DEVELOPMENT SCHEME

Prepared under Section 25 (3)
of the Urban Renewal Authority Ordinance

市區重建局
URBAN RENEWAL AUTHORITY

PLANNING REPORT

Cheung Wah Street /Cheung Sha Wan Road (SSP-018)

Urban Renewal Authority
September 2021

PART 1

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EXECUTIVE SUMMARY

1. The Urban Renewal Authority (URA) submits this planning report to seek approval of the Town Planning Board (TPB) for the draft Development Scheme Plan (DSP) No. S/K5/URA3/A. The draft DSP refers to the proposed Development Scheme (the Scheme) at Cheung Wah Street / Cheung Sha Wan Road (SSP-018).

2. First, a street block at Kim Shin Lane / Fuk Wa Street (namely SSP-017) comprising 90 building blocks of age over 60 with no lifts is identify as a site with imminent redevelopment needs. However, SSP-017 is undesirable for redevelopment because its existing plot ratio is as high as 8.12, hence, the residual plot ratio is 0.88 only. Multiple sub-divided units are also identified. Although SSP-017 has all the quality to demand for redevelopment, its redevelopment potential is low. In this respect, a wider area for planning opportunities have to be explored. Taking a "planning-led" approach in urban renewal works in recent years, URA has identified part of Sham Shui Po as Sham Shui Po Action Area 1 (SSPAA1) for holistic urban renewal planning. SSP-018 comprises Sites A and B, both Government land opposite each other across Cheung Sha Wan Road, is identified for redevelopment to formulate a comprehensive land-use restructuring together with SSP-017 to create more planning gains at district level. The proposed residential use at Site A of SSP-018 will be able to sustain the proposed redevelopment of SSP-017.

3. Built in 1976, the existing Cheung Sha Wan Sports Centre at Site A of the Scheme which will be reprovisioned and upgraded at Site B up to present-day standard. Site B of the Scheme will be redeveloped to provide a POS larger than the existing Cheung Sha Wan Path Sitting-out Area and other new Government, institution and community (GIC) facilities to serve the public in a wider district. Under an integrated approach, the new GIC complex and its adjacent proposed public open space (POS) will form a larger leisure and community hub in connection with the Sham Shui Po Sports Ground for public enjoyment.

4. Including the reprovision of the new Cheung Sha Wan Sports Centre, to accommodate the needs of the district on social welfare and health facilities identified by relevant Government departments, not less than 38,000 sq.m. non-domestic GFA is proposed for GIC uses at both sites in the Scheme, which is more than about 33 times of the existing GIC GFA. The provision of floor space for GIC uses is in line with the promotion of the Government's policy on "Single Site, Multiple Uses".

5. Through re-structuring and re-planning of existing land uses, the Scheme will optimize the land uses to achieve more planning gains for the community. Apart from materializing the planning intention of current OZP in providing GIC facilities and POS without the need to divert portion of Cheung Sha Wan Road, the GIC site can be fully utilized to provide more GIC facilities under the Scheme, while Site A after redevelopment can also optimize for residential use to increase flat supply of about 830 flats.

6. A maximum building height of 140mPD is proposed in Site A of the draft DSP for creating 15m wide tower separation and various podium setbacks for better air ventilation and walking environment. The proposed 5-storey podium will accommodate retail uses and GIC facilities with headroom requirements.

7. Taking this integrated renewal opportunity, footbridges across Cheung Sha Wan Road and Cheung Wah Street are proposed to connect the open space provided in both URA projects (SSP-017 and SSP-018) to enhance connectivity of amenity features for public. The resultant all-weathered at grade and elevated pedestrian network will not only integrate various GIC facilities and POSs, but also enhance overall permeability and connectivity of a wider area of Sham Shui Po in the vicinity of the Scheme in the vicinity of the Scheme.

8. Under an integrated urban renewal approach, the Scheme also provides various opportunities for feasible revitalisation initiatives outside the Scheme area. With the provision of underground public vehicle park at Site A, opportunities for the replacement of some on-street parking spaces in the area will be created to make way for possible pavement widening at strategic locations. Those separate revitalisation initiatives will in particular strengthen the connector role of Cheung Wah Street to enhance the connectivity between the medium aged building cluster further north and the future leisure and community hub in the south, thus benefits a wider area. For Site B, there is a possible integration of the new POS with the existing Sham Shui Po Sports Ground in the south subject to further co-ordination with Leisure and Cultural Services Department (LCSD) on the associated revitalisation work separately, upon approval of the DSP and subject to further coordination and acceptancy of relevant Government departments.

行政摘要

1. 市區重建局(市建局)向城市規劃委員會提交發展計劃草圖(編號 S/K5/URA3/A)，並命名為昌華街/長沙灣道發展計劃(SSP-018) (該計劃)。

2. 首先，位於兼善里／福華街（SSP-017）合共 90 幢樓齡超過 60 年的樓宇，均沒有升降機設施，對重建有殷切需求。唯現時 SSP-017 的地積比已高至 8.12，剩餘地積比只有 0.88，欠缺重建誘因。據現場觀察，大部分單位亦已被分間成多個劏房出租。SSP-017 雖已具備所有重建的訴求，但重建潛力很低，因此需要以整區作規劃考慮一併處理。市建局以「規劃主導」的模式， 近年制定部分的深水埗區為深水埗行動區 (SSPAA1)，貫徹以全面的規劃方式進行市區更新工作。SSP-018 包括沿長沙灣道兩旁的地盤 A 及地盤 B 的政府用地，將與 SSP-017 一併納入重建，藉著重整現有土地用途，為社區帶來更大的規劃裨益。SSP-018 地盤 A 內擬議的住宅用途亦為 SSP-017 的重建帶來契機。

3. 現時位於地盤 A 的長沙灣體育館建於 1976 年，將會重置至地盤 B，並提升至現今康樂設施的規格及設計標準。地盤 B 重建後將提供比現時長沙灣徑休憩處更大的公共空間，以及全新的政府、機構或社區設施。透過整體規劃，期望將新的政府、機構或社區設施綜合大樓、擬議的公共空間，以及鄰近的深水埗運動場，融合成一個社區康樂設施集中點，將規劃裨益擴展到該計劃以外的周邊社區，以惠及更多居民。

4. 為配合地區對社會福利及地區康健設施的需求，該計劃建議提供不少於 38,000 平方米的非住宅樓面面積作政府、機構或社區設施用途，當中包括重置後的長沙灣體育館，為現時政府、機構或社區設施樓面面積的 33 倍。有關建議亦切合政府現行提倡「一地多用」的政策。

5. 該計劃藉著重整及重新規劃現有土地，優化土地用途並為社區帶來更大的規劃裨益。該計劃無需透過部分長沙灣道改道，亦能實踐現時分區計劃大綱圖內的規劃意向，善用該計劃地盤 B 的政府、機構或社區設施綜合大樓，提供更多政府、機構或社區設施，並提供公共空間。重建後的地盤 A 亦能地盡其用，提供約 830 個住宅單位。

6. 發展計劃草圖建議該計劃地盤 A 土地的建築物高度限制為 140 米(主水平基準以上)，為該計劃內的樓宇設計提供更大彈性，包括 15 米的樓宇間距及建築物部分地面後退以確保良好的空氣流通及改善行人環境。擬議的 5 層基座平台，亦可容納零售設施和有淨空高度要求的政府、機構或社區設施。

7. 藉此整體規劃的機會，該計劃建議提供行人天橋橫跨長沙灣道及昌華街，以連接兩個重建項目(SSP-017 及 SSP-018) 內的公共空間，以加強擬議社區設施的連接性。全天候的地面及高架行人網絡不單連接不同的政府、機構或社區設施和公共空間，亦能加強深水埗區一帶的連接性。

8. 作為整體市區更新模式，該計劃亦希望為該計劃範圍以外的地方帶來活化更新的機遇。在地盤 A 興建的地下停車場，長遠有助提供機遇，在鄰近一些策略性的地點騰出路邊泊車位，以擴闊行人路，有助推動該項目以外的活化項目，進一步提高昌華街的暢達性，加強北面「中年」樓宇群及重建後南面的社區康樂設施集中點的連接，惠及鄰近社區。市建局將與康樂及文化事務署(康文署)在細部設計階段時檢討，以活化方式進一步改善地盤 B 內的公眾休憩用地和現時深水埗運動場的連接性。然而有關工程須視乎相關政府部門的意見/許可而定。

CONTENTS

1. INTRODUCTION

1.1 The Cheung Wah Street / Cheung Sha Wan Road Development Scheme (the Scheme) (SSP-018) is located in Sham Shui Po District, comprises Sites A and B along Cheung Sha Wan Road.

1.2 The Development Scheme is included in the Urban Renewal Authority (URA)'s 20th Business Plan, which was approved by the Financial Secretary for commencement in 2021/22. It is proposed to be processed as a Development Scheme under section 25 of the URA Ordinance (URAO). In August 2021, the URA's Board approved the submission of the Development Scheme under section 25(5) of the URAO to the Town Planning Board (TPB). The draft Development Scheme Plan (DSP) No. S/K5/URA3/A is prepared for submission to the TPB.

1.3 Pursuant to section 23(1) of the URAO, the URA notified the public in the Government Gazette about the commencement of the Development Scheme on 24 September 2021. The draft DSP is now submitted under section 25(5) of the URAO to the TPB for consideration.

1.4 This planning report (Part 1 of the whole report) is prepared to provide the TPB with the necessary background information and the planning proposal to facilitate its consideration of the draft DSP (Part 2 of the report), submitted under section 25 of the URAO. Supplementary information, including the preliminary design of the proposed development, key technical assessments, social impact assessment (SIA) (Stage 1), and implementation approach are enclosed in Part 3 for reference.

1.5 First, a street block at Kim Shin Lane / Fuk Wa Street (namely SSP-017) comprising 90 building blocks of age over 60 with no lifts has been identify as a site with imminent redevelopment needs. However, SSP-017 is undesirable for redevelopment because its existing plot ratio is as high as 8.12, hence, the residual plot ratio is 0.88 only. Multiple sub-divided units are also identified. Although SSP-017 has all the quality to demand for redevelopment, its redevelopment potential is low. In this respect, a wider area for planning opportunities have to be explored. Taking a "planning-led" approach in urban renewal works in recent years, URA has identified part of Sham Shui Po as Sham Shui Po Action Area 1 (SSPAA1) for holistic planning. SSP-018 comprises Sites A and B, both Government land opposite each other across Cheung Sha Wan Road, is identified for redevelopment to formulate a comprehensive land-use restructuring together with SSP-017 to create more planning gains at district level. The proposed residential use at Site A of SSP-018 will be able to sustain the proposed redevelopment of SSP-017.

1.6 As SSP-017 conforms to the existing planning control, it will be implemented under section 26 of the URAO separately; it does not form part of this DSP.

2. THE DEVELOPMENT SCHEME PLAN AREA

2.1. The Development Scheme (the Scheme) is located in Sham Shui Po (SSP) District, comprises Sites A and B along Cheung Sha Wan Road. **Plan 1** shows the location of the Scheme. Site A of the Scheme is bounded by Hing Wah Street on the southeastern boundary, Cheung Sha Wan Road on the southwestern boundary, Cheung Wah Street on the northwestern boundary, and Cheung Sha Wan Catholic Secondary School on the northeastern boundary. It is currently occupied by the Cheung Sha Wan Sports Centre and a garden both under Leisure and Cultural Services Department (LCSD). Subject to site survey upon DSP approval, the net site area used to calculate the development potential of Site A is about 5,197 sq.m.

2.2. Site B of the Scheme is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground to the southeast. It covers a gross site area of about 13,857 sq.m, involving the Cheung Sha Wan Path Sitting-out Area and its adjoining garden under LCSD, as well as a temporary maintenance depot of Highways Department. Subject to site survey upon DSP approval, the net site area used to calculate the development potential of the site for Government, institutions or community (GIC) facilities at Site B is about 4,212 sq.m. The Scheme Area is shown in **Plan 2**.

2.3. Site A is currently zoned for "Government, Institution or Community (G/IC)" and "Open Space (O)", while Site B is currently zoned for "Government, Institution or Community (G/IC)", "Open Space (O)", and shown as 'Road' on the Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37. An extract of the OZP is shown on **Plan 3**.

2.4. The Scheme aims to optimise the land uses to achieve more planning gains for the community through re-structuring and re-planning. With the proposed development, more GIC facilities up to present-day standard and a set of connected public open space (POS) will be provided for public enjoyment. The Scheme will create synergy effect with the adjoining URA redevelopment project (SSP-017) (**Plan 4** refers) and manifest the planning gains to serve a wider area of Sham Shui Po. The holistic planning driven approach and objectives of the Scheme are in line with the objectives of urban renewal under the Urban Renewal Strategy (URS) issued in 2011 aiming to:

- Restructuring and replanning of concerned urban areas;
- Designing more effective and environmentally-friendly local transport and road networks within the concerned urban areas;
- Rationalising land uses within the concerned urban areas;
- Redeveloping dilapidated buildings into new buildings of modern standard and environmentally-friendly design;
- Providing more open space and community/welfare facilities; and
- Enhancing the townscape with attractive landscape and urban design.

3. BACKGROUND AND EXISTING CONDITIONS

Historical Background

3.1 Cheung Sha Wan where the Scheme locates was named after the long beach between Sham Shui Po and Lai Chi Kok. The Scheme was at the coast in the pre-war era and to the farther southeast of the Scheme founded as a market town at around 1750-1760s. In the early 19th Century, the town was already well-established and functioned as a service centre for shipping and trade. The town grew rapidly as a primary market after the establishment of the city of Hong Kong since it was one of the best-located places for the trade in firewood and fresh food. By the end of 19th Century, certain businesses such as lime-burning, tanning, iron working, boat making and repairing, dyers, joss-stick trades and stone-cutting were well developed in Sham Shui Po. To the northwest of Sham Shui Po was a string of villages with a large piece of cultivated area are found along the coast where the Scheme locates.

3.2 In the early 20th Century, private developers started small-scale reclamation work in Sham Shui Po. Before the war, the Government undertook two major reclamations in 1912 and 1919 extending the reclaimed area to Tonkin Street. Historical map and aerial photo records indicate that the coast where the Scheme locates started being reclaimed and developed at around 1950-1960s to provide land for housing and factories to accommodate the flow of immigrants from China after 1949.

Existing Uses

3.3. The Scheme consists of Sites A and B along Cheung Sha Wan Road. The existing Cheung Sha Wan Sports Centre at Site A is under the LCSD. The sports centre provides basic recreational facilities for public use during the opening hours and organise various recreational activities and training courses regularly for the public. According to the LCSD's website, the sports centre provides 1 multi-purpose arena for 1 volleyball court or convert to 1 basketball court (sub-standard 5-a-side basketball court) or convert to 4 badminton courts each of which can be converted into 2 table-tennis tables on weekdays. The sports centre was built in 1976 which the design and facilities is below current standard.

3.4. Site B of the Scheme involves the Cheung Sha Wan Path Sitting-out Area and its adjoining garden under LCSD, as well as a temporary maintenance depot of Highways Department. The existing open space at both Sites A and B are disconnected while the Sham Shui Po Sports Ground is in the south.

Surrounding Land Uses

3.5. The street blocks adjoining the Scheme are a mix of residential, commercial and industrial uses. The Scheme is predominately surrounded by residential buildings to the east while commercial and industrial uses are more concentrated to the west of the Scheme. Some of the industrial buildings appear not to be engaged in manufacturing activities but mainly for office, storage, workshop / showroom uses. To the east across Hing Wah Street is predominantly public housing, Un Chau Estate, while private residential buildings are found mainly to the north of the Scheme. Commercial uses such as retail shops, eateries and car repair shops are found on the ground floor of the surrounded residential buildings.

3.6. The Sham Shui Po Sports Ground is located to the south of the Scheme, which is a popular venue for local sports activities and events.

Existing Traffic Network

3.7. The Cheung Sha Wan Road in between Sites A and B of the Scheme is a primary distributor forming the major traffic road connecting east and west with high traffic flow. To the east of the Scheme is Hing Wah Street is a district distributor which is a key traffic road connecting north and south. Cheung Wah Street, Fuk Wa Street and Fuk Wing Street are local distributors locating to the northwest of Site A of the Scheme. Some of the local roads are frequently occupied by road-side parking, storage and loading/unloading activities.

Existing Pedestrian Network

3.8. The Scheme is located between Lai Chi Kok and Cheung Sha Wan MTR Stations. Cheung Sha Wan Road in between Sites A and B of the Scheme is the major pedestrian corridor in the vicinity. Many residents from Un Chau Estate locating at the east of the Scheme and nearby residential developments locating at the north of the Scheme walk to Cheung Sha Wan Road for public transport services. At present, long queuing at the bus stops often appear along the pavement of Cheung Sha Wan Road, resulting in a crowded condition along the pavement.

3.9. Residents from the nearby residential developments often walk through three inner streets in the vicinity of the Scheme for daily activities, i.e. Cheung Wah Street, Fuk Wa Street and Fuk Wing Street. However, the current pedestrian environment may be unwelcoming as the car repairing activities, dumping and roadside storage often occupied the pavement of these streets.

3.10. The existing temporary maintenance depot of Highways Department at Site B is not accessible by public and acts as a major blockage of the pedestrian network. The existing Cheung Sha Wan Sports Centre and Garden at Site A is disconnected from the existing Cheung Sha Wan Path Sitting-out Area at Site B and the Sham Shui Po Sports Ground in the south. Local residents in the north of the Scheme has to pass through the Cheung Sha Wan Path Sitting-out Area to reach the Sham Shu Po Sports Ground for sports activities.

Environmental Condition

3.11. The Scheme is along the heavily trafficked Cheung Sha Wan Road between Site A and B and Castle Peak Road to the further northwest. The Scheme is envisaged to be subject to severe traffic noise and air pollutants generated from the heavy traffic along these major roads.

4 PLANNING AND LAND USE PROPOSALS

Development Intensity

4.1. Under the draft DSP, the scheme area in orange colour is proposed to be zoned "R(A)", which is primarily for residential use, with the lowest three floors or in the purpose-designed non-residential portion of a building for commercial use as stipulated in the proposed Notes of the "R(A)" zone. The scheme area in green is proposed to be zoned "O" while the scheme area in blue is proposed to be zoned "G/IC".

4.2. In the Notes of "R(A)" zone, the proposed plot ratio (PR) is 7.5 for domestic building or 9.0 for a building that is partly domestic and partly non-domestic, which is in line with the development intensity of "R(A)" zone under the prevailing Cheung Sha Wan OZP. It is proposed to include a clause in the "Remarks" of the proposed Notes of "R(A)" stating that "any floor space that is constructed or intended for use solely as GIC facilities, as required by the Government, may be disregarded from PR calculation".

4.3. A maximum building height of 140mPD is proposed at Site A under the draft DSP to enable a higher podium design to mitigate the severe traffic noise generated from the surrounding road traffic (details on technical assessments described in paragraph 4.14 to 4.24). This will not only allow for accommodating GIC facilities with appropriate headroom in the podium, but will also opportune for creating 15m tower separation and various podium setbacks, including about 15-20m ground floor setback from Cheung Wah Street for better air ventilation and providing opportunities to preserve existing trees. It is considered compatible with the nearby built environment, which includes Un Chau Estate (120mPD) and The Sparkle (152mPD) to the southeast of the Scheme.

4.4. For Site B, a maximum building height of 95 mPD is proposed for the GIC complex.

4.5. The proposed development parameters of the Scheme are shown in **Table 4.1**, which will be subject to adjustments in the detailed design stage after DSP's approval.

Table 4.1 Proposed Development Parameters of the Scheme

Parameters (Site A)	Details
Gross Site Area	About 5,197 sq.m.
Site Area for PR Calculation	About 5,197 sq.m. (subject to survey and detailed design)
Proposed Zoning	"R(A)"
Proposed Maximum Building Height	Not more than 140mPD
Proposed Maximum Domestic GFA (PR)^	About 38,978 sq.m. (PR = 7.5)
Proposed Maximum Non-domestic GFA (excluding GIC Provision (PR))^	About 5,197 sq.m. (PR = 1.0)
Proposed Non-domestic GFA for GIC Provision (PR) ^ (proposed to be exempted from GFA calculation under DSP)	Not less than 5,197 sq.m. (PR = 1.0)
Total GFA	Around 49,372 sq.m.
No. of Flats@	About 830 flats
Average Flat Size@ (GFA)	About 46 sq.m.
Internal Transport Facilities for the proposed development (including the proposed provision for GIC facilities)*	Basement ancillary car park to accommodate: - 142 nos. private car parking spaces - 12 motor-cycle parking spaces - 9 nos. L/UL bays
Public Vehicle Park*	Basement public vehicle park to accommodate about 50 private car parking spaces
Proposed Public Open Space	About 750 sq.m.

Parameters (Site B)	**Details**
Gross Site Area	About 13,857 sq.m
Net Site Area (for G/IC)	About 4,212 sq.m. (Subject to site survey and detailed design)
Proposed Zoning	"G/IC", "O"
Proposed Maximum Building Height (for G/IC)	Maximum 95 mPD
Proposed Maximum G/IC GFA (PR)^	About 33,696 sq.m. (8.0)
Proposed Public Open Space	About 9,645 sq.m.
Internal Transport Facilities for the proposed development*	Basement ancillary car park to accommodate: - 65 nos. private car parking spaces - 3 nos. L/UL bays
Notes: ^ The exact GFA and PR are subject to TPB approval, detailed design and prevailing First Schedule of Building (Planning) Regulations (B(P)R). @ Indicative only, subject to detailed design at project implementation stage. * Subject to liaison and agreement with Transport Department.	

Conceptual Layout

4.6. As shown in the indicative block plan and the section plan of the notional design for the Scheme in (**Appendix 1**), the proposed development at Site A comprises two residential towers (T1 and T2) on top of a commercial/retail/GIC podium, an open space , and a basement car park for public and ancillary parking spaces. Site B comprises of a GIC complex building and a POS.

Re-provision and new provision of GIC facilities for the community

4.7. To accommodate the needs of the district on social welfare and health facilities and align with "Single Site, Multiple Uses" principle promoted by Government, it is proposed to provide about 38,893 sq.m. non-domestic GFA is proposed for GIC uses at both sites in the Scheme, which is more than 33 times of the existing Cheung Sha Wan Sports Centre of about 1,170 sq.m. at Site A.

4.8. The existing Cheung Sha Wan Sports Centre at Site A, built in 1976, will be reprovisioned at Site B and be upgraded to prevailing standard and continue its operation for public enjoyment. The proposed GFA of the reprovisioned sports centre at Site B will be about 9,100sq.m. which will be about 8 times of the existing sports centre at Site A. A multi-purpose air-conditioned main games arena which can used for 1 netball court/ 2 basketball courts/2 volleyball courts/ 8 badminton courts will be provided in the proposed GIC complex at Site B. In addition, a multi-purpose activity room, dance room, fitness room, table-tennis room, children's play room, etc. will be provided in the new Cheung Sha Wan Sports Centre subject to further liaison with LCSD. The actual uses of the new GIC provision in the Scheme will be subject to liaison with Planning Department, other relevant Government departments as well as the views from the relevant stakeholders.

Re-structuring of POS and provision of all-weathered at-grade and elevated pedestrian network to enhance walkability and connectivity

4.9. Under the proposed Scheme, a POS of not less than 9,645 sq.m is proposed at Site B and a POS of not less than 750 sq.m. is proposed at Site A along Cheung Sha Wan Road. The restructured POS provision will not be less than the area of existing POS provision of about 10,382sq.m at Sites A and B and provide better integration. According to the consultation with LCSD, LCSD agreed to take up the management and maintenance of the proposed POS at Site B. LCSD proposed the POS at Site A under planning to be under ownership and management of URA or its future joint-venture partner(s), or its assignee, as it will be fronting the retail facilities of Site A, subject to further liaison with relevant Government departments upon DSP approval. It is envisaged that the proposed POS at Site A will be open to public during reasonable hours.

4.10. Taking this redevelopment opportunity, footbridges across Cheung Sha Wan Road and Cheung Wah Street are proposed to connect up the POSs at the Scheme and an adjoining URA project (SSP-017). The resultant all-weathered at-grade and elevated pedestrian network will not only integrate various GIC facilities and POSs, but will also enhance connectivity of a wider area of Sham Shui Po. Proper paving and landscaping, where appropriate, will be provided at the pedestrian walkways to create a safe and pleasant walking environment. Given the proposed footbridges are outside the DSP boundary and do not form part of the DSP, the URA will liaise with relevant Government departments on the proposal via a separate revitalisation initiatives subject to the approval of DSP and detailed technical feasibility.

4.11. To further enhance the walkability of the Scheme Area, ground floor setbacks will be provided along Cheung Sha Wan Road, Cheung Wah Street and Hing Wah Street to create a wider pavement for a better walking environment. With an integrated urban renewal approach, the provision of underground public vehicle park at Site A would create opportunity for the replacement of some on-street parking spaces in the area. It will make way for possible pavement widening under separated revitalization work at strategic locations. For Site B, there is a possible integration of the new POS with the existing Sham Shui Po Sports Ground in the south subject to further co-ordination with LCSD on the associated revitalization work.

Proposed building height to enhance flexibility in building design

4.12. A maximum building height of 140mPD is proposed in Site A of the Scheme Area, which can enable a slimmer building form and wider building separation to enhance building permeability of the local area. Despite not less than 750 sq.m of open space will be provided at Site A, ground floor setbacks (15-20 m along Cheung Wah Street) are also proposed for pavement widening to create better walking environment and provide opportunities to preserve or transplant trees at Site A.

4.13. Given the Scheme adjoins to the Cheung Sha Wan Road which is a heavy traffic road, a 5-storey podium is proposed at Site A, with an aim to raise the residential floors to higher levels to mitigate noise impacts according to the respective technical assessments (Details on technical assessments provided in para. 4.16 to 4.26). The 5-storey podium will also allow for accommodating GIC facilities with headroom requirements to serve a wider district. With the proposed building height of 140mPD, the two proposed residential towers in Site A can adopt more flexible design on block size, disposition and layout to provide sufficient building separation as recommended in the Sustainable Building Design (SBD) Guidelines to improve permeability.

Greenery and Landscaping

4.14. A total of 294 nos. of trees (with 95mm Diameter at Breast Height (DBH) or above) were identified within the Scheme Area. The majority of the existing trees were found to be in fair form, fair health and fair amenity value. No old and valuable trees (OVTs) are recorded on site. All the existing trees will be retained or transplanted as far as practical.

4.15. The proposed development will follow the SBD Guidelines as far as practicable to provide greenery to enhance the built environment. Greenery will be provided at pedestrian level, podium edge as well as roof top where appropriate and applicable, to create a visual relief and enhancement of the built environment. A tree survey was conducted and a compensation planting proposal was prepared together with a preliminary design concept to address the conditions of the existing vegetation on site (see **Appendix 2**). Mitigation measures are proposed for the trees affected by the proposed development of the Scheme. Detailed landscape design, layout arrangement and proposed tree treatment of the POS at Site B will be further liaised with LCSD upon DSP approval.

Technical Assessments

Visual Impact

4.16. A Visual Impact Assessment (VIA) was conducted (see **Appendix 3**) to study the potential visual impact with the implementation of the Scheme. Visual appraisal has made reference to the Town Planning Board Guidelines No. 41 and been carried out at locally viewpoints. The proposed building height of not more than 140mPD at Site A respects and complements the building height profile of the surrounding context. The study has demonstrated that the proposed development was visually compatible with the surrounding built environment and planned developments,and would not create significant visual impact in general.

Social Impact

4.17. In accordance with the URS, a non-obtrusive SIA (Stage 1) has been conducted and the report is included as **Appendix 4**. The report includes the local profile of the Scheme, which will need to be prepared for and borne in mind during the implementation of the Scheme. The Stage 2 SIA report is under preparation based on factual data, which has been conducted on the commencement of the Scheme. The Stage 2 SIA report will be submitted to TPB separately. The SIA reports are to assess the likely effect of the implementation of the Scheme and to propose mitigation measures to minimise any social impact.

Traffic Impact

4.18. A TIA (see **Appendix 5**) has been conducted to assess the traffic impact of the Scheme and the proposed provision of internal transport facilities of the proposed development. The TIA demonstrated that the Scheme (together with the proposed public vehicle park) has no adverse traffic impact on the local traffic network and the pedestrian walking environment. The proposed parking provision and the internal transport facilities aligns with the requirements in the latest HKPSG and are acceptable from traffic engineering point of view.

Environmental Aspect

4.19. An Environmental Assessment (EA) (see **Appendix 6**) was conducted to study any potential environmental impact/benefits associated with the implementation of the Scheme. The study concluded that the impact on air quality, noise impact, land contamination and waste management were not insurmountable with mitigation measures adopted if necessary.

4.20. Air quality impact assessment (AQIA) indicated that in view of the local air quality condition, fresh air intake and residential units for the proposed development in Site A of the scheme area shall be located at minimum about 6.35mAG (i.e. about 11mPD) above ground to meet the air quality requirement under AQOs.

4.21. On noise assessment, with appropriate noise mitigation measures implemented during the construction period, no adverse impact arising from the construction activities is expected. Based on the notional layout and adoption of mitigated measures such as acoustic fins, acoustic balcony/window, the road traffic noise will be minimized and a noise compliance rate of 80% by flat could be achieved. The potential noise impact from the fixed noise sources has also assessed and no adverse noise impact is anticipated with mitigated measures adopted.

4.22. Land Contamination appraisal was made for the Scheme area. It is considered that potential land contamination is very low as the site has been occupied mainly for residential purposes for decades and there was no dangerous good license issued for any activity in the Scheme in EPD's records.

4.23. In terms of waste management, appropriate sustainable measures/approaches to waste management are proposed to produce less waste and reuse or recover value from waste, no adverse environmental impacts arising from handling, storage, transportation or disposal of the wastes generated the construction and operation stage of the Scheme are envisaged.

Air Ventilation

4.24. An Air Ventilation Assessment (AVA) has been conducted to assess the ventilation performance of the area surrounding the Scheme (see **Appendix 7**). A comparison of air ventilation was made between the notional design under the OZP-compliant Scheme (the Baseline Scheme) according to the consultation with Planning Department and the notional design under the draft DSP (the Proposed Scheme). It is concluded that no adverse air ventilation impact is anticipated for the Proposed Scheme as compared to the Baseline Scheme.

Drainage and Sewerage Impact

4.25. A Drainage and Sewerage Impact Assessment (DSIA) was conducted (see **Appendix 8**). The DSIA report concluded that the impact on the capacities of the existing drainage and sewerage system due to the increase of population from the proposed development will be acceptable. With the provision of new drainage and sewerage pipes and upgrading / diversion of a few sections of existing drainage and sewerage pipes connecting with the proposed development, the discharge generated from the proposed development in the Scheme will be within the capacities and will not have adverse impact to the existing drainage and sewerage systems.

Water Supply Impact

4.26. A Water Supply Impact Assessment (WSIA) was also conducted (see **Appendix 9**). Findings of WSIA concluded that there would be no adverse impact to the water supply due to the proposed development.

5 PLANNING AND DESIGN MERITS

5.1 The Scheme will provide the following planning and environmental benefits:-

- Provision of about 38,000 sq.m. GIC GFA for re-provisioning of existing Cheung Sha Wan Sports Centre to be upgraded to prevailing standard and for provisioning of new social welfare and health facilities to address community needs. The total floor area of GIC provision of the Scheme will be about 33 times of the existing GIC provision (ie. Cheung Sha Wan Sports Centre at Site A)

- Re-structuring and rationalising the land uses in the Scheme to optimise the land uses to achieve more planning gains for the community;

- The proposed residential use at Site A of SSP-018 will be able to sustain the proposed redevelopment of SSP-017 which has pressing redevelopment need and contribute to flat supply;

- Creation of an all-weathered at-grade and elevated pedestrian network with proposed footbridges across Cheung Sha Wan Road and Cheung Wah Street to enhance connectivity for the benefit of a wider area of Sham Shui Po;

- Provision of no more than 50 underground public car parking spaces and create opportunities for possible pavement widening under URA's separated revitalization initiatives at strategic locations;

- Possible integration of the new POS at Site B with the existing Sham Shui Po Sports Ground in the south under separated associated revitalization work subject to further co-ordination with LCSD; and

- Enhancing the townscape, urban design and environment through sensible building layout and design.

6 IMPLEMENTATION OF THE DEVELOPMENT SCHEME

6.1. The URA does not own or lease any land within the boundaries of the Scheme, both Sites A and B are currently owned by the government. Close liaison on land matters and construction will be carried out with relevant government departments upon DSP approval.

6.2. Supplementary documents detailing the implementation programme for the Scheme is attached in **Appendix 10**. The URA may implement the Scheme in association with one or more parties or implementing the Scheme by itself alone.

URBAN RENEWAL AUTHORITY

September 2021

PART 2

THE DRAFT PLAN

DRAFT URBAN RENEWAL AUTHORITY
CHEUNG WAH STREET / CHEUNG SHA WAN ROAD
DEVELOPMENT SCHEME PLAN NO. S/K5/URA3/A

(Being a Draft Plan for the Purposes of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority Ordinance)

NOTES

(N.B. These form part of the Plan)

(1) These Notes show the uses or developments on land falling within the boundaries of the Plan which are always permitted and which may be permitted by the Town Planning Board, with or without conditions, on application. Where permission from the Town Planning Board for a use or development is required, the application for such permission should be made in a prescribed form. The application shall be addressed to the Secretary of the Town Planning Board, from whom the prescribed application form may be obtained.

(2) Any use or development which is always permitted or may be permitted in accordance with these Notes must also conform to any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, as may be applicable.

(3) (a) No action is required to make the existing use of any land or building conform to this Plan until there is a material change of use or the building is redeveloped.

(b) Any material change of use or any other development (except minor alteration and/or modification to the development of the land or building in respect of the existing use which is always permitted) or redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Town Planning Board.

(c) For the purposes of subparagraph (a) above, "existing use of any land or building" means –

(i) before the publication in the Gazette of the notice of the first statutory plan covering the land or building (hereafter referred as 'the first plan'),

- a use in existence before the publication of the first plan which has continued since it came into existence; or

- a use or a change of use approved under the Buildings Ordinance which relates to an existing building; and

(ii) after the publication of the first plan,

- a use permitted under a plan which was effected during the effective period of that plan and has continued since it was effected; or

- a use or a change of use approved under the Buildings Ordinance which relates to an existing building and permitted under a plan prevailing at the time when the use or change of use was approved.

(4) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board, all permissions granted by the Town Planning Board in respect of the site of the use or material change of use or development or redevelopment shall lapse.

(5) Road widths, road junctions and alignments of roads may be subject to minor adjustments as detailed planning proceeds.

(6) Temporary uses (expected to be 5 years or less) of any land or building are always permitted as long as they comply with any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, and there is no need for these to conform to the zoned use or these Notes. For temporary uses expected to be over 5 years, the uses must conform to the zoned use or these Notes.

(7) The following uses or developments are always permitted on land falling within the boundaries of the Plan except where the uses or developments are specified in Column 2 of the Schedule of Uses:

(a) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, road, bus/public light bus stop or lay-by, cycle track, Mass Transit Railway station entrance, Mass Transit Railway structure below ground level, taxi rank, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine; and

(b) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government;

(8) Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted uses and developments within the same zone are always permitted and no separate permission is required.

(9) In these Notes, "existing building" means a building, including a structure, which is physically existing and is in compliance with any relevant legislation and the conditions of the Government lease concerned.

(10) Any development not compatible with the Urban Renewal Authority's Development Scheme for the area is prohibited by virtue of section 25(4) of the Urban Renewal Authority Ordinance.

DRAFT URBAN RENEWAL AUTHORITY
CHEUNG WAH STREET / CHEUNG SHA WAN ROAD
DEVELOPMENT SCHEME PLAN NO. S/K5/URA3/A

Schedule of Uses

RESIDENTIAL (GROUP A)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot Flat Government Use (not elsewhere specified) House Library Market Place of Recreation, Sports or Culture Public Clinic Public Transport Terminus or Station (excluding open-air terminus or station) Residential Institution Public Vehicle Park (excluding container vehicle) School (in free-standing purpose-designed building only) Social Welfare Facility Utility Installation for Private Project	Commercial Bathhouse/ Massage Establishment Eating Place Education Institution Exhibition or Convention Hall Government Refuse Collection Point Hospital Hotel Institutional Use (not elsewhere specified) Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Office Petrol Filling Station Place of Entertainment Private Club Public Convenience Public Transport Terminus or Station (not elsewhere specified) Public Utility Installation Religious Institution School (not elsewhere specified) Shop and Services (not elsewhere specified) Training Centre

(Please see next page)

RESIDENTIAL (GROUP A) (Cont'd)

In addition, the following uses are always permitted (a) on the lowest three floors of a building, taken to include basements; or (b) in the purpose-designed non-residential portion of an existing building, both excluding floors containing wholly or mainly car parking, loading / unloading bay and / or plant room:

Eating Place
Educational Institution
Institutional Use (not elsewhere specified)
Off-course Betting Centre
Office
Place of Entertainment
Private Club
Public Convenience
Recyclable Collection Centre
School
Shop and Services
Training Centre

Planning Intention

This zone is intended primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building.

Remarks

(1) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in the plot ratio for the building upon development and/or redevelopment in excess of 7.5 for a domestic building or 9.0 for a building that is partly domestic and partly non-domestic, or the plot ratio of the existing building, whichever is the greater. Except where the plot ratio is permitted to be exceeded under paragraphs (7) and/or (8) hereof, under no circumstances shall the plot ratio for the domestic part of any building, to which this paragraph applies, exceed 7.5.

(2) For a non-domestic building to be erected on the site, the maximum plot ratio shall not exceed 9.0 except where the plot ratio is permitted to be exceeded under paragraphs (7) and/or (8) hereof.

(3) For the purposes of paragraph (1) above, no addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the relevant maximum domestic and/or non-domestic plot ratio, or the domestic and/or non-domestic plot ratio or the existing building, whichever is the greater, subject to, as applicable –

(i) the plot ratio of the existing building shall apply only if any addition, alteration and/or modification to or redevelopment of an existing building is for the same type of building as the existing building, i.e. domestic, non-domestic, or partly domestic and partly non-domestic building; or

(ii) the maximum domestic and/or non-domestic plot ratio stated in paragraph (1) above shall apply if any addition, alteration and/or modification to or redevelopment of an existing building is not for the same type of building as the existing building, i.e. domestic, non-domestic, or partly domestic and partly non-domestic building.

(4) In determining the relevant maximum plot ratio/GFA for the purposes of paragraph (1) and (2) above, any floor space that is constructed or intended for use solely as car park, loading/ unloading bay, plant room, caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as Government, institution or community facilities, as required by the Government, may also be disregarded.

(5) An at-grade Public Open Space of not less than 750m^2 shall be provided.

(6) The provision of underground public car parking spaces will be exempted from GFA calculation.

(7) No new development, or addition, alternation and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building height in terms of metres above Principal Datum (mPD) as stipulated on the Plan, or the height of the existing building, whichever is the greater.

(8) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the plot ratio for the building on land to which paragraphs (1) and (2) applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum plot ratio specified in the paragraphs (1) and (2) above may thereby be exceeded.

(9) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio and building height restrictions as stated in paragraphs (1), (2) and (6) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

OPEN SPACE

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Aviary Barbecue Spot Field Study/Education/Visitor Centre Park and Garden Pavilion Pedestrian Area Picnic Area Playground/Playing Field Public Convenience Sitting Out Area Zoo	Eating Place Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Transport Terminus or Station Public Utility Installation Public Vehicle Park(excluding container vehicle) Religious Institution Service Reservoir Shop and Services Tent Camping Ground Utility Installation for Private Project

Planning Intention

This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.

GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot Animal Quarantine Centre (in Government building only) Broadcasting, Television and/or Film Studio Eating Place (Canteen, Cooked Food Centre only) Educational Institution Exhibition or Convention Hall Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) Hospital Institutional Use (not elsewhere specified) Library Market Place of Recreation, Sports or Culture Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution Research, Design and Development Centre School Service Reservoir Social Welfare Facility Training Centre Wholesale Trade	Animal Boarding Establishment Animal Quarantine Centre (not elsewhere specified) Columbarium Correctional Institution Crematorium Driving School Eating Place (not elsewhere specified) Flat Funeral Facility Helicopter Fueling Station Helicopter Landing Pad Holiday Camp Hotel House Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Off-course Betting Centre Office Petrol Filling Station Place of Entertainment Private Club Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Refuse Disposal Installation (Refuse Transfer Station only) Residential Institution Sewage Treatment/Screening Plant Shop and Services (not elsewhere specified) Utility Installation for Private Project Zoo

(Please see next page)

Planning Intention

This zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.

Remarks

(1) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building heights in terms of metres above Principal Datum (mPD) as stipulated on the Plan, or the height of the existing building, whichever is the greater.

(2) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restrictions stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

DRAFT URBAN RENEWAL AUTHORITY

CHEUNG WAH STREET / CHEUNG SHA WAN ROAD

DEVELOPMENT SCHEME PLAN NO. S/K5/URA3/A

EXPLANATORY STATEMENT

DRAFT URBAN RENEWAL AUTHORITY

CHEUNG WAH STREET / CHEUNG SHA WAN ROAD

DEVELOPMENT SCHEME PLAN NO. S/K5/URA3/A

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DRAFT URBAN RENEWAL AUTHORITY
CHEUNG WAH STREET / CHEUNG SHA WAN ROAD
DEVELOPMENT SCHEME PLAN NO. S/K5/URA3/A

(Being a Draft Plan for the Purposes of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority Ordinance)

EXPLANATORY STATEMENT

Note: For the purposes of the Town Planning Ordinance (the Ordinance), this statement shall not be deemed to constitute a part of the Plan.

1. INTRODUCTION

This explanatory statement is intended to assist an understanding of the draft Urban Renewal Authority (URA) Cheung Wah Street/ Cheung Sha Wan Road Development Scheme Plan (DSP) No. S/K5/URA3/A. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the area covered by the Plan.

2. AUTHORITY FOR THE PLAN AND PROCEDURES

2.1 In the URA's 20^{th} Business Plan (2021/22) which was approved by the Financial Secretary, the Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) was proposed to be processed as a Development Scheme (the Scheme) under section 25 of the URA Ordinance (URAO).

2.2 On XX September 2021, pursuant to section 23(1) of the URAO, the URA notified in the Government Gazette the commencement of implementation of the Cheung Wah Street/ Cheung Sha Wan Road Development Scheme.

2.3 On the same day of commencement (i.e. 24 September 2021), the URA submitted the draft URA Cheung Wah Street/ Cheung Sha Wan Road DSP to the Board under section 25(5) of the URAO.

2.4 On XXXX, the Board, under section 25(6)(a) of the URAO, deemed the draft URA Cheung Wah Street/ Cheung Sha Wan Road DSP as being suitable for publication. Under section 25(7) of the URAO, the draft DSP, which the Board has deemed suitable for publication, is deemed to be a draft plan prepared by the Board for the purposes of the Town Planning Ordinance (the Ordinance).

2.5 On XXXX, the draft Cheung Wah Street/ Cheung Sha Wan Road DSP No. S/K5/URA3/1 (the Plan) was exhibited under section 5 of the Ordinance. By virtue of section 25(9) of the URAO, the Plan has from the date replaced the Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37 in respect of the area delineated and described herein.

3. OBJECT OF THE PLAN

The DSP comprises two Sites, with Site A at the north of Cheung Sha Wan Road and Site B at the south of Cheung Sha Wan Road. The Plan illustrates that the Development Scheme Area (the Area) in orange colour is designated as "Residential (Group A)" ("R(A)"), the Area in blue colour is designated as "Government, Institution or Community" ("G/IC"), and the Area in green colour is designated as "Open Space" ("O"). It is planned to be developed by means of the Development Scheme prepared under section 25 of the URAO. Site A of the DSP intends to be primarily for a high-density residential development with commercial uses are always permitted on the lowest three floors of an existing building or in the purpose-designed non-residential portion of a building. Site B of the DSP intends to be primarily for Government, Institution or Community (GIC) uses and Public Open Space.

4. NOTES OF THE PLAN

4.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Area in this zone and which may be permitted by the Board, with or without conditions, on application. The provision for application for planning permission under section 16 of the Ordinance allows greater flexibility in land use planning and control of development to meet changing needs.

4.2 For the guidance of the general public, a set of definitions that explains some of the terms used in the Notes may be obtained from the Technical Services Division of the Planning Department and can be downloaded from the Board's website at http://www.info.gov.hk/tpb.

5. AREA COVERED BY THE PLAN

5.1 The Development Scheme boundary which is shown in heavy broken line on the Plan. Site A is bounded by Hing Wah Street on the southeastern boundary, Cheung Sha Wan Road on the southwestern boundary, Cheung Wah Street on the northwestern boundary, and Cheung Sha Wan Catholic Secondary School on the northeastern boundary, with a gross site area of about 5,197 m^2. Site B of the Scheme is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the southeastern boundary, with a gross site area of about 13,857 m^2.

5.2 On the Approved Cheung Sha Wan OZP No. S/K5/37, Site A is zoned "Government, Institution or Community (G/IC)" and "Open Space (O)", while Site B is currently zoned for "Government, Institution or Community (G/IC)", "Open Space (O)", and an area shown as 'Road' before the exhibition of the Plan.

6. EXISTING CONDITIONS

6.1 Site A of the Area is currently occupied by the Cheung Sha Wan Sports Centre and a garden both owned and managed by Leisure and Cultural

Services Department (LCSD). The sports centre was built in 1976 of which the design and facilities are below current standard. Site B involves the Cheung Sha Wan Path Sitting-out Area and part of Sham Shui Po Sports Ground owned and managed by LCSD and a temporary maintenance depot occupied by Highways Department.

7. PLANNING AND LAND USE PROPOSALS

7.1 On the Plan, Site A of the Area is zoned "R(A)" and Site B of the Area is zoned "G/IC" and "O". The Notes of the Plan indicated broadly the intended land uses within the Area.

Uses

7.2 The "R(A)" zone is intended primarily for a high-density residential development. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building.

7.3 The maximum plot ratio within the "R(A)" zone is 9.0, or the plot ratio of the existing building(s), whichever is the greater. Except where the plot ratio is permitted to be exceeded under the Notes of the Plan or under Building (Planning) Regulations 22(1) or (2), under no circumstances shall the plot ratio for the domestic part of any development exceed 7.5. The "R(A)" zone is also subject to a maximum building height of 140 metres above Principal Datum (mPD).

7.4 The "G/IC" zone is intended primarily for the provision of GIC facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments. The "G/IC" zone is subject to a maximum building height of 95 mPD.

7.5 The "O" zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.

7.6 To provide design flexibility, minor relaxation of the plot ratio and building height restrictions may be considered by the Board on application under section 16 of the Ordinance taking into account its individual planning and design merits.

Government, Institution or Community (GIC) Facilities

7.7 Subject to confirmation of operational needs and detailed design, about 38,700 m^2 non-domestic GFA would be proposed for GIC uses at the Scheme Area, with about 5,100 m^2 within the non-domestic portion of Site A and about 33,600 m^2 non-domestic GFA at Site B. The existing Cheung Sha Wan Sports Centre at Site A which was built in 1976 will be reprovisioned at Site B up to prevailing standard and continue its operation for public enjoyment. The intended use of new GIC provision would be subject to further liaison with relevant Government departments as well as views from local stakeholders. In determining the relevant maximum plot ratio of the development and/or redevelopment in Site A, any floor space that is constructed or intended for use solely as GIC facilities, as required by the Government, may be disregarded.

Public Open Space

7.8 Subject to detailed design, a POS of not less than 9,645 m^2 is proposed at Site B and a POS of not less than 750 m^2 is proposed at Site A along Cheung Sha Wan Road. According to the consultation with LCSD, LCSD agreed to take up the management and maintenance of the proposed POS at Site B. LCSD proposed the POS at Site A under planning to be under ownership and management of URA or its future joint-venture partner(s), or its assignee, subject to further liaison with relevant Government departments. The proposed POS at Site A will be open to public during reasonable hours.

Provision of all-weathered at-grade and elevated pedestrian network

7.9 Subject to Roads (Works, Use and Compensation) Ordinance, footbridges across Cheung Sha Wan Road and Cheung Wah Street are proposed to connect up the POSs at the Scheme and an adjoining URA Development Project (Kim Shin Lane / Fuk Wa Street (SSP-017)). The resultant at grade and elevated pedestrian network will not only integrate various GIC facilities and POSs, but will also enhance connectivity of a wider built environment of Sham Shui Po. Proper paving and landscaping, where appropriate, will be provided at the pedestrian walkways to create a safe and pleasant walking environment. Given the proposed footbridges are outside the DSP boundary and do not form part of the DSP, the URA will liaise with relevant Government departments on the proposal via a separate revitalisation initiatives subject to the approval of DSP and detailed technical feasibility.

7.10 To further enhance the pedestrian circulation and pavement environment, appropriate podium setbacks of the proposed development along Cheung Sha Wan Road, Cheung Wah Street, and Hing Wah Street, where appropriate, would be explored in the Area. There is also a possible integration of the new POS with the existing Sham Shui Po Sports Ground in the south subject to further co-ordination with LCSD on the associated revitalization work.

Underground Public Vehicle Park

7.11 For public benefits, no more than 50 underground public car parking spaces will be provided in a basement car park at Site A according to consultation with Transport Department. Such provision will create opportunity for the replacement of some on-street parking spaces in the area. It will make way for possible pavement widening under separate revitalization initiatives at strategic locations. The provision of underground public car parking spaces will be exempted from GFA calculation according Joint Practice Note No. 4.

Internal Transport Facilities

7.12 Ancillary car parking spaces and loading/unloading bays will be provided in a basement car park at Site A to serve the proposed residential development with non-domestic podium in the Development Scheme. To serve the proposed GIC facilities at Site B, loading/ unloading bays and ancillary car parking spaces will be provided on the ground floor and at basement levels, respectively, of the proposed GIC complex. The number of car parking spaces, loading/unloading bays will be based on the relevant requirements under the current Hong Kong Planning Standards and Guidelines (HKPSG) and subject to agreement with Transport Department.

Air Ventilation

7.13 As identified in the air ventilation assessment report, Cheung Wah Street and Fuk Wing Street could be better benefited by the north-south direction wind breezeway with "Good Design Features" (i.e. ground floor setbacks along Cheung Sha Wan Road, Cheung Wah Street and Hing Wah Street and residential towers separation at Site A) in the proposed development. The proposed development will also meet the requirements under Sustainable Building Design Guidelines (SBDG).

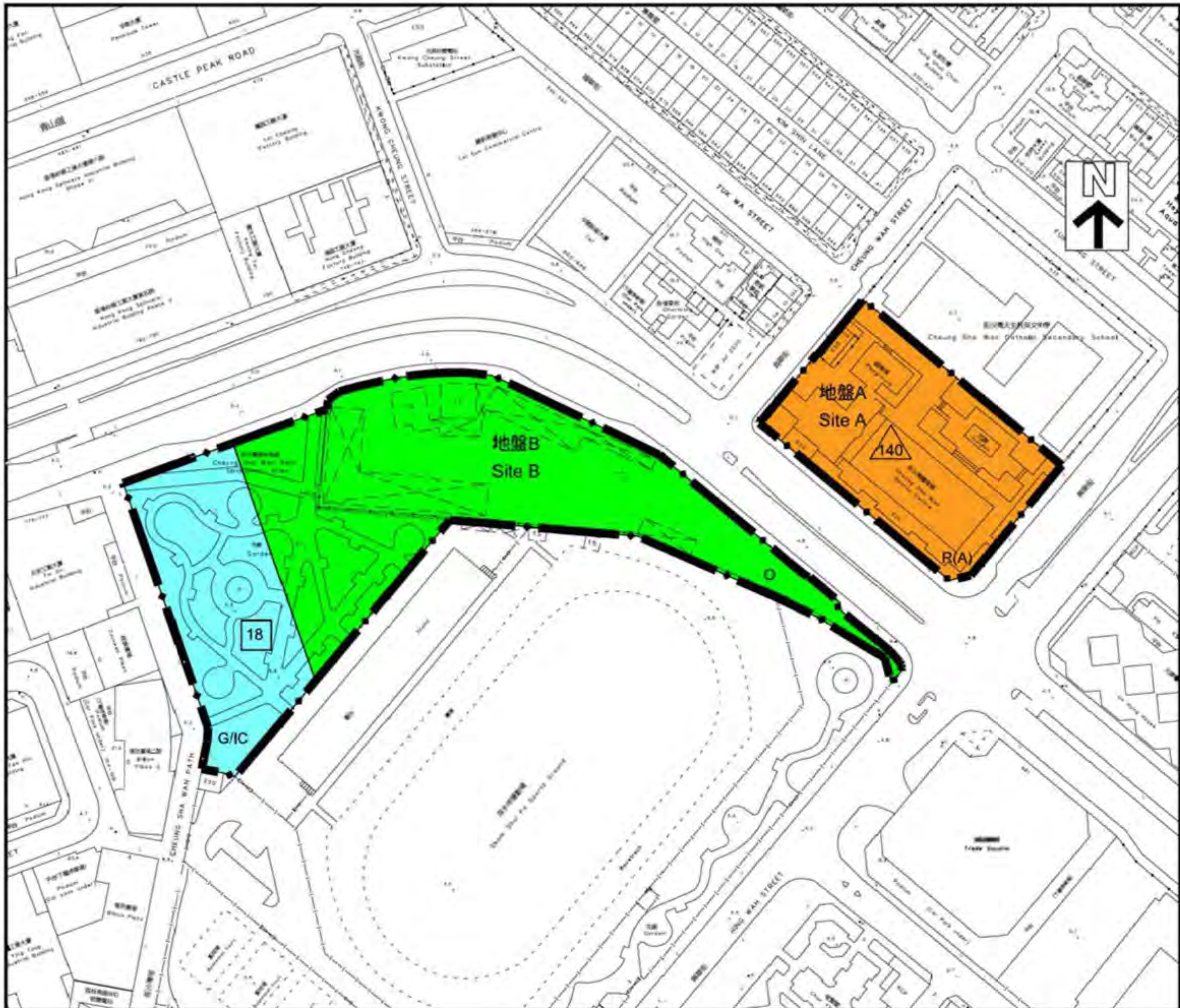
8. IMPLEMENTATION OF THE DEVELOPMENT SCHEME

8.1 The proposals set out in the Plan form an integral part of the Development Scheme for the Area.

8.2 The URA does not own or lease any land within the boundaries of the Scheme; both Sites A and B are currently owned by the Government. Close liaison on land matters and construction will be carried out with relevant Government departments upon DSP approval. The proposed GIC facilities within the Area and POS at Site B will be handed over to Government for future ownership, management and maintenance, subject to liaison with relevant Government departments.

8.3 The URA may implement the Development Scheme on its own or in association with one or more partners.

TOWN PLANNING BOARD
September 2021



圖例
NOTATION

BOUNDARY OF DEVELOPMENT SCHEME	■ ◆ ■	發展計劃範圍界線
RESIDENTIAL (GROUP A)	R(A)	住宅(甲類)
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
OPEN SPACE	O	休憩用地
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	140	最高建築物高度 (在主水平基準上若干米)
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)	18	最高建築物高度 (樓層數目)

夾附的<<註釋>>屬這份圖則的一部分

THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN

2021年　月　日城市規劃委員會根據市區重建局條例第25(6)(a)條認為適宜公布，並於2021年　月　日按照城市規劃條例第5條展示。

PLAN DEEMED SUITABLE BY THE TOWN PLANNING BOARD FOR PUBLICATION UNDER SECTION 25(6)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE ON 2021 AND EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE ON 2021.

SECRETARY, TOWN PLANNING BOARD 城市規劃委員會秘書

香港城市規劃委員會依據城市規劃條例擬備的市區重建局昌華街/長沙灣道發展計劃圖則

TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD URBAN RENEWAL AUTHORITY CHEUNG WAH STREET / CHEUNG SHA WAN ROAD DEVELOPMENT SCHEME PLAN

SCALE 1 : 1500 比例尺

米 METRES 15 0 15 30 45 60 75 METRES 米

依據市區重建局條例第25(3)(a)條擬備

PREPARED UNDER SECTION 25(3)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE

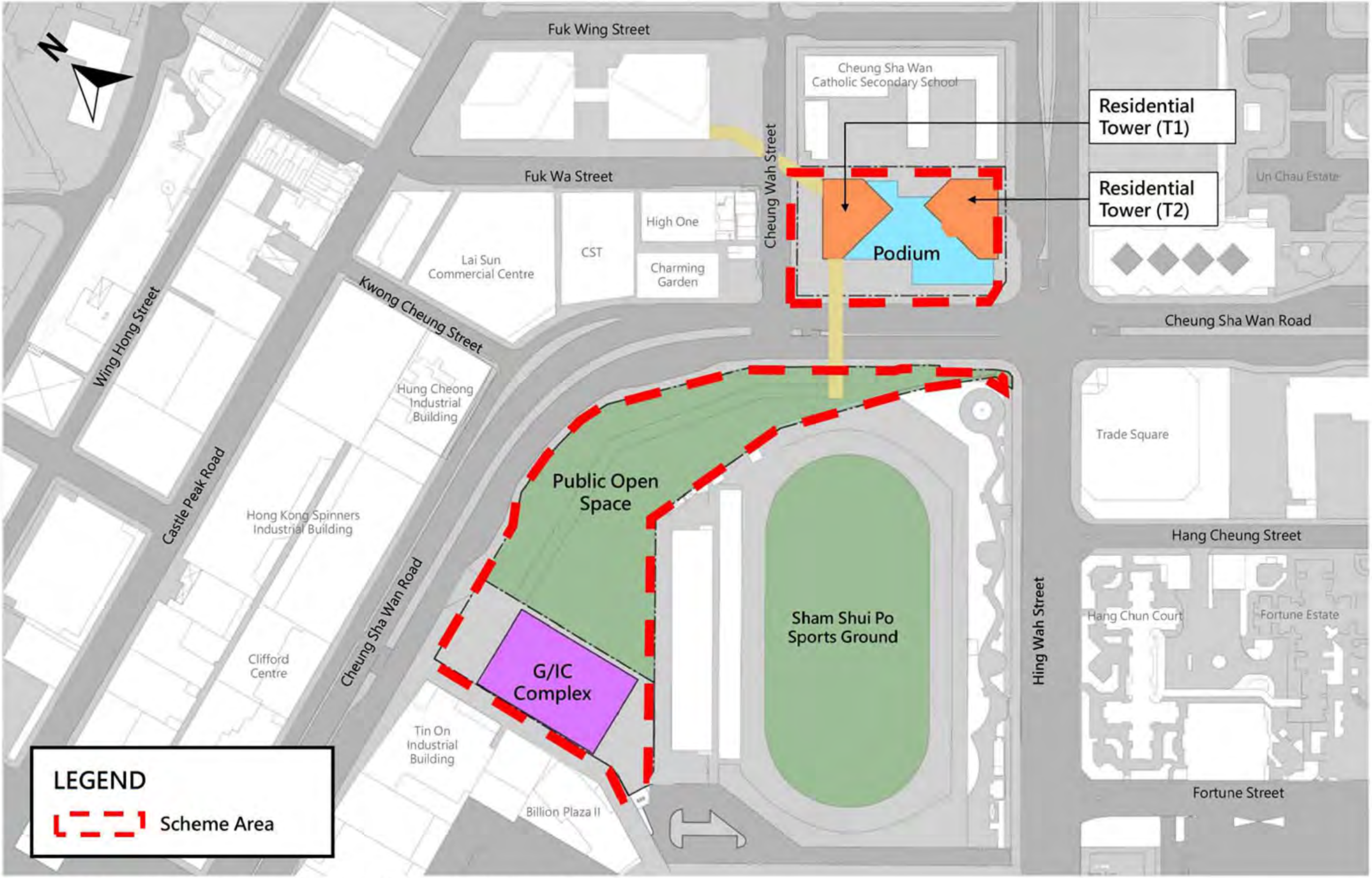
圖則編號 PLAN No. S/K5/URA3/A

PART 3

SUPPLEMENTARY INFORMATION

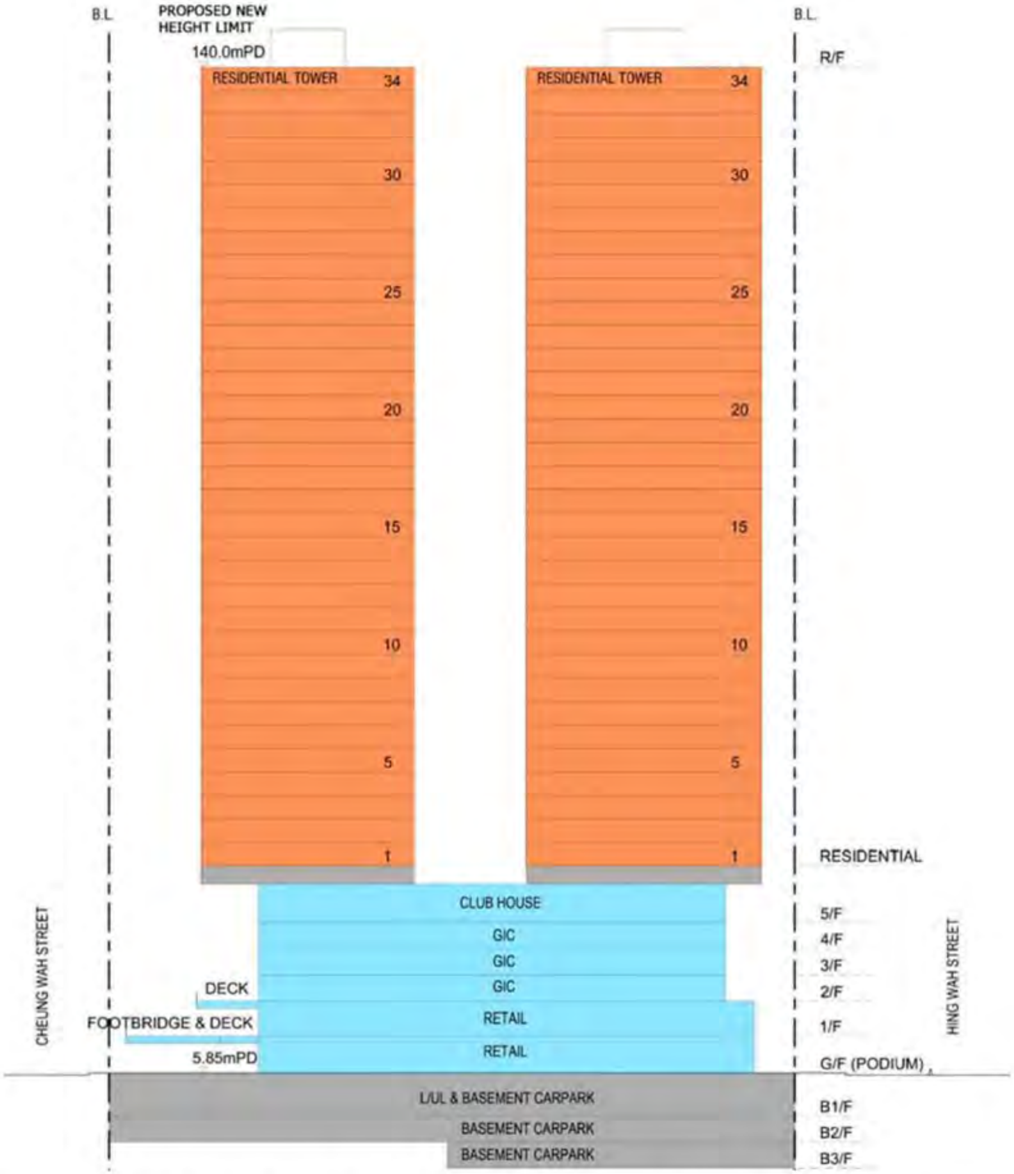
Appendix 1

Preliminary Design



(Remarks: For indicative purpose only. SSP-018 Notional layout subject to detailed design upon DSP approval.)

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)	Figure 1.1	Notional Design – Block Plan	Not drawn to scale Sep 2021

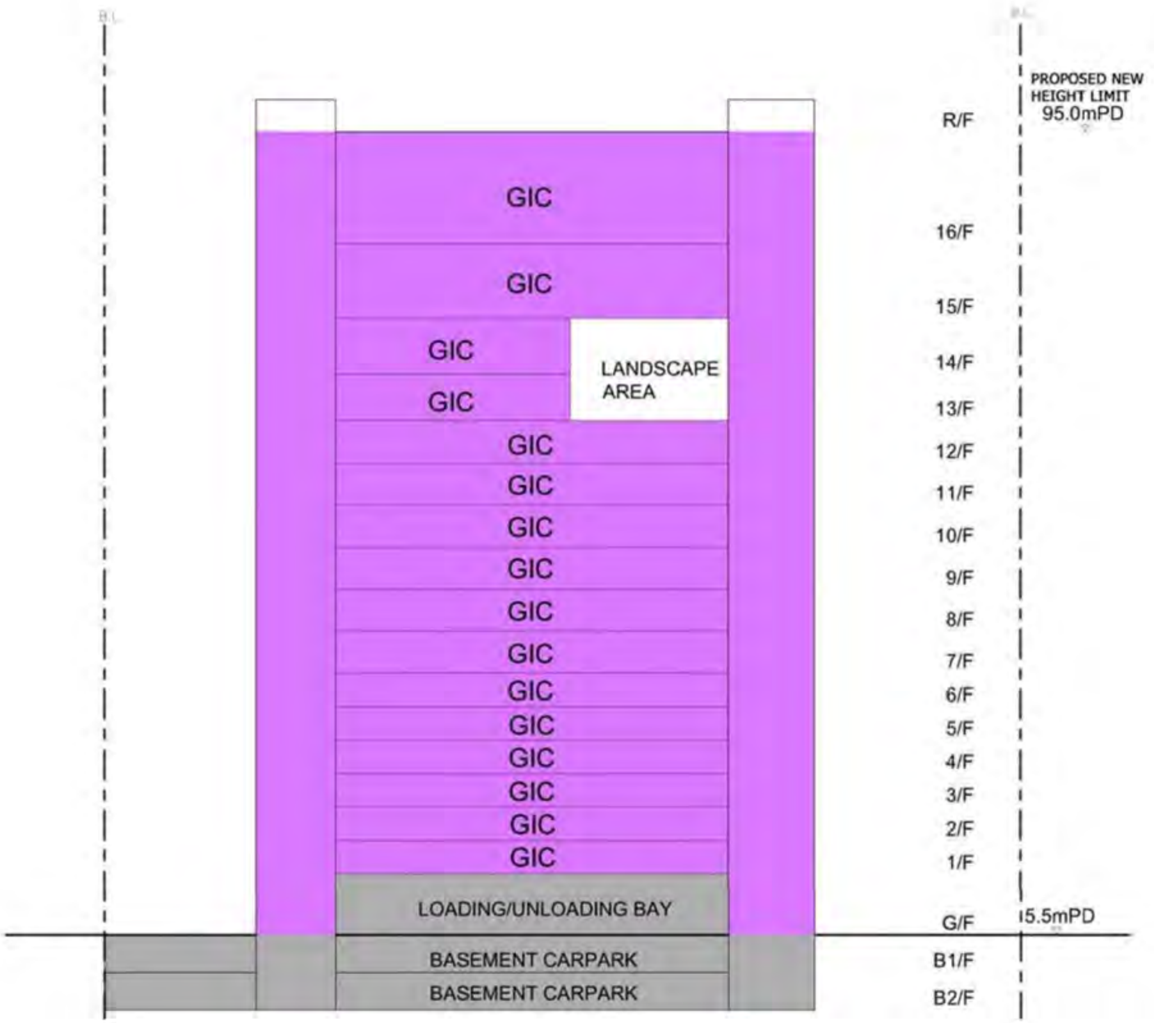


LEGEND

The Scheme

(Remarks: For indicative purpose only. SSP-018 Notional layout subject to detailed design upon DSP approval.)

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)	Figure 1.2	Notional Design – Schematic Section at Site A	Not drawn to scale Sep 2021



LEGEND

The Scheme

(Remarks: For indicative purpose only. SSP-018 Notional layout subject to detailed design upon DSP approval.)

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)	Figure 1.3	Notional Design – Schematic Section at Site B	Not drawn to scale Sep 2021

Appendix 2

Preliminary Landscape Design and Tree Survey Report

Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)

Preliminary Landscape Design and Tree Preservation Proposal

24th September 2021

Prepared By:

SCENIC Landscape Studio Limited

SCENIC 新境

Project Title	Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)
Report Title	**Preliminary Landscape Design and Tree Preservation Proposal**

Revision	**Date**	**Complied by:**	**Checked by:**	**Approved by:**	**Description**
-	20210802	Various	Fiona Yu	Chris Foot	Draft to Client
A	20210805	Various	Fiona Yu	Chris Foot	Draft to Client
B	20210827	Various	Fiona Yu	Chris Foot	Draft to Client
C	20210920	Various	Fiona Yu	Chris Foot	Draft to Client
D	20210924	Various	Fiona Yu	Chris Foot	Final to Client

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Tables

Annexes

1.0 Introduction

1.1 The Urban Renewal Authority (URA) has proposed Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO). SCENIC Landscape Studio Limited have been commissioned to prepare the Tree Preservation Proposal for a development scheme ("the Proposed Development") at Sham Shui Po ("the Application Site"). The Application Site comprises of site A and B, which fall within areas zoned Open Space (O), Government, Institution or Community (G/IC) and Road on the Approved Cheung Sha Wan (KPA 5) Outline Zoning Plan ("OZP") No. S/K5/37.

1.2 The Tree Preservation Proposal outlines the approach and findings of the tree survey and describes the type, number and condition of the existing trees found within the site. The proposal also identifies the trees found to be in conflict with the Proposed Development and makes recommendations for their proposed treatment and provides an indication of the number of new trees required to compensate for the loss of existing trees.

1.3 This tree preservation proposal has been prepared in broad accordance in broad accordance with DEVB TC(W) No. 4/2020 "Tree Preservation" and DEVB TC(W) No. 2/2020 'Tree Preservation and Tree Removal Application for Building Development in Private Projects'. The survey approach is presented as **Annex I – Tree Survey Methodology**.

1.4 The tree survey was undertaken in June 2021.

2.0 Existing Site Description

2.1 The Application Site (site A and site B) covers a total land area of 19,054m^2. Site A is a sitting out area southwest to Cheung Sha Wan Catholic Secondary School and is bounded by Cheung Sha Wan Street, Cheung Sha Wan Road and Hing Wah Street. Site B, situated opposite to site A along Cheung Sha Wan Road and at northwest to Sham Shui Po Sports Ground, consists of Cheung Sha Wan Path Sitting Out Area at the west and a temporary work site of HyD at the east. Tree and shrub plantings are found throughout site A, Cheung Sha Wan Path Sitting Out Area and along the edge of the temporary work site of site B.

3.0 Project Description

3.1 The Proposed Scheme in site A consists of a commercial and G/IC complex building with 2 residential towers with maximum building height of 134.95m. The proposed development provides 838 nos. of household units. Vehicular access will be located at eastern corner of the site where it meets Hing Wah Street.

3.2 A G/IC building not exceeding a building height of 90.5m is proposed at the western part of site B. Vehicular access will be located at northern and southern ends of the G/IC building to provide connections between Cheung Sha Wan Road and Sham Shui Po Sports Ground.

3.3 The Proposed Scheme will be landscaped to provide quality public open space for enjoyment and a landscape buffer along the periphery of the development to form an effective screen between the proposed development and the traffic. Footbridge connection between site A and site B across Cheung Sha Wan Road will be provided to enhance accessibility.

4.0 Existing Vegetation

4.1 A total of 294 nos. trees were identified within the Application Site boundary and immediately adjacent to it. As shown on **Annex II** – **Tree Location Plan** the tree growth is found within a series of areas both within and at the periphery of the Application Site Boundary.

4.2 The existing tree locations are illustrated on **Annex II – Tree Location Plan** and **Annex III - Tree Survey Schedule** provides an identification of numbers of tree species, an assessment of their condition and recommendations for the treatment of the trees and **Annex IV** – Tree Photographic Record provides a visual reference for the assessments.

4.3 **Table 4.1** below lists the tree species surveyed and their relative abundance and describes their conservation value (native or exotic).

Table 4.1 Existing Tree Species Summary

Botanical Name	Chinese Name	Overall No. of Trees within Survey Area	Native (N) Exotic (E)	Conservation Status in Hong Kong
Acacia confusa	台灣相思	3	E	Common
Ailanthus fordii	常綠臭椿	9	N	Common
Albizia lebbeck	大葉合歡	1	E	Common
Aleurites moluccana	石栗	73	E	Common
Araucaria heterophylla	異葉南洋杉	1	E	Common
Bauhinia variegata	宮粉羊蹄甲	1	E	Common
Bauhinia x blakeana	洋紫荊	1	N	Common
Bombax ceiba	木棉	7	E	Common
Callistemon viminalis	串錢柳	7	E	Common
Caryota mitis	短穗魚尾葵	2	E	Common
Caryota ochlandra	魚尾葵	3	E	Common
Celtis sinensis	朴樹	5	E	Common
Choerospondias axillaris	南酸棗	1	N	Common
Corymbia torelliana	毛葉桉	12	E	Common
Dypsis lutescens	散尾葵	1	E	Common
Elaeocarpus obtusus subsp. Apiculatus	長芒杜英	1	E	Common
Ficus benjamina	垂葉榕	20	E	Common
Ficus elastica	印度橡樹	2	E	Common
Ficus microcarpa	細葉榕	3	N	Common
Ficus virens	大葉榕	1	N	Common
Garcinia subelliptica	菲島福木	1	E	Common
Grevillea robusta	銀樺	2	E	Common
Jacaranda mimosifolia	藍花楹	1	E	Common
Juniperus chinensis `Kaizuca`	龍柏	11	E	Common
Lagerstroemia speciosa	大花紫薇	15	E	Common
Leucaena leucocephala	銀合歡	1	E	Common

Botanical Name	Chinese Name	Overall No. of Trees within Survey Area	Native (N) Exotic (E)	Conservation Status in Hong Kong
Litsea glutinosa	潺槁樹	1	N	Common
Livistona chinensis	蒲葵	14	E	Common
Macaranga tanarius var. tomentosa	血桐	12	N	Common
Melaleuca quinquenervia	白千層	5	E	Common
Melia azedarach	苦楝	18	E	Common
Michelia x alba	白蘭	1	E	Common
Morus alba	桑	2	N	Common
Murraya paniculata	九里香	1	E	Common
Phoenix roebelenii	日本葵	14	E	Common
Podocarpus macrophyllus	羅漢松	5	N	Common
Ravenala madagascariensis	旅人蕉	14	E	Common
Roystonea regia	大王椰子 (王棕)	9	E	Common
Senna siamea	鐵刀木	6	E	Common
Spathodea campanulata	火焰木	1	E	Common
Sterculia lanceolata	假蘋婆	1	N	Common
Syzygium jambos	蒲桃	3	E	Common
Terminalia catappa	欖仁樹	1	E	Common
Terminalia mantaly	小葉欖仁	1	E	Common
Dead trees		**0**		
Total		**294**		

4.4 The most numerous of the existing trees are *Aleurites moluccana* (73 nos.), *Ficus benjamina* (20 nos.) and *Melia azedarach* (18 nos.). Most of these trees exist along application boundary of site A, site B and at the periphery of Cheung Sha Wan Path Sitting-Out Area of Site B. Other species include *Corymbia torelliana, Lagerstroemia speciosa, Livistona chinensis* and *Phoenix roebelenii* etc. Other species identified are generally present in quantities of less than 10 nos. with no trees found dead within of the Application Site Boundary. The photographs in **Annex IV** clearly shows the condition of the surveyed existing trees.

4.5 The average trunk diameter at breast height (DBH) is 0.35m. The average tree height is 8.16m and the average crown spread is 4.16m.

4.6 A high percentage of trees exhibit a fair existing form and condition. This assessment and photographic record show that many of the trees are growing in close proximity to one another or structures resulting in leaning main stem and asymmetrical canopies. The table also shows a high percentage of trees surveyed have fair amenity value. This includes a large proportion of the trees which have a spindly, contorted and often leaning form with asymmetrical canopy growth due to their close proximity to one another and the competition for light. **Annex III - Tree Survey Schedule** provides further information of the form and condition of individual trees, indicating the range of characteristics observed.

4.7 Nine nos. specimen of *Ailanthus fordii* were identified by the survey. This species is protected under Forestry Regulations (Cap. 96. sub. leg.) It is also listed as "Near Threatened" in Rare and Precious Plants of Hong Kong (Status in China). However these specimens have been planted as part of the development of the existing open space rather than being naturally growing specimens; and so therefore not considered to be protected.

4.8 A number of specimens (15 nos) of *Lagerstroemia speciosa* were identified as part of the survey. *Lagerstroemia speciosa* are generally protected in Hong Kong under the Forestry Regulations (Cap. 96. sub. leg.) except for "plants grown outside Hong Kong or on any land held from the Government under a lease, licence or permit or by virtue of an Ordinance". Since all the recorded *Lagerstroemia speciosa* were found within landscaped areas it is likely that they have been planted as ornamental shrubs and therefore not protected under Cap. 96 and not considered as a floral species of conservation interest for this Project (Hong Kong Herbarium and South China Botanical Garden eds., 2007)

4.9 There are no trees within the Application Site registered as Old and Valuable Trees (DEVB TC(W) No. 5/2020 Registration of Old and Valuable Trees (OVT), and Guidelines for their Preservation). Two trees T143 and T203 are mature specimens with good value.

5.0 Recommendations

5.1 Of the 294 nos trees surveyed some 146 nos trees are recommended for retention in-situ/ transplantation. The proposed tree protection measures are indicated in **Annex VII - Tree Protection Measures**.

5.2 Approximately 31 nos trees are recommended for transplantation and a further 117 nos. for transplantation / felling as they are conflict with the proposed notional design of the Scheme. The locations of the trees to be transplanted / felled are shown in **Annex V – Tree Recommendation Plan**.

5.3 The feasibility of transplanting the affected trees has been reviewed. The affected trees will be transplanted as far as practicable subject to the agreement of relevant government departments. The permanent receptor sites for the transplanted trees shall be located, as far as possible, within the Application Site. If this is not possible offsite receptor sites shall be identified preferably within the same area so that the trees will continue to contribute to the landscape and visual amenity of the locale. If transplanting is found to be not feasible / appropriate at the detailed design stage, tree felling will be proposed and the loss of trees shall be compensated. **Table 5.1** provides a summary of the recommendations for the treatment of the existing trees.

Table 5.1 Summary of Tree Recommendations

Recommendation	Approximate Number of Trees	% Trees
Trees to be retained / transplanted	146	50%
Trees to be transplanted	31	10%
Trees to be transplanted / felled	117	40%
Total number of trees	**294**	

Note: The preliminary tree treatment proposal is not deemed to be final, subject to detailed design and government's agreement.

5.4 The recommendations for tree retention and felling are provided in **Annex III - Tree Survey Schedule** and their proposed status recorded on photographic Records of Existing Trees are presented as **Annex IV**. Their proposed status recorded on plans is presented on **Annex V – Tree Recommendation Plan**.

6.0 Preliminary New Tree Planting Proposal

6.1 The new tree planting proposals will be based on a compensatory ratio of 1:1 in number. These will be in compensation for the felled trees in the existing Cheung Sha Wan Road Sitting-out Area and Sham Shui Po Sports Ground. The new tree planting will utilise heavy standard trees (min 75mm DBH) with an approximate spacing of 5000 mm and will be planted within new residential Sites A and B and the new extension to the Sham Shui Po Sports Ground.

6.2 A summary of the preliminary new tree planting proposals is provided in **Table 6.2** below and shown in Annex VI - New Tree Planting Plan.

Table 6.2: Preliminary New Tree Planting Proposals

Botanical Name	Chinese Name	Native / Exotic	Tree Size
Tree Species			
Adenanthera microsperma	海紅豆	N	Heavy Standard
Ailanthus fordii	常綠臭椿	N	Heavy Standard
Bauhinia purpurea	紅花羊蹄甲	E	Heavy Standard
Bischofia javanica	秋楓	N	Heavy Standard
Bixa orellana	紅木	E	Heavy Standard
Libidibia ferrea	巴西鐵木	E	Heavy Standard
Chukrasia tabularis	麻楝	E	Heavy Standard
Cinnamomum camphora	樟	N	Heavy Standard
Cleistocalyx nervosum	水翁	N	Heavy Standard
Ehretia longiflora	長花厚殼樹	N	Heavy Standard
Elaeocarpus japonicus	日本杜英	N	Heavy Standard
Ficus subpisocarpa	筆管榕	N	Heavy Standard
Ficus virens	大葉榕	N	Heavy Standard
Garcinia subelliptica	菲島福木	E	Heavy Standard
Ilex rotunda var. microcarpa	小果鐵冬青	N	Heavy Standard
Jacaranda mimosifolia	藍花楹	E	Heavy Standard
Juniperus chinensis 'Kaizuka'	龍柏	E	Heavy Standard
Koelreuteria bipinnata	複羽葉欒樹	E	Heavy Standard
Liquidambar formosana	楓香	N	Heavy Standard
Machilus breviflora	短序潤楠	N	Heavy Standard
Plumeria rubra	雞蛋花	E	Heavy Standard
Polyspora axillaris	大頭茶	N	Heavy Standard
Pongamia pinnata	水黃皮	N	Heavy Standard
Pterocarpus indicus	紫檀	E	Heavy Standard
Radermachera hainanensis	海南菜豆樹	E	Heavy Standard
Tabebuia chrysantha	黃鐘木	E	Heavy Standard
Terminalia mantaly	小葉欖仁	E	Heavy Standard
Xanthostemon chrysanthus	金蒲桃	E	Heavy Standard

Note: The species selection above is based on the Greening Master Plan for the Sham Shui Po District. The final selection will evolve during the detailed design stage of the project and is subject to the agreement of relevant government departments.

7.0 Relevant Recognised Standards for Tree Preservation and Protection

7.1 The tree preservation, protection and transplanting proposals will be undertaken in accordance with the following:

- BS 3998: 2010 Recommendations for Tree Work;
- BS 4043: 1989 Recommendations for transplanting root-balled trees;
- BS 4428 1989 Code of practice for general landscape operations (excluding hard surfaces);
- BS 5837: 2012 Trees in relation to Construction;
- ArchSD General Specification, Section 25 (2017 edition); and
- Handbook on Tree Management prepared by the Greening, Landscape and Tree Management Section of Development Bureau (http://www.greening.gov.hk/en/tree_care/Handbook_on_Tree_Management.html)

8.0 Conclusion

8.1 The Application Site contains some 294 nos. specimens, largely comprising of common tree species with a small number of common native species.

8.2 Some specimens of *Ailanthus fordii* and *Lagerstroemia speciosa* were identified and whilst these species are normally protected under Cap. 96 both were planted as part of the development of the existing open space rather than being naturally growing specimens and are therefore not protected.

8.3 There are no trees within the Application Site registered as Old and Valuable Trees (DEVB TC (W) No. 5/2020 Registration of Old and Valuable Trees (OVT), and Guidelines for their Preservation). Two trees T143 and T203 are mature specimens with good value.

8.4 Based on the proposed notional architectural layout, approximately 146 nos. of trees are recommended for retention in-situ/ transplantation, 31 nos. of tree are recommended for transplantation and a further 117 nos. for transplantation / felling.

8.5 Should any of the trees be felled the new tree planting proposals will be based on a compensatory ratio of 1:1 in number, using heavy standard trees (min 75mm DBH) Both the new (compensatory) trees and transplanted trees shall be planted within residential Sites A and B and the new extension to the Sham Shui Po Sports Ground as far as practicable. As a whole, the proposed tree preservation and removal proposal shall meet the minimum requirements for compensatory planting as stipulated in DEVB TC(W) No. 5/2020.

Annexes

Annex I
Tree Survey Methodology

Tree Survey Methodology

1.0 Tree Survey

1.1 Definitions

1.1.1 Scope of Survey: To survey all 'trees' within the Application Site Boundary and the intermediate adjacent area where trees are possibly be affected by proposed road widening works.

1.1.2 Tree: A woody plant with a stem diameter over 95mm measured at a point 1300mm above the root collar (DBH).

1.1.3 DBH: Diameter at Breast Height as defined in the Practice Note Issue No. 2/2006 issued by AFCD.

1.2 Site Survey

1.2.1 The tree locations were recorded by visual assessment and subject to verification by topographic surveyor. Measurements of tree size (DBH, Height and Crown Spread) were primarily measured by Tree Surveyor. Photographs to show the whole tree, tree trunk, tree base are taken for each tree during the tree assessment survey. Topographic plans are attached in Annex VI for reference.

1.3 Basic Tree Information in Tree Survey Schedule

1.3.1 The tree survey schedule includes the following information for each tree or group of trees surveyed:

1.3.2 **Tree Number** - Each tree is allocated a tree number and clearly marked on site with an identity label showing the tree number and its position plotted on topographic Tree Location Plan(s) (Annex III). The numbering is to follow a logical sequence in numerical order say from north to south.

1.3.3 **Species Name (Botanical Name)** - All trees are identified by species, or in some cases by genus if full identification is not possible. Species names currently adopted by AFCD take precedence over other scientific publications.

1.3.4 **Jurisdiction** - Authority providing expert advice in vetting of Tree Removal Application for particular trees.

1.3.5 **Tree Dimensions** - The following dimensions are to be recorded for each tree:

- Overall **Height** (in metres);
- **Trunk DBH** (in metres / millimetres; refer to schedule);
- Overall **Crown Spread** (in metres);
- **Height at the base of the tree**: In metres above principal datum (mPD); and
- **Location:** On a slope or flat ground

1.3.6 Measurements of tree dimension and location are recorded by topographical surveyor

1.4 Photographic Record

1.4.1 Photographs to show the whole tree, tree trunk, tree base are taken for each tree during the tree assessment survey. Four photographs per A4 sheet.

1.5 Tree Health and Condition

1.5.1 Factors considered include both functional health and structural stability, which is evaluated with reference to the following criteria:

Foliage Condition
- Insect and fungal infections. Colour and small size indicating possible damage to roots;
- Crown density and foliage colour in consideration of normal species performance, seasonal and climatic effect;
- Evidence of insect, bacterial or fungal infections;
- Mechanical damage (e.g. typhoons, insect consumption and vandalism).

Branch Condition
- Poor shoot growth and die-back in the crown are often symptoms of root problems caused by a change in the water table level or soil compaction resulting from site development work.
- Dead or crossing branches.
- Heavy horizontal branches [which] may make the tree unstable" (Ref. R.Webb).
- The presence of broken damaged or cut branches to be noted as a possible site for infections, calluses may protect the wounds.
- Damaged branches which make the tree unbalanced or unstable;
- Location of decay and/or voids in the branches.
- Whether the tree is "an edge tree exposed as a result of the removal of adjacent trees [which] often has an unbalanced crown and may be hazardous" (Ref R.Webb).

Trunk Condition
- Tightly forked trunks which may be a source of weakness in the tree and in high winds can be torn apart.
- Inspect for "cavities or internal rot [which] can be revealed by discoloured bark, moisture seeping through the bark or bracket fungi" (Ref R.Webb).
- Co-dominant stems with included bark.
- Open cavities, cracks and bark damage.

Root Condition
- Damaged surficial roots.
- Ground heave evident in cracks in the soil around root zone.
- Branch die-back.

Miscellaneous
- Occurrence of aggressive climbers or parasitic plants.
- Asymmetrical crowns and leaning due to intense competition between adjacent trees.
- Tangled branches or roots.
- Adjacency of underground structures.

1.5.2 Ratings for tree health and condition:

Definition
G Trees with a low incidence of less serious defects are graded as good;
F Trees with a higher incidence of less serious defects are graded as fair;
P Trees with more serious defects are graded as poor; or
D Trees that are dead or irretrievably unhealthy are graded as dead.

1.6 Tree Form

1.6.1 Assessment of tree form following inspections are classified as follows with reference to the overall tree size, shape and any special features:

G	**Good** - trees with well-balanced form, upright, evenly branching, well-formed head and generally in accordance with the standard form for its species
F	**Fair** - Trees with less balanced crowns which are mildly distorted due to competition with neighbouring trees or structures, or which have suffered minor damage or which have leaning trunks for example are graded as average
P	**Poor** - trees with very unbalanced form, distorted crowns, severely leaning, suffering loss of major branches with general damage; unstable and growing close to adjacent trees.

1.6.2 Terms used to describe tree form:

- Forked: a tree with a division in the main stem or having major branches that divide near ground level.
- Topped: a tree that has had its main trunk severed drastically reducing and distorting its crown development.
- Multi-stem: a tree with more than one main stem or trunk

1.7 Tree Condition

1.7.1 Assessment of tree health and condition involves inspections for the above features and classification as follows:

G	**Good** - trees with a low incidence of the less serious features listed above and a high chance of a fast recovery from such features.
F	**Fair** - trees with a higher incidence of the less serious features and a medium chance of recovery.
P	**Poor** - trees with more serious health features and with a low chance of recovery, even with remedial measures.
D	**Dead** - no signs of life or irretrievably unhealthy

1.8 Amenity Value

1.8.1 Amenity value is graded as "Excellent", "Good", "Fair" or "Poor". The grading indicates the following qualities in trees or groups of trees:

Excellent	Important trees where species may be of fung shui significance which should be retained by adjusting the design layout accordingly

Good	Common species and good health, good condition and good form.
Fair	Common species and average health, average condition and average form.
Poor	Common species and little or no functional or visual value and poor health, poor condition and poor form.

1.9 Structural Condition

1.9.1 Assessment of tree structural condition involves inspections for the overall tree structural system features and classification as follows:

G	**Good** - trees with good structural system and robust form with low risk of structural failure.
F	**Fair** - trees with overall robust structure despite some minor structural problems and risk of structural failure is medium.
P	**Poor** - trees with more serious structural problem and with high risk of structural failure.

1.10 Suitability for Transplanting

1.10.1 This assessment is based on the health of the tree and the practicalities of transplantation. Some species are much more tolerant of the stress of transplantation than others. The assessment of the survival rate of a species after transplantation is based on the observed performance of that species in previous transplantation programmes. Species with insufficient transplantation data are assumed to have a low survival rate. Grading are given as follows:

High - very likely to survive transplantation;
Medium - likely to survive transplantation;
Low - unlikely to survive due to poor health/species/form or difficult to transplant.

1.11 Conservation Status

1.11.1 Assessment of conservation status indicates rarity and protection status under relevant ordinances of a species in Hong Kong. References such as Rare and Precious Plants of Hong Kong, the IUCN Red List of Threatened Species and the Forests and Countryside Ordinance (Cap. 96) may be used.). The categories include very common, common, rare, rare and protected.

1.12 Remarks

1.12.1 Notes will be made about the condition of the tree including any defects, whether it is leaning or not, asymmetrical canopies, the presence of cavities, tree form issues such as forked main stem, included bark, decay, growth of sprouts; and/or growth of climbers. The schedule shall also record any trees with high conservation values such as rare or protected species, old and valuable trees etc.

2.0 Effects of the Development on Existing Trees

2.1 Treatment of Trees

2.1.1 First priority to retain trees and then if this is not possible transplant trees to new location. Trees in direct conflict with proposals which are necessary to be felled shall be confirmed on site by the Architect's / Engineer's Representative. Existing trees to be retained will be protected during construction.

2.2 Assessment

2.2.1 The assessment leading to the recommendation for the treatment of the tree is based on the following:

Retain

2.2.2 The preferred option for all trees is to be retained in-situ unless they pose a threat to the public or the trees are nuisance species (e.g. *Leucaena leucocephala*). In case a tree group processes significant value in the landscape or to the ecosystem, it should be retained as a whole even when the individual components are not outstanding aesthetically.

2.2.3 The feasibility of retaining trees has been considered with regard to the following:

- Potential damage to trees as a result of proximity to the works.
- Changes to ground level on a macro scale which affects the ground water table and may cause severe stress.
- Special constructions to maintain the existing ground level are also considered.
- Conflict between tree roots and the proposed works.

Transplant

Statutory Guidelines

2.2.4 The recommendation of Transplanting makes reference to paragraph 7[b] of the DEVB TC(W) No.4/2020 which states '…transplant the affected tree(s) to other permanent locations within the project site or the maintenance area to minimise the loss of vegetation in the local environs'. This should be considered as far as possible unless the trees affected are of low conservation and amenity value, or have a low chance of surviving or recovering to its normal form after transplanting'.

2.2.5 In situations where it is impossible to retain trees then transplanting them is the first consideration. The criteria upon which the assessment of transplanting trees is based includes the following:

- **Variety of species**, rare Hong Kong species are particularly important.
- **Condition of the tree**, especially trees with balanced form, in good health and with high amenity value.
- **Size and maturity**, small and younger trees have a better chance of surviving transplanting while larger, mature trees are difficult to transplant both logistically and in terms of survival rate.
- **Species**, different tree species have differing rates of survival and are better suited to transplanting than others.

- **Access**, large machinery may be required to lift the trees, steep slopes and rocky terrain therefore make it difficult to access trees.

2.2.6 A recommendation to transplant a tree will be made only when:

- It is impossible to retain the tree in-situ due to the unavoidable proximity of proposed retaining walls, viaducts, roads or other structures, including their foundations, which pose major conflicts with its branches, root system or the tree in its entirety.
- It is impossible to retain the tree in-situ due to changes to surrounding ground levels on a macro scale which affect the ground water table thereby severely stressing the tree or where large areas of proposed cut and fill unavoidably affect the tree.
- Transplantation of the tree is feasible and is positive to the landscape and environment for the public.
- The Overall Value of the tree justifies transplanting.

Fell

Statutory Guidelines

2.2.7 The recommendation of Felling makes reference to paragraph 9 of the DEVB TC(W) No. 4/2020 which states '...Tree removal arising from government projects shall only be considered and approved under the following circumstances -

(a) preservation or transplanting is unsuitable or impracticable;
(b) the tree has been irreparably damaged by inclement weather;
(c) dead tree(s); or
(d) any other justifications or circumstances'

2.2.8 Expanding on this the following shall also be considered:

- Tees in direct conflict with the proposals; changes of level etc., trees which cannot be transplanted
- There is no practical alternative and the tree to be felled is neither included in the Register of Old and Valuable Trees under DEVB TCW No. 05/2020 nor potentially eligible to be registered as such.
- The tree has an unrecoverable health problem and is in poor condition;
- The tree has a low amenity value;
- Dead, damaged, hazardous or trees with contagious diseases are also proposed to be felled or
- Trees which are unsuitable for the proposed development. For example poisonous species within a public open space;
- Woodland trees which have had adjacent trees removed and have an unbalanced form or which are at risk of being blown over due to loss of supporting trees are considered for felling; or
- Other justifications provided by the project proponent.

2.2.9 Where it is possible neither to retain trees in-situ nor transplant them to other permanent locations within the site or off-site, felling is recommended. The felling of a tree must be justified by the following criteria:

- No irreplaceable, rare or protected species (under Forestry Regulation Cap.96) is felled.
- The felling would not cause a serious loss of species diversity in the subject area.
- A genuine development or traffic need exists, which cannot be reasonably overcome.
- Adequate compensatory tree planting is to be implemented, or replacement with a new nursery grown specimen of the same species and comparable size is deemed more cost effective than transplanting, particularly in the case of common pioneer or cultivated species

(e.g. *Acacia confusa*).

- The tree is not an unusually large or fine example of its species.
- The tree has a low amenity value, poor health, and structure or form;
- The tree is in poor condition or is unsuitable for transplanting due to its low survival potential.
- The tree is not in the list of Champion Trees (Ref: Jim, C.Y. 1994. Champion Trees in Urban Hong Kong. Urban Council, Hong Kong) nor Unusual Trees (Ref: AFCD's Register of Unusual Trees in Rural Areas), nor registered Old and Valuable Tree.
- The tree is neither a significant landmark tree nor of special fung shui or cultural significance.
- Existing site conditions are such that transplantation would be hazardous to the public.
- The tree is dead, hazardous or diseased.
- A tree that has been rendered unstable because of the removal of neighbouring trees may be considered for felling.
- The tree possesses invasive habits. According to DEVB TC(W) No. 4/2020 section 8 (e) this includes *Leucaena leucocephala* is identified as an undesirable species with aggressive growth characteristics which prevent natural succession of indigenous species and so is not controlled by the same preservation requirements as other more valuable tree species. Therefore, this weed species should be replaced with native tree species.

2.3 Tree Photography

2.3.1 With respect to the objectives of photo recording and the possible function of the photographs, shot of each tree follows the standards set out below:

- Where practical (within reasonable distance and within a safe location), the whole form of an individual tree will be shown;
- Where obstacle(s) are present (e.g. structures, other trees / nearby vegetation, dense climbers covering, etc.), the main tree trunk(s) from the base level to at least 3m in height will be shown;
- Picture to show the full extent of the canopy (may include more than one shot) and the base of the tree including the adjacent ground conditions;
- Where special feature(s) at the trunk base present (e.g. exposed roots, special rooting medium, etc.), the photo shot of a tree is taken from the location where such feature as well as the largest possible part of the tree can be displayed.

2.4 References

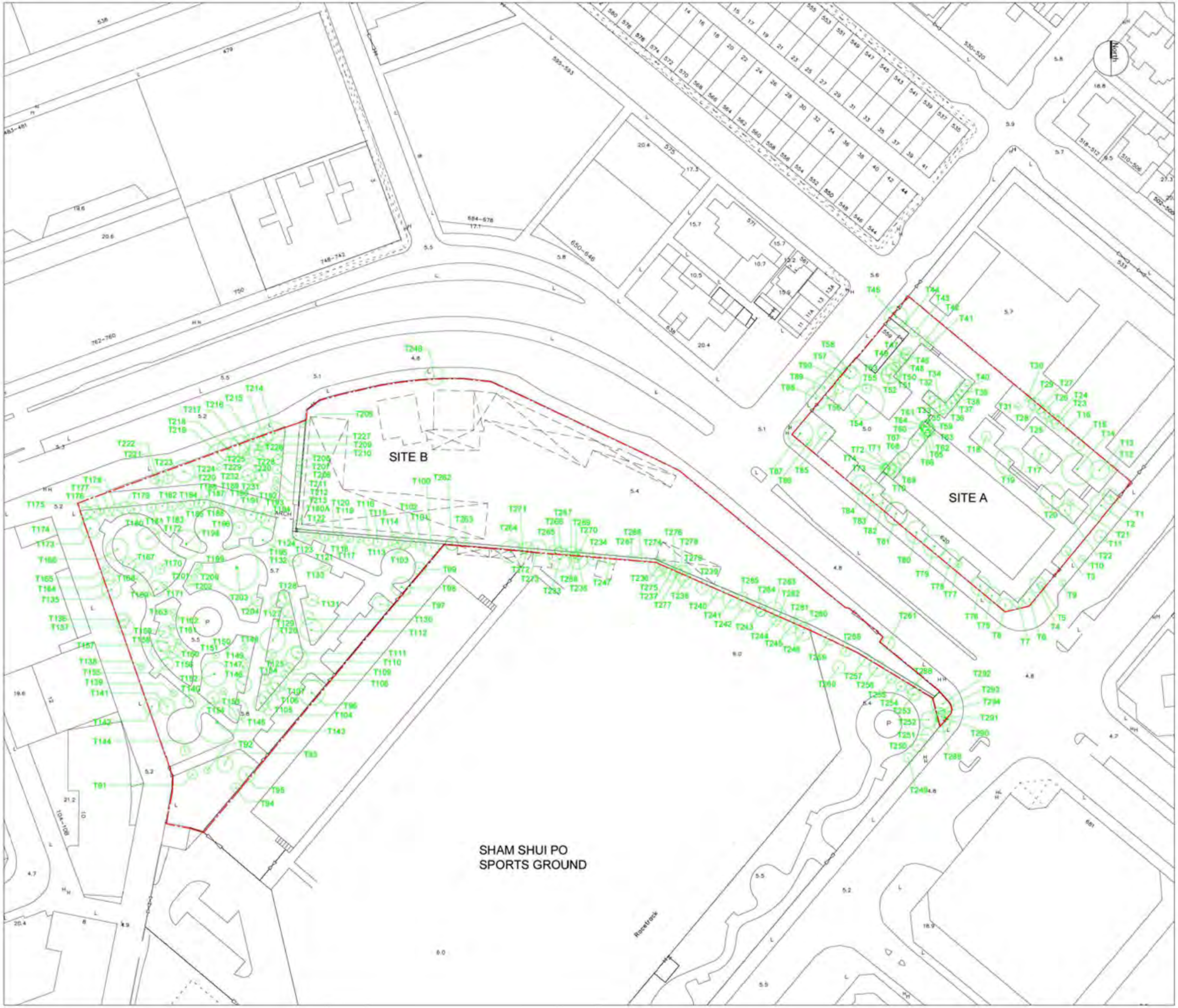
Ordinances, Circulars and Practice Notes

- Chapter 96. Forest and Countryside Ordinance;
- Chapter 586. Protection of Endangered Species of Animals and Plants Ordinance;
- DEVB TC(W) No. 05/2020, Registration of Old and Valuable Trees, and Guidelines for their Preservation;
- DEVB TC(W) No. 04/2020, Tree Preservation;
- DEVB TC(W) No. 2/2020 Tree Preservation and Tree Removal Application for Building Development in Private Projects;
- AFCD Conservation Practice Note No. 2, Measurement of Diameter at Breast Height (DBH); and
- AFCD Conservation Practice Note No. 3, The Use of Plant Names.

Publications

- HU, Q. et al (2003) Rare and Precious Plants of Hong Kong. AFCD, Hong Kong;
- Leisure and Culture Services Department. Register of Old and Valuable Trees. Website: http://ovt.lcsd.gov.hk/ovt/
- Webb, R. (1991). Tree Planting and Maintenance in Hong Kong. Standing Interdepartmental Landscape Technical Group, Hong Kong Government, Hong Kong.

Annex II
Tree Location Plan



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Legend

APPLICATION SITE BOUNDARY

EXISTING LEVEL

EXISTING TREE

General notes

Rev.	Date	Description	Inital
Revision			

	Name:	Signed:	Date:
Designed by:	CJF		
Drawn by:	FY		
Checked by:	CJF		
Approved by:	JBC		

Project Title:

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)

Drawing Title:

TREE LOCATION PLAN

Drawing Number:		Revision:
URAP005-TL001		-
Project Number:	Scale:	Date:
URAP005	1:550@A1	15/06/2021

Annex III
Tree Survey Schedule

Tree Survey Schedule

Address: Sham Shui Po
Prepared by a Certified Arborist (Ray Luk)
Field Survey conducted on [05/06/2021]
To be read in conjunction with drawing number: URAP005- TL001

Tree No.	Photo No.	Botanical Name	Chinese Name	Jurisdiction (AFCD, HyD, LCSD/RGD)	Survey Size			Form			Health Condition				Structural Condition			Amenity Value				Suitability for Transplanting			Conservation Status	Proposed Treatment			Within Site	Justification	Remarks
					DBH (m)	Height (m)	Spread (m)	G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L		Retain / Trans	Trans	Trans / Fell			
T1	T01	*Acacia confusa*	台灣相思	LCSD	0.570	13	5			1		1				1				1				1	common			1	1	B/C/D/F	Significant pruning in the past
T2	T02	*Acacia confusa*	台灣相思	LCSD	0.830	13	7		1			1				1				1				1	common			1	1	B/C/D/F	Asymmetric crown; leaning
T3	T03	*Ficus benjamina*	垂葉榕	LCSD	0.290	5	3		1			1				1				1			1		common			1	1	B/F	Major pruning and decay
T4	T04	*Aleurites moluccana*	石栗	LCSD	0.510	8	5		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; Cavity on trunk; Wound on branch
T5	T05	*Ficus benjamina*	垂葉榕	LCSD	0.100	2	2		1			1				1				1			1		common	1			1	N/A	N/A
T6	T06	*Aleurites moluccana*	石栗	LCSD	0.480	8	4		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T7	T07	*Aleurites moluccana*	石栗	LCSD	0.460	8	3		1			1				1				1				1	common	1			1	N/A	N/A
T8	T08	*Aleurites moluccana*	石栗	LCSD	0.400	6	4		1			1				1				1				1	common	1			1	N/A	Cavity on trunk; Exposed roots
T9	T09	*Bombax ceiba*	木棉	LCSD	0.300	5	4		1			1				1				1			1		common	1				N/A	Deformed canopy
T10	T10	*Sterculia lanceolata*	假蘋婆	LCSD	0.160	5	2		1			1			1					1			1		common	1				N/A	N/A
T11	T11	*Bombax ceiba*	木棉	LCSD	0.300	7	4		1			1				1				1				1	common			1		C/D/F	Leaning, contorted form; canopy damaged
T12	T12	*Grevillea robusta*	銀樺	LCSD	0.120	3	2		1			1				1				1				1	common			1	1	C/D	N/A
T13	T13	*Ficus benjamina*	垂葉榕	LCSD	0.680	10	6		1			1				1				1				1	common			1	1	C/D/F	Co-dominant trunks
T14	T14	*Ficus benjamina*	垂葉榕	LCSD	0.910	14	10		1			1				1				1				1	common		1		1	B/C/D/F	Multiple trunks; Stub
T15	T15	*Murraya paniculata*	九里香	LCSD	0.200	3	4			1		1				1				1			1		common			1	1	C/D/F	Mature specimen; trunk stub
T16	T16	*Podocarpus macrophyllus*	羅漢松	LCSD	0.130	4	1		1			1				1				1				1	common			1	1	C/D/F	N/A
T17	T17	*Caryota mitis*	短穗魚尾葵	LCSD	0.110	6	5		1			1				1				1			1		common			1	1	C/D/F	N/A
T18	T18	*Livistona chinensis*	蒲葵	LCSD	0.490	17	3		1			1			1					1				1	common			1	1	C/D/F	N/A
T19	T19	*Ficus microcarpa*	細葉榕	LCSD	1.160	19	9		1			1				1				1				1	common			1	1	C/D	Co-dominant trunks
T20	T20	*Michelia x alba*	白蘭	LCSD	0.710	21	8		1			1				1				1				1	common			1	1	B/C/D/F	Co-dominant trunks; leaning; pruning wound healed
T21	T21	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.110	4	2		1			1				1				1			1		common			1	1	B/C/D/F	Mature specimen
T22	T22	*Dypsis lutescens*	散尾葵	LCSD	0.110	5	4		1			1				1				1			1		common			1	1	B/C/D/F	N/A
T23	T23	*Podocarpus macrophyllus*	羅漢松	LCSD	0.160	7	4		1			1				1				1				1	common			1	1	C/D/F	N/A
T24	T24	*Acacia confusa*	台灣相思	LCSD	0.270	7	3		1			1				1				1				1	common			1	1	C/D/F	Co-dominant trunks; Included bark
T25	T25	*Podocarpus macrophyllus*	羅漢松	LCSD	0.210	5	3		1			1				1				1				1	common			1	1	C/D/F	N/A
T26	T26	*Ficus benjamina*	垂葉榕	LCSD	0.100	5	4		1			1				1				1				1	common			1	1	C/D/F	Co-dominant trunks
T27	T27	*Podocarpus macrophyllus*	羅漢松	LCSD	0.170	7	3		1			1				1				1				1	common			1	1	C/D/F	N/A
T28	T28	*Ficus benjamina*	垂葉榕	LCSD	0.150	6	4		1			1				1				1				1	common			1	1	C/D/F	N/A
T29	T29	*Podocarpus macrophyllus*	羅漢松	LCSD	0.140	4	2		1			1				1				1				1	common			1	1	C/D/F	N/A
T30	T30	*Ficus benjamina*	垂葉榕	LCSD	0.110	4	2		1			1				1				1				1	common			1	1	C/D/F	N/A
T31	T31	*Garcinia subelliptica*	菲島福木	LCSD	0.200	5	2		1			1				1				1			1		common		1		1	C/D/F	N/A
T32	T32	*Livistona chinensis*	蒲葵	LCSD	0.250	5	4		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T33	T33	*Livistona chinensis*	蒲葵	LCSD	0.170	7	4		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T34	T34	*Livistona chinensis*	蒲葵	LCSD	0.250	7	5		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T35	T35	*Livistona chinensis*	蒲葵	LCSD	0.240	4	3		1			1			1					1				1	common			1	1	B/C/D/F	Leaning
T36	T36	*Livistona chinensis*	蒲葵	LCSD	0.260	7	4		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T37	T37	*Livistona chinensis*	蒲葵	LCSD	0.250	6	3		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T38	T38	*Livistona chinensis*	蒲葵	LCSD	0.250	4	3		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T39	T39	*Livistona chinensis*	蒲葵	LCSD	0.240	7	4		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T40	T40	*Livistona chinensis*	蒲葵	LCSD	0.210	7	4		1			1			1					1				1	common			1	1	B/C/D/F	Leaning
T41	T41	*Livistona chinensis*	蒲葵	LCSD	0.240	4	3		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T42	T42	*Livistona chinensis*	蒲葵	LCSD	0.220	4	3		1			1			1					1				1	common		1		1	B/C/D/F	N/A
T43	T43	*Callistemon viminalis*	串錢柳	LCSD	0.150	4	3			1		1				1				1				1	common			1	1	C/D/F	Severe leaning

Tree No.	Photo No.	Botanical Name	Chinese Name	Jurisdiction (AFCD, HyD, LCSD/RGD)	Survey Site			Form			Health Condition				Structural Condition			Amenity Value				Suitability for Transplanting			Conservation Status	Proposed Treatment			Within Site	Justification	Remarks
					DBH (m)	Height (m)	Spread (m)	G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L		Retain / Trans	Trans	Trans / Fell			
T44	T44	*Callistemon viminalis*	串錢柳	LCSD	0.110	3	2		1			1				1				1				1	common			1	1	C/D/F	Leaning
T45	T45	*Aleurites moluccana*	石栗	LCSD	0.590	11	7		1			1			1					1				1	common			1	1	C/D/F	Restricted roots
T46	T46	*Ailanthus fordii*	常綠臭椿	LCSD	0.480	12	4		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Protected under Cap. 96
T47	T47	*Ailanthus fordii*	常綠臭椿	LCSD	0.330	9	3		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Protected under Cap. 96
T48	T48	*Ailanthus fordii*	常綠臭椿	LCSD	0.350	7	3		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Protected under Cap. 96
T49	T49	*Ailanthus fordii*	常綠臭椿	LCSD	0.480	17	4		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Protected under Cap. 96
T50	T50	*Ailanthus fordii*	常綠臭椿	LCSD	0.650	17	8		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Protected under Cap. 96
T51	T51	*Ailanthus fordii*	常綠臭椿	LCSD	0.310	8	5		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Protected under Cap. 96
T52	T52	*Ailanthus fordii*	常綠臭椿	LCSD	0.460	17	6		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Co-dominant branches; protected under Cap. 96
T53	T53	*Ailanthus fordii*	常綠臭椿	LCSD	0.370	14	5		1			1				1				1				1	near threatened			1	1	B/C/D/E/F	Protected under Cap. 96
T54	T54	*Ficus benjamina*	垂葉榕	LCSD	1.240	14	16		1			1			1				1					1	common		1		1	B/C/D/E/F	Wound on trunk; Co-dominant branches
T55	T55	*Caryota ochlandra*	魚尾葵	LCSD	0.100	4	3		1			1				1				1			1		common			1	1	B/C/D/E/F	Large specimen; pruning wound for primary branch
T56	T56	*Callistemon viminalis*	串錢柳	LCSD	0.140	7	3			1		1					1			1				1	common			1	1	B/C/D/F	Cracks on trunk base; Leaning; Uprooted
T57	T57	*Syzygium jambos*	蒲桃	LCSD	0.360	13	7			1		1				1				1				1	common			1		C/D/E/F	Bending trunk; Cavity on trunk; Leaning; Exposed roots
T58	T58	*Syzygium jambos*	蒲桃	LCSD	0.380	8	4			1		1					1			1				1	common			1	1	C/D/E/F	Dead wood on trunk; Leaning; Exposed roots
T59	T59	*Ravenala madagascariensis*	旅人蕉	LCSD	0.180	9	4		1			1			1					1				1	common			1	1	C/D/E/F	N/A
T60	T60	*Ravenala madagascariensis*	旅人蕉	LCSD	0.310	8	4		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T61	T61	*Ravenala madagascariensis*	旅人蕉	LCSD	0.250	6	3		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T62	T62	*Ravenala madagascariensis*	旅人蕉	LCSD	0.250	5	4		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T63	T63	*Ravenala madagascariensis*	旅人蕉	LCSD	0.210	6	4		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T64	T64	*Ravenala madagascariensis*	旅人蕉	LCSD	0.290	6	3		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T65	T65	*Ravenala madagascariensis*	旅人蕉	LCSD	0.280	6	3		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T66	T66	*Ravenala madagascariensis*	旅人蕉	LCSD	0.230	6	3		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T67	T67	*Livistona chinensis*	蒲葵	LCSD	0.280	8	4		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T68	T68	*Livistona chinensis*	蒲葵	LCSD	0.290	8	4		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T69	T69	*Ravenala madagascariensis*	旅人蕉	LCSD	0.220	7	3		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T70	T70	*Ravenala madagascariensis*	旅人蕉	LCSD	0.240	7	4		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T71	T71	*Ravenala madagascariensis*	旅人蕉	LCSD	0.610	7	4		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T72	T72	*Ravenala madagascariensis*	旅人蕉	LCSD	2.210	7	4		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T73	T73	*Ravenala madagascariensis*	旅人蕉	LCSD	2.220	7	3		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T74	T74	*Ravenala madagascariensis*	旅人蕉	LCSD	2.550	6	3		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T75	T75	*Aleurites moluccana*	石栗	LCSD	0.380	9	5		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T76	T76	*Aleurites moluccana*	石栗	LCSD	0.510	11	6		1			1				1				1				1	common	1			1	N/A	N/A
T77	T77	*Caryota ochlandra*	魚尾葵	LCSD	0.130	5	2		1			1				1				1			1		common	1			1	N/A	N/A
T78	T78	*Aleurites moluccana*	石栗	LCSD	0.510	11	6		1			1				1				1				1	common	1			1	N/A	N/A
T79	T79	*Aleurites moluccana*	石栗	LCSD	0.470	10	7		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; Cavity on branch
T80	T80	*Aleurites moluccana*	石栗	LCSD	0.510	11	7		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T81	T81	*Aleurites moluccana*	石栗	LCSD	0.450	12	7		1			1				1				1				1	common	1			1	N/A	Cavity on trunk
T82	T82	*Aleurites moluccana*	石栗	LCSD	0.470	13	6		1			1				1				1				1	common	1			1	N/A	N/A
T83	T83	*Aleurites moluccana*	石栗	LCSD	0.590	10	7		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T84	T84	*Aleurites moluccana*	石栗	LCSD	0.470	10	6		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; Cavity on trunk
T85	T85	*Choerospondias axillaris*	南酸棗	LCSD	0.400	7	5		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T86	T86	*Ailanthus fordii*	常綠臭椿	LCSD	0.250	11	2		1			1				1				1				1	common	1			1	N/A	N/A
T87	T87	*Aleurites moluccana*	石栗	LCSD	0.570	12	8		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T88	T88	*Bombax ceiba*	木棉	LCSD	0.460	15	7		1			1				1			1					1	common	1				N/A	N/A
T89	T89	*Bombax ceiba*	木棉	LCSD	0.310	15	7		1			1				1			1					1	common	1				N/A	N/A
T90	T90	*Bombax ceiba*	木棉	LCSD	0.340	14	5		1			1				1			1					1	common	1				N/A	Leaning
T91	T91	*Melaleuca quinquenervia*	白千層	LCSD	0.500	9	3		1			1				1				1				1	common			1	1	C/D/E/F	Co-dominant branches

Tree No.	Photo No.	Botanical Name	Chinese Name	Jurisdiction (AFCD, HyD, LCSD/RGD)	Survey Site			Form			Health Condition				Structural Condition			Amenity Value				Suitability for Transplanting			Conservation Status	Proposed Treatment			Within Site	Justification	Remarks
					DBH (m)	Height (m)	Spread (m)	G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L		Retain / Trans	Trans	Trans / Fell			
T92	T92	*Grevillea robusta*	銀樺	LCSD	0.480	16	2		1			1				1				1				1	common			1	1	C/D/E/F	Slightly leaning
T93	T93	*Melaleuca quinquenervia*	白千層	LCSD	0.490	14	5		1			1				1				1				1	common			1	1	C/D/E/F	N/A
T94	T94	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.220	6	3		1			1				1				1			1		common	1			1	N/A	Asymmetric canopy; contorted
T95	T95	*Spathodea campanulata*	火焰木	LCSD	0.450	11	5		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T96	T96	*Ficus virens*	大葉榕	LCSD	0.430	15	8		1			1				1				1				1	common	1			1	N/A	N/A
T97	T97	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.310	8	7		1			1			1					1				1	common	1			1	N/A	N/A
T98	T98	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.220	8	6		1			1			1					1			1		common	1			1	N/A	N/A
T99	T99	*Ficus benjamina*	垂葉榕	LCSD	0.320	7	4			1		1				1				1				1	common	1			1	N/A	Wound on trunk
T100	T100	*Aleurites moluccana*	石栗	LCSD	0.530	9	8		1			1				1				1				1	common	1			1	N/A	Heavy crown load; Wound on trunk; Leaning
T101	T101	*Aleurites moluccana*	石栗	LCSD	0.450	9	3		1			1				1				1				1	common	1			1	N/A	N/A
T102	T102	*Aleurites moluccana*	石栗	LCSD	0.330	9	2		1			1				1				1				1	common	1			1	N/A	N/A
T103	T103	*Aleurites moluccana*	石栗	LCSD	0.320	11	4		1			1				1				1				1	common	1			1	N/A	Gall
T104	T104	*Senna siamea*	鐵刀木	LCSD	0.430	15	5		1			1				1				1				1	common			1	1	B/C/D/E/F	Epicormics
T105	T105	*Senna siamea*	鐵刀木	LCSD	0.350	16	4		1			1				1				1				1	common			1	1	B/C/D/E/F	N/A
T106	T106	*Senna siamea*	鐵刀木	LCSD	0.350	15	4		1			1				1				1				1	common			1	1	B/C/D/E/F	Epicormics; Wound on trunk
T107	T107	*Senna siamea*	鐵刀木	LCSD	0.340	15	5		1			1				1				1				1	common			1	1	C/D/E/F	Epicormics; Wound on trunk; Cavity on trunk
T108	T108	*Callistemon viminalis*	串錢柳	LCSD	0.100	5	2		1			1				1				1				1	common	1			1	N/A	N/A
T109	T109	*Callistemon viminalis*	串錢柳	LCSD	0.150	5	3		1			1				1				1				1	common	1			1	N/A	N/A
T110	T110	*Senna siamea*	鐵刀木	LCSD	0.330	17	7		1			1				1				1				1	common	1			1	N/A	Wound on trunk
T111	T111	*Corymbia torelliana*	毛葉桉	LCSD	0.330	10	4		1			1				1				1				1	common	1			1	N/A	N/A
T112	T112	*Corymbia torelliana*	毛葉桉	LCSD	0.440	17	7		1			1				1				1				1	common	1			1	N/A	Contorted trunk
T113	T113	*Ficus benjamina*	垂葉榕	LCSD	0.420	7	6		1			1				1				1				1	common	1			1	N/A	Heavy crown load; Asymmetric crown; Epicormics
T114	T114	*Aleurites moluccana*	石栗	LCSD	0.360	9	3		1			1				1				1				1	common	1			1	N/A	N/A
T115	T115	*Aleurites moluccana*	石栗	LCSD	0.420	8	3		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; Dieback twigs
T116	T116	*Aleurites moluccana*	石栗	LCSD	0.360	9	3		1			1				1				1				1	common	1			1	N/A	N/A
T117	T117	*Aleurites moluccana*	石栗	LCSD	0.340	8	2		1			1				1				1				1	common	1			1	N/A	N/A
T118	T118	*Aleurites moluccana*	石栗	LCSD	0.310	8	2		1			1				1				1				1	common	1			1	N/A	N/A
T119	T119	*Aleurites moluccana*	石栗	LCSD	0.290	9	2		1			1				1				1				1	common	1			1	N/A	Dieback twigs
T120	T120	*Aleurites moluccana*	石栗	LCSD	0.320	11	3		1			1				1				1				1	common	1			1	N/A	N/A
T121	T121	*Aleurites moluccana*	石栗	LCSD	0.310	9	3		1			1				1				1				1	common	1			1	N/A	N/A
T122	T122	*Aleurites moluccana*	石栗	LCSD	0.310	7	2		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; leaning
T123	T123	*Aleurites moluccana*	石栗	LCSD	0.320	9	3		1			1				1				1				1	common		1		1	C/E/F	Co-dominant branches; Dieback twigs
T124	T124	*Aleurites moluccana*	石栗	LCSD	0.250	6	3		1			1				1				1				1	common		1		1	C/E/F	Dieback twigs; leaning bow shaped stem
T125	T125	*Corymbia torelliana*	毛葉桉	LCSD	0.410	13	3		1			1				1				1				1	common	1			1	N/A	N/A
T126	T126	*Corymbia torelliana*	毛葉桉	LCSD	0.460	15	8		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; asymmetric canopy; leaning
T127	T127	*Corymbia torelliana*	毛葉桉	LCSD	0.440	18	8		1			1				1				1				1	common	1			1	N/A	Leaning; asymmetric canopy
T128	T128	*Corymbia torelliana*	毛葉桉	LCSD	0.330	10	4		1			1				1				1				1	common	1			1	N/A	N/A
T129	T129	*Corymbia torelliana*	毛葉桉	LCSD	0.470	17	7		1			1				1				1				1	common	1			1	N/A	N/A
T130	T130	*Corymbia torelliana*	毛葉桉	LCSD	0.570	17	4		1			1				1				1				1	common	1			1	N/A	N/A
T131	T131	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.160	4	4		1			1			1					1			1		common	1			1	N/A	Leaning
T132	T132	*Corymbia torelliana*	毛葉桉	LCSD	0.510	16	5		1			1				1				1				1	common		1		1	C/E/F	Contorted stem
T133	T133	*Bauhinia x blakeana*	洋紫荊	LCSD	0.200	8	3			1		1				1				1				1	common	1			1	N/A	Bending trunk; Wound on trunk
T134	T134	*Jacaranda mimosifolia*	藍花楹	LCSD	0.130	5	3		1			1				1				1				1	common			1	1	B/C/D/E/F	Leaning
T135	T135	*Melia azedarach*	苦楝	LCSD	0.660	14	9		1			1				1				1				1	common			1	1	B/C/D/E/F	Leaning; asymetric caonpy
T136	T136	*Melia azedarach*	苦楝	LCSD	0.650	14	8			1		1				1				1				1	common			1	1	B/C/D/E/F	Co-dominant trunk; Cavity on trunk; Cracks on trunk; leaning
T137	T137	*Melia azedarach*	苦楝	LCSD	0.520	12	6		1			1				1				1				1	common			1	1	B/C/D/E/F	Co-dominant branches
T138	T138	*Callistemon viminalis*	串錢柳	LCSD	0.120	3	2		1			1				1				1			1		common		1		1	B/C/D/E/F	N/A

Tree No.	Photo No.	Botanical Name	Chinese Name	Jurisdiction (AFCD, HyD, LCSD/RGD)	Survey Size			Form			Health Condition				Structural Condition			Amenity Value				Suitability for Transplanting			Conservation Status	Proposed Treatment			Within Site	Justification	Remarks
					DBH (m)	Height (m)	Spread (m)	G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L		Retain / Trans	Trans	Trans / Fell			
T139	T139	*Callistemon viminalis*	串錢柳	LCSD	0.110	3	2		1			1				1				1			1		common		1		1	B/C/D/E/F	N/A
T140	T140	*Melaleuca quinquenervia*	白千層	LCSD	0.330	7	4		1			1				1				1				1	common			1	1	B/C/D/E/F	Leaning; co-dominant, forked stem
T141	T141	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.180	6	5		1			1			1					1			1		common			1	1	B/C/D/E/F	Contorted stem
T142	T142	*Melia azedarach*	苦楝	LCSD	0.580	14	7		1			1				1				1				1	common			1	1	B/C/D/E/F	Mature specimen
T143	T143	*Ficus microcarpa*	細葉榕	LCSD	1.130	17	13		1			1			1				1					1	common		1		1	B/C/D/E/F	Mature specimen; leaning
T144	T144	*Ficus benjamina*	垂葉榕	LCSD	0.100	3	3		1			1				1				1			1		common			1	1	B/C/D/E/F	Mature specimen; leaning
T145	T145	*Corymbia torelliana*	毛葉桉	LCSD	0.490	10	6		1			1				1				1				1	common			1	1	B/C/D/E/F	Co-dominant branches; leaning
T146	T146	*Corymbia torelliana*	毛葉桉	LCSD	0.480	12	5		1			1				1				1				1	common			1	1	B/C/D/E/F	Leaning
T147	T147	*Melaleuca quinquenervia*	白千層	LCSD	0.270	7	2		1			1				1				1				1	common			1	1	B/C/D/E/F	Leaning
T148	T148	*Phoenix roebelenii*	日本葵	LCSD	0.110	2	2		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T149	T149	*Phoenix roebelenii*	日本葵	LCSD	0.110	2	2		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T150	T150	*Phoenix roebelenii*	日本葵	LCSD	0.110	3	1		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T151	T151	*Phoenix roebelenii*	日本葵	LCSD	0.130	3	2		1			1			1					1			1		common		1		1	B/C/D/E/F	Transplant
T152	T152	*Melia azedarach*	苦楝	LCSD	0.550	9	8		1			1				1				1				1	common			1	1	B/C/D/E/F	N/A
T153	T153	*Bombax ceiba*	木棉	LCSD	0.180	9	2		1			1				1				1				1	common			1	1	B/C/D/E/F	Contortd main stem
T154	T154	*Melaleuca quinquenervia*	白千層	LCSD	0.400	13	4		1			1				1				1				1	common			1	1	B/C/D/E/F	N/A
T155	T155	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.210	7	4		1			1			1					1				1	common			1	1	B/C/D/E/F	N/A
T156	T156	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.240	6	4		1			1			1					1			1		common			1	1	B/C/D/E/F	Leaning
T157	T157	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.160	7	6		1			1			1					1			1		common			1	1	B/C/D/E/F	Leaning
T158	T158	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.270	8	6		1			1			1					1			1		common			1	1	B/C/D/E/F	N/A
T159	T159	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.160	5	4		1			1			1					1			1		common			1	1	B/C/D/E/F	N/A
T160	T160	*Phoenix roebelenii*	日本葵	LCSD	0.110	3	2		1			1			1					1			1		common			1	1	B/C/D/E/F	Leaning low stem
T161	T161	*Phoenix roebelenii*	日本葵	LCSD	0.110	5	2		1			1			1					1			1		common			1	1	B/C/D/E/F	Leaning contorted stem
T162	T162	*Phoenix roebelenii*	日本葵	LCSD	0.110	4	2		1			1			1					1			1		common			1	1	B/C/D/E/F	Leaning contorted stem
T163	T163	*Phoenix roebelenii*	日本葵	LCSD	0.110	5	2		1			1			1					1			1		common			1	1	B/C/D/E/F	Leaning contorted stem
T164	T164	*Melia azedarach*	苦楝	LCSD	0.390	8	4		1			1				1				1				1	common			1	1	B/C/D/E/F	Leaning
T165	T165	*Bombax ceiba*	木棉	LCSD	0.130	5	2		1			1				1				1				1	common			1	1	B/C/D/E/F	Leaning
T166	T166	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.260	11	7		1			1			1					1			1		common			1	1	B/C/D/E/F	N/A
T167	T167	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.250	4	4			1		1					1			1			1		common			1	1	B/C/D/E/F	Wound on trunk
T168	T168	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.280	7	6		1			1			1					1			1		common			1	1	B/C/D/E/F	Tree support
T169	T169	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.220	6	5		1			1			1					1			1		common			1	1	B/C/D/E/F	N/A
T170	T170	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.140	3	3		1			1				1				1			1		common			1	1	B/C/D/E/F	N/A
T171	T171	*Elaeocarpus obtusus subsp. Apiculatus*	長芒杜英	LCSD	0.440	15	2		1			1				1				1				1	common			1	1	B/C/D/E/F	Slightly leaning
T172	T172	*Lagerstroemia speciosa*	大花紫薇	LCSD	0.210	8	7		1			1			1					1			1		common			1	1	B/C/D/E/F	N/A
T173	T173	*Bauhinia variegata*	宮粉羊蹄甲	LCSD	0.340	9	6			1		1				1				1				1	common			1	1	B/C/D/E/F	Bending trunk; cavity on trunk; contorted
T174	T174	*Aleurites moluccana*	石栗	LCSD	0.540	10	4		1			1				1				1				1	common			1	1	B/C/D/E/F	Co-dominant branches; asymmetric canopy
T175	T175	*Aleurites moluccana*	石栗	LCSD	0.480	12	4		1			1				1				1				1	common			1	1	C/D/E/F	N/A
T176	T176	*Aleurites moluccana*	石栗	LCSD	0.280	12	2		1			1				1				1				1	common			1	1	C/D/E/F	Dieback twigs; leaning low stem
T177	T177	*Aleurites moluccana*	石栗	LCSD	0.340	11	3		1			1				1				1				1	common			1	1	C/D/E/F	Cavity on trunk
T178	T178	*Aleurites moluccana*	石栗	LCSD	0.360	13	4		1			1				1				1				1	common			1	1	C/D/E/F	Co-dominant branches
T179	T179	*Aleurites moluccana*	石栗	LCSD	0.380	14	4		1			1				1				1				1	common			1	1	C/D/E/F	N/A
T180	T180	*Aleurites moluccana*	石栗	LCSD	0.390	9	4		1			1				1				1				1	common			1	1	C/D/E/F	Co-dominant branches
T181	T181	*Aleurites moluccana*	石栗	LCSD	0.340	12	3		1			1				1				1				1	common			1	1	C/D/E/F	Cavity on trunk
T182	T182	*Aleurites moluccana*	石栗	LCSD	0.390	10	4		1			1				1				1				1	common			1	1	C/D/E/F	Dieback twigs
T183	T183	*Aleurites moluccana*	石栗	LCSD	0.350	10	3		1			1				1				1				1	common			1	1	C/D/E/F	Dieback twigs
T184	T184	*Aleurites moluccana*	石栗	LCSD	0.320	10	2		1			1				1				1				1	common			1	1	C/D/E/F	Cavity on trunk
T185	T185	*Aleurites moluccana*	石栗	LCSD	0.410	10	3		1			1				1				1				1	common			1	1	C/D/E/F	Cavity on trunk
T186	T186	*Aleurites moluccana*	石栗	LCSD	0.370	10	3		1			1				1				1				1	common			1	1	C/D/E/F	Dieback twigs

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					DBH (m)	Height (m)	Spread (m)	G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L		Retain / Trans	Trans	Trans / Fell			
T187	T187	*Aleurites moluccana*	石栗	LCSD	0.350	10	4		1			1				1				1				1	common			1	1	C/D/E/F	Dieback twigs; cavity on trunk, primary branch stub with decayed surface
T188	T188	*Aleurites moluccana*	石栗	LCSD	0.330	8	2		1			1				1				1				1	common			1	1	C/D/E/F	Dieback twigs
T189	T189	*Aleurites moluccana*	石栗	LCSD	0.340	9	2		1			1				1				1				1	common			1	1	C/D/E/F	Dieback twigs; cavity on trunk; lowered stem
T190	T190	*Aleurites moluccana*	石栗	LCSD	0.400	10	2		1			1				1				1				1	common			1	1	C/D/E	Dieback twigs; co-dominant branches with forked stem
T191	T191	*Aleurites moluccana*	石栗	LCSD	0.340	11	2		1			1				1				1				1	common			1	1	C/D/E	Dieback twigs
T192	T192	*Aleurites moluccana*	石栗	LCSD	0.360	10	4		1			1				1				1				1	common			1	1	C/D/E	Wound on trunk
T193	T193	*Aleurites moluccana*	石栗	LCSD	0.340	10	3		1			1				1				1				1	common	1			1	N/A	N/A
T194	T194	*Aleurites moluccana*	石栗	LCSD	0.450	9	5		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; Wound on branch
T195	T195	*Terminalia catappa*	欖仁樹	LCSD	0.410	10	6		1			1				1				1				1	common	1			1	N/A	Co-dominant branches; leaning; asymmetric canopy; bow shaped main stem
T196	T196	*Ficus benjamina*	垂葉榕	LCSD	0.110	4	4		1			1				1				1			1		common	1			1	N/A	N/A
T198	T198	*Ficus elastica*	印度橡樹	LCSD	0.400	15	14		1			1				1				1				1	common			1	1	B/C/D/E/F	Restricted roots
T199	T199	*Phoenix roebelenii*	日本葵	LCSD	0.120	2	2		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T200	T200	*Phoenix roebelenii*	日本葵	LCSD	0.110	2	2		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T201	T201	*Phoenix roebelenii*	日本葵	LCSD	0.130	2	2		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T202	T202	*Phoenix roebelenii*	日本葵	LCSD	0.130	2	2		1			1			1					1			1		common		1		1	B/C/D/E/F	N/A
T203	T203	*Ficus elastica*	印度橡樹	LCSD	2.500	17	14		1			1				1			1					1	common		1		1	B/C/D/E/F	Dieback twigs; Dead branch
T204	T204	*Corymbia torelliana*	毛葉桉	LCSD	0.620	13	7		1			1				1				1				1	common	1			1	N/A	Co-dominant branches
T205	T205	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.130	6	2		1			1				1				1				1	common	1			1	N/A	N/A
T206	T206	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.120	5	2		1			1				1				1				1	common	1			1	N/A	Tree support
T207	T207	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.140	4	2		1			1				1				1				1	common	1			1	N/A	Tree support
T208	T208	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.120	4	2		1			1				1				1				1	common	1			1	N/A	Tree support
T209	T209	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.110	4	2		1			1				1				1			1		common	1			1	N/A	Leaning
T210	T210	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.170	4	3		1			1				1				1			1		common	1			1	N/A	N/A
T211	T211	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.120	5	3		1			1				1				1			1		common	1			1	N/A	N/A
T212	T212	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.120	4	3		1			1				1				1			1		common	1			1	N/A	Leaning
T213	T213	*Juniperus chinensis 'Kaizuca'*	龍柏	LCSD	0.140	4	2		1			1				1				1			1		common	1			1	N/A	Leaning
T214	T214	*Ficus benjamina*	垂葉榕	LCSD	0.440	10	7		1			1				1				1				1	common	1			1	N/A	Epicormics; slightly leaning form
T215	T215	*Ficus benjamina*	垂葉榕	LCSD	0.510	11	6		1			1				1				1				1	common	1			1	N/A	Epicormics
T216	T216	*Ficus benjamina*	垂葉榕	LCSD	0.430	11	5		1			1				1				1				1	common	1			1	N/A	Epicormics
T217	T217	*Ficus benjamina*	垂葉榕	LCSD	0.550	12	6		1			1				1				1				1	common	1			1	N/A	Epicormics; co-dominant trunks; leaning form
T218	T218	*Ficus benjamina*	垂葉榕	LCSD	0.340	12	7		1			1				1				1				1	common	1			1	N/A	Epicormics
T219	T219	*Ficus benjamina*	垂葉榕	LCSD	0.370	12	6		1			1				1				1				1	common	1			1	N/A	Epicormics
T220	T220	*Ficus benjamina*	垂葉榕	LCSD	0.260	12	7		1			1				1				1				1	common			1	1	C/D/E/F	Epicormics; multiple trunks; leaning form
T221	T221	*Roystonea regia*	大王椰子(王棕)	LCSD	0.440	11	3		1			1				1				1				1	common			1		C/D/E/F	N/A
T222	T222	*Terminalia mantaly*	小葉欖仁	LCSD	0.130	3	2		1			1				1				1			1		common			1	1	C/D/E/F	Slightly leaning
T223	T223	*Roystonea regia*	大王椰子(王棕)	LCSD	0.440	11	3		1			1			1					1				1	common		1		1	C/D/E/F	N/A
T224	T224	*Araucaria heterophylla*	異葉南洋杉	LCSD	0.140	6	2		1			1				1				1			1		common	1			1	N/A	N/A
T225	T225	*Phoenix roebelenii*	日本葵	LCSD	0.110	3	2		1			1			1					1			1		common	1			1	N/A	N/A
T226	T226	*Roystonea regia*	大王椰子(王棕)	LCSD	0.440	10	4		1			1			1					1				1	common	1			1	N/A	N/A
T227	T227	*Roystonea regia*	大王椰子(王棕)	LCSD	0.500	10	3		1			1			1					1				1	common	1			1	N/A	N/A
T228	T228	*Roystonea regia*	大王椰子(王棕)	LCSD	0.440	10	3		1			1			1					1				1	common	1			1	N/A	N/A
T229	T229	*Phoenix roebelenii*	日本葵	LCSD	0.120	3	2		1			1			1					1			1		common	1			1	N/A	N/A
T230	T230	*Roystonea regia*	大王椰子(王棕)	LCSD	0.410	11	4		1			1			1					1				1	common	1			1	N/A	N/A
T231	T231	*Roystonea regia*	大王椰子(王棕)	LCSD	0.500	12	4		1			1			1					1				1	common	1			1	N/A	N/A
T232	T232	*Roystonea regia*	大王椰子(王棕)	LCSD	0.470	11	4		1			1			1					1				1	common	1			1	N/A	N/A
T233	T233	*Aleurites moluccana*	石栗	LCSD	0.590	9	7		1			1				1				1				1	common	1				N/A	N/A
T234	T234	*Aleurites moluccana*	石栗	LCSD	0.390	8	4		1			1				1				1				1	common	1				N/A	N/A

Tree No.	Photo No.	Botanical Name	Chinese Name	Jurisdiction (AFCD, HyD, LCSD/RGD)	Survey Site			Form			Health Condition				Structural Condition			Amenity Value				Suitability for Transplanting			Conservation Status	Proposed Treatment			Within Site	Justification	Remarks
					DBH (m)	Height (m)	Spread (m)	G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L		Retain / Trans	Trans	Trans / Fell			
T235	T235	*Aleurites moluccana*	石栗	LCSD	0.490	9	6		1			1				1				1				1	common	1				N/A	Co-dominant branches; cavity on trunk; pruning wound
T236	T236	*Aleurites moluccana*	石栗	LCSD	0.390	7	6		1			1				1				1				1	common	1				N/A	Co-dominant branches; Wound on branch
T237	T237	*Aleurites moluccana*	石栗	LCSD	0.240	7	4		1			1				1				1				1	common	1				N/A	Co-dominant branches; slightly leaning
T238	T238	*Aleurites moluccana*	石栗	LCSD	0.290	6	4		1			1				1				1				1	common	1				N/A	Leaning low stem
T239	T239	*Aleurites moluccana*	石栗	LCSD	0.300	7	4		1			1				1				1				1	common	1				N/A	Co-dominant branches; dead branches, pruning scars on primary branches
T240	T240	*Aleurites moluccana*	石栗	LCSD	0.340	6	4		1			1				1				1				1	common	1				N/A	Co-dominant branches; wounded roots; included bark
T241	T241	*Aleurites moluccana*	石栗	LCSD	0.240	5	5		1			1				1				1				1	common	1				N/A	N/A
T242	T242	*Aleurites moluccana*	石栗	LCSD	0.280	5	4		1			1				1				1				1	common	1				N/A	Leaning form
T243	T243	*Aleurites moluccana*	石栗	LCSD	0.220	6	3		1			1				1				1				1	common	1				N/A	N/A
T244	T244	*Aleurites moluccana*	石栗	LCSD	0.240	5	3		1			1				1				1				1	common	1				N/A	Leaning form
T245	T245	*Aleurites moluccana*	石栗	LCSD	0.370	6	4		1			1				1				1				1	common	1				N/A	Co-dominant branches; included bark
T246	T246	*Aleurites moluccana*	石栗	LCSD	0.440	7	5		1			1				1				1				1	common	1				N/A	Co-dominant branches; included bark
T247	T247	*Aleurites moluccana*	石栗	LCSD	0.340	6	4		1			1				1				1				1	common	1			1	N/A	Co-dominant trunks
T248	T248	*Celtis sinensis*	朴樹	LCSD	0.580	6	6			1		1				1				1				1	common	1				N/A	Co-dominant branches; bending trunk; restricted roots; contorted form; asymmetric canopy
T249	T249	*Aleurites moluccana*	石栗	LCSD	0.350	7	3		1			1				1				1				1	common	1				N/A	Wound on trunk
T250	T250	*Aleurites moluccana*	石栗	LCSD	0.330	6	4		1			1				1				1				1	common	1				N/A	Wound on trunk
T251	T251	*Aleurites moluccana*	石栗	LCSD	0.410	7	4		1			1				1				1				1	common	1				N/A	Wound on trunk
T252	T252	*Ficus benjamina*	垂葉榕	LCSD	0.250	8	5		1			1				1				1				1	common	1				N/A	N/A
T253	T253	*Aleurites moluccana*	石栗	LCSD	0.390	7	4		1			1				1				1				1	common	1				N/A	N/A
T254	T254	*Aleurites moluccana*	石栗	LCSD	0.250	6	3		1			1				1				1				1	common	1				N/A	Leaning; asymmetric canopy
T255	T255	*Ficus microcarpa*	細葉榕	LCSD	0.250	5	3		1			1				1				1				1	common	1				N/A	Asymmetric canopy
T256	T256	*Aleurites moluccana*	石栗	LCSD	0.440	10	5			1		1				1				1				1	common	1				N/A	Co-dominant branches; Wound on branch
T257	T257	*Syzygium jambos*	蒲桃	LCSD	0.150	6	4		1			1				1				1				1	common	1				N/A	N/A
T258	T258	*Aleurites moluccana*	石栗	LCSD	0.420	11	6		1			1				1				1				1	common	1				N/A	N/A
T259	T259	*Albizia lebbeck*	大葉合歡	LCSD	0.190	7	3		1			1				1				1				1	common	1				N/A	Asymmetric canopy
T260	T260	*Roystonea regia*	大王椰子(王棕)	LCSD	0.290	9	4		1			1			1					1				1	common	1				N/A	N/A
T261	T261	*Melia azedarach*	苦楝	LCSD	0.600	7	4		1			1				1				1				1	common	1			1	N/A	Restricted roots
T262	T262	*Leucaena leucocephala*	銀合歡	HyD	0.230	6	4			1		1				1					1			1	common			1	1	G	Unble to label; included bark; leanig form
T263	T263	*Morus alba*	桑	HyD	0.350	4	2			1		1				1				1				1	common	1			1	N/A	Unble to label; Topped
T264	T264	*Melia azedarach*	苦楝	LCSD	0.400	11	7		1			1				1				1				1	common	1				N/A	Unble to label; Rooting area cannot be reached
T265	T265	*Celtis sinensis*	朴樹	HyD	0.190	5	5		1				1			1				1				1	common	1			1	N/A	Unble to label; contorted; severely leaning
T266	T266	*Macaranga tanarius var. tomentosa*	血桐	HyD	0.150	4	4			1		1				1				1				1	common	1			1	N/A	Unble to label
T267	T267	*Caryota mitis*	短穗魚尾葵	HyD	0.150	6	4		1			1				1				1				1	common	1			1	N/A	Unble to label

Tree No.	Photo No.	Botanical Name	Chinese Name	Jurisdiction (AFCD, HyD, LCSD/RGD)	Survey Site			Form			Health Condition				Structural Condition			Amenity Value				Suitability for Transplanting			Conservation Status	Proposed Treatment			Within Site	Justification	Remarks
					DBH (m)	Height (m)	Spread (m)	G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L		Retain / Trans	Trans	Trans / Fell			
T268	T268	Macaranga tanarius var. tomentosa	血桐	HyD	0.390	5	3			1		1				1				1				1	common	1				N/A	Unble to label
T269	T269	Macaranga tanarius var. tomentosa	血桐	HyD	0.130	4	2			1		1				1				1				1	common	1			1	N/A	Unble to label
T270	T270	Macaranga tanarius var. tomentosa	血桐	HyD	0.140	3	3			1		1				1				1				1	common	1			1	N/A	Unble to label
T271	T271	Macaranga tanarius var. tomentosa	血桐	HyD	0.170	4	3			1		1				1				1				1	common	1			1	N/A	Unble to label; Rooting area cannot be reached
T272	T272	Celtis sinensis	朴樹	HyD	0.180	5	4		1			1				1				1				1	common	1			1	N/A	Unble to label; Rooting area cannot be reached
T273	T273	Celtis sinensis	朴樹	HyD	0.300	9	5		1			1				1				1				1	common	1			1	N/A	Unble to label; Rooting area cannot be reached
T274	T274	Macaranga tanarius var. tomentosa	血桐	HyD	0.140	4	3			1		1				1				1				1	common	1				N/A	Unble to label; Multiple trunks; Epicomics
T275	T275	Macaranga tanarius var. tomentosa	血桐	HyD	0.150	5	4			1		1				1				1				1	common	1			1	N/A	Unble to label
T276	T276	Macaranga tanarius var. tomentosa	血桐	HyD	0.260	3	3			1		1				1				1				1	common	1			1	N/A	Unble to label
T277	T277	Macaranga tanarius var. tomentosa	血桐	HyD	0.140	3	2			1		1				1				1				1	common	1			1	N/A	Unble to label
T278	T278	Macaranga tanarius var. tomentosa	血桐	HyD	0.150	5	5			1		1				1				1				1	common	1			1	N/A	Unble to label
T279	T279	Macaranga tanarius var. tomentosa	血桐	HyD	0.120	2	1			1		1				1				1				1	common	1			1	N/A	Unble to label
T280	T280	Morus alba	桑	HyD	0.350	4	4			1		1				1				1				1	common	1			1	N/A	Unble to label; Restricted roots
T281	T281	Caryota ochlandra	魚尾葵	HyD	0.110	3	2		1			1				1				1				1	common	1			1	N/A	Unble to label
T282	T282	Litsea glutinosa	潺槁樹	HyD	0.140	6	4		1			1				1				1				1	common	1			1	N/A	Unble to label; Restricted roots
T283	T283	Melia azedarach	苦楝	HyD	0.270	6	5		1			1				1				1				1	common	1			1	N/A	Unble to label; Restricted roots
T284	T284	Melia azedarach	苦楝	HyD	0.290	5	4		1			1				1				1				1	common	1			1	N/A	Unble to label; Restricted roots
T285	T285	Melia azedarach	苦楝	HyD	0.390	8	3		1			1				1				1				1	common	1			1	N/A	Unble to label; Restricted roots
T286	T286	Melia azedarach	苦楝	HyD	0.300	7	3		1			1				1				1				1	common	1			1	N/A	Unble to label
T287	T287	Melia azedarach	苦楝	HyD	0.180	3	2		1			1				1				1				1	common	1			1	N/A	Unble to label
T288	T288	Macaranga tanarius var. tomentosa	血桐	HyD	0.180	4	4			1		1				1				1				1	common	1				N/A	Unble to label; Wound on trunk
T289	T289	Celtis sinensis	朴樹	HyD	0.230	5	5		1			1				1				1				1	common	1			1	N/A	Unble to label; Asymmetric crown; Climber
T290	T290	Melia azedarach	苦楝	HyD	0.220	3	5		1			1				1				1				1	common	1			1	N/A	Unble to label; Climber; leaning form; asymmetric canopy
T291	T291	Melia azedarach	苦楝	HyD	0.250	9	4		1			1				1				1				1	common	1			1	N/A	Unble to label; Climber
T292	T292	Melia azedarach	苦楝	HyD	0.440	11	7		1			1				1				1				1	common	1			1	N/A	Unble to label
T293	T293	Melia azedarach	苦楝	HyD	0.120	5	2		1			1				1				1				1	common	1			1	N/A	Unble to label; climber; asymmetric canopy
T294	T294	Melia azedarach	苦楝	HyD	0.140	6	4		1			1				1				1				1	common	1			1	N/A	Unble to label; climber; asymmetric canopy
T180A	T180A	Senna siamea	鐵刀木	HyD	0.300	6	3			1		1				1				1				1	common		1		1	C/D/E/F	Unble to label; Asymmetric crown
								0	265	29	0	293	1	0	67	234	3	0	6	287	1	0	52	242		146	31	117	255		
								0%	90%	10%	0%	100%	0%	0%	23%	76%	1%	0%	2%	97%	1%	0%	18%	82%		50%	10%	40%	87%		294
								G	F	P	G	F	P	D	G	F	P	E	G	F	P	H	M	L	Conservation Status	Retain / Trans	Trans	Trans / Fell	Within Site		Surveyed Total no. of trees

Legend

Tree Condition / Health

G Good
F Fair
P Poor
D Dead

Amenity Value
E Excellent
G Good
F Fair
P Poor

Tree Form

Structural Condition
G Good
F Fair
P Poor

Suitability for Transplantation
Hig
Med
Low Survival Rate expected after

poor health, poor condition and poor form.

Conservation Status
Conservation status (indicates rarity and protection status under relevant ordinances of a species in Hong Kong. References such as Rare and Precious Plants of Hong Kong, the IUCN Red List of Threatened Species and the Forests and Countryside Ordinance (Cap. 96) are used.)

Justification of Tree Transplanting / Felling
- **A** Existing dead tree .
- **B** Existing tree is in conflict with the proposed scheme
- **C** Existing tree is in conflict with the proposed internal circulation and EVA
- **D** Recommend to fell as the existing tree has an anticipated low survival rate if transplanted.
- **E** Tree growing in close proximity to other trees, asymmetrical roots and accessibility.
- **F** Existing tree has leaning form and broken or damaged branches and trunk.
- **G** Existing tree is invasive weed species.

Top of Soil Level at the base of the tree
This figure refers to the soil level at the base of the tree to be maint This figure refers to the soil level at the base of the tree to be maintained following the development of the The future soil level should not cover the root collar of the tree.

Tree Girth
* Girth of a tree refers to its trunk circumference at breast height (i.e. measured at 1.3m above ground level)

** Girth of a tree refers to its trunk cirumference at breast height (i.e. trees with multitrunk branching were all measured seperately at 1m above ground level). The collective girth was then calculated using the methodology set Conservation Practice Note No. 02/2003, Measurement of Diameter at Breast Height (DBH

Annex IV
Photographic Record of
Existing Trees

T01 (Acacia confusa)
Photograph showing the overall form of the tree.

T02 (Acacia confusa)
Photograph showing the overall form of the tree.

T03 (Ficus benjamina)
Photograph showing the overall form of the tree.

T04 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T05 (Ficus benjamina)
Photograph showing the overall form of the tree.

T06 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T07 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T08 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T09 (Bombax ceiba)
Photograph showing the overall form of the tree.

T10 (Sterculia lanceolata)
Photograph showing the overall form of the tree.

T11 (Bombax ceiba)
Photograph showing the overall form of the tree.

T12 (Grevillea robusta)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

T13 (Ficus benjamina)
Photograph showing the overall form of the tree.

T14 (Ficus benjamina)
Photograph showing the overall form of the tree.

T15 (Murraya paniculata)
Photograph showing the overall form of the tree.

T16 (Podocarpus macrophyllus)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR	REV	-	

T17 (Caryota mitis)
Photograph showing the overall form of the tree.

T18 (Livistona chinensis)
Photograph showing the overall form of the tree.

T19 (Ficus microcarpa)
Photograph showing the overall form of the tree.

T20 (Michelia x alba)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
Tree Photographic Record	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR	REV	-	

T21 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

T22 (Dypsis lutescens)
Photograph showing the overall form of the tree.

T23 (Podocarpus macrophyllus)
Photograph showing the overall form of the tree.

T24 (Acacia confusa)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
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Tree Photographic Record

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CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T25 (Podocarpus macrophyllus)
Photograph showing the overall form of the tree.

T26 (Ficus benjamina)
Photograph showing the overall form of the tree.

T27 (Podocarpus macrophyllus)
Photograph showing the overall form of the tree.

T28 (Ficus benjamina)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
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Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T29 (Podocarpus macrophyllus)
Photograph showing the overall form of the tree.

T30 (Ficus benjamina)
Photograph showing the overall form of the tree.

T31 (Garcinia subelliptica)
Photograph showing the overall form of the tree.

T32 (Livistona chinensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
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Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T33 (Livistona chinensis)
Photograph showing the overall form of the tree.

T34 (Livistona chinensis)
Photograph showing the overall form of the tree.

T35 (Livistona chinensis)
Photograph showing the overall form of the tree.

T36 (Livistona chinensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR	REV	-	

T37 (Livistona chinensis)
Photograph showing the overall form of the tree.

T38 (Livistona chinensis)
Photograph showing the overall form of the tree.

T39 (Livistona chinensis)
Photograph showing the overall form of the tree.

T40 (Livistona chinensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T41 (Livistona chinensis)
Photograph showing the overall form of the tree.

T42 (Livistona chinensis)
Photograph showing the overall form of the tree.

T43 (Callistemon viminalis)
Photograph showing the overall form of the tree.

T44 (Callistemon viminalis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
Tree Photographic Record	CHECKED	CJF	DRAWN	FY
	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T45 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T46 (Ailanthus fordii)
Photograph showing the overall form of the tree.

T47 (Ailanthus fordii)
Photograph showing the overall form of the tree.

T48 (Ailanthus fordii)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	
Tree Photographic Record	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR		REV	-

SCENIC 新城

T49 (Ailanthus fordii)
Photograph showing the overall form of the tree.

T50 (Ailanthus fordii)
Photograph showing the overall form of the tree.

T51 (Ailanthus fordii)
Photograph showing the overall form of the tree.

T52 (Ailanthus fordii)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
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Tree Photographic Record

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CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T53 (Ailanthus fordii)
Photograph showing the overall form of the tree.

T54 (Ficus benjamina)
Photograph showing the overall form of the tree.

T55 (Caryota ochlandra)
Photograph showing the overall form of the tree.

T56 (Callistemon viminalis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T57 (Syzygium jambos)
Photograph showing the overall form of the tree.

T58 (Syzygium jambos)
Photograph showing the overall form of the tree.

T59 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T60 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

T61 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T62 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T63 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T64 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
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Tree Photographic Record

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CHECKED	CJF	**DRAWN**	FY
FIGURE NO.	URAP005 TSR	**REV**	-

SCENIC 新城

T65 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T66 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T67 (Livistona chinensis)
Photograph showing the overall form of the tree.

T68 (Livistona chinensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR		REV -	

T69 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T70 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T71 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T72 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
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FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T73 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T74 (Ravenaia madagascariensis)
Photograph showing the overall form of the tree.

T75 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T76 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T77 (Caryota ochlandra)
Photograph showing the overall form of the tree.

T78 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T79 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T80 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T81(Aleurites moluccana)
Photograph showing the overall form of the tree.

T82 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T83 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T84 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

T85 (Choerospondias axillaris)
Photograph showing the overall form of the tree.

T86 (Ailanthus fordii)
Photograph showing the overall form of the tree.

T87 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T88 (Bombax ceiba)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T89 (Bombax ceiba)
Photograph showing the overall form of the tree.

T90 (Bombax ceiba)
Photograph showing the overall form of the tree.

T91 (Melaleuca quinquenervia)
Photograph showing the overall form of the tree.

T92 (Grevillea robusta)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T93 (Melaleuca quinquenervia)
Photograph showing the overall form of the tree.

T94 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T95 (Spathodea campanulata)
Photograph showing the overall form of the tree.

T96 (Ficus virens)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T97 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T98 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T99 (Ficus microcarpa)
Photograph showing the overall form of the tree.

T100 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

T101 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T102 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T103 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T104 (Senna siamea)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	**SCALE**	N.T.S.	**DATE**	Jun 2021	SCENIC 新城
	CHECKED	CJF	**DRAWN**	FY	
	FIGURE NO.	URAP005 TSR		**REV** -	

T105 (Senna siamea)
Photograph showing the overall form of the tree.

T106 (Senna siamea)
Photograph showing the overall form of the tree.

T107 (Senna siamea)
Photograph showing the overall form of the tree.

T108 (Callistemon viminalis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR		REV -	

T109 (Callistemon viminalis)
Photograph showing the overall form of the tree.

T110 (Senna siamea)
Photograph showing the overall form of the tree.

T111 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T112 (Corymbia torelliana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
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Tree Photographic Record

SCALE	N.T.S.	DATE	Jun 2021
CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T113 (Ficus benjamina)
Photograph showing the overall form of the tree.

T114 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T115 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T116 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)

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CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T117 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T118 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T119 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T120 (Aleurites moluccana)
Photograph showing the overall form of the tree.

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Tree Photographic Record	CHECKED	CJF	DRAWN	FY
	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T121 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T122 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T123 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T124 (Aleurites moluccana)
Photograph showing the overall form of the tree.

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FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T125 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T126 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T127 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T128 (Corymbia torelliana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
Tree Photographic Record	CHECKED	CJF	DRAWN	FY
	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T129 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T130 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T131 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T132 (Corymbia torelliana)
Photograph showing the overall form of the tree.

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Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T133 (Bauhinia x blakeana)
Photograph showing the overall form of the tree.

T134 (Jacaranda mimosifolia)
Photograph showing the overall form of the tree.

T135 (Melia azedarach)
Photograph showing the overall form of the tree.

T136 (Melia azedarach)
Photograph showing the overall form of the tree.

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Tree Photographic Record

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CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T137 (Melia azedarach)
Photograph showing the overall form of the tree.

T138 (Callistemon viminalis)
Photograph showing the overall form of the tree.

T139 (Callistemon viminalis)
Photograph showing the overall form of the tree.

T140 (Melaleuca quinquenervia)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)

Tree Photographic Record

SCALE	N.T.S.	DATE	Jun 2021
CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T141 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T142 (Melia azedarach)
Photograph showing the overall form of the tree.

T143 (Ficus microcarpa)
Photograph showing the overall form of the tree.

T144 (Ficus benjamina)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T145 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T146 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T147 (Melaleuca quinquenervia)
Photograph showing the overall form of the tree.

T148 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

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Tree Photographic Record	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR	REV	-	

T149 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T150 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T151 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T152 (Melia azedarach)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	**SCALE**	N.T.S.	**DATE**	Jun 2021	SCENIC 新城
	CHECKED	CJF	**DRAWN**	FY	
	FIGURE NO.	URAP005 TSR		**REV** -	

T153 (Bombax ceiba)
Photograph showing the overall form of the tree.

T154 (Melaleuca quinquenervia)
Photograph showing the overall form of the tree.

T155 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T156 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T157 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T158 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T159 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T160 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

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SCENIC 新城

T161 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T162 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T163 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T164 (Melia azedarach)
Photograph showing the overall form of the tree.

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Tree Photographic Record	CHECKED	CJF	DRAWN	FY
	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T165 (Bombax ceiba)
Photograph showing the overall form of the tree.

T166 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T167 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T168 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

T169 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

T170 (Juniperus chinensis 'Kaizuca'
Photograph showing the overall form of the tree.

T171 (Elaeocarpus obtusus subsp. Apiculatus)
Photograph showing the overall form of the tree.

T172 (Lagerstroemia speciosa)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR	REV	-	

T173 (Bauhinia variegata)
Photograph showing the overall form of the tree.

T174 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T175 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T176 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T177 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T178 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T179 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T180 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
Tree Photographic Record	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR		REV -	

T181 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T182 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T183 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T184 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T185 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T186 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T187 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T188 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
Development Scheme (SSP-018)

Tree Photographic Record

SCALE	N.T.S.	DATE	Jun 2021
CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T189 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T190 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T191 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T192 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
Development Scheme (SSP-018)

Tree Photographic Record

SCALE	N.T.S.	**DATE**	Jun 2021
CHECKED	CJF	**DRAWN**	FY
FIGURE NO.	URAP005 TSR	**REV**	-

SCENIC 新城

T193 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T194 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T195 (Terminalia catappa)
Photograph showing the overall form of the tree.

T196 (Ficus benjamina)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
Tree Photographic Record	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR		REV -	

T198 (Ficus elastica)
Photograph showing the overall form of the tree.

T199 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T200 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T201 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T202 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

T203 (Ficus elastica)
Photograph showing the overall form of the tree.

T204 (Corymbia torelliana)
Photograph showing the overall form of the tree.

T205 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
Development Scheme (SSP-018)

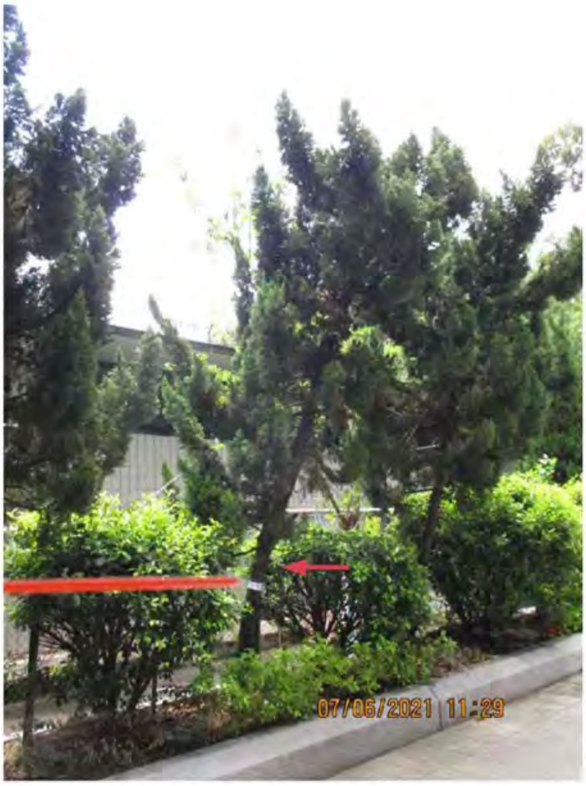
Tree Photographic Record

SCALE	N.T.S.	DATE	Jun 2021
CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T206 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

T207 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.



T208 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

T209 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

T210 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

T211 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

T212 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

T213 (Juniperus chinensis 'Kaizuca')
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
Development Scheme (SSP-018)

Tree Photographic Record

SCALE	N.T.S.	DATE	Jun 2021
CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T214 (Ficus benjamina)
Photograph showing the overall form of the tree.

T215 (Ficus benjamina)
Photograph showing the overall form of the tree.

T216 (Ficus benjamina)
Photograph showing the overall form of the tree.

T217 (Ficus benjamina)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T218 (Ficus benjamina)
Photograph showing the overall form of the tree.

T219 (Ficus benjamina)
Photograph showing the overall form of the tree.

T220 (Ficus benjamina)
Photograph showing the overall form of the tree.

T221 (Roystonea regia)
Photograph showing the overall form of the tree.

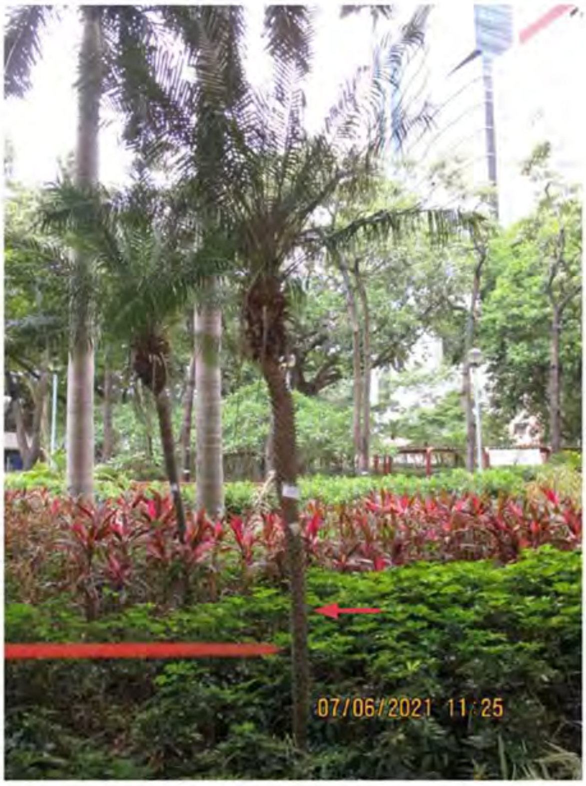
Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T222 (Terminalia mantaly)
Photograph showing the overall form of the tree.

T223 (Roystonea regia)
Photograph showing the overall form of the tree.

T224 (Araucaria heterophylla)
Photograph showing the overall form of the tree.



T225 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	**SCALE**	N.T.S.	**DATE**	Jun 2021
	CHECKED	CJF	**DRAWN**	FY
	FIGURE NO.	URAP005 TSR	**REV**	-

SCENIC 新城

T226 (Roystonea regia)
Photograph showing the overall form of the tree.

T227 (Roystonea regia)
Photograph showing the overall form of the tree.

T228 (Roystonea regia)
Photograph showing the overall form of the tree.

T229 (Phoenix roebelenii)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

T230 (Roystonea regia)
Photograph showing the overall form of the tree.

T231 (Roystonea regia)
Photograph showing the overall form of the tree.

T232 (Roystonea regia)
Photograph showing the overall form of the tree.

T233 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T234 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T235 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T236 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T237 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T238 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T239 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T240 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T241 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T242 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T243 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T244 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T245 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
Development Scheme (SSP-018)

Tree Photographic Record

SCALE	N.T.S.	DATE	Jun 2021
CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T246 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T247 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T248 (Celtis sinensis)
Photograph showing the overall form of the tree.

T249 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T250 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T251 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T252 (Ficus benjamina)
Photograph showing the overall form of the tree.

T253 (Aleurites moluccana)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	
Tree Photographic Record	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR		REV	-

SCENIC 新城

T254 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T255 (Ficus microcarpa)
Photograph showing the overall form of the tree.

T256 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T257 (Syzygium jambos)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

T258 (Aleurites moluccana)
Photograph showing the overall form of the tree.

T259 (Albizia lebbeck)
Photograph showing the overall form of the tree.

T260 (Roystonea regia)
Photograph showing the overall form of the tree.

T261 (Melia azedarach)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR	REV	-	

T262 (Leucaena leucocephala)
Photograph showing the overall form of the tree.

T263 (Morus alba)
Photograph showing the overall form of the tree.

T264 (Melia azedarach)
Photograph showing the overall form of the tree.

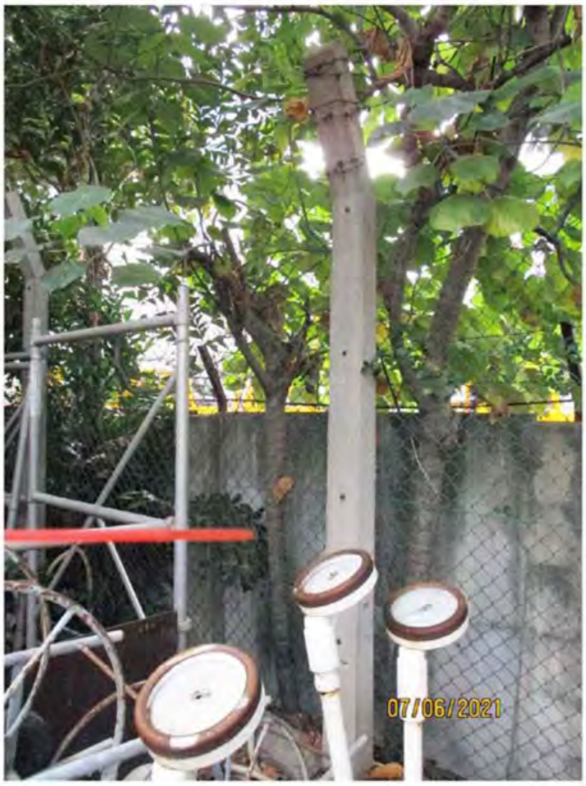
T265 (Celtis sinensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
	FIGURE NO.	URAP005 TSR		REV -	

T266 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

T267 (Caryota mitis)
Photograph showing the overall form of the tree.

T268 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

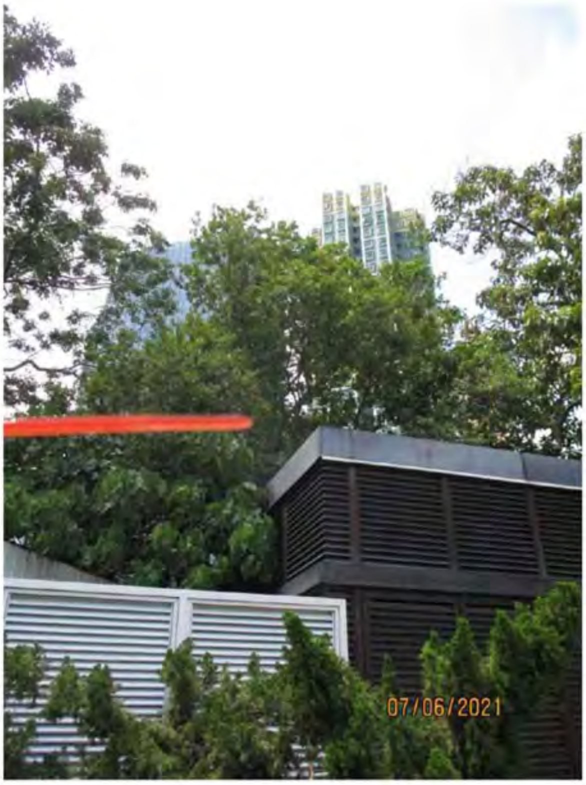


T269 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021		SCENIC 新城
	CHECKED	CJF	DRAWN	FY		
Tree Photographic Record	FIGURE NO.	URAP005 TSR			REV -	

T270 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

T271 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.



T272 (Celtis sinensis)
Photograph showing the overall form of the tree.

T273 (Celtis sinensis)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR			REV -

SCENIC 新城

T274 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

T275 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

T276 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road
Development Scheme (SSP-018)

Tree Photographic Record

SCALE	N.T.S.	DATE	Jun 2021
CHECKED	CJF	DRAWN	FY
FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城

T278 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

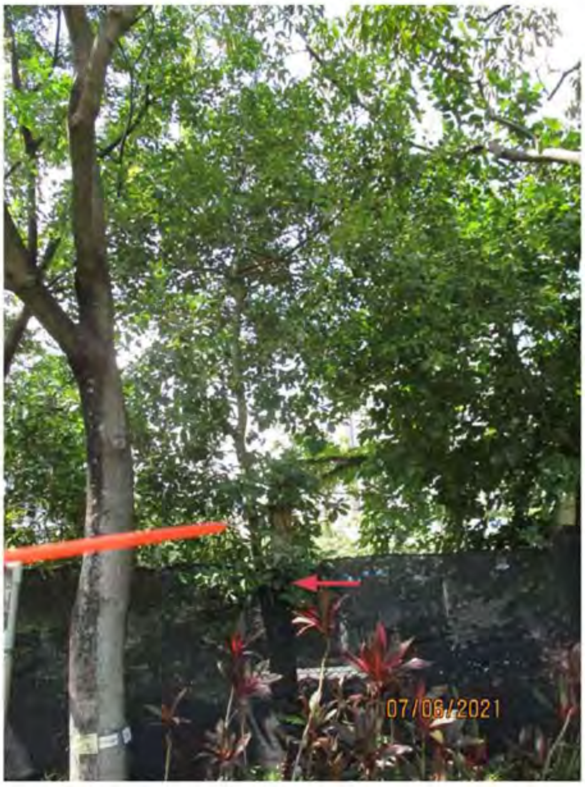
T279 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

T280 (Morus alba)
Photograph showing the overall form of the tree.

T281 (Caryota ochlandra)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	SCALE	N.T.S.	DATE	Jun 2021
	CHECKED	CJF	DRAWN	FY
	FIGURE NO.	URAP005 TSR	REV	-

SCENIC 新城



T282 (Litsea glutinosa)
Photograph showing the overall form of the tree.

T283 (Melia azedarach)
Photograph showing the overall form of the tree.

T284 (Melia azedarach)
Photograph showing the overall form of the tree.

T285 (Melia azedarach)
Photograph showing the overall form of the tree.

T286 (Melia azedarach)
Photograph showing the overall form of the tree.

T287 (Melia azedarach)
Photograph showing the overall form of the tree.

T288 (Macaranga tanarius var. tomentosa)
Photograph showing the overall form of the tree.

T289 (Melia azedarach)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) **Tree Photographic Record**	**SCALE**	N.T.S.	**DATE**	Jun 2021	SCENIC 新城
	CHECKED	CJF	**DRAWN**	FY	
	FIGURE NO.	URAP005 TSR	**REV**	-	

T290 (Melia azedarach)
Photograph showing the overall form of the tree.

T291 (Melia azedarach)
Photograph showing the overall form of the tree.

T292 (Melia azedarach)
Photograph showing the overall form of the tree.

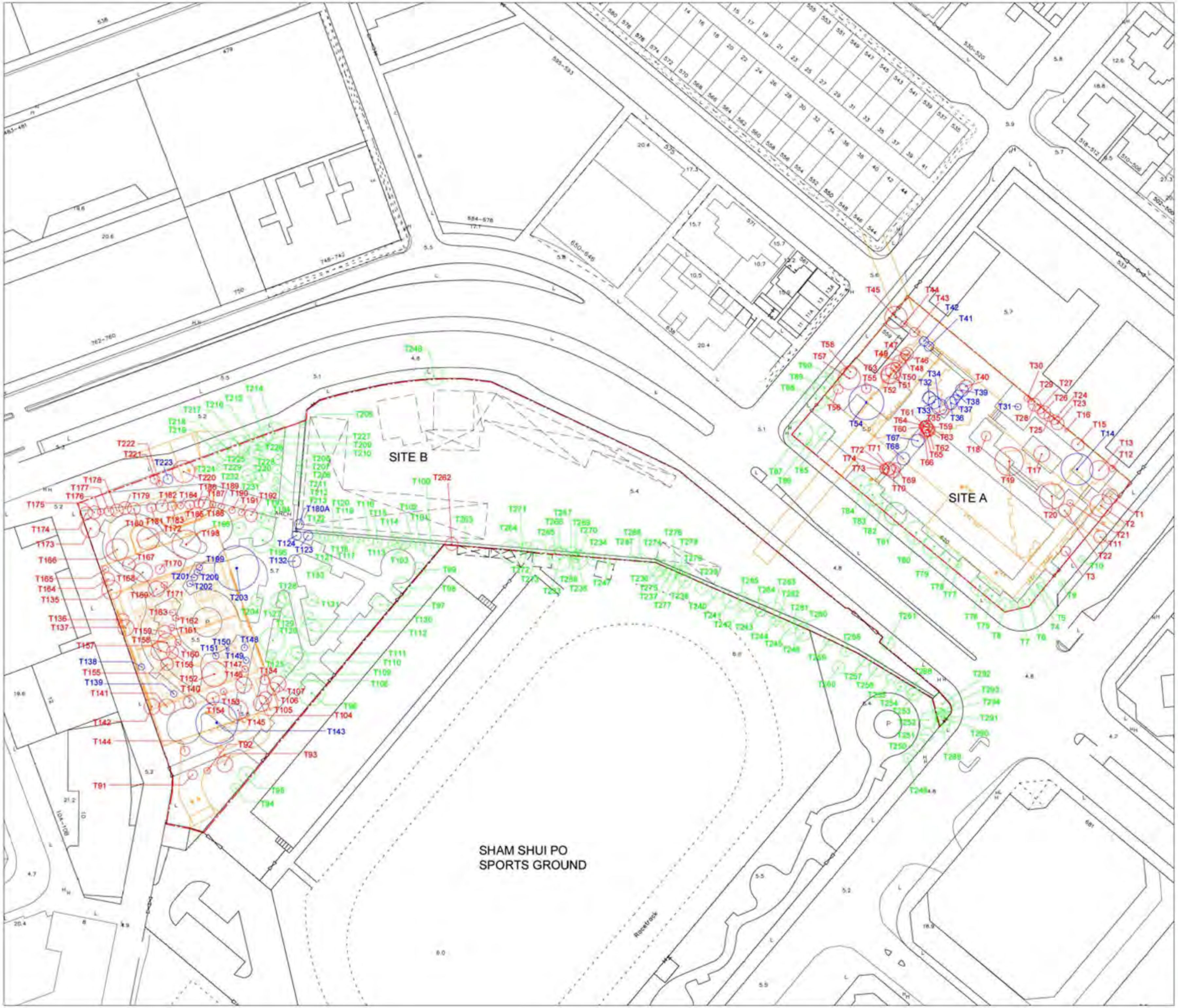
T293 (Melia azedarach)
Photograph showing the overall form of the tree.

T294 (Melia azedarach)
Photograph showing the overall form of the tree.

T180A (Senna siamea)
Photograph showing the overall form of the tree.

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)	SCALE	N.T.S.	DATE	Jun 2021	SCENIC 新城
	CHECKED	CJF	DRAWN	FY	
Tree Photographic Record	FIGURE NO.	URAP005 TSR		REV -	

Annex V
Tree Recommendation Plan



SCENIC landscape studio limited

12/F So Hong Commercial Building, 41-47 Jervois Street,
Sheung Wan, Hong Kong Telephone: +852 2468 2422
Email: scenic@studioscenic.com Fax: +852 3016 2422

Legend

- APPLICATION SITE BOUNDARY
- EXISTING LEVEL
- PROPOSED LEVEL
- PROPOSED ARCHITECTURAL SCHEME
- EXISTING TREES TO BE RETAINED/ TRANSPLANTED
- EXISTING TREES TO BE TRANSPLANTED
- EXISTING TREES TO BE TRANSPLANTED/ FELLED

General notes

Rev.	Date	Description	Inital

Revision

	Name:	Signed:	Date:
Designed by:	CJF		
Drawn by:	FY		
Checked by:	CJF		
Approved by:	JBC		

Project Title:

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)

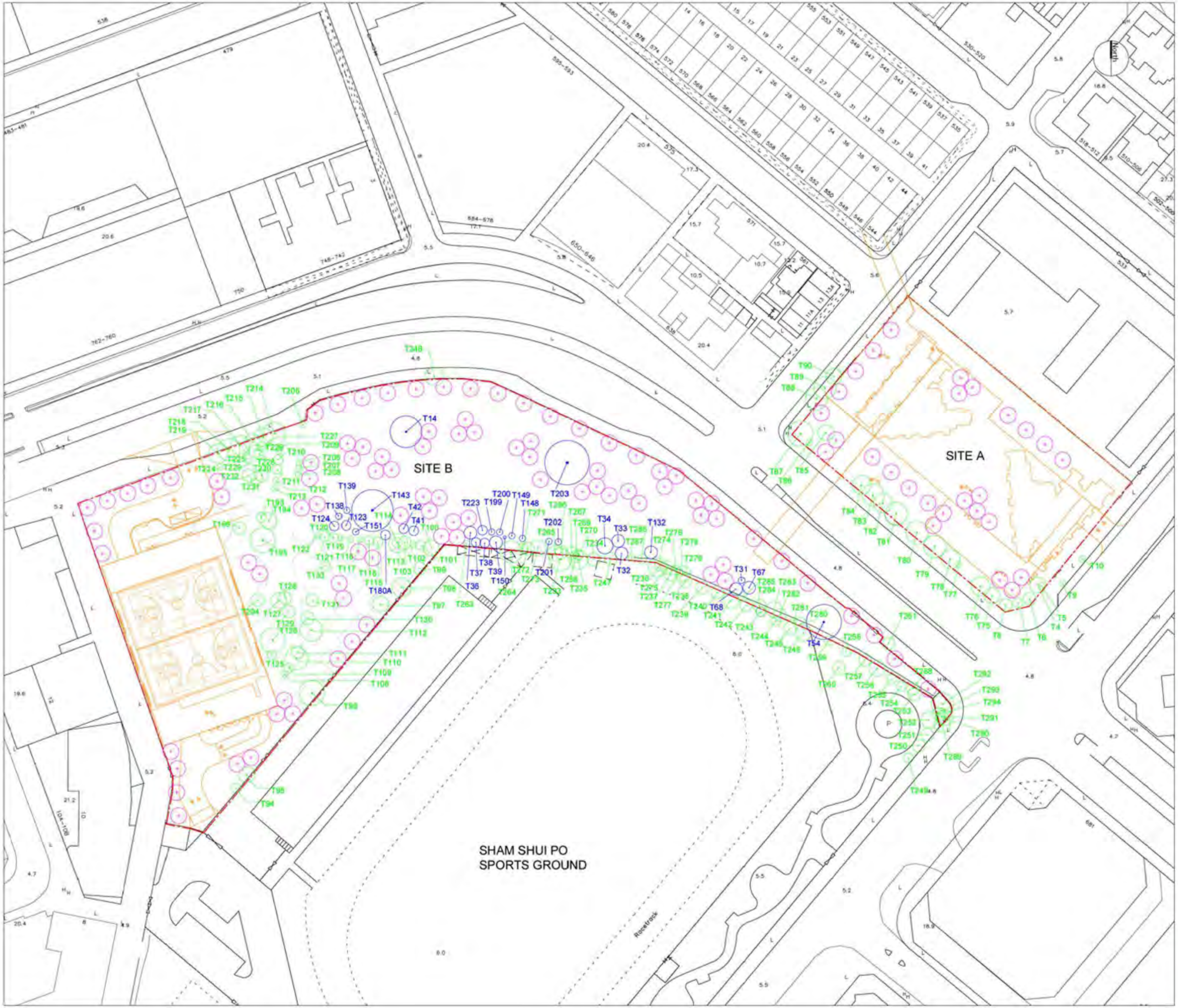
Drawing Title:

TREE RECOMMENDATION PLAN

Drawing Number:	Revision:
URAP005-TR001	-

Project Number:	Scale:	Date:
URAP005	1:550@A1	15/06/2021

Annex VI
New Tree Planting Plan



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Email: scenic@studioscenic.com Fax: +852 3016 2422

Legend

- APPLICATION SITE BOUNDARY
- EXISTING LEVEL
- PROPOSED LEVEL
- PROPOSED ARCHITECTURAL SCHEME
- EXISTING TREES TO BE RETAINED/ TRANSPLANTED
- EXISTING TREES TO BE TRANSPLANTED
- PROPOSED NEW TREE PLANTING

General notes

Rev.	Date	Description	Inital

Revision

	Name:	Signed:	Date:
Designed by:	CJF		
Drawn by:	FY		
Checked by:	CJF		
Approved by:	JBC		

Project Title:

Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018)

Drawing Title:

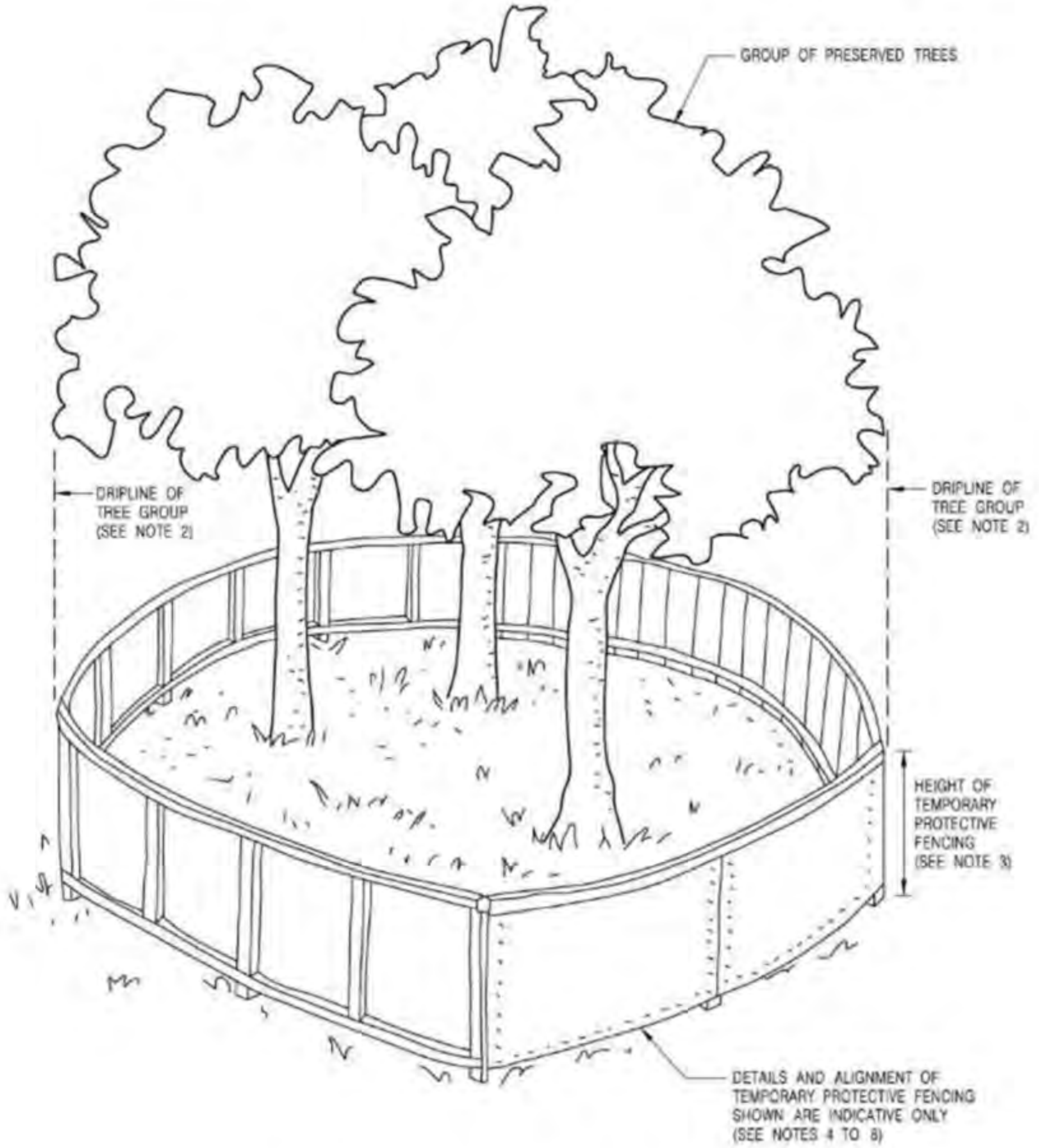
NEW TREE PLANTING PLAN

Drawing Number:	Revision:
URAP005-TC001	-

Project Number:	Scale:	Date:
URAP005	1:550@A1	15/06/2021

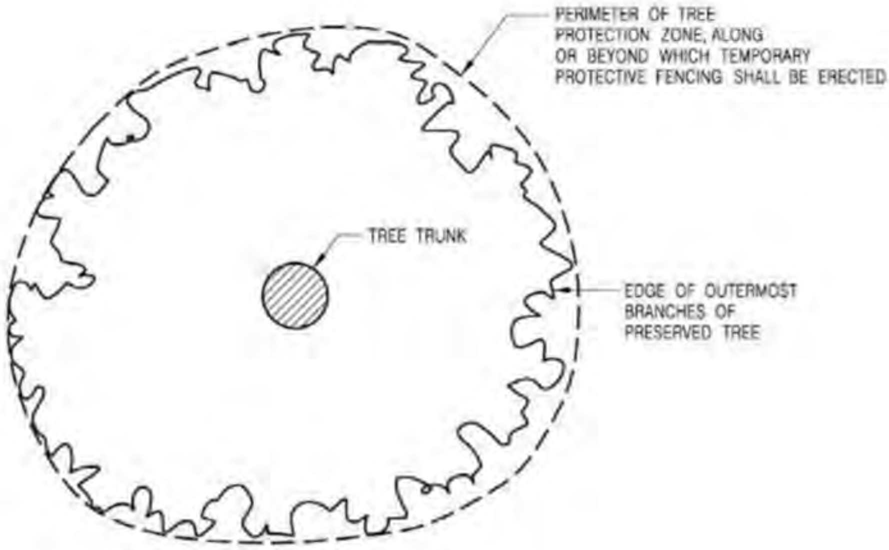
Annex VII
Tree Protection Measures

Tree Protection Measures

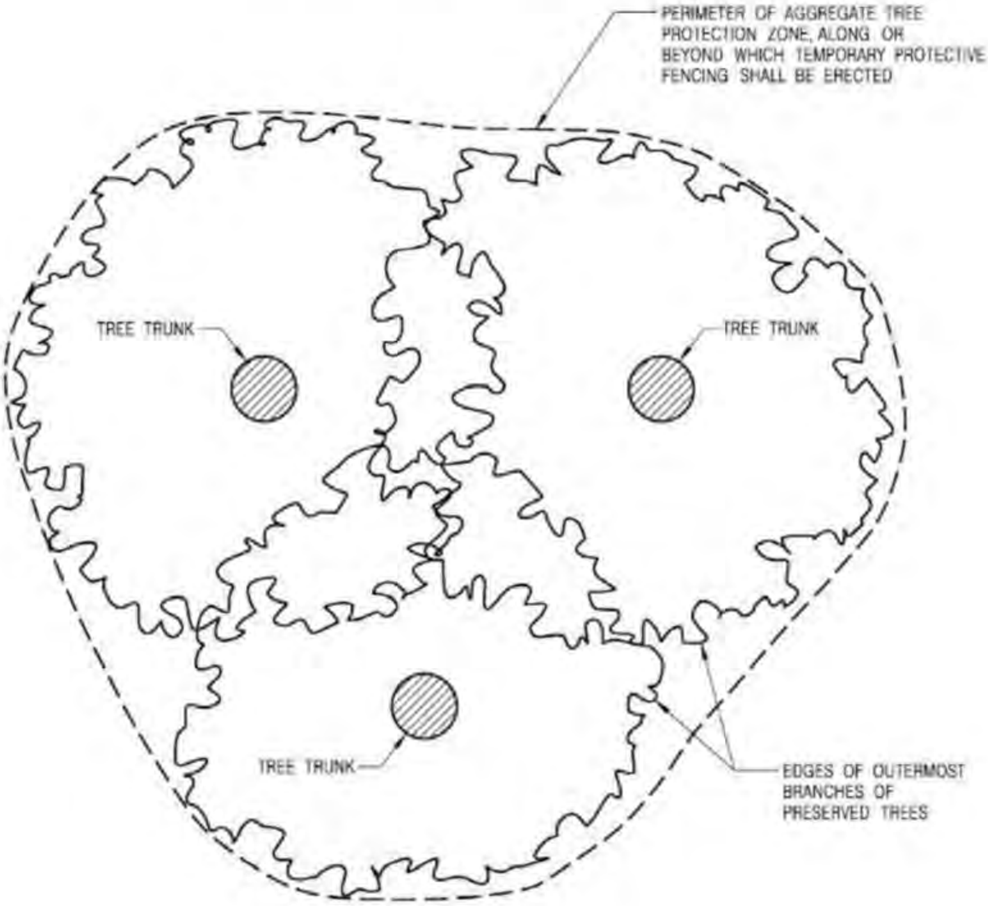


PERSPECTIVE – GROUP OF TREES

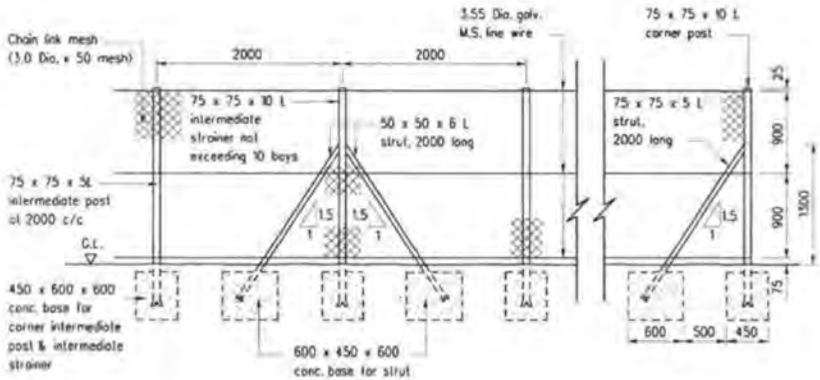
(DIAGRAMMATIC)



PLAN - INDIVIDUAL TREE
(DIAGRAMMATIC)

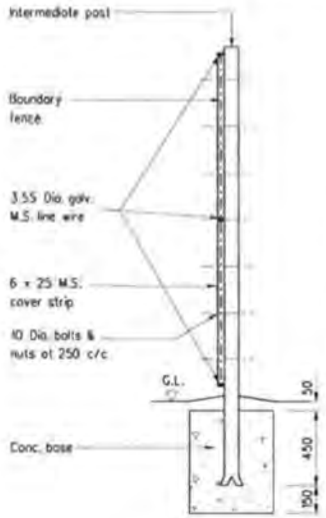


PLAN - GROUP OF TREES
(DIAGRAMMATIC)



ELEVATION OF INTERMADIATE POST
INTERMEDIATE STRAINER & CORNER POST

(NTS)

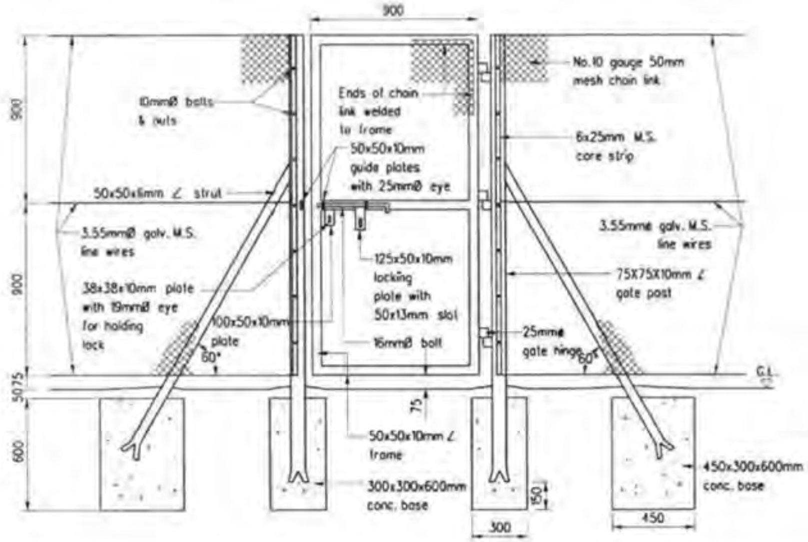


INTERMEDIATE POST

(NTS)

Notes :

1. Dimensions are in millimetres.
2. All welds to be ground smooth.
3. Steel to be grade 43 BS 4360.
4. All site welds to be treated with two coats of zinc rich paint before application of paint system.
5. Steelwork for fencing including wires to be hot dip galvanized to BS 729 to a coating thickness of least 500 g/m².
6. Chain link mesh to be zinc coated type GLS180 of BS1722 Part 1.
7. Concrete to be grade 30/20.
8. Where the concrete footing is located in block paved footpath, the footing should be lowered to allow for the paving blocks and the sand course.

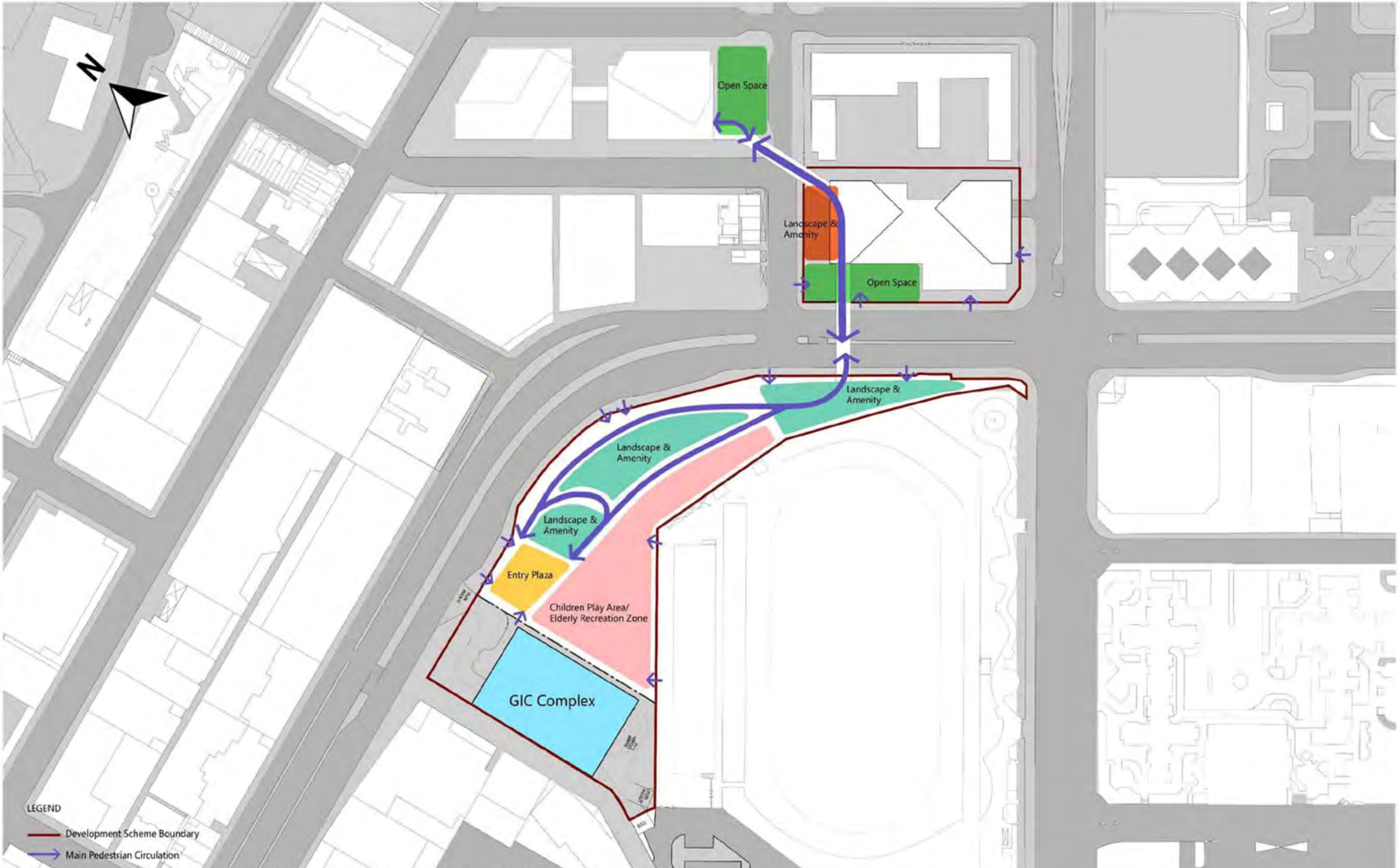


PEDESTRIAN GATE

(NTS)

Note: One pedestrian gate in each enclosure.

Annex VIII
Landscape Design Concept



(Remarks: For indicative purpose only. SSP-018 Notional layout subject to detailed design upon DSP approval.)

URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)	**Conceptual Landscape Plan**	Not drawn to scale
		Sep 2021

Appendix 3

Visual Impact Assessment (VIA) Report

Urban Renewal Authority Development Scheme

Prepared under Section 25 (3) of the Urban Renewal Authority Ordinance

Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)

Visual Impact Assessment

September 2021

Content

List of Tables

List of Figures

1 INTRODUCTION

1.1 The Urban Renewal Authority (URA) has commenced Cheung Wah Street/ Cheung Sha Wan Road Development Scheme (SSP-018) (the Scheme) under Section 25 of the Urban Renewal Authority Ordinance (URAO). The draft Development Scheme Plan (DSP) No. S/K5/URA3/A is submitted to the Town Planning Board (the Board) for consideration.

1.2 The Scheme is located in Sham Shui Po (SSP) District which comprises Sites A and B along Cheung Sha Wan Road. Site A of the Scheme is broadly bounded by Hing Wah Street to the southeast, Cheung Sha Wan Road to the southwest, Cheung Wah Street to the northwest, and Cheung Sha Wan Catholic Secondary School to the northeast. It is currently occupied by the Cheung Sha Wan Sports Centre and a garden under Leisure and Cultural Services Department (LCSD). Site A is currently zoned for "Government, Institution or Community (G/IC)" with maximum building height of 1 storey and "Open Space (O)" on the Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37.

1.3 Site B of the Scheme broadly bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground to the southeast. It is currently occupied by the Cheung Sha Wan Path Sitting-out Area, part of the Sham Shui Po Sports Ground under LCSD and a temporary maintenance depot of Highways Department. Site B is currently zoned for "Government, Institution or Community (G/IC)" with maximum building height of 1 storey, "Open Space (O)", and shown as "Road" on the Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37.

1.4 **Figure 1.1** shows the draft DSP. Under the draft DSP, the Scheme area in orange colour is proposed to be zoned "R(A)" with an overall plot ratio (PR) of 8.5 which PR of 7.5 is for domestic uses and the remaining PR of 1.0 is for non-domestic uses. About 5,197 sq.m. (PR of 1.0) non-domestic GFA is also proposed for G/IC uses in the Scheme area which is to be exempted from PR calculation under the draft DSP. A maximum height of 140mPD is proposed at Site A under the draft DSP. For Site B, the scheme area in green is proposed to be zoned "O" while the scheme area in blue is proposed to be zoned "G/IC". A maximum building height of 95mPD is proposed for the "G/IC" uses.

1.5 This Visual Impact Assessment (VIA) report is prepared to study the potential visual impact with the implementation of the Scheme under the notional design for consideration by the Board.

2 THE PROPOSED SCHEME

2.1 As stated in the Planning Report of the DSP submission, a street block at Kim Shin Lane / Fuk Wa Street (namely SSP-017) comprising 90 building blocks of age over 60 with no lifts is identify as a site with imminent redevelopment needs. However, SSP-017 is undesirable for redevelopment because its existing plot ratio is as high as 8.12, hence, the residual plot ratio is 0.88 only. Multiple sub-divided units are also identified. Although SSP-017 has all the quality to demand for redevelopment, its redevelopment potential is low. In this respect, a wider area for planning opportunities have to be explored.

2.2 Under a "planning-led" approach in urban renewal works in recent years, URA has identified part of Sham Shui Po as Sham Shui Po Action Area 1 (SSPAA1) for holistic planning of urban renewal works. SSP-018 comprises Sites A and B, both Government land opposite each other across Cheung Sha Wan Road is identified for redevelopment to formulate a comprehensive land-use restructuring together with SSP-017 to create more planning gains at district level. The proposed residential use at Site A of SSP-018 will be able to sustain the proposed redevelopment of SSP-017.

2.3 As SSP-017 and SSP-018 are interrelated and are commenced on the same day, the Proposed Scheme of this VIA report will also consider the cumulative impact of the SSP-017 and SSP-018 redevelopment. It is noted that SSP-017 conforms to the existing planning control, it will be implemented under Section 26 of the Urban Renewal Authority Ordinance (URAO) separately; it <u>does not</u> form part of this DSP.

2.4 **Figure 2.1** shows the layout plan of the notional design (the Proposed Scheme). Site A of SSP-018 comprises two residential towers (T1 and T2) on top of a commercial/ retail/ G/IC podium, a public open space (POS), and a basement car park for public and ancillary parking spaces. For Site B of SSP-018, it comprises one G/IC complex building and a POS.

2.5 A maximum building height of 140mPD is proposed at Site A to enhance flexibility on block size, disposition and layout in building design, enable a slimmer building form and create wider building separations as recommended in the Sustainable Building Design Guidelines. Ground floor setbacks from Cheung Wah Street, Cheung Sha Wan Road and Hing Wah Street are proposed to mitigate visual obstruction, create wider pavement and enhance walking environment. A maximum building height of 95mPD is proposed at Site B to utilize the site for G/IC uses. About 750 sq.m. of POS at Site A and 9,600 sq.m. of POS at Site B are also proposed to enhance the visual amenity.

2.6 A maximum building height of 120mPD is proposed at SSP-017, which conforms to the existing planning control. SSP-017 comprises two residential towers on top of a commercial/ retail podium. Ground floor setbacks from Cheung Wah Street is also proposed in SSP-017 to mitigate visual obstruction, create wider pavement and enhance walking environment. Under an integrated urban renewal approach, footbridges across Cheung Sha Wan Road and Cheung Wah Street, which do not form part of the Scheme, are suggested to connect up the public open spaces at both URA projects (SSP-017 and SSP-018) to enhance connectivity of the existing built environment.

2.7 The notional design is subject to change at the detailed design stage.

2.8 **Table 2.1** presents the development parameters of the Proposed Scheme:

Table 2.1 Development Parameters of SSP-018

	Site A	**Site B**
Scheme Total Area	About 5,197 sq.m.	About 13,857 sq.m.
Net Site (subject to survey and detailed design)	About 5,197 sq.m.	About 4,212 sq.m.
Proposed Zoning	"R(A)"	"G/IC", "O"
Proposed Maximum Domestic GFA	About 38,978 sq.m. (PR=7.5)	/
Proposed Maximum Non-domestic GFA (excluding GFA for G/IC Provision)	About 5,197 sq.m. (PR=1.0)	/
Proposed G/IC GFA G/IC Provision	Not less than 5,197 sq.m. (PR=1.0) (proposed to be exempted from GFA calculation under the DSP)	About 33,696 sq.m. (PR=8.0)
Proposed Public Open Space	About 750 sq.m.	About 9,645 sq.m.
Number of Blocks *	2	1 (G/IC Complex)

	Site A	**Site B**
Building Height *	Not more than 140mPD	Not more than 95mPD
Number of storeys *	About 34 storeys (on top of a 5-storey podium)	About 18 storeys (excluding basements)

** Remarks: All design parameters are subject to change at the detailed design stage.*

2.9 To comprehensively compare the visual impact of the Proposed Scheme, a Baseline Scheme is also presented on **Figure 2.2**. Under the Baseline Scheme, no building will be erected on the scheme area where is zoned either "O" or "Road". Two 1 storey buildings of 12m tall under existing "G/IC" zone within the boundary of SSP-018 Sites A and B are adopted in the Baseline Scheme to reflect the possible redevelopment. For SSP-017, existing buildings are adopted in the Baseline Scheme to reflect the cumulative impact before and after redevelopment.

2.10 This VIA will compare the visual changes of both the Proposed Scheme and the Baseline Scheme and thus appraise the visual impact.

3 METHODOLOGY

3.1 With reference to the *Town Planning Board Guidelines on Submission of Visual Impact Assessment for Planning Application to the Town Planning Board* (TPB-PG No.41), this VIA would adopt the following procedures:

3.2 ***1) Define the assessment area (i.e. visual envelope)***. The assessment area would cover the area of visual influence within which the proposed development is pronouncedly visible from key sensitive viewers. The extent of the assessment area would be determined having regard to the size of the proposed development, the distance of the development, potential visibility from the selected viewing points, and the actual site and the surrounding topographical conditions.

3.3 ***2) Identify Viewing Points (VPs) within the assessment area.*** The assessment would take into account views from key local and strategic viewing points. Local VPs are determined with reference to the setting of the project and views of local significance. For strategic VP(s), reference would be made to *Chapter 11 – Urban Design Guidelines in the Hong Kong Planning Standards and Guidelines* (HKPSG). VPs should be at human eye level for a realistic presentation of views. For each identified VPs, their sensitivity would be classified as high, medium or low by their activity, public perception and other relevant factors.

3.4 ***3) Appraise visual changes.*** Visual changes on visual composition, visual obstruction, effect on public views and effect on visual resources would be appraised. Perspectives indicating visual changes will be illustrated by photomontages for each identified VPs.

4 VISUAL IMPACT ANALYSIS

4.1 ASSESSMENT AREA

4.1.1 The assessment area for this VIA is defined by the visual envelope of the indicative Proposed Scheme. This visual envelope covers the fields of views from all sensitive viewers in direct sight of the proposed development. With verification by ground inspection, for Site A, the assessment area is defined by a distance equal to three times of the height (3H) of T1 and T2 in the Proposed Scheme, i.e. 420m, away from Site A. For Site B, since the maximum building height of the G/IC complex is 95mPD, the assessment area is defined by a distance equal to three times of the proposed building height, i.e. 285m, away from Site B. The areas for Sites A and B are combined to form the assessment area of this VIA.

Visual Elements in the Assessment Area

4.1.2 **Figure 4.1** shows the extent of assessment area. The area broadly extends to Ching Cheung Road to the north, Po On Road to the northeast, Cheung Sha Wan Playground to the southeast, Lai Chi Kok Road to the south and Cheung Lai Street to the west of the Scheme. **Figure 4.1** and the following will present the current and future visual elements within the assessment area:

4.1.3 The assessment area is densely developed with increasing number of high-rise developments. To the immediate west of the Scheme is the Cheung Sha Wan business area where is mixed with high-rise office towers and mid-rise industrial buildings. Various developments reaching about 120mPD or above are located to the immediate northwest and southwest of the Scheme, including Billion Plaza II (about 130mPD), Billion Plaza (about 120mPD), Clifford Centre (about 125mPD) and Law's Commercial Plaza (about 130mPD). Besides, there are several future high-rise non-domestic developments of about 130mPD to the further northwest of the Scheme, including the proposed developments covered by planning applications nos. A/K5/816 and A/K5/820 approved by the TPB in 2020.

4.1.4 The northern and eastern sides of the assessment area is a densely developed residential area with prolonged redevelopment activities. The area comprises high-rise residential developments, mid-rise residential towers and low-rise tenement buildings. To the northeast of the Scheme is a group of residential developments reaching about 120mPD or above, including Beacon Lodge (about 160mPD), Lotus House (about 135mPD), Heya Aqua (about 120mPD), Heya Crystal (about 120mPD), Heya Star (about 120mPD) and Heya Delight (about 120mPD). The building height of the URA-initiated Kim Shin Lane/ Fuk Wa Street Development Project (SSP-017) located to the north of the Scheme is about 120mPD. To the east of the Scheme is Un Chau Estate with towers mainly of about 120mPD.

4.1.5 The southern side of the assessment area comprises various low-rise facilities but also buildings with high building heights. To the immediate south of the Scheme is Sham Shui Po Sports Ground, serving as the major public outdoor space in the vicinity. To the further south of the playground is the low-rise Cheung Sha Wan Temporary Wholesale Poultry Market. To the further southwest of the Scheme is a cluster of high-rise residential developments including The Pacifica of about 165 to 185mPD. On the other side of the Poultry Market, there is a future public housing development of about 150mPD planned by the Government at the Wang Cheong Factory Estate site where is adjacent to an existing residential development of about 150mPD named The Sparkle. To the further southeast of the Scheme is Fortune Estate and Hang Chun Court with towers mainly of about 80 to 120mPD.

4.1.6 Apart from Sham Shui Po Sportsground, there are also several public outdoor spaces located within the assessment area. To the southeast of Fortune Estate is Cheung Sha Wan Playground serving as a major open space to the neighbourhood. To the immediate east and further northwest of the Scheme are Hing Wah Street Playground and Wing Hong Street Rest Garden respectively.

4.1.7 To conclude, the assessment area is densely developed with increasing number of high-rise developments. Developments reaching 120mPD or above are common around the Scheme while there are several existing or future developments of about 140 to 185mPD, such as The Pacifica and the future public housing development at the Wang Cheong Factory Estate site. Three major public outdoor spaces and open-air facilities are identified, including Sham Shui Po Sportsground, Hing Wah Street Playground and Cheung Sha Wan Playground are identified to the south, east and southeast of the Scheme.

4.2 IDENTIFICATION OF VIEWING POINTS

4.2.1 Based on the assessment area and visual elements identified, six local viewing points (VPs) are identified within the visual envelope as indicated on **Figure 4.2**. All major public outdoor spaces are included in this assessment. **Figure 4.3** then presents the location of the strategic viewing point identified with reference to the HKPSG.

Table 4.1 Viewing Points

VP	Location	Approximate Distance from the Scheme
Local Viewing Points		
VP1	Hing Wah Street Playground	120m
VP2	Sham Shui Po Sports Ground	150m
VP3	Cheung Sha Wan Playground	400m
VP4	Junction of Cheung Wah Street and Un Chau Street	120m
VP5	Exit B1 of Lai Chi Kok Railway Station	180m
VP6	Wing Hong Street Rest Garden	220m
Strategic Viewing Point		
VP7	Sun Yat Sen Memorial Park	5.2km

4.3 APPRAISAL OF VISUAL CHANGES

4.3.1 Photos of the existing condition and photomontages of both the Proposed Scheme and the Baseline Scheme are prepared for full appraisal and comparison of the visual changes before and after the proposed redevelopment at the Scheme together with future developments within its vicinity. The following will describe the visual composition and appraise visual changes of views for each selected VP. **Table 4.2** in the later part of this section will summarise the visual changes of all seven viewing points.

VP1 – Hing Wah Street Playground

4.3.2 In accordance with **Figures 4.2**, VP1 is about 120m to the east of the Scheme. Hing Wah Street Playground is a football pitch without any passive recreational facility. Although VP1 is close to the Scheme, considered that active football activities involve less public viewers who are sensitive to visual concerns and changes, the visual sensitivity of public viewers from this VP is graded as **medium**.

Visual Composition and Visual Obstruction

4.3.3 **Figure 4.4** presents the existing visual composition of the view from VP1 and potential visual compositions under the Baseline Scheme and the Proposed Scheme respectively.

4.3.4 With reference to **Figure 4.4**, the foreground of the view from VP1 is dominated by Heya Aqua (about 120mPD) and the football pitch of the Playground. Heya Aqua forms a substantial part of the visual composition of the view from VP1. The background of the view is formed by the dense urban development near Cheung Sha Wan Business Area, such as Billion Plaza (about 120mPD), Biliion Plaza II (about 130mPD), Charming Garden (about 100mPD) and The Amused (about 100mPD). The local visual context is dense with buildings commonly reaching about 120mPD or above. An open sky view is available at VP1.

4.3.5 Under the Proposed Scheme, the proposed development at SSP-017 (about 120mPD) would be visible on the background of the view from VP1. The proposed T1 and T2 within the Scheme area would be visible in front of the dense urban developments near Cheung Sha Wan Business Area. With due regard to the local visual context, the proposed T1 and T2 are of compatible and similar size and height, as compared to Heya Aqua and the proposed development at SSP-017. Although the Proposed Scheme would obstruct a portion of the open sky view, the obstruction is less substantial than the one caused by Heya Aqua.

4.3.6 Various mitigation measures are included in the Proposed Scheme to enhance the visual composition and obstruction. To minimize the blockage of views, the proposed T1 and T2 are disposed in an orientation parallel to the view towards the Scheme from VP1. The proposed maximum building height of 140mPD also enables a slimmer building form which further reduces the visual obstruction to the sky view. Ground floor setbacks from Hing Wah Street and Cheung Sha Wan Road will further reduce the building mass and visual obstruction, in particular at eye level.

4.3.7 With the above mitigation measures, despite the proposed development at the Scheme, a substantial portion of the open sky view from VP1 will be preserved. Furthermore, the visual permeability along Fuk Wing Street from VP1 will be preserved under the Proposed Scheme. Thus, a slightly adverse impact to the visual composition and obstruction is considered.

Effect on Public Viewers and Visual Resources

4.3.8 Noted that Hing Wah Street Playground is a football pitch without any passive recreational facility, public viewers involved into active football activities are less sensitive to visual concerns and changes. Thus, the importance and value of the sky view is not of priority. With the aforementioned mitigation measures, the potential negative visual impact caused by the Proposed Scheme can be addressed and minimised. Thus the Proposed Scheme would only cause a slight resultant effect to public viewers. On the contrary, it is more important to consider whether the Proposed Scheme would affect the overall visual context and create visual incompatibility. As compared to the existing visual context, the Proposed Scheme has a similar and compatible building height, mass and scale with the neighbouring developments, such as Heya Aqua (about 120mPD). Therefore, a negligible effect on visual resources caused by the Proposed Scheme is considered.

VP2 – Sham Shui Po Sports Ground

4.3.9 In accordance with **Figures 4.2**, VP2 is about 150m to the south of the Scheme. Sham Shui Po Sports Ground comprises a sports ground, a football pitch, two basketball courts and a netball court. Together with the provision of passive recreational facilities and sitting-out areas, the Sports Ground is highly utilised by the general public. Thus, the visual sensitivity of public viewers from this VP is graded as **high**.

Visual Composition and Visual Obstruction

4.3.10 **Figure 4.5** presents the existing visual composition of the view from VP2 and potential visual compositions under the Baseline Scheme and the Proposed Scheme respectively.

4.3.11 The current foreground of the view from VP2 is mainly the open-air sports facilities and trees inside Sham Shui Po Sports Ground. Although Hang Chun Court (about 110mPD) to the east of VP2 have substantially blocked the sky view, in overall, a wide open sky view can be enjoyed at VP2. The dense high-rise development along Hing Wah Street and Cheung Wah Street, such as Heya Aqua (about 120mPD), CST (about 100mPD) and Charming Garden (about 100mPD) have formulated the background of the view from VP2.

4.3.12 In accordance with **Figure 4.5**, for the Proposed Scheme, the proposed development at SSP-017 (about 120mPD) would be visible although most portion of it would be behind CST and Charming Garden. Although the two residential towers under the Proposed Scheme would appear slightly taller than the developments along Hing Wah Street and Cheung Wah Street, the Proposed Scheme possesses a compatible, appropriate and harmonious scale to integrate with the existing visual context. Negligible impact to the visual composition of the view from VP2 is considered.

4.3.13 With regard to visual obstruction, the Proposed Scheme would cause no obstruction to the foreground of the view from VP2. With the mitigation measures of slimmer building form and wider building separation included under the Proposed Scheme, only a minimal portion of the wide open sky view would be obstructed. The overall visual obstruction is considered as negligible.

Effect on Public Viewers and Visual Resources

4.3.14 As the Proposed Scheme integrates with the existing visual context, the Proposed Scheme would not create any sore thumb development and visual incompatibility. While the wide open sky view is an important visual resource and value for public viewers considered the high level of public utilisation of the Sports Ground, with the mitigation measures included, the wide open sky view being enjoyed at VP2 is well preserved under the Proposed Scheme. Thus, negligible effect on public viewers and visual resources is considered.

VP3 – Cheung Sha Wan Playground

4.3.15 In accordance with **Figures 4.2**, VP3 is about 400m to the southeast of the Scheme. Being surrounded by a group of residential developments, this Playground is highly utilised by the general public for its recreational facilities such as football pitch, basketball court, skating rink, children's playground and sitting out areas. Therefore, the visual sensitivity of public viewers from this VP is graded as **high**.

Visual Composition and Visual Obstruction

4.3.16 **Figure 4.6** presents the existing visual composition of the view from VP3 and potential visual compositions under the Baseline Scheme and the Proposed Scheme respectively.

4.3.17 The current foreground of the view from VP3 is mainly the open-air sports facilities and trees inside Cheung Sha Wan Playground. The dense high-rise residential towers of Un Chau Estate (about 120mPD), Heya Aqua (about 120mPD) and Fortune Estate (about 60 – 120mPD) have composed the background of the view from VP3. A wide open sky view is available on top of these residential towers.

4.3.18 With reference to **Figure 4.6**, the Proposed Scheme is of compatible height with the residential towers of Fortune Estate and Un Chau Estate which demonstrates its full integration and harmony with the existing visual context. Besides, the Proposed Scheme would not induce obstruction to the wide open sky view being enjoyed at VP3. Thus, a negligible effect to visual composition and obstruction is considered.

Effect on Public Viewers and Visual Resources

4.3.19 The open sky view is an important visual resource for public viewers considered the high level of public utilisation and passive recreational activities at the Playground. Noted that the open sky view being enjoyed at VP3 can be preserved and the Proposed Scheme fully integrates with the existing visual context, a negligible effect on public viewers and visual resources is considered.

VP4 – Junction of Cheung Wah Street and Un Chau Street

4.3.20 In accordance with **Figures 4.2**, VP4 is about 120m to the northeast of the Scheme. This junction serves as a connector between the Caritas Medical Centre and So Uk Estate towards the transport and community facilities along Cheung Sha Wan Road. Although the duration of sight towards the Scheme of public viewers at VP4 is short, the level of pedestrian and business activities at this junction is high. Thus, the visual sensitivity of public viewers from this VP is graded as **high**.

Visual Composition and Visual Obstruction

4.3.21 **Figure 4.7** presents the existing visual composition of the view from VP4 and potential visual compositions under the Baseline Scheme and the Proposed Scheme respectively.

4.3.22 Mid-rise to high-rise residential/ commercial developments, including High One (about 110mPD), Sea Panorama Court (about 85mPD) and The Pacifica (about 165 – 185mPD), have dominated the view from VP4, thus public viewers at VP4 can only access to a narrow sky view.

4.3.23 For the Proposed Scheme, the proposed development at SSP-017 would be visible from VP4. Most portions of the residential towers under the Proposed Scheme and the whole G/IC complex would be concealed by the existing buildings along Cheung Wah Street. Although a small portion of the sky view would be obstructed by the Proposed Scheme, it is considered that the Proposed Scheme fully integrates with the existing visual context by its compatible and appropriate building height. The ground floor setbacks from Cheung Wah Street included in both proposed developments at SSP-017 and SSP-018 have further reduced the visual obstruction and enhance the street environment at eye level. Although the footbridge across Cheung Wah Street connecting SSP-017 and SSP-018 is visible from VP4, it is considered compatible to the local visual context with only minimal visual obstruction at eye level induced. Noted the overall visual compatibility of the Proposed Scheme, a negligible impact to the visual composition and obstruction is considered.

Effect on Public Viewers and Visual Resources

4.3.24 Noted the sky view viewed from VP4 is narrow, it is considered more essential to assess whether the Proposed Scheme would affect the overall visual context and create visual incompatibility. With reference to **Figure 4.7** and the above assessment, the Proposed Scheme can fully integrate with the existing visual context, a negligible effect on public viewers and visual resources caused by the Proposed Scheme is considered.

VP5 – Exit B1 of Lai Chi Kok Railway Station

4.3.25 In accordance with **Figures 4.2**, VP5 is about 180m to the west of the Scheme. Although the duration of sight towards the Scheme of public viewers at VP5 is short, a very high level of pedestrian activity is observed at VP5 as it connects the Lai Chi Kok Railway Station and bus stops along Cheung Sha Wan Road to the commercial developments and the Caritas Medical Centre nearby. Therefore, the visual sensitivity of public viewers from this VP is graded as **high**.

Visual Composition and Visual Obstruction

4.3.26 **Figure 4.7** presents the existing visual composition of the view from VP5 and potential visual compositions under the Baseline Scheme and the Proposed Scheme respectively.

4.3.27 With reference to **Figure 4.7**, both the foreground and background of the view from VP5 are dominated by the mid-rise to high-rise developments along Cheung Sha Wan Road, including Law's Commercial Plaza (about 130mPD), CST (about 100mPD), Charming Garden (about 100mPD), Yan Fook Centre (about 85mPD) and Tin On Industrial Building (about 45mPD). Public viewers at VP5 can only access to a narrow sky view.

4.3.28 The residential towers under the Proposed Scheme are of compatible height with the towers along Cheung Sha Wan Road which demonstrates its full integration and harmony with the existing visual context. Most portions of the residential towers and the G/IC complex are concealed by the existing development. The Proposed Scheme would only induce minimal obstruction to the narrow sky view.

Effect on Public Viewers and Visual Resources

4.3.29 Noted that the duration of sight of public viewers at VP5 towards the Scheme is short, the importance of sky view is not of priority. Instead, it is more important to consider whether the Proposed Scheme would affect the overall visual context and create visual incompatibility. With reference to **Figure 4.8** and the above assessment, the Proposed Scheme can fully integrate with the existing visual context, a negligible effect on public viewers and visual resources caused by the Proposed Scheme is considered.

VP6 – Wing Hong Street Rest Garden

4.3.30 In accordance with **Figures 4.2**, VP6 is about 220m to the north of the Scheme. Situated next to the Caritas Medical Centre, this rest garden mainly comprises passive recreational facilities and sitting-out areas while the level of public utilisation is not high. Therefore, the visual sensitivity of public viewers from this VP is graded as **medium**.

Visual Composition and Visual Obstruction

4.3.31 **Figure 4.9** presents the existing visual composition of the view from VP6 and potential visual compositions under the Baseline Scheme and the Proposed Scheme respectively.

4.3.32 The current foreground of the view from VP6 is mixed with trees inside the rest garden, and the buildings along Fuk Wa Street, including Por Mee Factory Building (about 55mPD) and CST (about 100mPD). An open sky view can be enjoyed at VP6. With reference to **Figure 4.9**, as the Proposed Scheme will be concealed by the buildings and the proposed development at SSP-017 in the foreground, no visual obstruction will be induced by the Proposed Scheme.

<u>*Effect on Public Viewers and Visual Resources*</u>

4.3.33 Given that the Proposed Scheme will not be visible from VP6, no effect on public viewers and visual resources is anticipated by the Proposed Scheme.

VP7 – Sun Yat Sen Memorial Park

4.3.34 With reference to **Figure 4.3**, VP7 is one of the key public viewing points stipulated on Chapter 11 in the HKPSG. Viewing from the Sun Yat Sen Memorial Park at the opposite side of the Victoria Harbour, the ridgeline behind Kowloon shall be protected. As shown on **Figure 4.3**, the Proposed Scheme is in front of the ridgeline between Kam Shan and the Eagle's Nest.

4.3.35 By utilizing 3D GIS tools, **Figure 4.10** presents the visual impact analysis of the Proposed Scheme to the view from VP7. The 3D GIS skyline analysis shows that Cullinan West (about 160 to 180mPD), The Sparkle (about 150mPD) and Hoi Lok Court (about 120mPD) will conceal most portions of the Proposed Scheme. In addition, the Proposed Scheme is below both the ridgeline and the 20% building free zone. Therefore, negligible visual impact on the view from VP7 is anticipated by the Proposed Scheme.

Table 4.2 Summary of Anticipated Visual Changes

Visual Elements	Sensitivity of Public Viewers	Visual Change
VP1 – Hing Wah Street Playground		
Foreground dominated by the football pitch of the Playground and Heya Aqua. Background formed by the dense urban development near Cheung Sha Wan Business Area. An open sky view is available.	***Medium*** Although VP1 is close to the Scheme, public viewers involved active football activities are less sensitive to visual concerns and changes.	***Visual Composition and Visual Obstruction:*** The proposed buildings are of compatible and similar size and height, as compared to Heya Aqua and the proposed development at SSP-017. With various mitigation measures, obstruction of the open sky view caused by the Proposed Scheme is substantially minimised while the visual permeability along Fuk Wing Street from will be preserved. A slightly adverse impact to the visual composition and obstruction is considered. ***Effect on Public Viewers and Visual Resources:*** Public viewers involved into active football activities are less sensitive to visual concerns and changes. With various mitigation measures, the potential negative visual impact caused by the Proposed Scheme can be addressed and minimised. As compared to the existing visual context, the Proposed Scheme has a similar and compatible building height, mass and scale with the neighbouring developments. Thus, a negligible effect on visual resources is considered. ***Overall Visual Impact:*** **Slightly adverse**
VP2 – Sham Shui Po Sports Ground		
Foreground mainly occupied by the open-air sports facilities and trees inside the Sports Ground.	***High*** The Sports Ground is highly utilised by the general public for its	***Visual Composition and Visual Obstruction:*** The Proposed Scheme creates a compatible, appropriate and harmonious scale to integrate with the existing visual context. With the mitigation measures of

Visual Elements	Sensitivity of Public Viewers	Visual Change
Background formulated by the dense high-rise development along Hing Wah Street and Cheung Wah Street. In overall, a wide open sky view can be enjoyed at VP2.	recreational facilities.	slimmer building form and wider building separation included under the Proposed Scheme, only a minimal portion of the wide open sky view would be obstructed. ***Effect on Public Viewers and Visual Resources:*** The Proposed Scheme would not create any sore thumb development or visual incompatibility. The wide open sky view being enjoyed at VP2 is well preserved under the Proposed Scheme. Thus, negligible effect on public viewers and visual resources is considered. ***Overall Visual Impact:*** **Negligible**
VP3 – Cheung Sha Wan Playground		
Foreground mainly occupied by the open-air sports facilities and trees inside the Playground. Background mainly formed by the dense high-rise residential towers. A wide open sky view on top of the surrounding residential towers is available.	***High*** The Playground is highly utilised by the general public for its recreational facilities.	***Visual Composition and Visual Obstruction:*** The Proposed Scheme is of compatible height with the residential towers in Fortune Estate and Un Chau Estate, which demonstrates its full integration, and harmony with the existing visual context. Besides, the Proposed Scheme would not induce obstruction to the wide open sky view. ***Effect on Public Viewers and Visual Resources:*** The wide open sky view being enjoyed at VP3 can be well preserved and the Proposed Scheme fully integrates with the existing visual context. A negligible effect on public viewers and visual resources is considered. ***Overall Visual Impact:*** **Negligible**

Visual Elements	Sensitivity of Public Viewers	Visual Change
VP4 – Junction of Cheung Wah Street and Un Chau Street		
View with a narrow sky view dominated by mid-rise to high-rise residential/ commercial developments along Cheung Wah Street.	***High*** A high level of pedestrian and business activity is observed.	***Visual Composition and Visual Obstruction:*** Most portions of the building blocks of the Proposed Scheme would be concealed by the existing buildings which causes negligible impact. The ground floor setback from Cheung Wah Street included in the Proposed Scheme has further reduced the visual obstruction and enhance the street environment at eye level. ***Effect on Public Viewers and Visual Resources:*** As the Proposed Scheme can fully integrate with the existing visual context, a negligible effect on public viewers and visual resources caused by the Proposed Scheme is considered. ***Overall Visual Impact:*** **Negligible**
VP5 – Exit B1 of Lai Chi Kok Railway Station		
View dominated by the mid-rise to high-rise developments along Cheung Sha Wan Road with a narrow open sky view.	***High*** A very high level of pedestrian activity is observed.	***Visual Composition and Visual Obstruction:*** The Proposed Scheme is of compatible height with the towers along Cheung Sha Wan Road, which demonstrates its full integration with the existing visual context. The Proposed Scheme only induces very minimal obstruction to the narrow sky view. ***Effect on Public Viewers and Visual Resources:*** The Proposed Scheme can fully integrate with the existing visual context, a negligible effect on public viewers and

Visual Elements	Sensitivity of Public Viewers	Visual Change
		visual resources caused by the Proposed Scheme is considered. ***Overall Visual Impact:*** **Negligible**
VP6 – Wing Hong Street Rest Garden		
View mixed with trees inside the rest garden, and the buildings along Fuk Wa Street. Open sky view can be enjoyed.	***Medium*** The level of public utilisation is not high.	Existing buildings in the foreground conceal the Proposed Scheme. No visual change is anticipated. ***Overall Visual Impact:*** **Negligible**
VP7 – Sun Yat Sen Memorial Park		
View mainly formed by the Victoria Harbour, the dense urban development in Kowloon, a wide open sky and the ridgeline from Kam Shan to Tsz Wan Shan.	-	Existing buildings conceal most portions of the Proposed Scheme. Noted that the Proposed Scheme is below the ridgeline and the 20% building free zone, negligible visual impact is anticipated. ***Overall Visual Impact:*** **Negligible**

5 EVALUATION OF OVERALL VISUAL IMPACT AND CONCLUSION

5.1 The above analysis has compared the visual impact induced by the future redevelopment under both the Baseline Scheme and the Proposed Scheme. Block size, disposition and layout of the Proposed Scheme have been carefully designed with respect to the existing urban design, building height profile and key public viewing points in the vicinity. With the proposed maximum building height, various measures such as slimmer building form, wider building separation, careful building disposition and ground floor setbacks are included in the Proposed Scheme to enhance the visual quality and visual impact.

5.2 The Scheme is located in a densely developed residential neighbourhood with an increasing number of high-rise residential developments reaching 120mPD or above. Several existing and future developments of 140mPD or above are found around the Scheme, such as The Pacifica, Beacon Lodge and the public housing development at the Wang Cheong Factory Estate site. Therefore, with full regard to the existing visual context, the proposed maximum building height of 140mPD proposed at Site A, and the proposed maximum building height of 95mPD at scheme area coloured in blue will not result in visual incompatibility.

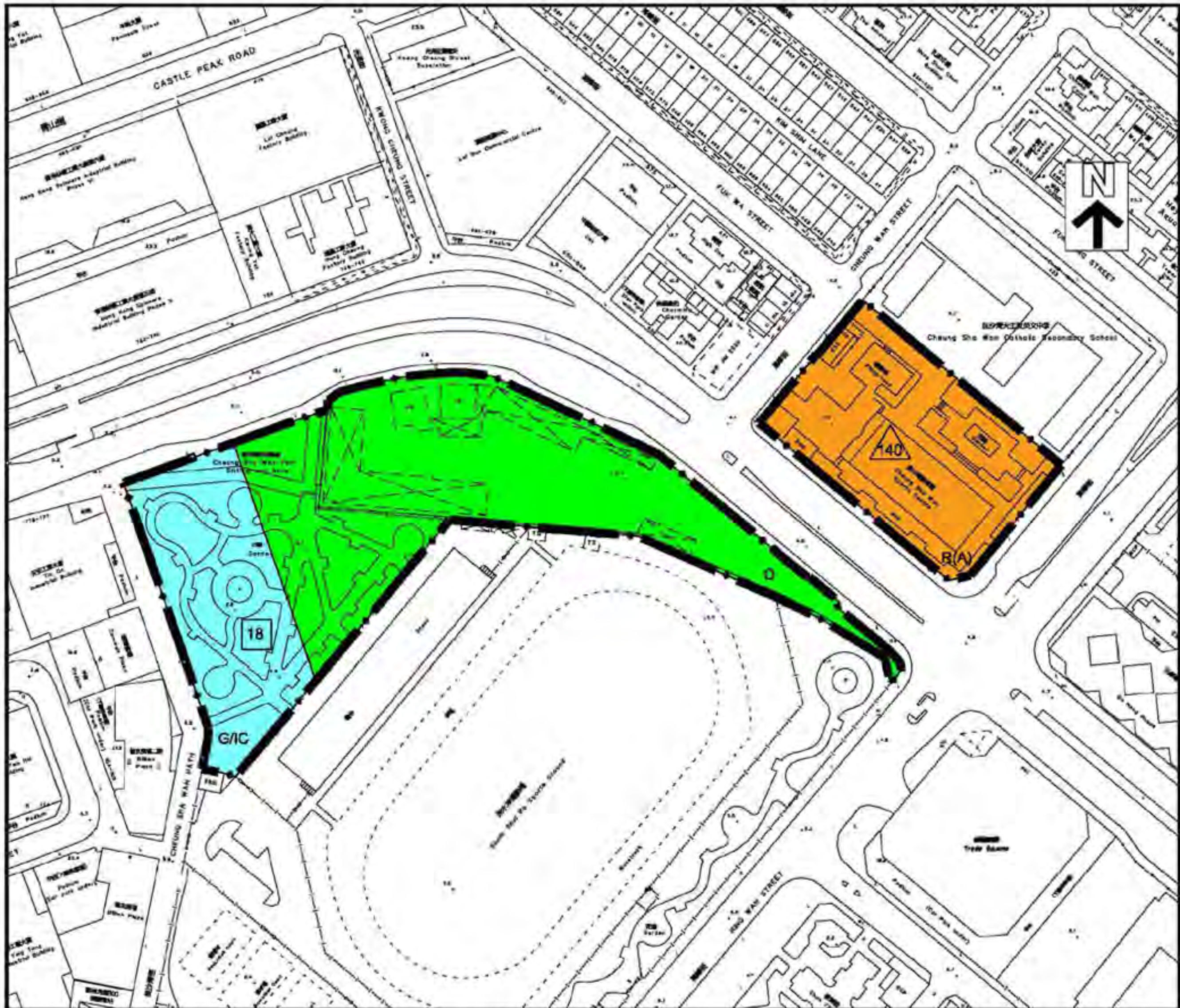
5.3 Referring to the visual impact analysis at VP6, the Proposed Scheme will be entirely concealed by existing developments. For VP4, VP5 and VP7, building blocks under the Proposed Scheme will be mostly concealed by existing developments. Noted the minimal visual change caused by Proposed Scheme, ***negligible*** visual impact is anticipated at these VPs.

5.4 Referring to VP2 and VP3, with the mitigation measures of slimmer building form and wider building separation being included, only a minimal portion of the wide open sky view would be obstructed by the Proposed Scheme. Since the Proposed Scheme is of compatible height which fully integrates with the existing visual context, a ***negligible*** overall visual impact is also anticipated at these VPs.

5.5 For VP1, although the Proposed Scheme also presents its compatibility with the existing visual context, the Proposed Scheme would obstruct a portion of the open sky view. Various mitigation measures including careful block disposition and slimmer building form are proposed which substantially minimised the visual obstruction. Noted that the public viewers at VP1 are less sensitive to the visual changes of the sky view, the potential negative visual impact caused by the Proposed Scheme can be addressed and minimised. Besides, the visual permeability along Fuk Wing Street is also preserved under the Proposed Scheme. Therefore, only a ***slightly adverse*** resultant visual impact is anticipated by the Proposed Scheme.

5.6 In conclusion, the Proposed Scheme will induce no significantly adverse visual impact. In overall, the visual impact for most VPs caused by the Proposed Scheme is negligible. The Proposed Scheme has similar building heights with the neighbouring development and is visually compatible to its context. Its induced visual obstruction at VP1 and VP2 could be addressed and minimized by various mitigation measures. Therefore, the result overall visual impact is concluded as ***negligible***.

URBAN RENEWAL AUTHORITY
September 2021



圖例
NOTATION

BOUNDARY OF DEVELOPMENT SCHEME		發展計劃範圍界線
RESIDENTIAL (GROUP A)	R(A)	住宅(甲類)
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
OPEN SPACE	O	休憩用地
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	140	最高建築物高度(在主水平基準上若干米)
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)	18	最高建築物高度(樓層數目)

夾附的<<註釋>>屬這份圖則的一部分

THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN

2021年 月 日城市規劃委員會根據市區重建局條例第25(6)(a)條認為適宜公布，並於2021年 月 日根據城市規劃條例第5條展示。

PLAN DEEMED SUITABLE BY THE TOWN PLANNING BOARD FOR PUBLICATION UNDER SECTION 25(6)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE ON 2021 AND EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE ON 2021

SECRETARY, TOWN PLANNING BOARD 城市規劃委員會秘書

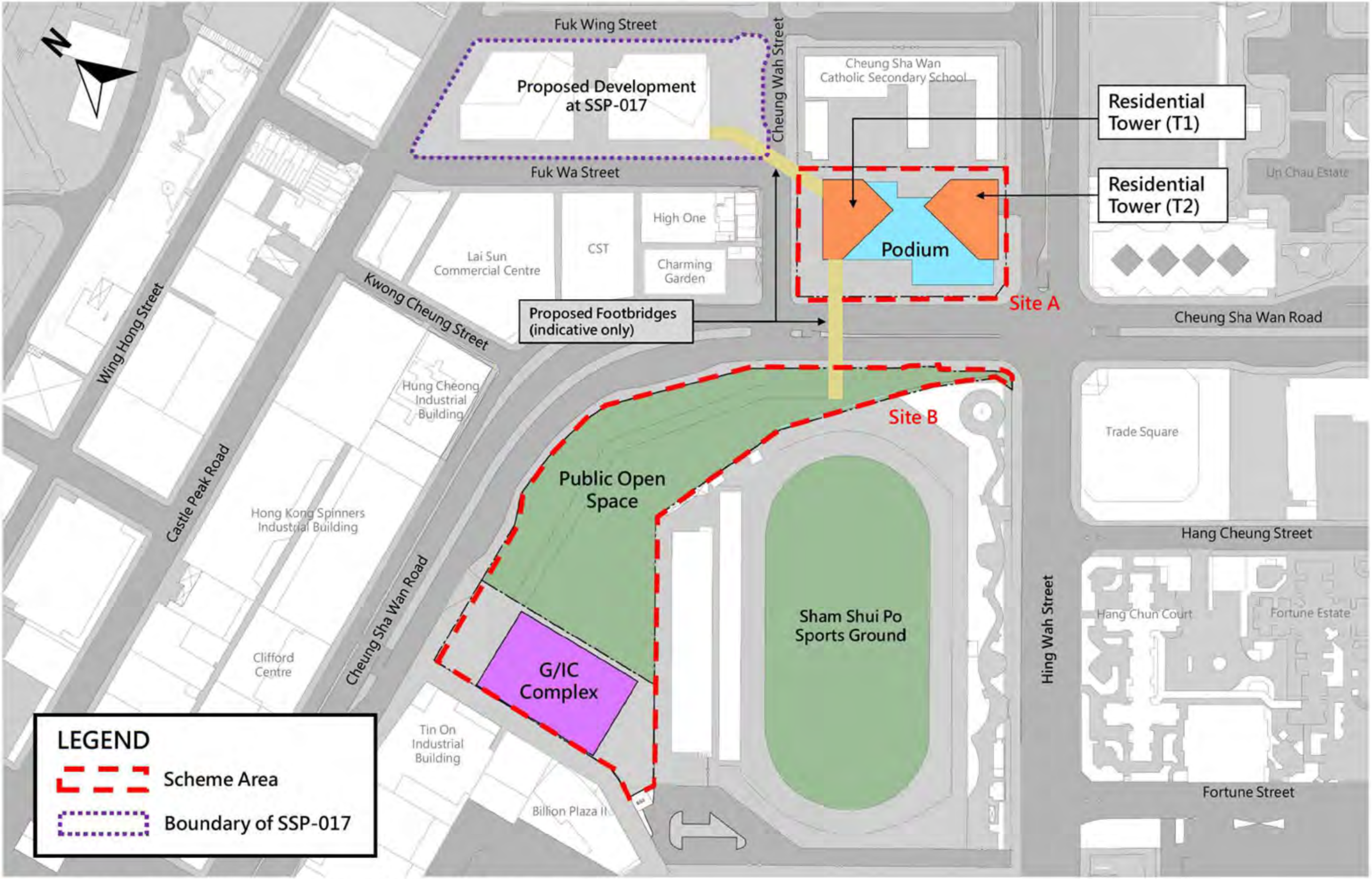
香港城市規劃委員會依據城市規劃條例擬備的市區重建局昌華街/長沙灣道發展計劃圖則

TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
URBAN RENEWAL AUTHORITY CHEUNG WAH STREET / CHEUNG SHA WAN ROAD DEVELOPMENT SCHEME PLAN

米 METRES 15 0 15 30 45 60 75 METRES 米

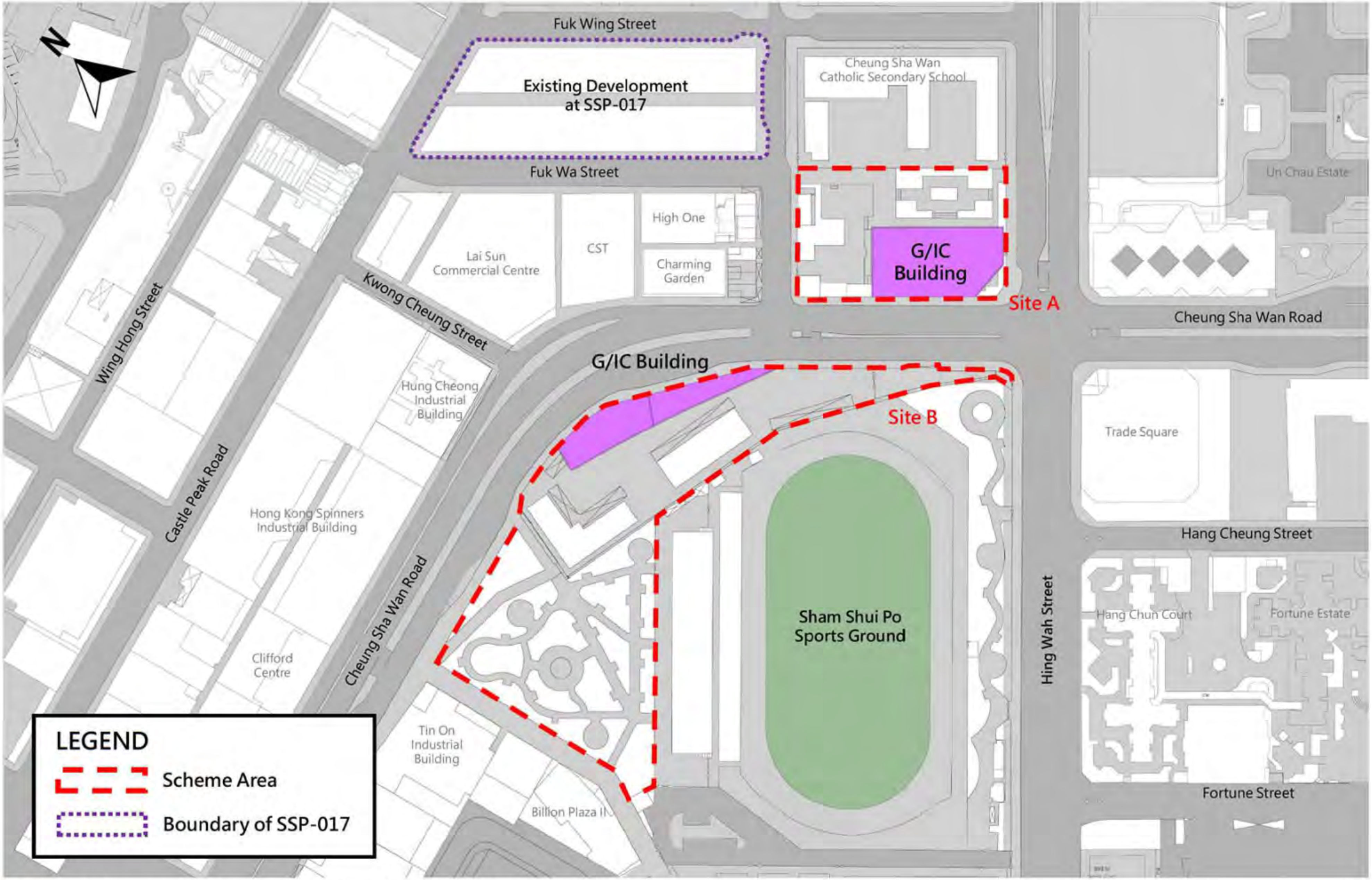
依據市區重建局條例第25(3)(a)條擬備
PREPARED UNDER SECTION 25(3)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE

圖則編號 PLAN No. S/K5/URA3/A



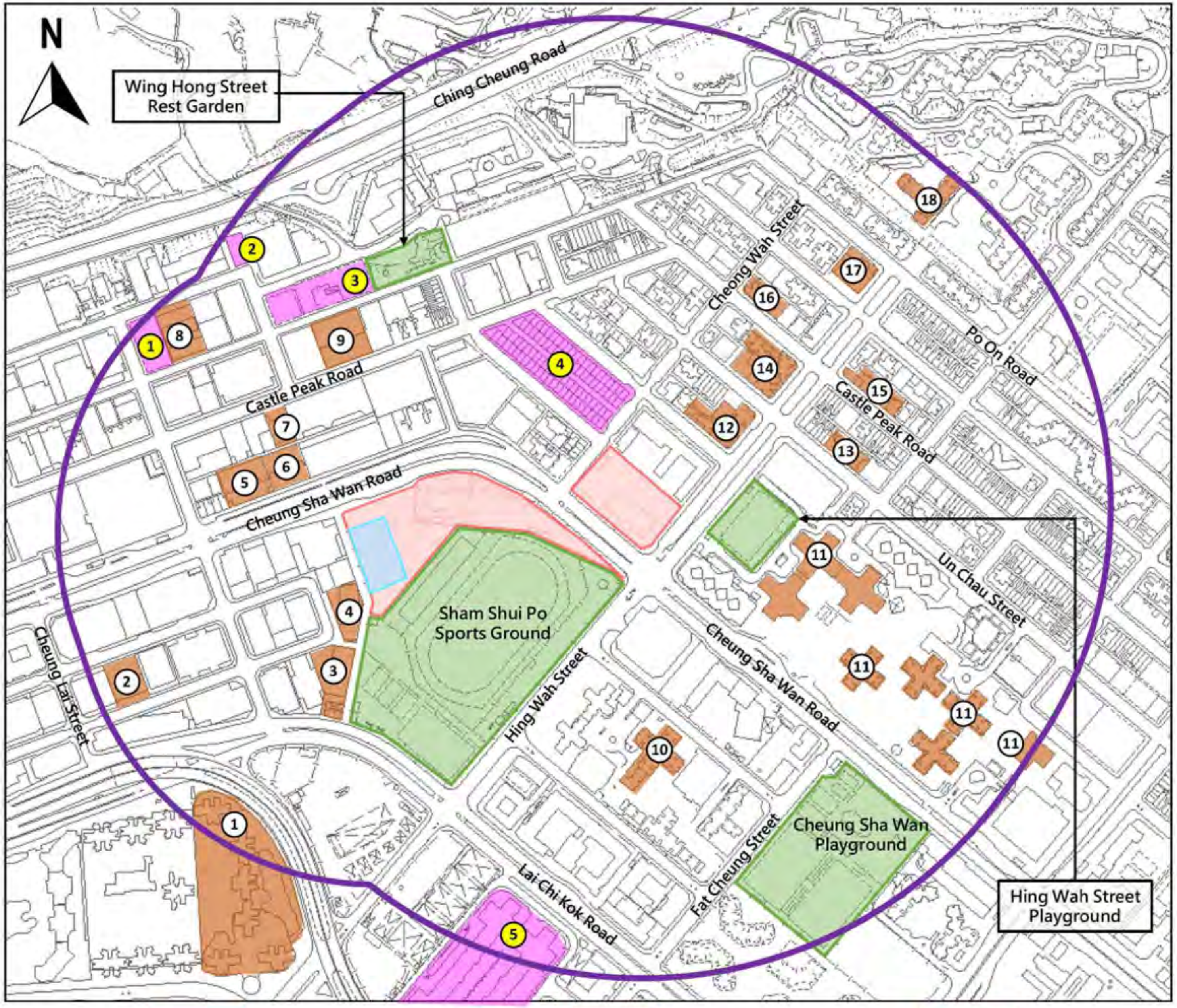
(Remarks: For indicative purpose only. SSP-018 Notional layout subject to detailed design upon DSP approval.)

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) **Visual Impact Assessment**	**Figure 2.1**	**Layout Plan of the Proposed Scheme (max. 140mPD)**	Not drawn to scale Sep 2021



(Remarks: For indicative purpose only. SSP-018 Notional layout subject to detailed design upon DSP approval.)

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) **Visual Impact Assessment**	**Figure 2.2**	**Layout Plan of the Baseline Scheme**	Not drawn to scale Sep 2021



Existing Developments reaching about 120mPD or above

1	The Pacifica	~ 165 - 185mPD
2	Saxon Tower	~ 135mPD
3	Billion Plaza	~ 120mPD
4	Billion Plaza II	~ 130mPD
5	Law's Commercial Plaza	~ 130mPD
6	Clifford Centre	~ 125mPD
7	Excel Centre	~ 140mPD
8	CEO Tower	~ 135mPD
9	Peninsula Tower	~ 125mPD
10	Fook Yat House, Fortune Estate	~ 120mPD
11	Un Chau Estate	~ 120mPD
12	Heya Aqua	~ 120mPD
13	TST Tower	~ 120mPD
14	Heya Crystal	~ 120mPD
15	Heya Star	~ 120mPD
16	Heya Delight	~ 120mPD
17	Beacon Lodge	~ 160mPD
18	Lotus House, So Uk Estate	~ 135mPD

Future Developments reaching about 120mPD or above

1	121 King Lam Street (A/K5/816)	~ 130mPD
2	1016-1018 Tai Nan West Street (A/K5/820)	~ 130mPD
3	Site at Junction of Wing Hong Street and Yu Chau West Street	~ 130mPD
4	Kim Shin Lane / Fuk Wa Street Development Project (SSP-017)	~ 120mPD
5	Public Housing Development at Wang Cheong Factory Estate Site	~ 150mPD

Scheme Area | Proposed GIC Complex | Assessment Area | Major Public Outdoor Space

市區重建局 URBAN RENEWAL AUTHORITY

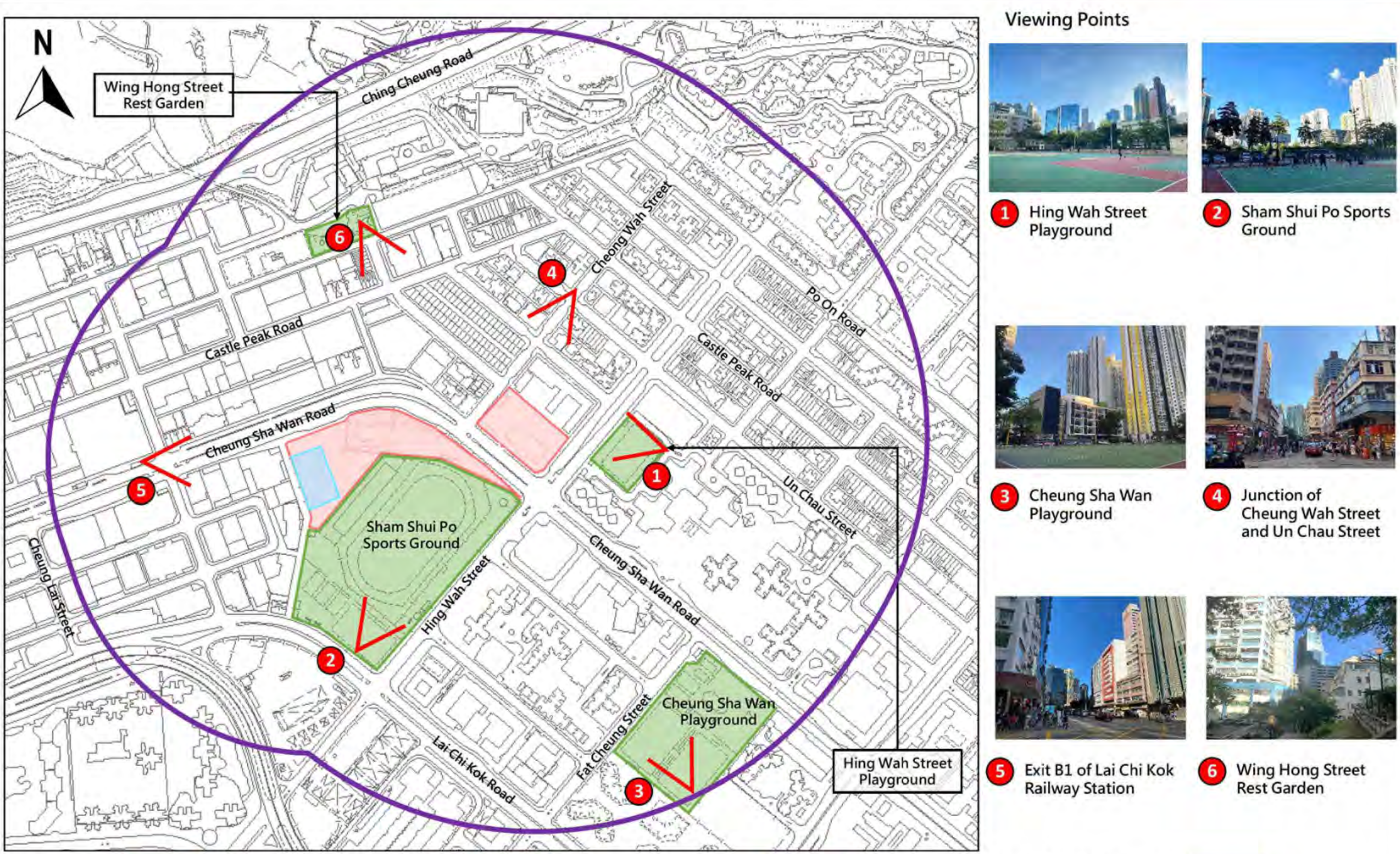
URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018)
Visual Impact Assessment

Figure 4.1

Assessment Area and Visual Elements

Not drawn to scale

Sep 2021

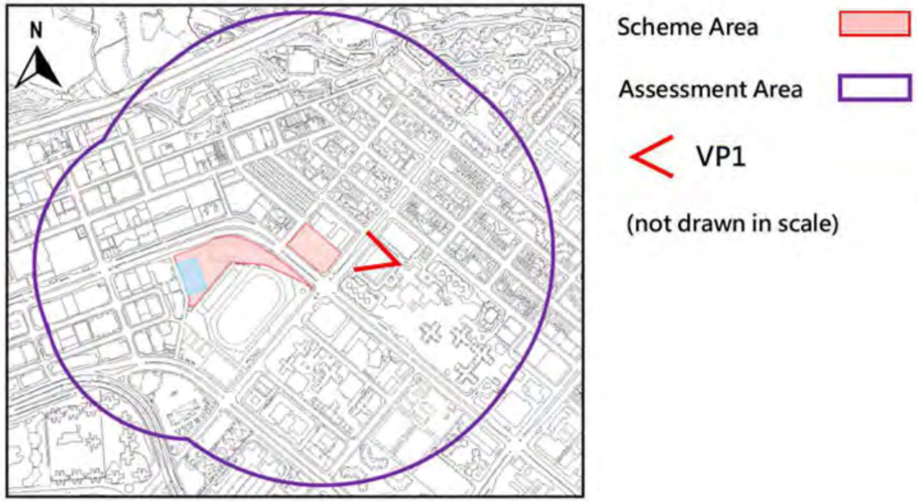


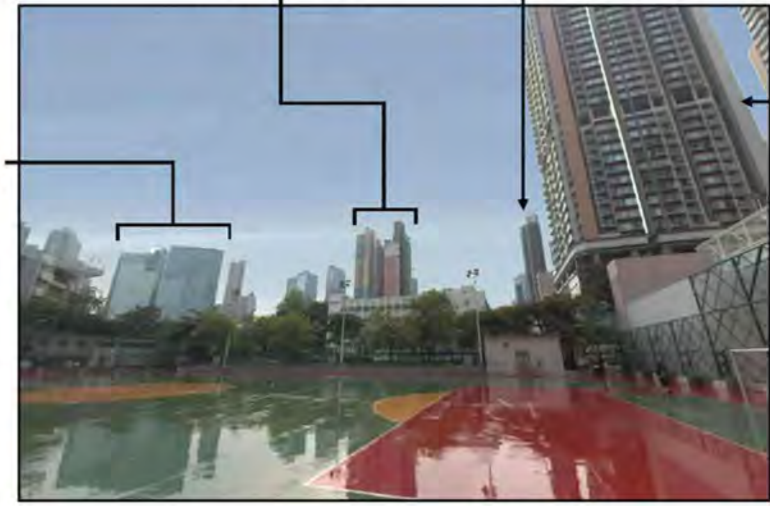
Scheme Area | Proposed GIC Complex | Assessment Area | Major Public Outdoor Space

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) **Visual Impact Assessment**	**Figure 4.2**	**Locations of Local Viewing Points**	Not drawn to scale Sep 2021

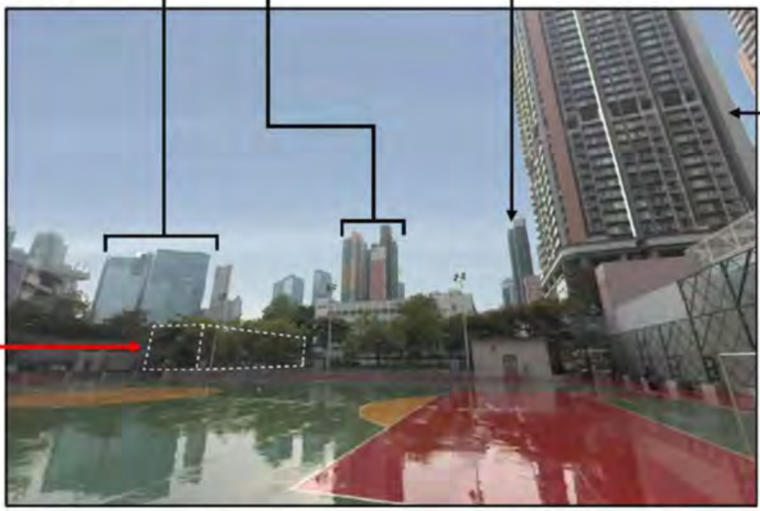
Source:
Strategic Viewing Points Webpage of Planning Department for the Town Planning Board Guidelines for Submission of Visual Impact Assessment to the Town Planning Board (TPB PG-No. 41) https://www.pland.gov.hk/pland_en/info_serv/via/web/vp_eng.html

Key Plan

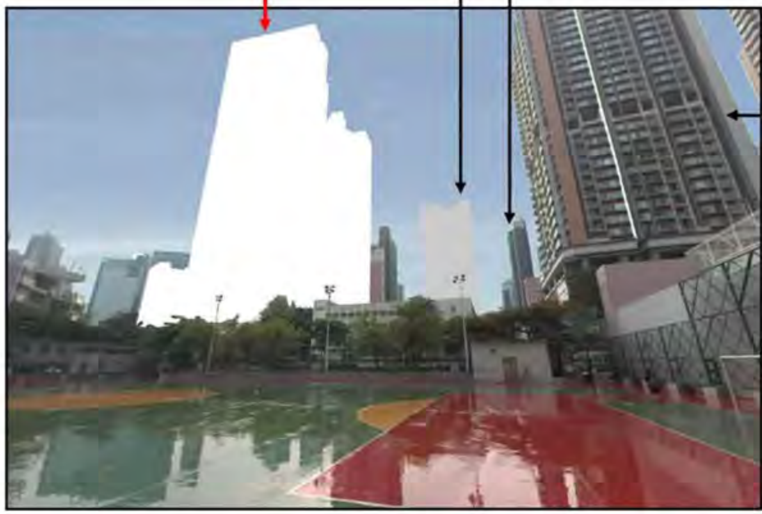




Existing Condition



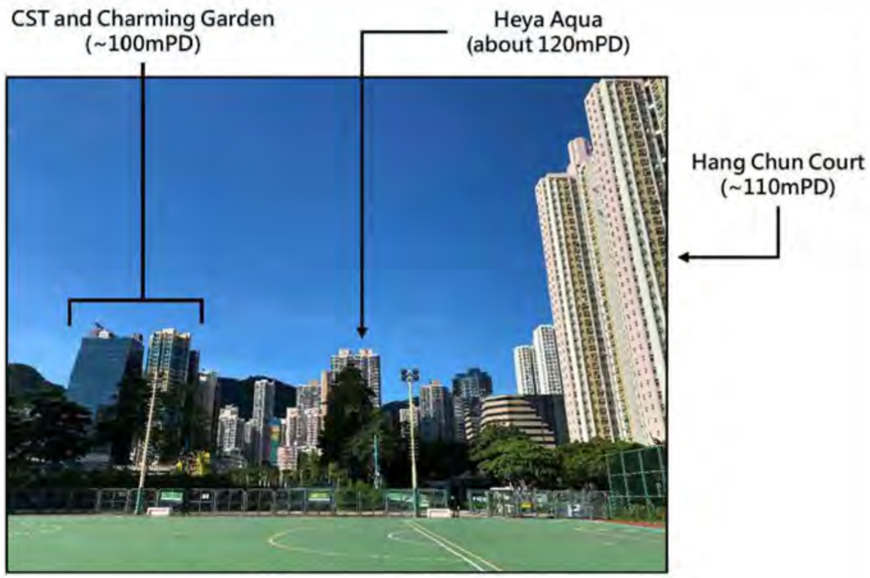
OZP-Compliant Scheme



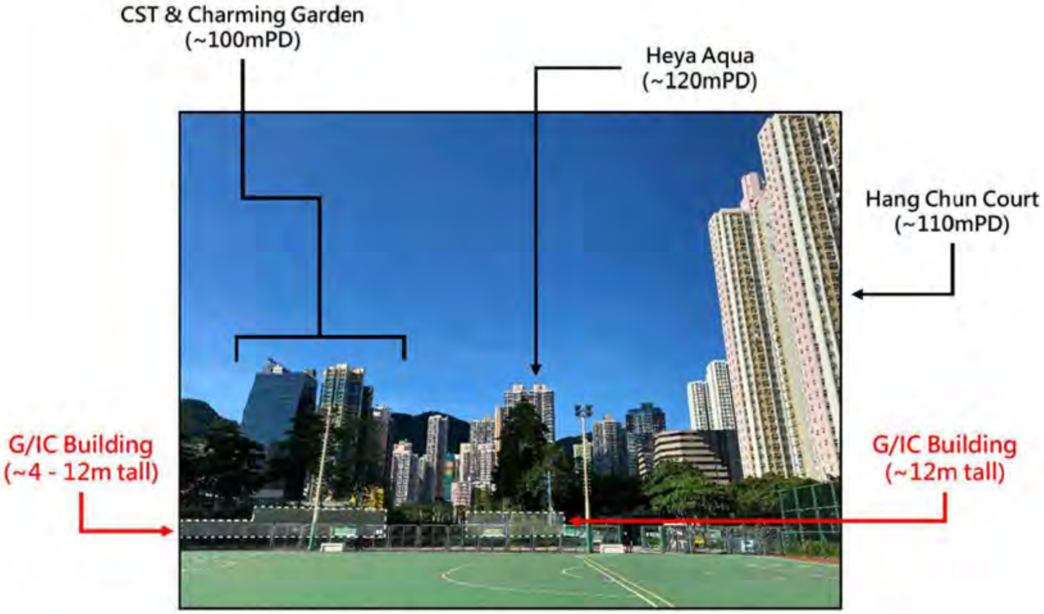
Proposed Scheme

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) **Visual Impact Assessment**	**Figure 4.4**	**Photomontages of VP1**	Sep 2021

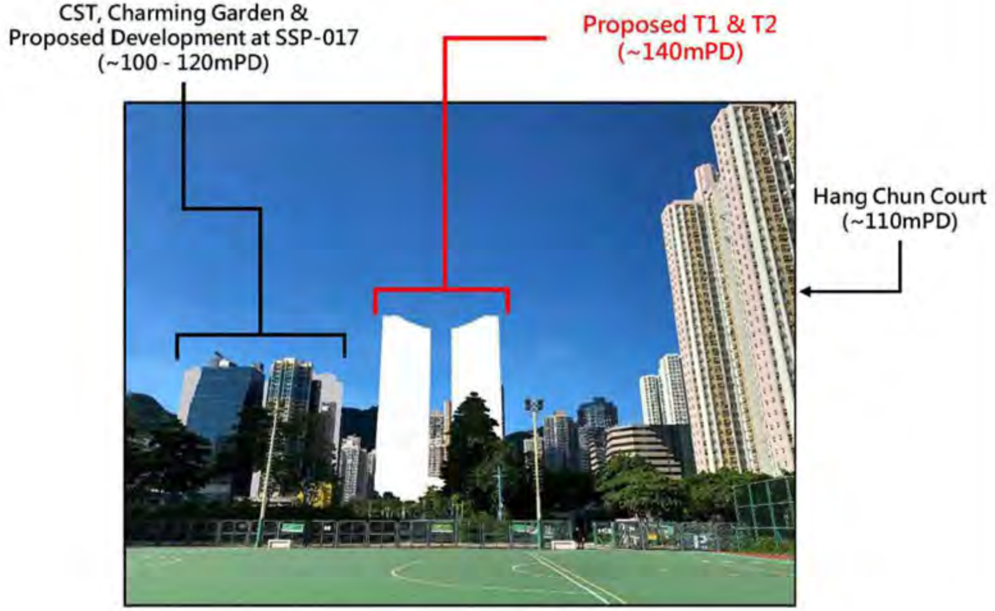
Key Plan



Existing Condition



OZP-Compliant Scheme



Proposed Scheme

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) **Visual Impact Assessment**	**Figure 4.5**	**Photomontages of VP2**	Sep 2021

Key Plan

Scheme Area

Assessment Area

VP3

(not drawn in scale)

Fortune Estate (~60 – 120mPD)

Heya Aqua (~120mPD)

Un Chau Estate (~120mPD)

Existing Condition

Fortune Estate (~60 – 120mPD)

Heya Aqua (~120mPD)

Un Chau Estate (~120mPD)

G/IC Buildings (~4 - 12m tall)

OZP-Compliant Scheme

Proposed Scheme (~140mPD)

Heya Aqua (~120mPD)

Un Chau Estate (~120mPD)

Fortune Estate (~60 – 120mPD)

Proposed Scheme

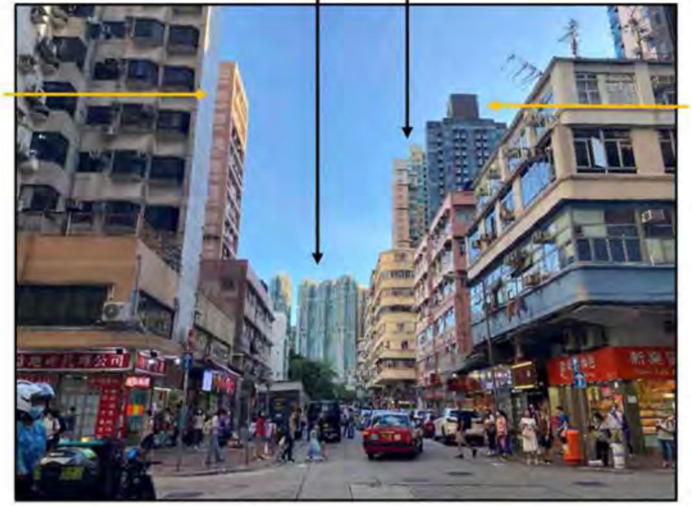
Key Plan

Scheme Area

Assessment Area

VP4

(not drawn in scale)



Existing Condition

OZP-Compliant Scheme

Proposed Scheme

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) **Visual Impact Assessment**	**Figure 4.7**	**Photomontages of VP4**	Sep 2021

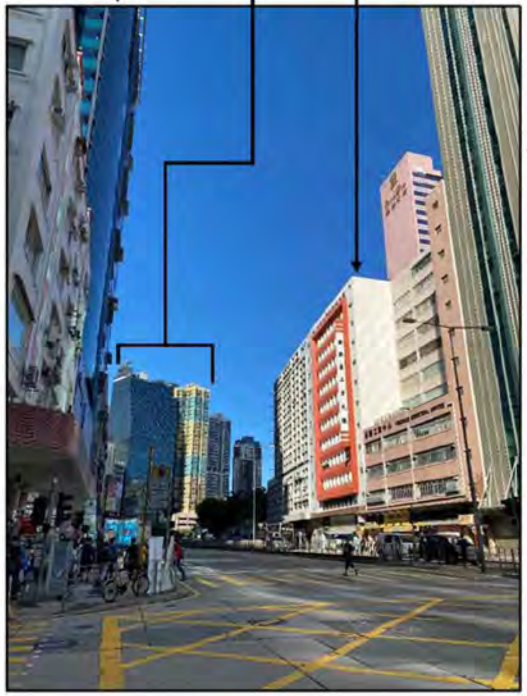
Key Plan

Scheme Area

Assessment Area

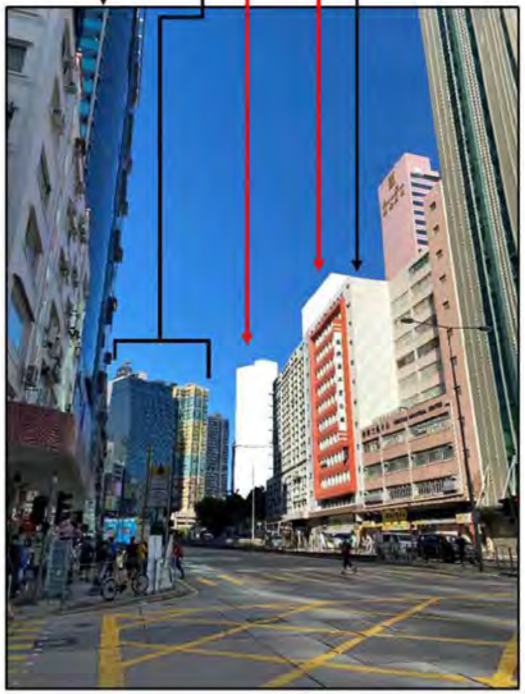
VP5

(not drawn in scale)



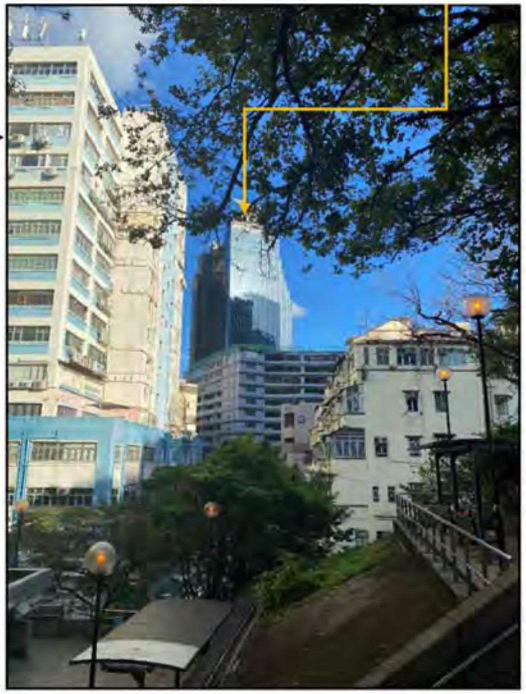
Existing Condition

OZP-Compliant Scheme



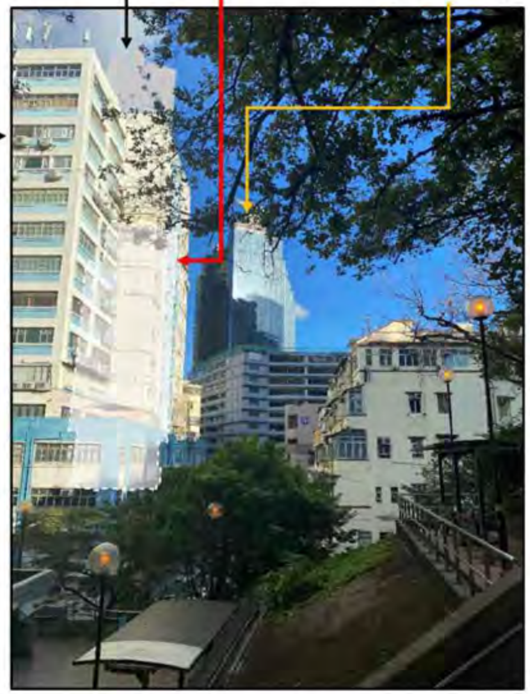
Proposed Scheme

Key Plan



Existing Condition

OZP-Compliant Scheme



Proposed Scheme

市區重建局 URBAN RENEWAL AUTHORITY	URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) **Visual Impact Assessment**	**Figure 4.9**	**Photomontages of VP6**	Sep 2021

Source:
Strategic Viewing Points Webpage of Planning Department for the Town Planning Board Guidelines for Submission of Visual Impact Assessment to the Town Planning Board (TPB PG-No. 41) *https://www.pland.gov.hk/pland_en/info_serv/via/web/vp_eng.html*

Appendix 4

Social Impact Assessment (Stage 1) Report

市區重建局
URBAN RENEWAL AUTHORITY

Cheung Wah Street / Cheung Sha Wan Road

Development Scheme (SSP-018)

Stage 1 Social Impact Assessment

September 2021

CONTENTS

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1. INTRODUCTION

1.1 According to the Urban Renewal Strategy (URS) issued by the Government in February 2011, the Urban Renewal Authority (URA) will carry out Social Impact Assessment (SIA) studies in the form of "*a Stage 1 social impact assessment ...... before the publication of any proposed redevelopment project in the Government Gazette*", and "*a Stage 2 social impact assessment ...... after the proposed project has been published in the Government Gazette*". This Stage 1 SIA is prepared by the URA for the proposed Cheung Wah Street / Cheung Sha Wan Road Development Scheme (the Scheme).

1.2 The URS also states "*Early social impact assessments will be initiated and conducted by the DURF (District Urban Renewal Forum) before redevelopment is recommended as the preferred option. The URA will update these assessments by DURF before implementing any specific redevelopment project.*" In the absence of a District Urban Renewal Forum ('DURF') for Sham Shui Po, there is no early SIA conducted by DURF which the URA could update for this Development Scheme.

1.3 According to the URS, the main elements of the Stage 1 SIA conducted by the URA before publication of a proposed project should include: -

- the population characteristics of the proposed project area;
- the socio-economic characteristics of the area;
- the housing conditions in the area;
- the characteristics of local business activities, including small shops and street stalls;
- the degree of overcrowding in the area;
- the availability of amenities, community and welfare facilities in the area;
- the historical background of the area;
- the cultural and local characteristics of the area;
- an initial assessment of the potential social impact of the proposed project; and
- an initial assessment of the mitigation measures required.

1.4 The Stage 2 SIA will be conducted after the publication of the project based on the factual information collected in the Freezing Survey (FS) upon project commencement. The URS stipulates the URA should submit both Stage 1 and Stage 2 SIA reports to the Town Planning Board (TPB) under section 25 of the Urban Renewal Authority Ordinance (URAO), and should release the reports for public information.

2. THE PROJECT BACKGROUND

2.1 First, a street block at Kim Shin Lane / Fuk Wa Street (namely SSP-017) comprising 90 building blocks of age over 60 with no lifts is identify as a site with imminent redevelopment needs. However, SSP-017 is undesirable for redevelopment because its existing plot ratio is as high as 8.12, hence, the residual plot ratio is 0.88 only. Multiple sub-divided units are also identified. Although SSP-017 has all the quality to demand for redevelopment, its redevelopment potential is low. In this respect, a wider area for planning opportunities have to be explored.

2.2 Under a "planning-led" approach in urban renewal works in recent years, URA has identified part of Sham Shui Po as Sham Shui Po Action Area 1 (SSPAA1) for holistic planning of urban renewal works. The Cheung Wah Street / Cheung Sha Wan Road Development Scheme (the Scheme) (SSP-018) comprises Sites A and B (**Figure 2.1**), both Government land opposite each other across Cheung Sha Wan Road is identified for redevelopment to formulate a comprehensive land-use restructuring together with SSP-017 to create more planning gains at district level. The proposed residential use at Site A of SSP-018 will be able to sustain the proposed redevelopment of SSP-017. As SSP-017 conforms to the existing planning control, it will be implemented under Section 26 of the URAO separately; it <u>does not</u> form part of this Scheme and will be covered by another Stage 1 SIA report.

2.3 The Scheme (SSP-018) is located in Sham Shui Po District, comprises Sites A and B along Cheung Sha Wan Road. Site A of the Scheme is bounded by Hing Wah Street on the southeastern boundary, Cheung Sha Wan Road on the southwestern boundary, Cheung Wah Street on the northwestern boundary, and Cheung Sha Wan Catholic Secondary School on the northeastern boundary. It is currently occupied by the Cheung Sha Wan Sports Centre and a garden both under Leisure and Cultural Services Department (LCSD). Subject to site survey and detailed design, the net site area used to calculate the development potential of Site A is about 5,197 sq.m.

2.4 Site B of the Scheme is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the southeastern boundary. Subject to site survey and detailed design, it covers a gross site area of about 13,857 sq.m, involving the Cheung Sha Wan Path Sitting-out Area and part of the Sham Shui Po Sports Ground under LCSD, as well as a temporary maintenance depot of Highways Department.

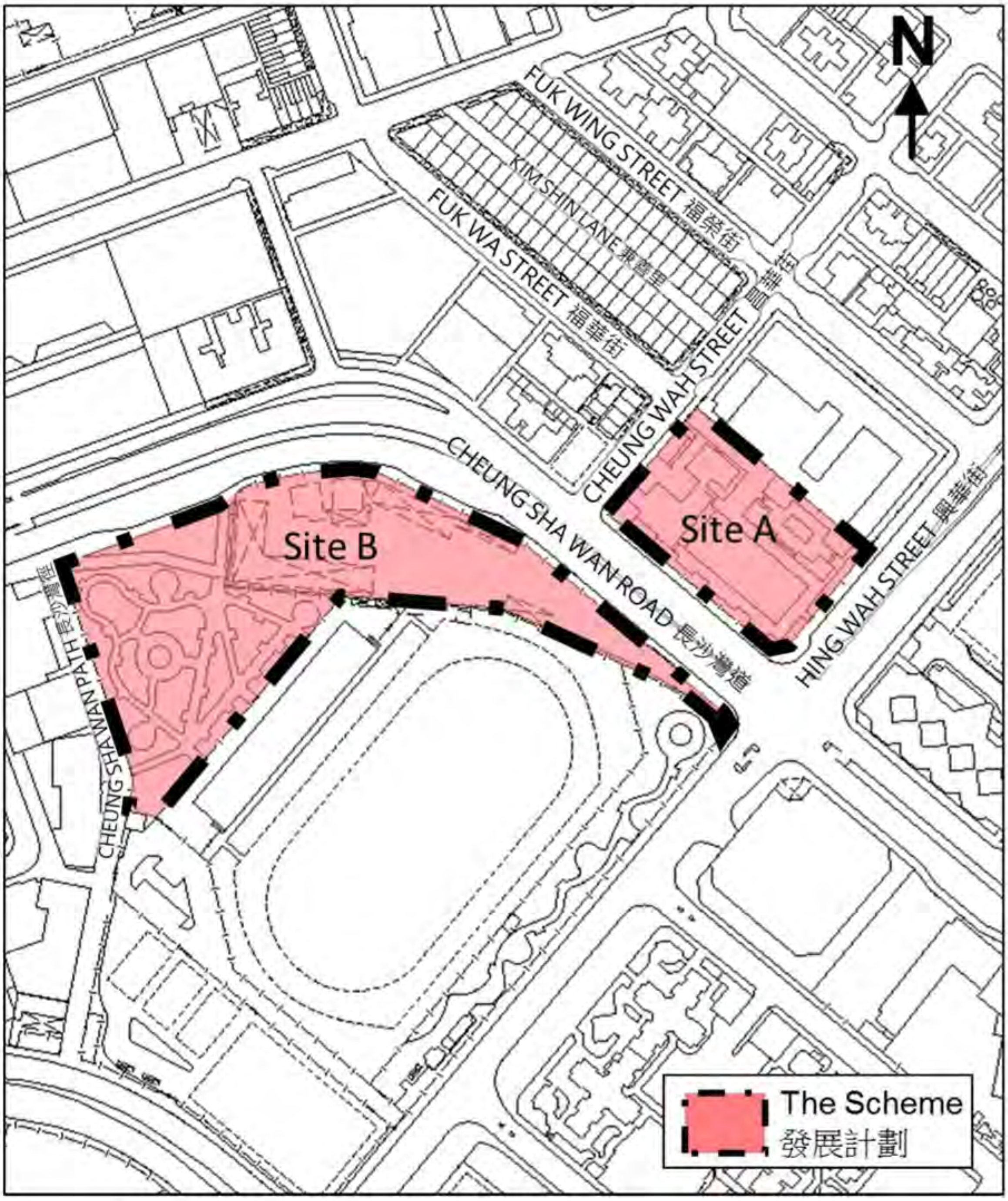


Figure 2.1 Location Plan

Planning Objectives

2.5 The URS issued in 2011 promulgates a comprehensive and holistic approach to carry out urban renewal with the following objectives:

- Restructuring and replanning of concerned urban areas;
- Designing more effective and environmentally-friendly local transport and road networks within the concerned urban areas;
- Rationalising land uses within the concerned urban areas;
- Providing more open space and community/ welfare facilities; and
- Enhancing the townscape with attractive landscape and urban design.

2.6 Under a "planning-led" approach, the Scheme includes the following key planning proposals to achieve the above URS objectives:

i. Through re-structuring and re-planning of existing land uses, the Scheme will optimise the land uses to achieve more planning gains for the community. Built in 1976, the existing Cheung Sha Wan Sports Centre at Site A of the Scheme which will be reprovisioned and upgraded at Site B up to present-day standard. Site B of the Scheme will be redeveloped to provide a POS larger than the existing Cheung Sha Wan Path Sitting-out Area and other new Government, institution and community (GIC) facilities to serve the public in a wider district. Under an integrated approach, the new GIC complex and its adjacent proposed public open space (POS) will form a larger leisure and community hub in connection with the Sham Shui Po Sports Ground for public enjoyment.

ii. Including the reprovision of the new Cheung Sha Wan Sports Centre, to accommodate the needs of the district on social welfare and health facilities identified by relevant Government departments, not less than 38,000 sq.m. non-domestic GFA is proposed for GIC uses at both sites in the Scheme, which is more than about 33 times of the existing GIC GFA. The provision of floor space for GIC uses is in line with the promotion of the Government's policy on "Single Site, Multiple Uses".

iii. Taking this integrated renewal opportunity, footbridges across Cheung Sha Wan Road and Cheung Wah Street are proposed to connect the open space provided in both URA projects (SSP-017 and SSP-018) to enhance connectivity of amenity features for public. The resultant all-weathered at grade and elevated pedestrian network will not only integrate various GIC facilities and POSs, but also enhance overall permeability and connectivity of a wider area of Sham Shui Po in the vicinity of the Scheme.

iv. Under an integrated urban renewal approach, the Scheme also provides various opportunities for feasible revitalisation initiatives outside the Scheme area. With the provision of underground public vehicle park at Site A, opportunities for the replacement of some on-street parking spaces in the area will be created to make way for possible pavement widening at strategic locations. Those separate revitalisation initiatives will in particular strengthen the connector role of Cheung Wah Street to enhance the connectivity between the medium aged building cluster further north and the future leisure and community hub in the south, thus benefits a wider area. For Site B, there is a possible integration of the new POS with the existing Sham Shui Po Sports Ground in the south subject to further co-ordination with LCSD on the associated revitalisation work separately, upon approval of the DSP and subject to further coordination and acceptancy of relevant Government departments.

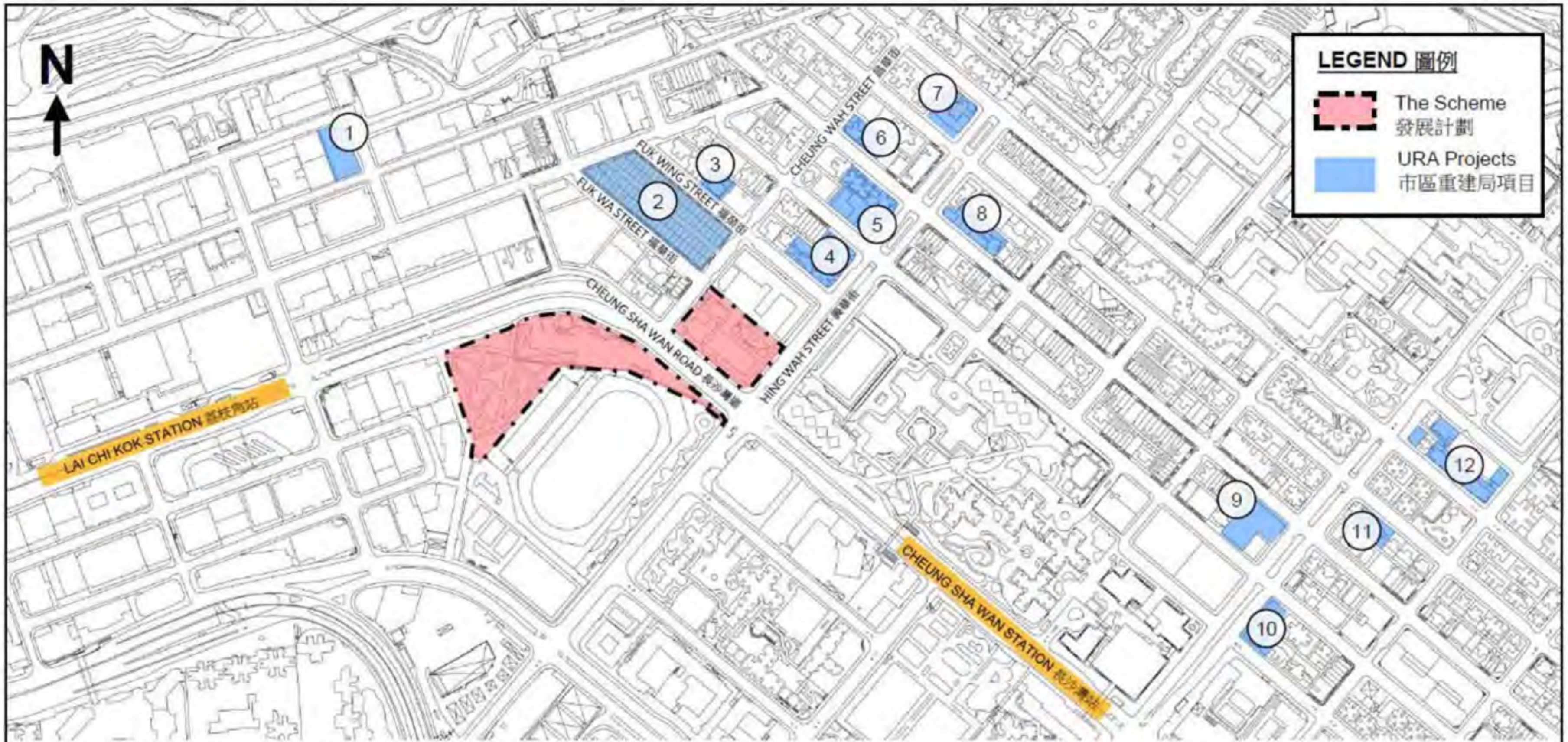
URA Projects in the Vicinity

2.7 The Scheme is located close to various completed and on-going URA projects nearby (**Figure 2.2**). To the northeast of the Scheme is a cluster of URA redevelopment projects. Completed URA projects include Fuk Wing Street Development Project (SSP-014), Heya Aqua (K22), Heya Crystal (K21), Heya Delight (K20), Beacon Lodge (K19) and Heya Star (K23), where were completed in 2015 and 2018.

2.8 To the east of the Scheme is another cluster of URA redevelopment projects. Tonkin Street/ Fuk Wing Street Development Project (SSP-015) and Castle Peak Road / Un Chau Street Development Project (SSP-016) are currently under construction and are expected to be completed by 2022 and 2023 respectively. There are also two completed URA redevelopment project, Heya Green (K25) and the Ascent (SSP/3/001) which were completed in 2013 and 2018 respectively. To the northwest of the Scheme is the 777-783 Yu Chau West Street Industrial Building Redevelopment Pilot Scheme Project (IB-2:SSP).

2.9 The Kim Shin Lane / Fuk Wa Street Development Project (SSP-017) located to the northwest of the Scheme across Cheung Wah Street and was commenced on the same date, allowing broader restructuring and replanning of the neighbourhood. SSP-017 will remove the existing old and dilapidated buildings and develop modern residential developments with commercial/retail uses in the low floors. The Scheme will create synergy with SSP-017 to formulate a comprehensive land-use restructuring together to create more planning gains at district level. As SSP-017 conforms to the existing planning control, it will be implemented under Section 26 of the URAO separately; it does not form part of this Scheme and will be covered by another Stage 1 SIA report.

Figure 2.2 URA Projects in the Vicinity



1. 777-783 Yu Chau West Street Industrial Building Redevelopment Pilot Scheme Project
汝州西街777-783號工業樓宇重建項目（先導計劃）(IB-2:SSP)
2. Kim Shin Lane / Fuk Wa Street Development Project
兼善里／福華街發展項目 (SSP-017)
3. Fuk Wing Street Development Project
福榮街發展項目 (SSP-014)
4. Hing Wah Street/ Un Chau Street/ Fuk Wing Street Project (Heya Aqua)
興華街／元州街／福榮街項目（喜漾）(K22)
5. Un Chau Street/ Hing Wah Street/ Castle Peak Road Project (Heya Crystal)
元州街／興華街／青山道項目（喜薈）(K21)
6. Castle Peak Road / Cheung Wah Street Project (Heya Delight)
青山道／昌華街項目（喜盈）(K20)
7. Po On Road / Shun Ning Road Project (Beacon Lodge)
保安道／順寧道項目（豐盛居）(K19)
8. Castle Peak Road / Hing Wah Street Project (Heya Star)
青山道／興華街項目（喜韻）(K23)
9. Castle Peak Road / Un Chau Street Development Project
青山道／元州街發展項目 (SSP-016)
10. Tonkin Street/ Fuk Wing Street Development Project
東京街／福榮街重建項目 (SSP-015)
11. Shun Ning Road Project (The Ascent)
順寧道發展項目（尚都）(SSP/3/001)
12. Po On Road / Wai Wai Road Project (Heya Green)
保安道／懷惠道項目（喜雅）(K25)

3. HISTORICAL BACKGROUND AND LOCAL CHARACTERISTICS

3.1 Sham Shui Po was founded as a market town at around 1750-1760s. In the early 19th Century, the town was already well-established and functioned as a service centre for shipping and trade. The town grew rapidly after the establishment of the city of Hong Kong since it was one of the best-located places for the trade in firewood and fresh food for the new city. As a result, the town became a primary market by the 1870s. By the end of 19th Century, certain businesses such as lime-burning, tanning, iron working, boat making and repairing, dyers, joss-stick trades and stone-cutting were well developed in Sham Shui Po. There were also extensive squatter areas settled by duck farmers, pig farmers and market gardeners, such as today's Apliu Street. The following paragraphs summarize some important development in Sham Shui Po since the 20th Century.

Public Housing

3.2 About 40% of housing stock in Sham Shui Po is public rental housing or subsidized home ownership housings (2016 By-Census). Sham Shui Po district also has the first group of public housings in Hong Kong. There are 19 Public Rental Housing (PRH) estates / Tenants Purchase Schemes (TPS) estates, and 9 Home Ownership Scheme/ Private Sector Participation Scheme / Green Form Subsidised Home Ownership Scheme (GSH) estates managed by the Hong Kong Housing Authority ('HA') in the District. A number of these public housing estates built in earlier decades, such as Shek Kip Mei Estate and So Uk Estate, have undergone or are undergoing redevelopment in recent years.

Lei Cheng Uk Han Tomb

3.3 The Lei Cheng Uk tomb, which is located at No. 41 Tonkin Street (see **Figure 3.1**), is the most important historic feature in Sham Shui Po. It was discovered in 1955 when the Government started construction of resettlement buildings in the area. The tomb was built in the Eastern Han Dynasty (i.e. AD 25-220). Historic items unearthed from the tomb included pottery and bronze objects. The tomb has been declared a gazetted monument for permanent preservation under the Antiquities and Monument Ordinance.

Sham Shui Po Sports Ground

3.4 Sham Shui Po Sports Ground (see **Figure 3.1**) located in Cheung Sha Wan was first opened on 9 January 1988. It comprises an all-weather, international standard 400-metre running track (8 lanes), a grass pitch with flood lights and spectator stand for

2,194 seats. It is a popular sports ground used by the local community in Sham Shui Po as well as hosting major sporting events. It was home to the 2011–12 Hong Kong First Division Football League season and the Fourway Athletics in the 2009–10 season.

Caritas Hospital

3.5 Caritas Medical Centre (see **Figure 3.1**) was founded by Caritas Hong Kong and opened by the Hong Kong Governor, David Trench, on 17 December 1964. The centre is now a general hospital with 1,206 beds situated in Sham Shui Po, and is co-managed by the Hospital Authority and Caritas Hong Kong. Caritas Medical Centre is the referral centre of the Kowloon West Cluster of the Hospital Authority in ophthalmology service serving the entire Kowloon west region. Caritas Medical Centre ophthalmology team also provides ophthalmic support to Kwong Wah Hospital (KWH). The Orthopaedic Rehabilitation Service for Kowloon West Cluster is also based at Caritas Medical Centre. The hospital runs the largest Developmental Disabilities Unit (Project Sunshine, Chinese: 陽光之家) for the entire territory of Hong Kong, to provide treatment, training and daily care for severely mentally handicapped patients under the age of 16 in a home-like setting. Despite not being a university hospital, it provides clinical training for medical and nursing students from the local universities.

3.6 Places with historical background and local character near the Scheme is shown on **Figure 3.1**.

Figure 3.1 Places with Historical Background and Local Character near the Scheme

4. POPULATION & SOCIO-ECONOMIC CHARACTERISTICS

4.1 Based on non-obtrusive on-site observation, there is no population and household identified in the Scheme. It will be confirmed at the Stage 2 SIA.

4.2 As stated in paragraph 2.3 and 2.4, Site A of the Scheme is currently occupied by the Cheung Sha Wan Sports Centre and a garden under LCSD, while Site B covers the Cheung Sha Wan Path Sitting-out Area and part of Sham Shui Po Sports Ground also under LCSD as well as a temporary maintenance depot of Highways Department. Hence, no household is included in the Scheme.

5. HOUSING & ENVIRONMENTAL CONDITIONS

5.1 No housing is located within the Scheme area. The degree of overcrowding in the Scheme area is not applicable.

Existing Uses

5.2 The existing Cheung Sha Wan Sports Centre at Site A is under the LCSD. The sports centre provides some basic recreational facilities for public use during the opening hours and organise recreational activities and training courses regularly for the public. According to the LCSD's website, the sports centre provides 1 multi-purpose arena for 1 volleyball court or converting to 1 basketball court (sub-standard 5-a-side basketball court) or converting to 4 badminton courts, which one of the badminton court can be converted into 2 table-tennis tables on weekdays. The sports centre was built in 1976 which the design and facilities is below current standard.

5.3 Site B of the Scheme involves the Cheung Sha Wan Path Sitting-out Area and part of the Sham Shui Po Sports Ground under LCSD as well as a temporary maintenance depot of Highways Department. There is no public access to the temporary maintenance depot of Highways Department, which is a major blockage of the POS at Sites A and B. Local residents in the north of the Scheme has to pass through the Cheung Sha Wan Path Sitting-out Area to reach the Sham Shui Po Sports Ground in the south.

5.4 Site B will be first redeveloped to provide more GIC facilities and POS up to present-day standard for the public. After completion, the existing Cheung Sha Wan Sports Centre at Site A will then be reprovisioned at Site B up to present-day standard and continue its operation.

Environmental Condition

5.5 The Scheme is located between Lai Chi Kok and Cheung Sha Wan MTR Stations. Cheung Sha Wan Road in between Sites A and B of the Scheme is a primary distributor with high traffic flow. The Scheme is envisaged to be subject to traffic noise generated from the heavy traffic.

5.6 Many residents from Un Chau Estate locating at the east of the Scheme and nearby residential developments locating at the north of the Scheme walk to Cheung Sha Wan Road for public transport services. At present, long queuing at the bus stops often appear along the pavement of Cheung Sha Wan Road, resulting in a crowded condition along the pavement. The major pedestrian circulation is therefore concentrated along the pavement of Cheung Sha Wan Road which is often crowded during peak hours.

6. CULTURAL & LOCAL CHARACTERISTICS, AND CHARACTERISTICS OF LOCAL BUSINESS ACTIVITIES

6.1 The Scheme is predominately surrounded by residential buildings to the east while there are more industrial and commercial buildings to the west of the Scheme. To the east across Hing Wah Street is predominantly residential, including a public housing estate - Un Chau Estate, while private residential buildings are found mainly to the north of the Scheme. Commercial uses such as retail shops, eateries and car repair shops are found on the ground floor of the surrounded residential buildings.

6.2 No shop is identified within the Scheme area.

7. RECREATIONAL, AMENITY & COMMUNITY AND WELFARE FACILITIES

7.1 **Figure 7.1** shows the location of various GIC facilities and public open spaces within the 500m radius of the Scheme area. There are a number of public open spaces near the Scheme area, the closest being Sham Shui Po Sports Ground located to the south and Hing Wah Street Playground to the east of the Scheme.

7.2 The major GIC facilities within the 500m radius of the Scheme area include the Cheung Sha Wan Fire Station and Ambulance Depot, and several educational facilities, including primary schools and secondary schools.

7.3 For existing social welfare facilities and services (refer to **Table 7.1**), family and child welfare services, services for the elderly, rehabilitation and medical social services, services for offenders, and services for young people are found in close proximity to the Scheme.

7.4 Despite of the existing G/IC facilities in the neighbourhood, the Scheme would take the redevelopment opportunity to provide not less than 38,000 sq.m. non-domestic GFA for G/IC uses at both sites in the Scheme, which is more than 33 times of the existing provision. The existing Cheung Sha Wan Sports Centre at Site A will be reprovisioned at Site B up to present-day standard and continue its operation. The actual use of the new GIC provision will be subject to liaison with relevant government departments as well as views from local stakeholders after the approval of the DSP. The provision of floor space for GIC uses is in line with the promotion of the government's policy on "Single Site, Multiple Uses".

7.5 Opportunities for place making and cohesive greening/landscaping to integrate with surrounding landscape will also be explored. Subject to further co-ordination with LCSD, there is a possible integration of the new POS at Site B with the existing Sham Shui Po Sports Ground in the south to improve the pedestrian friendly environment and to enhance the connectivity of the neighbourhood, upon approval of the DSP and subject to further coordination and acceptancy of relevant Government departments.

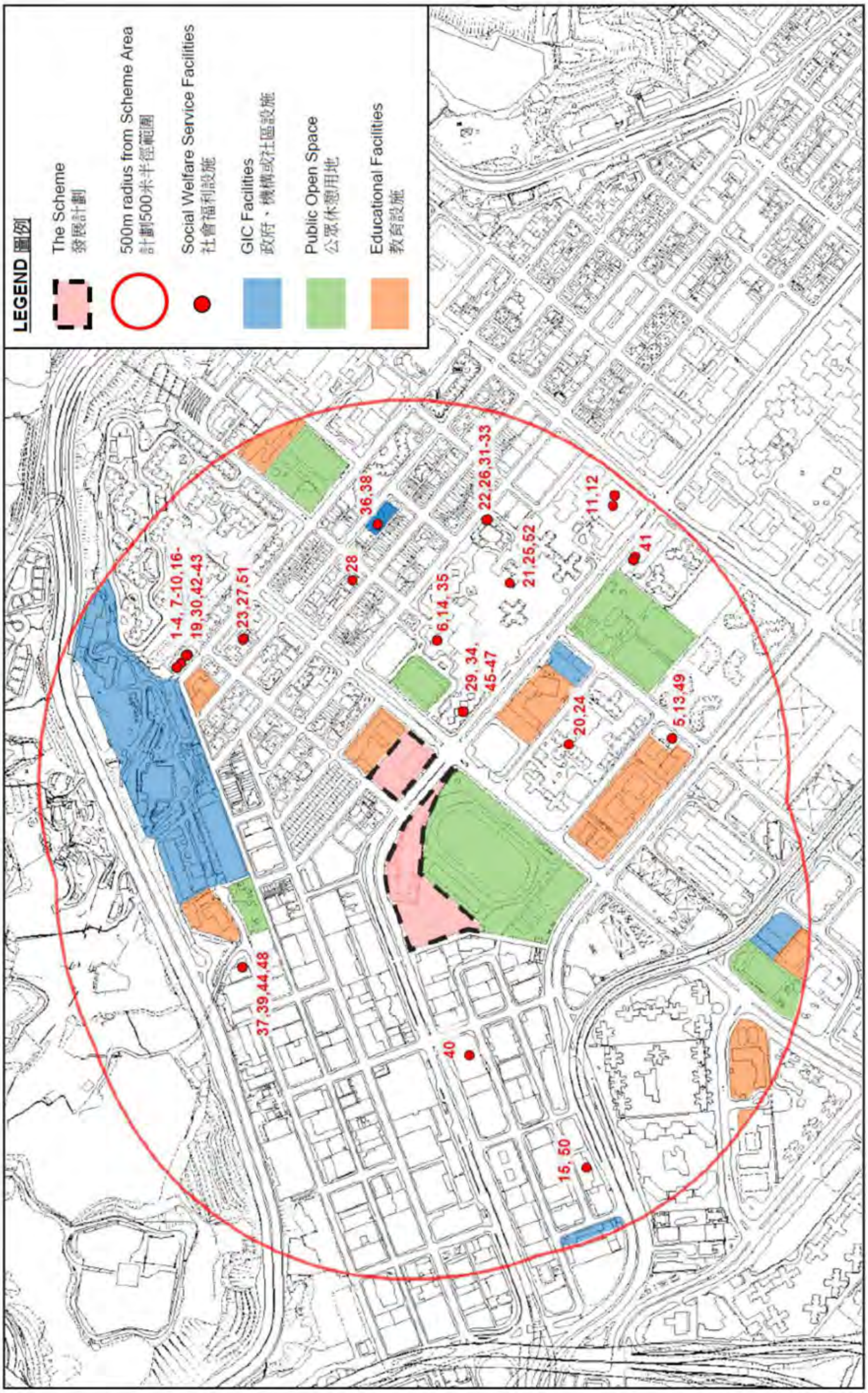


Figure 7.1 G/IC and Amenity Facilities within 500m Radius of the Scheme Area

Table 7.1 Social Welfare Facilities within 500m Radius of the Project Area

Service Unit		Operator	Address
A. Family and Child Welfare			
Agency-based Enhancement of Professional Staff Support Services in Residential Care Homes			
1.	Hong Kong Christian Service - So Uk Small Group Home 1	Hong Kong Christian Service	So Uk SGH 1, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
2.	Hong Kong Christian Service - So Uk Small Group Home 2	Hong Kong Christian Service	So Uk SGH 2, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
3.	Hong Kong Christian Service - So Uk Small Group Home 3	Hong Kong Christian Service	So Uk SGH 3, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
4.	Hong Kong Christian Service - So Uk Small Group Home 4	Hong Kong Christian Service	So Uk SGH 4, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
Extended Hours Child Care Service			
5.	Baptist Oi Kwan Social Service - Pui Yan Pre-Primary School (OCCS)	Baptist Oi Kwan Social Service	G/F., 1 Fortune Street, Cheung Sha Wan, Kowloon
6.	Hong Kong Young Women's Christian Association - Chiu Oi Wah Nursery School (OCCS)	Hong Kong Young Women's Christian Association	Wing B & C, G/F, Un Fung House, Un Chau Estate, Sham Shui Po, Kowloon
Emergency/Short-term Care in Small Group Home			
7.	Hong Kong Christian Service - So Uk Small Group Home 1	Hong Kong Christian Service	So Uk SGH 1, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
8.	Hong Kong Christian Service - So Uk Small Group Home 2	Hong Kong Christian Service	So Uk SGH 2, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
9.	Hong Kong Christian Service - So Uk Small Group Home 3	Hong Kong Christian Service	So Uk SGH 3, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
10.	Hong Kong Christian Service - So Uk Small Group Home 4	Hong Kong Christian Service	So Uk SGH 4, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon

Service Unit		Operator	Address
Family Aide			
11.	Hong Kong Family Welfare Society - Shamshuipo (West) Integrated Family Service Centre	Hong Kong Family Welfare Society	Unit 204, 2/F, Un Him House, Un Chau Estate, Shamshuipo, Kowloon
Integrated Family Service Centre			
12.	Hong Kong Family Welfare Society - Shamshuipo (West) Integrated Family Service Centre	Hong Kong Family Welfare Society	Unit 204, 2/F, Un Him House, Un Chau Estate, Shamshuipo, Kowloon
Occasional Child Care Service			
13.	Baptist Oi Kwan Social Service - Pui Yan Pre-Primary School (OCCS)	Baptist Oi Kwan Social Service	G/F., 1 Fortune Street, Cheung Sha Wan, Kowloon
14.	Hong Kong Young Women's Christian Association - Chiu Oi Wah Nursery School (OCCS)	Hong Kong Young Women's Christian Association	Wing B & C, G/F, Un Fung House, Un Chau Estate, Sham Shui Po, Kowloon
Specialised Co-parenting Support Centre			
15.	Hong Kong Family Welfare Society – Parent-child Connect Specialised Co-parenting Support Centre	Hong Kong Family Welfare Society	Unit 302, 3/F, Laford Centre, 838 Lai Chi Kwok Road, Kowloon
Small Group Homes			
16.	Hong Kong Christian Service - So Uk Small Group Home 1	Hong Kong Christian Service	So Uk SGH 1, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
17.	Hong Kong Christian Service - So Uk Small Group Home 2	Hong Kong Christian Service	So Uk SGH 2, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
18.	Hong Kong Christian Service - So Uk Small Group Home 3	Hong Kong Christian Service	So Uk SGH 3, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
19.	Hong Kong Christian Service - So Uk Small Group Home 4	Hong Kong Christian Service	So Uk SGH 4, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon

Service Unit		Operator	Address
B. Services for the Elderly			
Contract Home			
20.	Tung Wah Group of Hospitals - Chu Sau Cheung Nursing Home	Tung Wah Group of Hospitals	Unit 302 and 401, 3/F and 4/F, Ancillary Facilities Block, Cheung Sha Wan Estate, 391 Cheung Sha Wan Road, Kowloon
21.	Yan Chai Hospital - Lee Wai Siu Kee Elderly Home	Yan Chai Hospital	G/F (Part) to 2/F, Un Kin House, Un Chau Estate, No. 303 Un Chau Street, Sham Shui Po, Kowloon
Day Care Centre/Unit for the Elderly			
22.	Hong Kong Christian Service - Shamshuipo Day Care Centre for the Elderly	Hong Kong Christian Service	Room 201, 2/F, Un Him House, Un Chau Estate, Sham Shui Po, Kowloon
District Elderly Community Centre			
23.	Caritas - Hong Kong - Cheng Shing Fung District Elderly Centre (Sham Shui Po)	Caritas - Hong Kong	UG/F, Lai Bo Garden, 383 Po On Road, Shamshuipo, Kowloon
Neighbourhood Elderly Centre			
24.	Hong Kong Christian Service - Fortune Neighbourhood Elderly Centre	Hong Kong Christian Service	G/F, Fook Yat House, Fortune Estate, Sham Shui Po, Kowloon
25.	Hong Kong Christian Service - Un Chau Neighbourhood Elderly Centre	Hong Kong Christian Service	Wing C, G/F, Un Lok House & Wing C, G/F, Un Nga House, Un Chau Estate, Sham Shui Po, Kowloon
Pilot Scheme on Community Care Service Voucher for the Elderly			
26.	Yan Chai Hospital - Lee Wai Siu Kee Elderly Home	Yan Chai Hospital	G/F (Part) to 2/F, Un Kin House, Un Chau Estate, No. 303 Un Chau Street, Sham Shui Po, Kowloon
Support Team for the Elderly Based at District Elderly Community Centres			
27.	Caritas - Hong Kong - Cheng Shing Fung District Elderly Centre (Sham Shui Po)	Caritas - Hong Kong	UG/F, Lai Bo Garden, 383 Po On Road, Shamshuipo, Kowloon

Service Unit		**Operator**	**Address**
Enhanced Home and Community Care Services			
28.	Tung Wah Group of Hospitals - Enhanced Home and Community Care Service (Sham Shui Po)	Tung Wah Group of Hospitals	Flat C, 3/F, Shun Lee Commercial Building, 338-340 Castle Peak Road, Cheung Sha Wan, Kowloon
C. Rehabilitation and Medical Social Services			
Agency-based Occupational Therapist Service			
29.	Wai Ji Christian Service - Agency-Based Occupational Therapy Service	Wai Ji Christian Service	1/F, Un Hong House, Un Chau Estate, Sham Shui Po, Kowloon
Care and Attention Home for Severely Disabled Persons with Day Care Services for Persons with Severe Disabilities			
30.	Mental Health Association of Hong Kong (The) - So Uk Home	Mental Health Association of Hong Kong (The)	3/F & 4/F, So Uk Amenity and Com. Bldg., So Uk Estate, Sham Shui Po, Kowloon
District Support Centre for Persons with Disabilities			
31.	Yang Memorial Methodist Social Service - Sham Shui Po District Support Centre	Yang Memorial Methodist Social Service	Unit 201, 2/F, Ancillary Facilities Block, Cheung Sha Wan Estate, Sham Shui Po, Kowloon
Home-based Rehabilitation Training Service			
32.	Yang Memorial Methodist Social Service - Sham Shui Po District Support Centre	Yang Memorial Methodist Social Service	Unit 201, 2/F, Ancillary Facilities Block, Cheung Sha Wan Estate, Sham Shui Po, Kowloon
Home Care Services for Persons with Severe Disabilities			
33.	Yang Memorial Methodist Social Service - Kowloon (1) Regional Home Care Service	Yang Memorial Methodist Social Service	Unit 201, 2/F, Ancillary Facilities Block, Cheung Sha Wan Estate, Sham Shui Po, Kowloon
Hostel for Moderately Mentally Handicapped Persons			
34.	Wai Ji Christian Service - Un Chau Hostel	Wai Ji Christian Service	1/F, Un Hong House, Un Chau Estate, Sham Shui Po, Kowloon

Service Unit		Operator	Address
Integrated Programme in Kindergarten-cum-Child Care Centre			
35.	Hong Kong Young Women's Christian Association - Chiu Oi Wah Nursery School (OCCS)	Hong Kong Young Women's Christian Association	Wing B & C, G/F, Un Fung House, Un Chau Estate, Sham Shui Po, Kowloon
On the Job Training Programme for People with Disabilities			
36.	Baptist Oi Kwan Social Service - Training & Employment Service (Cheung Sha Wan Centre)	Baptist Oi Kwan Social Service	G/F-2/F, 323 Shun Ning Road, Cheung Sha Wan, Kowloon
37.	Society of Rehabilitation and Crime Prevention, Hong Kong (The) - Employment Development Service (HQ contact)	Society of Rehabilitation and Crime Prevention, Hong Kong (The)	Flat A, 4/F, Tai Cheong (Liberal) Fty Bldg, 3 Wing Ming Street, Lai Chi Kok, Kowloon
Sunnyway - On the Job Training Programme for Young People with Disabilities			
38.	Baptist Oi Kwan Social Service - Training & Employment Service (Cheung Sha Wan Centre)	Baptist Oi Kwan Social Service	G/F-2/F, 323 Shun Ning Road, Cheung Sha Wan, Kowloon
39.	Society of Rehabilitation and Crime Prevention, Hong Kong (The) - Employment Development Service (HQ contact)	Society of Rehabilitation and Crime Prevention, Hong Kong (The)	Flat A, 4/F, Tai Cheong (Liberal) Fty Bldg, 3 Wing Ming Street, Lai Chi Kok, Kowloon
Integrated Rehabilitation Services Centre			
40.	Caritas - Hong Kong - Cheer Home	Caritas - Hong Kong	1/F, Ancillary Facilities Block, Cheung Sha Wan Estate, Sham shui Po, Kowloon
41.	Po Leung Kuk - So Uk Child Development Centre	Po Leung Kuk	2/F., Amenity and Community Building, So Uk Estate, Sham Shui Po, Kowloon
Special Child Care Centres cum Early Education & Training Centres			
42.	Po Leung Kuk - So Uk Child Development Centre	Po Leung Kuk	2/F., Amenity and Community Building, So Uk Estate, Sham Shui Po, Kowloon
Supported Employment			

Service Unit		Operator	Address
43.	Society of Rehabilitation and Crime Prevention, Hong Kong (The) - Employment Development Service (HQ contact)	Society of Rehabilitation and Crime Prevention, Hong Kong (The)	Flat A, 4/F, Tai Cheong (Liberal) Fty Bldg, 3 Wing Ming Street, Lai Chi Kok, Kowloon
44.	Wai Ji Christian Service - Supported Employment (Sham Shui Po)	Wai Ji Christian Service	1/F, Un Hong House, Un Chau Estate, Sham Shui Po, Kowloon
Sheltered Workshop			
45.	Wai Ji Christian Service - Un Chau Sheltered Workshop	Wai Ji Christian Service	1/F, Un Hong House, Un Chau Estate, Sham Shui Po, Kowloon
Visiting Medical Practitioner Scheme			
46.	Wai Ji Christian Service - Un Chau Hostel	Wai Ji Christian Service	1/F, Un Hong House, Un Chau Estate, Sham Shui Po, Kowloon
D. Services for Offenders			
Services for Ex-offenders and Discharged Prisoners			
47.	Society of Rehabilitation and Crime Prevention, Hong Kong (The) - Employment Development Service (HQ contact)	Society of Rehabilitation and Crime Prevention, Hong Kong (The)	Flat A, 4/F, Tai Cheong (Liberal) Fty Bldg, 3 Wing Ming Street, Lai Chi Kok, Kowloon
E. Services for Young People			
After School Care Programme			
48.	Baptist Oi Kwan Social Service - [Non-Subvented] Cheung Sha Wan Children Development Education Centre (Formerly known as Cheung Sha Wan After School Care Service)	Baptist Oi Kwan Social Service	1/F., 1 Fortune Street, Cheung Sha Wan, Kowloon
Cyber Youth Support Teams			

Service Unit		Operator	Address
49.	Boys' and Girls' Clubs Association of Hong Kong (The) - Nitecat Online - Cyber Youth Support Team	Boys' and Girls' Clubs Association of Hong Kong (The)	Room 202, 2/F, Laford Centre, 838 Lai Chi Kok Road, Cheung Sha Wan, Kowloon
Family Support Networking Team			
50.	Caritas - Hong Kong - Sham Shui Po Family Support Networking Team	Caritas - Hong Kong	UG/F, Lai Po Garden, 383 Po On Road, Sham Shui Po, Kowloon
District Youth Outreaching Social Work Teams			
51.	Boys' and Girls' Clubs Association of Hong Kong (The) - Sham Shui Po District Youth Outreaching Social Work Team	Boys' and Girls' Clubs Association of Hong Kong (The)	Unit 2, G/F, Un Kin House, Un Chau Estate, Sham Shui Po, Kowloon

Source: Social Welfare Department's website: Local District Service Profile: Welfare Service Units Managed or Funded by Social Welfare Department (Sham Shui Po), as of 10 September 2021.

8. INITIAL ASSESSMENT OF POTENTIAL SOCIAL IMPACT, AND MITIGATION MEASURES

Potential Social Impact

8.1 The proposed redevelopment offers an opportunity to optimize land uses through replanning and restructuring, and improve the walkability and connectivity within the Scheme area.

8.2 The services and facilities provided in the existing Cheung Sha Wan Path Sitting-out Area at Site B, existing Cheung Sha Wan Sports Centre and garden at Site A will inevitably be interrupted by the proposed redevelopment during construction.

Mitigation Measures

8.3 As stated in paragraph 5.2-5.4, Site B of the Scheme will be first redeveloped to provide a public open space (POS) larger than the existing Cheung Sha Wan Path Sitting-out Area and other new GIC facilities to serve the public in a wider area. Under the current planning, it is the intention of URA to relocate the existing Cheung Sha Wan Sports Centre at Site A to Site B after the completion of the new GIC complex. So, the continuous services for public enjoyment can be maintained as far as practicable. Early notification of changes at the sites and careful consideration will be required to minimize the inconvenience caused as far as practicable.

8.4 The URA will arrange briefing session(s) and recording video(s) to the stakeholders of the Scheme to explain the planning intentions and procedures of the proposed development.

8.5 The Stage 2 SIA to be conducted after the Freezing Survey will further assess the impact of the Scheme in detail on affected persons and propose mitigation measures.

9. CONCLUSION

9.1 This Stage 1 SIA study provides a general profile of the Scheme. The assumptions in this report will be verified by the Stage 2 SIA to be carried out after the Freezing Survey. The needs of the affected persons will be assessed and appropriate arrangements to minimise major adverse social impact, if any, from the Scheme will be proposed in the Stage 2 SIA.

URBAN RENEWAL AUTHORITY
September 2021

Appendix 5

Traffic Impact Assessment (TIA) Report

ATKINS

Member of the SNC-Lavalin Group

Urban Renewal Authority Development Project in Sham Shui Po (SSP-018)

Traffic Impact Assessment Report

September 2021

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1. Introduction

1.1. Background

1.1.1. The Urban Renewal Authority (URA) has proposed a Development Scheme at Cheung Wah Street/ Cheung Sha Wan Road (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO). The Scheme is located in Sham Shui Po district, which comprises Sites A and B. Site A of the Scheme is bounded by Hing Wah Street on the south-eastern boundary, Cheung Sha Wan Road on the southwestern boundary, Cheung Wah Street on the north-western boundary, and Cheung Sha Wan Catholic Secondary School on the north-eastern boundary. Site B of the Scheme is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the south-eastern boundary.

1.1.2. This Traffic Impact Assessment (TIA) is to support the submission of a draft Development Scheme Plan (DSP) with its planning proposal to the Town Planning Board (TPB) for consideration.

1.1.3. Atkins China Limited (Atkins) was commissioned by URA to conduct a TIA study to assess the traffic impact and the proposal of traffic provisions for the Scheme.

1.2. Scope

1.2.1. The scope of this TIA is outlined as follows:

- conduct surveys to collect the existing traffic flows within the study area;
- recommend an appropriate and feasible provision and layout of internal transport facilities the proposed development schemes of the Scheme;
- estimate the vehicular and pedestrian traffic to be generated by the Scheme;
- forecast the future vehicular and pedestrian traffic demand in the vicinity at the appropriate design year;
- examine the traffic impact of the Scheme on the surrounding road and pedestrian walkway network; and
- recommend improvement measures to the problematic roads and junctions, if considered necessary and practicable to the Scheme wherever applicable.

1.3. Report Structure

1.3.1. Following this introductory chapter, there are 5 chapters:

- **Chapter 2** – presents the Scheme and internal transport facilities;
- **Chapter 3** – describes the road network and transport facilities in the vicinity;
- **Chapter 4** – describes the methodology for traffic forecasting;
- **Chapter 5** – presents the results of the TIA at the adopted design year, and recommends any improvement measures to alleviate the foreseeable traffic problem, if considered necessary; and
- **Chapter 6** – summarizes the findings of the study and presents the conclusion.

2. The Scheme

2.1. Site Location

2.1.1. Site A of the Scheme is bounded by Hing Wah Street on the south-eastern boundary, Cheung Sha Wan Road on the southwestern boundary, Cheung Wah Street on the north-western boundary, and Cheung Sha Wan Catholic Secondary School on the north-eastern boundary. Site B of the Scheme is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the south-eastern boundary. The locations of the subject sites are indicated in **Figure 2.1**.

2.2. Development Parameters

2.2.1. The subject sites cover a total gross site area of about 19,054 m^2 and the total net site area for plot ratio calculation is about 9,409 m^2. The Scheme is anticipated to be completed in two phases and full completion will be by year 2034. The proposed development parameters are tabulated in **Table 2.1**.

Table 2.1 Proposed Development Parameters

Component		Development Parameters			
		Site A		Site B	
Completion year		2034		2028	
Gross Site Area		Approx. 5,197 m^2		Approx. 13,857 m^2	
Net Site Area		Approx. 5,197 m^2		Approx. 4,212 m^2	
Proposed Gross Floor Area (GFA) and Plot Ratio (PR)	Residential	Approx. 38,978 m^2 GFA	7.5 PR	-	-
	Retail	Approx. 5,197 m^2 GFA	1.0 PR	-	-
	GIC (1)	Approx. 5,197 m^2 GFA	1.0 PR	Approx. 33,696 m^2 GFA	8.0 PR
No. of Building Block		2		1	
No. of Residential Flats	40 m^2 GFA < Flat Size ≤ 70 m^2 GFA	838 Fats		-	
Average Flat Size		Approx. 47 m^2		-	
Public Open Space		Approx. 750 m^2		Approx. 9,645 m^2	

Note: Subject to change at detailed design stage

Remarks: (1) The use of the GIC is not yet confirmed and subject to liaison with government departments upon approval of the Scheme.

2.3. Parking and Servicing Facilities Provision

2.3.1. The required parking and servicing facilities provision are determined in according with the Hong Kong Planning Standards and Guidelines (HKPSG). The requirements and the proposed parking provisions are summarized in **Table 2.2**.

Table 2.2 Required Transport Facilities According to HKPSG

Type	Parameter	HKPSG Parking Provision Requirement	Required Provision (nos.)	Proposed Provision (nos.)
Site A				
Residential				
Private Car Parking Space	838 flats	Global Parking Standard (GPS): 1 car space for 4 - 7 flats Demand Adjustment Ratio (R1): 40 < Flat Size ≤ 70 = **1.2** Accessibility Adjustment Ratio (R2): Within a 500m- radius of rail station = **0.75** Development Intensity Adjustment Ratio (R3): 5.00 < Plot Ratio ≤ 8.00 = **0.90** Parking Requirement = GPS x R1 x R2 x R3 838 units, 40 < Flat Size ≤ 70	97 - 170	97
Visitor Car Parking	2 blocks	5 nos. per residential block with more than 75 units	10	10
Motorcycle Parking	838 flats	1 motorcycle parking space per 100-150 flats	6 - 9	9
Loading/ unloading Bay	838 flats/ 2 blocks	1 bay per 800 flats or minimum 1 bay for each housing block or as determined by Authority	2	2
Retail				
Private Car Parking Space	5,197 m^2	Zone 1: Car space per 150 – 300m^2 GFA	18 – 35	26
Motorcycle Parking	18 – 35	5 – 10% of private car parking space	1 – 4	3
Loading/ unloading Bay	5,197 m^2	1 bay for GV for every good vehicle for every 800 - 1,200 m^2 GFA	5 – 7	7
GIC Facility (~5,197m^2) [1]				
Private Car Parking Space	-	N/A	N/A	9
Loading/ unloading Bay	-	N/A	N/A	1 [2]
Ambulance Lay-by	-	N/A	N/A	1 [3]
Taxi and Private Car Lay-by	-	N/A	N/A	1 [3]
Motorcycle Parking		N/A	N/A	2 [3]
Underground Public Carpark				
Private Car Parking Space	-	-	-	50
	Site A Total	**Private Car Parking**	125 - 215	**192**
		Motorcycle Parking	7 – 13	**14** [3]
		Loading/ unloading Bay	7 - 9	**9**
		Ambulance Lay-by	-	**1** [3]
		Taxi and Private Car Lay-by	-	**1** [3]

Type	Parameter	HKPSG Parking Provision Requirement	Required Provision (nos.)	Proposed Provision (nos.)
Accessible Car Parking Space	*192*	*3 spaces for 151-250 total car parking spaces in lot*	*3*	***3***
Site B				
GIC Facility (~33,696 m² GFA) ***(1)***				
Private Car Parking Space	-	N/A	N/A	**65** (3)
Loading/ unloading Bay	-	N/A	N/A	**3** (3)
Accessible Car Parking Space	*65*	*2 spaces for 51-150 total car parking spaces in lot.*	*2*	**2** (3)

Remarks: (1) The intended GIC uses will be subject to further liaison with relevant Government Departments. The proposed transport facilities provision is assumption only.
(2) Loading/unloading bay to be shared used by the Retail and GIC due to low demand for GIC facilities. However, the provision is assumption only and subject to the GIC operator need in later stage.
(3) Provision maybe adjusted/ deleted subject to the GIC operator need.

2.3.2. As can be seen in the above table, 192 nos. of private car parking space (including 50 nos. of public parking space and 3 nos. of assessable car parking space), 14 nos. of motorcycle parking space, 9 nos. of loading/unloading bay, 1 no. of ambulance lay-by and 1 no. of taxi and private car lay-by are proposed for Site A whist 65 nos. of private car parking space (including 2 nos. of accessible car parking space) and 3 nos. of loading/ unloading bay are proposed for Site B to facilitate the operation of both sites.

2.3.3. The proposed parking provision is within the range of the required provision according to the latest HKPSG. Since the subject sites are located within short walking distance to MTR Cheung Sha Wan and Lai Chi Kok Stations, low-end parking provision is adopted for the private car parking space for the residential blocks of Site A.

2.3.4. As the type of GIC to be provided at both Sites A and B are not yet identified by relevant government departments, the proposed parking provision for the GIC facilities are assumption only and to be agreed with GIC operator in the detail design stage.

2.3.5. Underground public carpark with 50 nos. of private car parking spaces is proposed for Site A to compensate the potential suspension of on-street parking space by the revitalization scheme at the adjacent streets to be proposed by another URA's project. The suspension of on-street parking spaces will make way for pavement widening or partial pedestrianization to enhance walkability in the area under the revitalization scheme.

2.3.6. The adjacent street to be affected by the revitalization scheme are including the northern kerb of Fuk Wa Street between Castle Peak Road and Cheung Wah Street and the western kerb of Hing Wah Street between Cheung Sha Wan Road and Fuk Wing Street.

2.3.7. The proposed 50 nos. of public parking spaces are derived based on the existing on-street parking inventory and on-site observation on the parking demand (including illegal parking) at the sections of streets as mentioned in the previous paragraph. The existing parking space inventory and observed parking demand are summarised in **Table 2.3**.

Table 2.3 Observed Parking Inventory and Demand

Location	Existing Parking Space to be Affected by Revitalization Scheme (nos.)		Observed Parking Demand (nos.)	
	Private Car	Accessible	Private Car	Accessible
Fuk Wa Street	20	0	30 (1)	0
Hing Wah Street	12	2	12	2
Total	**32**	**2**	**42**	**2**

Remarks: (1) Including illegal parking demand.

2.3.8. As can be seen in the above table, total numbers of 44 parking spaces (including the accessible parking spaces) are required to accommodate the affected parking spaces by the revitalization scheme and also the additional parking demand and thus 50 numbers of parking spaces are proposed for the underground public carpark at Site A to provide some buffer capacity.

2.3.9. Public parking facilities have not been proposed for Site B as the site is above the MTR railway alignment and thus the excavation depth for basement carpark is limited.

2.3.10. Besides, 3 and 2 nos. of car parking spaces at Site A and Site B respectively will be reserved for persons with disabilities.

2.4. Proposed Layout and Arrangement of Internal Transport Facilities

2.4.1. Ancillary car park for the Scheme is mostly provided at the basement levels. Car ramp system is proposed at the two sites to provide vertical connections between the ground and basement levels.

Site A

2.4.2. The ancillary car park for Site A and the proposed public parking spaces are provided in the two basement levels. The loading/unloading area and the Refuse Collection Point are located on Basement Level 1 whilst the private car parking spaces are provided on both parking floors. The required transport facilities to serve the GIC in Site A will also be provided on the Basement Level 1.

Site B

2.4.3. The ancillary car park for Site B is provided on the ground level and the two basement levels. The loading/unloading area is located on the Ground Floor whilst the private car parking spaces are provided on the two parking floors.

2.5. Vehicular Access (Run-in/out) Arrangement

2.5.1. The proposed run-in/out of Site A of the Scheme would be located at northbound of Hing Wah Street. As the site is abuts Hing Wah Street northbound, Cheung Wah Street southbound and Cheung Sha Wan Road eastbound, Hing Wah Street would be the road with less traffic compare to the others. Moreover, it is also the exit arms of a junction and thus the proposed run-in/out would have less impact to the operation of the adjacent junctions.

2.5.2. The schematic layouts of ground level of Site A showing the proposed run-in/out and the typical swept path analysis results are shown in **Figures 2.2** and **2.3**.

2.5.3. Three options of run-in/out for Site B have been studied in the early stage of the TIA and detail are descript as below:

Option 1

2.5.4. As the only road abutting Site B is the busy Cheung Sha Wan Road, run-in/out located at westbound of Cheung Sha Wan Road is identified as Option 1 in this study. An existing bus bay at Cheung Sha Wan Road would be affected by the proposed run-in/out and thus relocation of one of the bus stop to the downstream bus bay might be required. This option has been withdrawn from the study due to the impact on existing bus stop.

Option 2

2.5.5. Although Cheung Sha Wan Road is the only public road abutting Site B, alternative has been explored to avoid impact to the busy road. Option 2 is therefore identified at the south-west corner of the site, to make use of the existing driveway for the car park of Sham Shui Po Sports Ground (SSPSG) with run-in/out on Hing Wah Street. This option has also been withdrawn from the study due to it is not preferred administratively.

Option 3

2.5.6. In order to provide an access road for the GIC building of Site B, Option 3 is proposed also at the south-west corner of the site but forming a new access road along Cheung Sah Wan Path and connecting Lai Chi Kok Road. The proposed access road in Option 3 would take up some of the area of the adjacent basketball court and thus require additional redevelopment of the area. LCSD suggested URA to explore the feasibility of opening a new access from Lai Chi Kok Road leading to the proposed GIC Complex via the LCSD site with 1 no. of seven-a-side football field and 2 nos. of basketball courts to the immediate southwest of the Sham Shui Po Sports Ground. Hence, Option 3 is proposed which is also feasible from traffic perspective, while the rearrangement of the adjacent ball courts will subject to further liaison with LCSD at detailed design stage.

2.5.7. The schematic layout of the run-in/ out, the proposed access road Option 3 and the typical swept path analysis result are illustrated in **Figures 2.4** to **2.6**.

2.5.8. As shown in **Figures 2.3**, **2.5** and **2.6**, swept path analysis was assessed at the run-in/ out. The result shows that there are sufficient manoeuvring spaces for the ingress and egress movements of a 11m long heavy goods vehicle.

2.6. Pedestrian Access Arrangement

2.6.1. The anticipated major pedestrian accesses of Site A would be located at both Cheung Wah Street and Hing Wah Street near the boundary of Cheung Sha Wan Catholic Secondary School as an approximate 6.0m walkway connecting the pedestrian entrance of the development is to be provided by building setback.

2.6.2. The major pedestrian accesses of Site B would be located at Cheung Sha Wan Road as which is the only frontage to the public road.

2.6.3. The building/ podium of Site A will have setback on all four side of the site boundary to provide wider pedestrian walkway and thus enhance the pedestrian walking environment.

2.6.4. Moreover, two numbers of footbridges connecting the adjacent URA Project K05/3/002, Site A and Site B of the Scheme will be provided to enhance the connectivity of the redevelopment sites and the public open space at Site B.

2.6.5. The footpath along Cheung Sha Wan Road would be the major access route for the east-west direction between the sites and MTR Lai Chi Kok and Cheung Sha Wan Stations. Pedestrian accessing between the sites and the other public transport nodes could via Cheung Sha Wan Road, Hing Wah Street, Lai Chi Kok Road and Cheung Sah Wan Path. The anticipated pedestrian routes are indicated in **Figure 2.7**.

3. Traffic Context

3.1. Road Network

3.1.1. The local road network in the vicinity is essentially a grid formed by east-west and north-south running roads.

3.1.2. The subject site will be served by the primary distributors of Cheung Sha Wan Road and Lai Chi Kok Road, district distributors of Hing Wah Street, Castle Peak Road, Un Chau Street and Tung Chau Street and the local distributors of Cheung Wah Street. The major vehicular ingress and egress routes to and from the subject sites are shown in **Figure 3.1**.

3.1.3. There are four major frontages of the sites abutting Cheung Sha Wan Road, Hing Wah Street and Cheung Wah Street.

3.1.4. The section of Cheung Wah Street abutting Site A is a one-way southbound carriageway providing linkage from Castle Peak Road to Cheung Sha Wan Road and also connects the major district/ local distributors such as Un Chau Street, Fuk Wing Street and Fuk Wa Street.

3.1.5. Hing Wah Street is a two-way carriageway providing linkage from Po On Road to the north to Tung Chau Street to the south. The section of Hing Wah Street abutting Site A is a dual three-lanes carriage with metered parking space along the kerb.

3.1.6. Cheung Sha Wan Road are dual three-lanes carriageway runs in east-west directions providing linkage to Nathan Road to the east and Kwai Chung Road to the west.

3.1.7. Castle Peak Road, Un Chau Street, Lai Chi Kok Road and Tung Chau Street runs in east-west direction providing linkage to the adjacent districts.

3.1.8. These adjacent roads provide access to/from other areas in the territory. It is anticipated that the subject site will be well served by the existing road network in the vicinity.

3.2. Public Transport Services

3.2.1. Currently, the subject site is serving by several public transport services including MTR, franchised bus, Green Mini-bus (GMB) and Public Light Bus (PLB). The MTR Lai Chi Kok and Cheung Sha Wan Stations are located approximate 300m away from the subject sites. Moreover, there are more than 70 numbers of franchised bus, GMB and PLB routes with servicing points in the vicinity of the subject site. Detail of the services are tabulated in **Table 3.1** and the existing adjacent public transport service points are shown in **Figure 2.7**.

Table 3.1 Existing Public Transport Services

Route No.	Origins & Destinations	Frequency (mins)
Franchised Bus		
KMB		
6	Star Ferry <-> Lai Chi Kok Bus Terminus	8-10
37	Olympic Station <-> Kwai Shing (Central)	13-15
41	Kowloon City Ferry <-> Tsing Yi (Cheung Ching Estate)	25
42	Shun Lee <-> Tsing Yi (Cheung Hong Estate)	15
44	Mong Kok East Station <-> Tsing Yi Estate	8-12
45	Kowloon City Ferry <-> Kwai Chung (Lai Yiu Estate)	20
46	Jordan (West Kowloon Station) <-> Kwai Chung (Lai Yiu Estate)	25-30
72	Tai Wo <-> Cheung Sha Wan	15
86	Wong Nai Tau <-> Mei Foo	15-20
102	Mei Foo -> Shau Kei Wan	3-6
102P	Mei Foo -> Shau Kei Wan	7 scheduled service
171	South Horizons <-> Lai Chi Kok	5-7
171A	Lei Tung Estate -> Lai Chi Kok	9-15
171P	South Horizons -> Lai Chi Kok	5-11
214	Yau Tong <-> Cheung Sha Wan (Kom Tsun Street)	10-13
904	Kennedy Town (Belcher Bay) <-> Lai Chi Kok	12
905	Wan Chai North <-> Lai Chi Kok	5-9
234X	Tsim Sha Tsui East (Mody Road) <-> Tsuen Wan (Bayview Garden)	15
238X	China Ferry Terminal <-> Tsuen Wan (Riviera Gardens)	12
265B	Mong Kok (Park Avenue) <-> Tin Heng Estate	5-6
270B	Olympic Station <-> Sheung Shui	15
270D	Luen Wo Hui -> Sham Shui Po	1 schedule service
272E	Sham Shui Po <-> Tai Wo	2 scheduled services
286C	Shum Shui Po <-> Lee On	6 scheduled services
286P	Mei Chung Court -> Cheung Sha Wan	5 scheduled services
286X	Hin Keng <-> Sham Shui Po (Circular)	10
2A	Lok Wah <-> Mei Foo	8
2B	Chuk Yuen Estate <-> Cheung Sha Wan	30
2F	Tsz Wan Shan (North) <-> Cheung Sha Wan	10
2X	Choi Fook <-> Mei Foo	20
30X	Whampoa Garden <-> Tsuen Wan (Allway Gardens)	15
31B	Shek Lei (Tai Loong Street) <-> Olympic Station	12-13
33A	Mong Kok (Park Avenue) <-> Tsuen Wan (Nina Tower)	15
35A	Kwai Chung (On Yam Estate) <-> Tsim Sha Tsui East	5-8
36A	Lei Muk Shue <-> Cheung Sha Wan (Sham Mong Road)	15
36B	Jordan (West Kowloon Station) <-> Lei Muk Shue	11
42A	Jordan (West Kowloon Station) <-> Tsing Yi (Cheung Hang Estate)	4-8
43C	Island Harbourview <-> Tsing Yi (Cheung Hong Estate)	12

52X	Mong Kok (Park Avenue) <-> Tuen Mun Central	5-9
58X	Mong Kok East Station <-> Leung King Estate	5-8
59X	Mong Kok East Station <-> Tuen Mun Pier Head	3-8
6C	Mei Foo <-> Kowloon City Ferry	9-12
6D	Mei Foo <-> Ngau Tau Kok	12-15
60X	Jordan (West Kowloon Station) <-> Tuen Mun Central	6-8
66X	Olympic Station <-> Tai Hing	8-12
67X	Mong Kok East Station <-> Siu Hong Court	6-11
68X	Mong Kok (Park Avenue) <-> Hung Shui Kiu (Hung Fuk Estate)	10-15
69X	Jordan (West Kowloon Station) <-> Tin Shui	12
86A	Shatin Wai <-> Cheung Sha Wan (Kom Tsun Street)	15
86C	Lee On <-> Cheung Sha Wan	15
98C	Hang Hau (North) (Tseung Kwan O Hospital) <-> Mei Foo	8-10
98S	Lohas Park Station <-> Mei Foo	4 scheduled services
N241	Hung Hom Station <-> Tsing Yi (Cheung Wang Estate)	20
CTB		
E21	Tai Kok Tsui (Island Harbourview) <-> AsiaWorld-Expo	10-15
E21A	Ho Man Tin (Oi Man Estate) <-> Tung Chung (Yat Tung Estate)	15
E21C	Tai Kok Tsui (Island Harbourview) <-> Aircraft Maintenance Area	1 scheduled service
N21	Tsim Sha Tsui (Star Ferry) <-> Airport (Ground Transportation Centre)	20
N21A	Tsim Sha Tsui (Star Ferry) <-> Airport (via Yat Tung Estate)	4 scheduled services
KMB/ NWFB		
N122	Shau Kei Wan <-> Mei Foo	10
KMB/ CTB		
N171	Ap Lei Chau Estate <-> Lai Chi Kok	20
Green Minibus		
44S	Hoi Lai Estate < > Castle Peak Road	10-15
45M	Sham Shui Po (Ki Lung Street) < > Wing Hong Street	10
75	Sham Shui Po (Fu Cheong Estate) < > Cheung Sha Wan (Castle Peak Road)	7-9
411	Kwai Chung (Lai Kong Street) < > Sham Shui Po (Un Chau Street)	8-15
97A	Wonderland Villas < > Cheung Sha Wan (Cheung Fat Street)	6-20
Red Minibus		
-	To Kwa Wan and Hung Hom < > Cheung Sha Wan (Castle Peak Rd)	Depart when fully occupied
-	Wong Tai Sin and Kowloon City < > Cheung Sha Wan (Castle Peak Rd)	Depart when fully occupied
-	Kwun Tong and Wong Tai Sin < > Cheung Sha Wan (Castle Peak Rd)	Depart when fully occupied
-	Ngau Tau Kok Station < > Cheung Sha Wan (HK Spinners Industrial Bldg)	Depart when fully occupied
-	Cheung Sha Wan (HK Spinners Industrial Bldg) < > Kwun Tong (Yee On St)	Depart when fully occupied
-	Tsz Wan Shan < > Cheung Sha Wan and Mei Foo	Depart when fully occupied
-	To Kwa Wan (Jubilant Place) < > Mei Foo	Depart when fully occupied
-	Causeway Bay (Canal Rd Flyover) < > Mong Kok and Cheung Sha Wan	Depart when fully occupied

3.2.2. As shown in the above, the subject site is well served by the existing public transport facilities provided in the vicinity.

3.3. Pedestrian Facilities

3.3.1. The existing pedestrian facilities are well-developed in the vicinity of the subject site. Pedestrians can access the subject sites via the surrounding footpaths and pedestrian crossings to/from nearby taxi, bus and PLB servicing points as well as MTR Lai Chi Kok and Cheung Sha Wan Stations.

3.4. Planned Highway Infrastructure

3.4.1. The Central Kowloon Route (CKR) is a dual 3-lane trunk road connecting the West Kowloon reclamation and the proposed Kai Tak Development to relieve traffic congestion on the existing east-west roads across Central Kowloon area and it is anticipated to be commissioned in 2025. In view of the connection point of the CKR, the local traffic pattern near the Scheme would have insignificant impact by the planned road.

3.4.2. Except from the widening proposal of Hing Wah Street (which has no programme for implementation at the moment), junction improvement schemes in the area have not been identified and thus the existing road network have been adopted for the assessment.

4. Traffic Forecast

4.1. Methodology

4.1.1. According to the current programme, the completion of the Scheme is anticipated to be by phases at year 2028 and 2034 for Site B and A respectively. For the purposes of this study, it has been assumed that full occupation of each site will be occurs in each completion year.

4.1.2. Therefore, years 2031 and 2037 (3 years after completion of each site) would be adopted as the design years for assessment purpose.

4.1.3. As discussed in the previous **Section 3.4**, the CKR is planned to be commissioned by year 2025 and the local traffic pattern would have insignificant impact by the new connection bypass the central Kowloon area. Since the road network in design year would be similar to the existing arrangement, the background traffic forecasts for the design years 2031 and 2037 were therefore derived according to the traffic survey results and projected by applying a growth rate. The traffic forecast has been compared with the 2015 Based District Traffic Models (BDTM) K1 published by Transport Department (TD) and found that the set of traffic flows derived by survey results is generally higher.

4.1.4. The growth factor used was derived by referring to the past traffic growth trend on the Annual Traffic Census (ATC) Reports published by TD and the latest 2016-based Territory Population and Employment Data Matrices (TPEDM) of Sham Shui Po Area on the website of Planning Department (PlanD).

4.1.5. Trip generations by other planned developments in the vicinity were estimated and assigned onto the surrounding road network to produce the reference traffic forecasts at design year.

4.1.6. Trip generations of the Scheme was estimated by using appropriate trip generation rates. Traffic generations were then assigned to the surrounding road network and superimposed onto the reference traffic forecasts to create the design year forecasts for assessment at design year.

4.2. Traffic Survey

4.2.1. With reference to the weekday daily traffic pattern of the nearest ATC counting stations at Lai Chi Kok Road (from Tonkin Street to Hing Wah Street) and Tonkin Street (from Cheung Sha Wan Road to Un Chau Street) from the subject sites as shown in **Diagram 4.1**. The peak local traffic is occurred around 9:00 and 18:00 during the morning and evening respectively and an afternoon peak is appeared at Tonkin Street around 13:00. As most of the development trips of the Scheme would be generated during the morning and evening peak periods and the local traffic at the evening peak is the peak of the day, manual classified traffic count surveys were conducted to identify the existing traffic flows during the peak hour periods from 07:30 to 09:30 and from 17:00 to 19:00 on a typical weekday in April 2021 to collect the up-to-date traffic data for the assessment use.

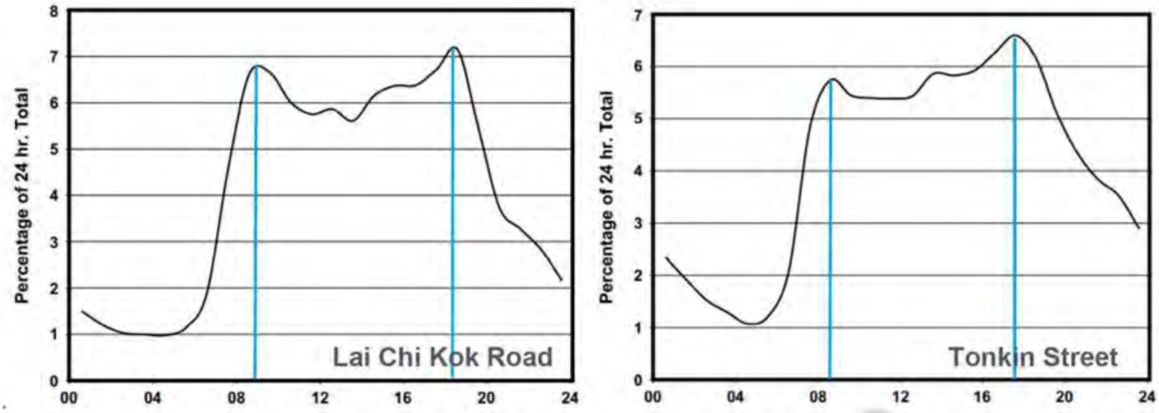


Diagram 4.1 Weekday Traffic Profile at ATC Counting Stations

4.2.2. As the pandemic situation have been stable, the working arrangement have been resumed to normal and the face-to-face class arrangement have been resumed for most of the school with the upper population limit of two-thirds of the school's maximum capacity during the morning period. The school trips would be very similar to normal situation as the school buses will be operated everyday even with less students on board. Since the afternoon school peak would not be overlapped with the local traffic peak during the evening period, the traffic pattern for the morning and evening peak periods during the survey period is considered under the normal traffic condition.

4.2.3. The monthly variation of traffic flows at the above mentioned ATC counting stations (as shown in **Diagram 4.2**) have been referenced to derive the seasonal factor for the local traffic.

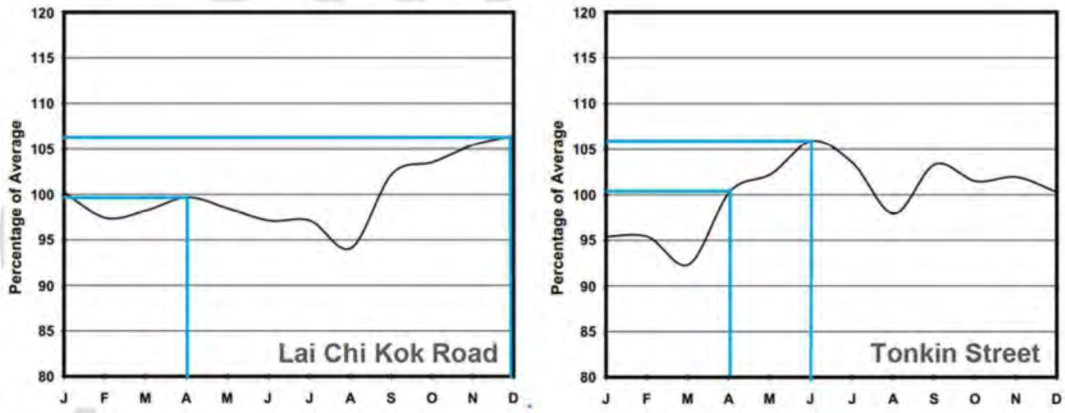


Diagram 4.2 Monthly Variation of Traffic at ATC Counting Stations

4.2.4. As can be seen in the above diagram, the peak traffic demand of the year would occur in December and June at Lai Chi Kok Road and Tonkin Street respectively. An average seasonal factor of 1.06 is applied to the observed traffic flows in this study to reflect the peak traffic season scenario of the local area.

4.2.5. The locations of the surveyed junctions in the vicinity are listed in **Table 4.1** and shown in **Figure 2.1**.

Table 4.2 Location of Key Junctions

Index (1)	Location	Junction Type
J1	Castle Peak Road / Hing Wah Street	Signal
J2	Fuk Wing Street / Cheung Wah Street	Priority
J3	Un Chau Street / Hing Wah Street	Signal
J4	Cheung Sha Wan Road / Cheung Lai Street	Signal
J5	Cheung Sha Wan Road / Tai Nan West Street	Signal
J6	Cheung Sha Wan Road / Cheung Wah Street	Signal
J7	Cheung Sha Wan Road / Hing Wah Street	Signal
J8	Cheung Sha Wan Road / Tonkin Street	Signal
J9	Lai Chi Kok Road / Cheung Lai Street	Signal
J10	Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street	Signal
J11	Lai Chi Kok Road / Hing Wah Street	Signal
J12	Tung Chau Street / Hing Wah Street West	Signal
J13	Sham Shing Road / Hing Wah Street West	Signal

*Remarks: (1) Refer to **Figure 2.1**.*

4.2.6. The morning and evening peak hours were identified as 08:30 to 09:30 and 17:00 to 18:00 respectively. The year 2021 observed traffic flows are presented in **Figure 4.1**.

4.2.7. Pedestrian head count survey has been conducted at the key section of footpath along the anticipated access routes of the sites during the morning, noon and evening peak periods (07:30 to 09:30, 12:30 to 14:30 and 17:30 to 19:30) on a typical weekday in April 2021 to collect the existing pedestrian demand in the local area.

4.2.8. The survey results indicate that the observed peak 15-minute pedestrian demand would be occurs during 08:40 to 08:55, 13:00 to 13:15 and 18:00 to 18:15 in the morning, noon and evening peak periods respectively and the observed pedestrian flows are presented in **Figure 4.2**.

4.2.9. Pedestrian trip generation survey has also been conducted at a similar residential development at 399 Castle Peak Road, Heya Crystal, and the existing Cheung Sha Wan Sport Centre for reference to develop the trip generation rate for the Scheme.

4.2.10. In view of the development composition of Heya Crystal with 3 nos. of residential blocks and retail mall in the podium levels, it is located adjacent to the subject sites and completed in the recent years, it is considered as the appropriate site to conduct pedestrian count survey to collect the trip generation data for the study.

4.2.11. As Site A of the project would occupy the existing Cheung Sha Wan Sport Centre and to be relocated to the proposed GIC building at Site B, the future sport centre would be serving the same area of local resident and thus the existing pedestrian demand of the sport centre is collected to derive the future demand with reference to the area of both the existing and relocated sport centre.

4.2.12. The observed survey results are summarized in **Table 4.2**.

Table 4.3 Trip Generation Survey Results

Development	No. of flat/ m² GFA	AM Peak		Lunch Peak		PM Peak	
		GEN (1)	ATT (1)	GEN (1)	ATT (1)	GEN (1)	ATT (1)
		Observed Peak 15-minute Pedestrian Demand (ped/15-min)					
Heya Crytal - Residential	350	49	21	24	24	24	47
Heya Crystal - Retail	3,921	57	69	119	141	48	79
Cheung Sha Wan Sports Centre	1,168	14	12	4	10	4	12
		Pedestrian Trip Generation Rate (ped/15-min/flat or 100m² GFA)					
Heya Crytal - Residential	350	0.1400	0.0600	0.0686	0.0686	0.0686	0.1343
Heya Crystal - Retail	3,921	1.4537	1.7598	3.0349	3.5960	1.2242	2.0148
Cheung Sha Wan Sports Centre	1,168	1.1986	1.0274	0.3425	0.8562	0.3425	1.0274

Remark: (1) "GEN" means "Generation" and "ATT" means Attraction.

4.3. Growth Rate Determination

4.3.1. Traffic forecasts for the design years were projected by applying an appropriate growth rate to the observed traffic flows based on the survey results. The growth rates were determined with reference to the ATC reports and the latest 2016-based TPEDM of Sham Shui Po Area on the website of PlanD.

Annual Traffic Census (ATC)

4.3.2. The historical traffic growth trend of the major roads in the vicinity of the subject site was reviewed making reference to the ATC reports. The Annual Average Daily Traffic (AADT) data from year 2013 to year 2019 were extracted and the estimated average annual growth rate is given in **Table 4.3**.

Table 4.4 Traffic Growth Rate Derived from ATC

Station No.	Road Name	AADT							Growth Rate (p.a.)
		2013	2014	2015	2016	2017	2018	2019	
3008	Lai Chi Kok Rd	16,360	16,350	16,280	16,420	16,460	15,530	15,280	+1.10%
3017	Tonkin St	18,930	18,710	19,580	19,240	18,850	19,320	18,860	
3225	Cheung Sha Wan Rd	23,350	24,880	24,990	24,770	24,970	25,370	23,670	
3260	Un Chau St	10,130	10,620	10,970	10,820	10,760	9,000	9,790	
3261	Castle Peak Rd	16,990	16,600	17,140	16,910	16,800	14,550	12,590	
3263	Hing Wah St	8,650	9,320	9,620	9,490	9,440	13,490	10,870	
3427	Cheung Sha Wan Rd	30,650	31,990	32,630	35,080	34,850	34,550	37,290	
3429	Lai Chi Kok Rd	17,960	16,770	17,850	17,700	17,840	17,960	14,760	
3466	Castle Peak Rd	9,720	9,910	9,160	9,040	8,990	9,110	8,360	
3468	Hing Wah St	10,470	9,620	9,560	9,430	9,380	9,500	9,580	
3670	Hing Wah St	9,120	8,850	7,160	7,830	7,780	7,880	7,210	
3858	Tonkin St	17,430	16,900	17,450	17,320	18,160	18,400	16,840	
3876	Tai Nan W St	7,700	7,460	7,710	7,990	8,120	8,230	7,530	

Station No.	Road Name	AADT							Growth Rate (p.a.)
		2013	2014	2015	2016	2017	2018	2019	
4056	Castle Peak Rd	12,510	12,130	12,530	12,360	11,700	14,380	13,160	
		209,970	**210,110**	**212,630**	**214,400**	**214,100**	**217,270**	**205,790**	

Notes: The AADT figures with grey colour background are estimated values based on the ATC Reports. Those estimated figures are excluded in calculating the weighted average annual growth rate.

4.3.3. As shown in **Table 4.3**, the weighted average annual growth rate determined from ATC data is about +1.10% per annum (p.a.) from year 2013 to year 2019.

Territory Population and Employment Data Matrices (TPEDM)

4.3.4. Reference was also made to the latest 2016-based TPEDM from year 2016 to year 2026 in Sham Shui Po area published on the PlanD website. The population and employment planning data from year 2016 to 2026 and the estimated annual growth rates are illustrated in **Table 4.4**.

Table 4.5 Traffic Growth Rate Derived from TPEDM

District	Population			Employment			Overall		
	2016	2021	2026	2016	2021	2026	2016	2021	2026
Sham Shui Po	438,050	482,700	484,350	235,750	238,900	235,650	**673,800**	**721,600**	**720,000**
Growth Rate (p.a.)	+1.01%			0.00%			**+0.67%**		

4.3.5. As shown in **Table 4.4**, the annual growth rate determined from TPEDM population, employment and the sum of two are about +1.01% p.a., 0% p.a. and +0.67% p.a. respectively from year 2016 to year 2026.

Adopted Growth Rate

4.3.6. Based on the above, the highest growth rate derived from the two sets of data is +1.10% p.a. and thus it is adopted for assessment to produce the years 2031 and 2037 background traffic flows in order to conduct a conservative assessment.

4.4. Other Planned Development Trip Generation

4.4.1. According to the available information, it is noted that there are 22 nos. of planned developments which is under construction or approved in planning application in the vicinity of the subject site and the location are shown in **Figure 2.1**. These planned developments are assumed to be completed before the design year 2031 in the study and have been considered in the reference traffic flows forecasting. The relevant development parameters are summarised in **Table 4.5**.

Table 4.6 Design Parameters for Planned Developments

Developments [1]	Development Component	Parameters
URA Projects		
Development at Kim Shin Lane (SSP-017)	Residential	About 995 Flats
	Retail	About 9,249 m^2

Developments (1)	Development Component	Parameters
217-235 Castle Peak Road & 300-308A Un Chau Street (SSP-016)	Residential	About 337 Flats
	Retail	About 2,474 m²
24-38 Tonkin Street & 240-244 Fuk Wing Street (SSP-015)	Residential	About 175 Flats
	Retail	About 1,070 m²
Public Housing Development Projects		
North West Kowloon Reclamation (NWKR) Site 1	Residential	About 2,591 Flats
	Retail	About 4,204 m²
	Office	About 9,454 m²
	Kindergarten	6 Classrooms
	Social Welfare Services	About 2,990 m²
North West Kowloon Reclamation Site 6 (Phase 2 & 3 and GIC)	Residential	About 2,483 Flats
	Market	About 80 Stalls
	Indoor Sport Centre	About 2,809 m²
	District Library	About 2,885 m²
	Reserved Stack for Hong Kong Central Library	About 7,263 m²
	Kindergarten	6 Classrooms
	Social Welfare Services	About 6,600 m²
Wang Cheong Factory Estate	Residential	About 1,200 Flats
	Retail	About 347 m²
Private Development Projects		
91 King Lam Street	Office	About 92,736 m²
121 King Lam Street	Industrial	About 7,320 m²
1016-1018 Tai Nan West Street	Industrial	About 16,488 m²
NKIL 6572 Junction of Wing Hong Street, Yu Chau West Street and Wing Ming Street	Office	About 34,473 m²
550-556 Castle Peak Road	Office	About 21,186 m²
42A Wing Hong Street	Hotel	132 Rooms
320-328 Shun Ning Road	Residential	About 92 Flats
	Retail	About 349 m²
27-29 Tonkin Street	Residential	About 414 Flats
	Retail	About 3,605 m²
7, 7A, 9 & 9A Cheung Wah Street	Residential	About 42 Flats
	Retail	About 451 m²
916-922 Cheung Sha Wan Road	Office	About 12,000 m²
924-926 Cheung Sha Wan Road	Office	About 16,000 m²
NKIL 6582 Cheung Shun Street	Office	About 49,995 m²
	Public Vehicle Park	85 spaces
822 Lai Chi Kok Road	Office	About 20,279 m²
CDA Site bounded by Lai Hong Street, Fat Tseung Street West, Sham Mong Road and West Kowloon Corridor	Residential	About 3,647 Flats
	Retail	About 11,000 m²
	Kindergarten	12 Classrooms

Developments (1)	Development Component	Parameters
	Social Welfare Services	About 3,830 m²
	Public Vehicle Park	97 spaces
NKIL 6549 Off Hing Wah Street	Residential	About 1,347 Flats
NKIL 6550 Off Hing Wah Street	Hotel	975 Rooms

*Remarks: (1) Refer to **Figure 2.1** for location of the planned development.*

4.4.2. Development trips generated by the above planned developments were estimated making reference to the Transport Planning and Design Manual (TPDM) published by TD, the trip rate adopted in the BDTM and the in-house survey data. Mean value of the trip rate provided in TPDM have been adopted in the study to in line with the forecasting methodology of BDTM. The adopted trip rates and traffic generation of the planned/ committed developments are summarized in **Table 4.6**.

Table 4.7 Traffic Generation by Planned Developments

Developments (1)	Parameters	Adopted Trip Rates (pcu/hr/flats or pcu/hr/100m² GFA or pcu/hr/space) (2)				Trip Generation (pcu/hr)			
		AM		PM		AM		PM	
		GEN (3)	ATT (3)	GEN (3)	ATT (3)	GEN (3)	ATT (3)	GEN (3)	ATT (3)
Development at Kim Shin Lane (SSP-017)	995 Flats	0.0718	0.0425	0.0286	0.0370	71	42	28	37
	9,249 m² Retail	0.2296	0.2434	0.3100	0.3563	21	23	29	33
217-235 Castle Peak Road & 300-308A Un Chau Street	337 Flats	0.0718	0.0425	0.0286	0.0370	24	14	10	12
	2,474 m² Retail	0.2296	0.2434	0.3100	0.3563	6	6	8	9
24-38 Tonkin Street & 240-244 Fuk Wing Street	175 Flats	0.0718	0.0425	0.0286	0.0370	13	7	5	6
	1,070 m² Retail	0.2296	0.2434	0.3100	0.3563	2	3	3	4
North West Kowloon Reclamation Site 1	2,591 Flats	0.0432	0.0326	0.0237	0.0301	112	84	61	78
	4,204 m² Retail	0.2296	0.2434	0.3100	0.3563	10	10	13	15
	9,454 m² Office	0.1703	0.2452	0.1573	0.1175	16	23	15	11
	6 Classrooms	2.3056	2.3056	0.0286	0.0286	14	14	0	0
	2,990 m² GIC	0.1703	0.2452	0.1573	0.1175	5	7	5	4
North West Kowloon Reclamation Area Site 6	2,483 Flats	0.0432	0.0326	0.0237	0.0301	107	81	59	75
	80 Stalls	0.1340	0.0860	0.0590	0.0350	11	7	5	3
	Indoor Sport Centre	-	-	-	-	10	10	10	10
	District Library	-	-	-	-	10	10	10	10
	Reserved Stack for Hong Kong Central Library	-	-	-	-	5	5	5	5
	6 Classrooms	2.3056	2.3056	0.0286	0.0286	14	14	0	0
	6,600 m² GIC	0.1703	0.2452	0.1573	0.1175	11	16	10	8
Wang Cheong Factory Estate	1,200 Flats	0.0432	0.0326	0.0237	0.0301	52	39	28	36
	347 m² Retail	0.2296	0.2434	0.3100	0.3563	1	1	1	1
91 King Lam Street	92,736 m² Office	0.1703	0.2452	0.1573	0.1175	158	227	146	109
121 King Lam Street	7,320 m² Industrial	0.0926	0.1386	0.1350	0.1049	7	10	10	8

Developments (1)	Parameters	Adopted Trip Rates (pcu/hr/flats or pcu/hr/100m² GFA or pcu/hr/space) (2)				Trip Generation (pcu/hr)			
		AM		PM		AM		PM	
		GEN (3)	ATT (3)	GEN (3)	ATT (3)	GEN (3)	ATT (3)	GEN (3)	ATT (3)
1016-1018 Tai Nan West Street	16,488 m² Industrial	0.0926	0.1386	0.1350	0.1049	15	23	22	17
NKIL 6572 at Wing Hong Street	34,473 m² Office	0.1703	0.2452	0.1573	0.1175	59	85	54	41
550-556 Castle Peak Road	21,186 m² Office	0.1703	0.2452	0.1573	0.1175	36	52	33	25
42A Wing Hong Street	132 Hotel Rooms	0.1329	0.1457	0.1290	0.1546	18	19	17	20
320-328 Shun Ning Road	92 Flats	0.0718	0.0425	0.0286	0.0370	7	4	3	3
	349 m² Retail	0.2296	0.2434	0.3100	0.3563	1	1	1	1
27-29 Tonkin Street	414 Flats	0.0718	0.0425	0.0286	0.0370	30	18	12	15
	3,605 m² Retail	0.2296	0.2434	0.3100	0.3563	8	9	11	13
7, 7A, 9 & 9A Cheung Wah Street	42 Flats	0.0718	0.0425	0.0286	0.0370	3	2	1	2
	451 m² Retail	0.2296	0.2434	0.3100	0.3563	1	1	1	2
916-922 Cheung Sha Wan Road	12,000 m² Office	0.1703	0.2452	0.1573	0.1175	20	29	19	14
924-926 Cheung Sha Wan Road	16,000 m² Office	0.1703	0.2452	0.1573	0.1175	27	39	25	19
NKIL 6582 Cheung Shun Street	49,995 m² Office	0.1703	0.2452	0.1573	0.1175	85	123	79	59
	85 Public Parking Spaces	0.1000	0.0949	0.1154	0.0846	9	8	10	7
822 Lai Chi Kok Road	20,279 m² Office	0.1703	0.2452	0.1573	0.1175	35	50	32	24
CDA Site at Fat Tseung Street West	3,647 Flats	0.0718	0.0425	0.0286	0.0370	262	155	104	135
	11,000 m² Retail	0.2296	0.2434	0.3100	0.3563	25	27	34	39
	12 Classrooms	6.9375	6.9375	5.4375	5.4375	83	83	65	65
	3,830 m² GIC	0.1703	0.2452	0.1573	0.1175	7	9	6	5
	97 Public Parking Spaces	0.1000	0.0949	0.1154	0.0846	10	9	11	8
NKIL 6549 Off Hing Wah Street	1,347 Flats	0.0888	0.0515	0.0356	0.0480	120	69	48	65
NKIL 6550 Off Hing Wah Street	975 Hotel Rooms	0.1329	0.1457	0.1290	0.1546	130	142	126	151
					Total	***1,671***	***1,610***	***1,175***	***1,204***

Remarks: *(1) Refer to **Figure 2.1** for location of the planned development.*
(2) Refer to TPDM Vol. 1, Ch. 3, Appendix, Table 1 and Table 2, BDTM Urban Final Report, Appendix Q or in-house survey results for public wet market and public car park;
(3) "GEN" means "Generation" and "ATT" means Attraction.
Note: * *Trip Generation is rounded to the nearest digit.*

4.4.3. As shown in **Table 4.6**, the planned developments will generate overall 2-way trips of 2,541 pcu/hr and 1,806 pcu/hr during the morning and evening peak hour respectively.

4.4.4. In order to produce a comprehensive assessment results, the pedestrian trips to be generated by the adjacent planned development at Kim Shin Lane and 7, 7A, 9 & 9A Cheung Wah Street have also been considered in the TIA study and it is summarised in **Table 4.7**.

Table 4.8 Pedestrian Trip Generation by Planned Development

Development Use	No. of flat/ m^2 GFA	AM Peak		Lunch Peak		PM Peak	
		GEN (1)	ATT (1)	GEN (1)	ATT (1)	GEN (1)	ATT (1)
		Pedestrian Trip Generation Rate (ped/15-min/flat or 100m^2 GFA)					
Residential	-	0.1400	0.0600	0.0686	0.0686	0.0686	0.1343
Retail	-	1.4537	1.7598	3.0349	3.5960	1.2242	2.0148
		Pedestrian Trip Generation (ped/15-min)					
Residential Development at Kin Shin Lane							
Residential	995	139	60	68	68	68	134
Retail	9,249	134	163	281	333	113	186
Residential Development at 7, 7A, 9 & 9A Cheung Wah Street							
Residential	42	6	3	3	3	3	6
Retail	451	7	8	14	16	6	9
	Total	**286**	**234**	**366**	**420**	**190**	**335**

Remarks: (1) "GEN" means "Generation" and "ATT" means Attraction.
*Note: * Trip Generation is rounded to the nearest digit.*

4.5. Reference Traffic Flows

4.5.1. The traffic and pedestrian demand to be generated/ attracted by the planned/ committed developments will be assigned on the surrounding road network and superimposed onto the years 2031 and 2037 background traffic flows to produce the reference traffic and pedestrian flows. The years 2031 and 2037 reference traffic and pedestrian flows are shown in **Figures 4.3 to 4.5**.

4.6. Development Traffic Generation

4.6.1. Trip generation of the Scheme is estimated using the appropriate trip rates given in TPDM and in-house survey data. The estimation of traffic trips to be generated by the Scheme is summarized in **Table 4.8**.

Table 4.9 Traffic Generation by the Scheme

Component	Parameter	Adopted Trip Rates (pcu/hr/flat or pcu/hr/100 m^2 GFA) (1)				Trip Generation (pcu/hr)			
		AM		PM		AM		PM	
		GEN (2)	ATT (2)	GEN (2)	ATT (2)	GEN (2)	ATT (2)	GEN (2)	ATT (2)
Site A									
Residential	838 flats	0.0718	0.0425	0.0286	0.0370	60	36	24	31
Retail	5,197 m^2	0.2296	0.2434	0.310	0.3563	12	13	16	19
GIC (3)	5,197 m^2	0.1703	0.2452	0.1573	0.1175	9	13	8	6

Underground Public Carpark	50 space	0.1000	0.0949	0.1154	0.0846	5	5	6	4
Site B									
Indoor Recreation Centre (4)	6,580 m²	-	-	-	-	10	10	10	10
GIC (3)	27,116 m²	0.1703	0.2452	0.1573	0.1175	46	66	43	32
					Total	**142**	**143**	**107**	**102**

Remarks: (1) Refer to TPDM Vol. 1, Ch. 3, Appendix, Table 1 and Table 2 or in-house survey results for TD managed public car park;
(2) "GEN" means "Generation" and "ATT" means Attraction;
(3) Trip rate for GIC referenced to Office rate in TPDM Vol. 1, Ch. 3, Appendix, Table 2
*Note: * Trip Generation is rounded to the nearest digit.*

4.6.2. As presented in the above table, the Scheme will produce 2-way trips of 285 pcu/hr and 209 pcu/hr during the morning and evening peak hours respectively.

4.6.3. Nominal traffic trip for the Indoor Recreation Centre at Site B is proposed due to it is serving the local area and thus most of the user will make their trips to the centre on-foot. Besides, public parking will not be provided at Site B, it will also encourage the user to the public transport instead.

4.6.4. The forecast of pedestrian trip generation for the Scheme was derived with reference to the development schedule and the observed pedestrian trip generation rates in **Table 4.2**. The estimated pedestrian trips of the Scheme during the peak hour periods are tabulated in **Table 4.9**.

Table 4.10 Pedestrian Trip Generation by the Scheme

Development Use	No. of flat/ m² GFA	AM Peak		Lunch Peak		PM Peak	
		GEN (1)	ATT (1)	GEN (1)	ATT (1)	GEN (1)	ATT (1)
		Pedestrian Trip Generation Rate (ped/15-min/flat or 100m² GFA)					
Residential	-	0.1400	0.0600	0.0686	0.0686	0.0686	0.1343
Retail	-	1.4537	1.7598	3.0349	3.5960	1.2242	2.0148
Sport Centre	-	1.1986	1.0274	0.3425	0.8562	0.3425	1.0274
		Pedestrian Trip Generation (ped/15-min)					
Site A							
Residential	838	117	50	57	57	57	113
Retail	5,197	76	91	158	187	64	105
GIC (2)	5,197	10	10	10	10	10	10
	Sub-total	***203***	***151***	***225***	***254***	***131***	***228***
Site B							
Indoor Recreation Centre	6,580	79	68	23	56	23	68
GIC (2)	27,116	50	50	50	50	50	50
	Sub-total	***129***	***118***	***73***	***106***	***73***	***118***
	Total	**332**	**269**	**298**	**360**	**204**	**346**

Remarks: (1) "GEN" means "Generation" and "ATT" means Attraction.
(2) Pedestrian trips are assumed value. The type of G/IC facilities is to be confirmed with government departments.
Note: * Trip Generation is rounded to the nearest digit.

4.6.5. As can be seen in the above table, the peak demand of 2-way pedestrian trips would be 658 ped/15-minute during the noon peak. The estimated pedestrian trip to be generated by the Scheme will be assigned onto the surrounding pedestrian walkway network based on the trip distribution to/from the major transport node with reference to the model split of the 2016 population by-census results of the adjacent residential buildings as shown in **Table 4.10**.

Table 4.11 Modal Split Adopted for the Subject Development

Development	Type of Population	Population	Population Census Model Split (1)					
			MTR	BUS	PLB	Walk	Other	Total
473 & 473A Castle Peak Road, odd number of 535 – 573 Fuk Wing Street & 1 – 41 Kim Shin Lane	Working	982	60.4%	11.3%	7.3%	21.0%	0%	100%
	Student	256	26.7%	15.4%	-- (2)	38.6%	19.3%	100%
475 & 475A Castle Peak Road, even number of 544 – 588 Fuk Wa Street & 2 – 44 Kim Shin Lane	Working	979	42.6%	20.9%	16.5%	18.5%	1.5%	100%
	Student	265	24.2%	21.2%	- (2)	38.0%	16.6%	100%
	Overall	**2,482**	**45.9%**	**16.6%**	**9.4%**	**23.7%**	**4.4%**	**100%**

Remarks: (1) Year 2016 population by-census results;
(2) PLB trips are classified as "Other" for the model split of student's trips.

4.6.6. The estimated development pedestrian trips for each transport mode are then distributed onto the pedestrian network and superimposed onto the 2031 and 2037 reference pedestrian flows to produce the 2031 and 2037 design pedestrian flows (with the Scheme). The 2031 and 2037 design pedestrian forecasts are shown in **Figure 4.6**.

4.7. Design Traffic Flows

4.7.1. The estimated development vehicular flows of the Scheme were assigned on the surrounding road network according to the vehicle access route of each site and superimposed onto the years 2031 and 2037 reference traffic flows to produce the design traffic flows.

4.7.2. The years 2031 and 2037 design traffic flows during the peak hours are shown in **Figures 4.7** and **4.8.**

5. Traffic Impact Assessment

5.1. Methodology

5.1.1. Junction capacity analysis was conducted for the base year 2021 and design years 2031 and 2037 (three years after completion of each site) for the junctions which are likely to be affected by the Scheme.

5.1.2. Capacity analysis was carried out in accordance with the procedures outlined in the Transport Planning and Design Manual (TPDM). The capacity analysis was based on the observed traffic flows at year 2021 and traffic forecasts at design years 2031 and 2037 for Reference Scenarios (without the Scheme) and Design Scenarios (with the Scheme).

5.2. Junction Analysis

5.2.1. The results of the capacity analysis for existing year 2021 Observed Scenario, design years 2031 and 2037 Reference and Design Scenarios are summarized in **Tables 5.1**, **5.2** and **5.3** respectively. The calculation sheets are attached in **Appendix B**.

Table 5.1 Junction Performance for Year 2021 Observed Scenario

Index (1)	Location	Junction Type	RC%/ DFC (2)	
			AM	PM
J1	Castle Peak Road / Hing Wah Street	Signal	>50%	>50%
J2	Fuk Wing Street / Cheung Wah Street	Priority	0.68	0.55
J3	Un Chau Street / Hing Wah Street	Signal	>50%	>50%
J4	Cheung Sha Wan Road / Cheung Lai Street	Signal	>50%	>50%
J5	Cheung Sha Wan Road / Tai Nan West Street	Signal	32%	46%
J6	Cheung Sha Wan Road / Cheung Wah Street	Signal	>50%	>50%
J7	Cheung Sha Wan Road / Hing Wah Street	Signal	35%	26%
J8	Cheung Sha Wan Road / Tonkin Street	Signal	>50%	50%
J9	Lai Chi Kok Road / Cheung Lai Street	Signal	32%	47%
J10	Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street	Signal	>50%	>50%
J11	Lai Chi Kok Road / Hing Wah Street	Signal	*12%*	*14%*
J12	Tung Chau Street / Hing Wah Street West	Signal	16%	21%
J13	Sham Shing Road / Hing Wah Street West	Signal	>50%	>50%

*Remarks: (1) Refer to **Figure 2.1**.*
(2) "RC%" means reserved capacity and "DFC" means design flow capacity.

5.2.2. As can be seen in **Table 5.1**, most of the assessed key junctions are operating satisfactorily in the existing year 2021 (RC ≥ 15% or DFC ≤ 0.85). Besides, the junction of Lai Chi Kok Road / Hing Wah Street (J11) would be operated below the marginal capacity (RC <15%) especially during the morning peak period.

Table 5.2 Junction Performance for Year 2031

Index (1)	Location	RC%/ DFC (2)			
		Reference		Design	
		AM	PM	AM	PM
J1	Castle Peak Road / Hing Wah Street	>50%	>50%	>50%	>50%
J2	Fuk Wing Street / Cheung Wah Street	0.86	0.69	0.86	0.69
J3	Un Chau Street / Hing Wah Street	>50%	>50%	>50%	>50%
J4	Cheung Sha Wan Road / Cheung Lai Street	45%	41%	42%	39%
J5	Cheung Sha Wan Road / Tai Nan West Street	***-12%***	*11%*	***-12%***	*11%*
J6	Cheung Sha Wan Road / Cheung Wah Street	37%	32%	37%	32%
J7	Cheung Sha Wan Road / Hing Wah Street	*12%*	*8%*	*9%*	*6%*
J8	Cheung Sha Wan Road / Tonkin Street	29%	29%	29%	28%
J9	Lai Chi Kok Road / Cheung Lai Street	***-1%***	*13%*	***-3%***	*11%*
J10	Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street	22%	31%	22%	31%
J11	Lai Chi Kok Road / Hing Wah Street	***-8%***	***-5%***	***-8%***	***-5%***
J12	Tung Chau Street / Hing Wah Street West	***-5%***	*2%*	***-5%***	*2%*
J13	Sham Shing Road / Hing Wah Street West	>50%	>50%	>50%	>50%

*Remarks: (1) Refer to **Figure 2.1**.*
(2) "RC%" means reserved capacity and "DFC" means design flow capacity.

5.2.3. As shown in **Tables 5.2**, the junctions of Cheung Sha Wan Road / Hing Wah Street (J7) would be operating below the marginal capacity limit (i.e. RC ≤ 15%) in design year 2031 even without the operational of Site B of the Scheme. Moreover, the junctions of Cheung Sha Wan Road / Tai Nan West Street (J5), Lai Chi Kok Road / Cheung Lai Street (J9), Lai Chi Kok Road / Hing Wah Street (J11) and Tung Chau Street / Hing Wah Street West (J12) would be operating over capacity (i.e. RC ≤ 0) during the peak hours under the Reference Scenario in 2031.

Table 5.3 Junction Performance for Year 2037

Index (1)	Location	RC%/ DFC (2)			
		Reference		Design	
		AM	PM	AM	PM
J1	Castle Peak Road / Hing Wah Street	>50%	>50%	>50%	>50%
J2	Fuk Wing Street / Cheung Wah Street	*0.92*	0.73	***1.04***	0.80
J3	Un Chau Street / Hing Wah Street	>50%	>50%	45%	>50%
J4	Cheung Sha Wan Road / Cheung Lai Street	37%	32%	33%	31%
J5	Cheung Sha Wan Road / Tai Nan West Street	***-16%***	*5%*	***-16%***	*5%*
J6	Cheung Sha Wan Road / Cheung Wah Street	28%	23%	25%	22%
J7	Cheung Sha Wan Road / Hing Wah Street	*5%*	*2%*	*2%*	***-1%***
J8	Cheung Sha Wan Road / Tonkin Street	21%	21%	21%	21%
J9	Lai Chi Kok Road / Cheung Lai Street	***-6%***	*6%*	***-8%***	*5%*
J10	Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street	15%	24%	15%	24%
J11	Lai Chi Kok Road / Hing Wah Street	***-14%***	***-10%***	***-14%***	***-11%***
J12	Tung Chau Street / Hing Wah Street West	***-10%***	***-4%***	***-11%***	***-5%***
J13	Sham Shing Road / Hing Wah Street West	>50%	>50%	>50%	>50%

*Remarks: (1) Refer to **Figure 2.1**.*
(2) "RC%" means reserved capacity and "DFC" means design flow capacity.

5.2.4. As shown in **Tables 5.3**, the junctions of Fuk Wing Street/ Cheung Wah Street (J2) and Cheung Sha Wan Road / Hing Wah Street (J7) would be operating below the marginal capacity limit (i.e. RC ≤ 15%) in design year 2037 even without the Scheme.

5.2.5. The junctions of Cheung Sha Wan Road / Tai Nan West Street (J5), Lai Chi Kok Road / Cheung Lai Street (J9), Lai Chi Kok Road / Hing Wah Street (J11) and Lai Chi Kok Road / Hing Wah Street West (J12) would be overloaded in year 2037 under the Reference Scenario.

5.2.6. Owing to the foreseeable adverse traffic conditional to be induced by the traffic growth of the district in the Reference Scenarios and the minor traffic impact (0 to 3%) to be induced by the Scheme to the Junctions J5, J7, J9, J11 and J12, junction improvement schemes are suggested for TD consideration to enhance the operational performance of the critical junctions.

5.2.7. Besides, junction improvement scheme is proposed for Junction J2 to mitigate the traffic impact to be induced by the Scheme.

5.3. Junction Improvement Schemes

5.3.1. Junction improvement schemes are proposed for the junction to be affected by the development traffic of the Scheme and suggested for the five junctions to be below marginal capacity or overloaded in the design year even without the operation of the Scheme.

Proposed Improvement for Junction of Fuk Wing Street / Cheung Wah Street (J2) – Figure 5.1

5.3.2. The existing operational performance is restricted by the visibility from the give-way arm of the junction at southbound of Cheung Wah Street. In order to enhance the operation, it is proposed to re-arrange the give-way arm to Fuk Wing Street. As the traffic flow from Cheung Wah Street is higher than Fuk Wing Street, the proposed give-way arrangement at Fuk Wing Street would benefit the traffic flow on Cheung Wah Street.

5.3.3. Moreover, it is noted that building setback at Cheung Wah Street will be proposed by the adjacent planned development and thus the visibility from Fuk Wing Street to the right side of Cheung Wah Street southbound will be improved.

Suggested Improvement for Junction of Cheung Sha Wan Road / Tai Nan West Street (J5) – Figure 5.2

5.3.4. The operational performance of the junction of Cheung Sha Wan Road / Tai Nan West Street during the critical morning peak hour is dictated by the heavy traffic flows at the left-turn of Cheung Sha Wan Road eastbound and northbound of Tai Nan West Street.

5.3.5. In order to provide more capacity for the critical traffic movement, it is suggested to modify the road marking at eastbound of Cheung Sha Wan Road to provide exclusive left-turn lane and shared straight ahead and left-turn traffic lanes for the near side two lanes and maintain the existing signal phasing sequence. The proposed junction arrangement as shown in **Figure 5.2**.

Suggested Improvement for Junction of Cheung Sha Wan Road / Hing Wah Street (J7) – Figure 5.3

5.3.6. The operational performance of the junction of Cheung Sha Wan Road / Hing Wah Street is dictated by the heavy traffic flows along both directions of Cheung Sha Wan Road. As widening to Cheung Sha Wan Road is not feasible due to site constraint and the east-west traffic already running concurrently in the traffic signal phase, enhancement could only be proposed at both arms of Hing Wah Street.

5.3.7. In order to enhance the operation, it is proposed to provide one additional traffic lane at both directions of Hing Wah Street and maintain the existing signal phasing sequence. The proposed junction arrangement as shown in **Figure 5.3**.

Suggested Improvement for Junction of Lai Chi Kok Road / Cheung Lai Street (J9) – Figure 5.4

5.3.8. The junction of Lai Chi Kok Road / Cheung Lai Street is overloaded due to the heavy traffic along eastbound of Lai Chi Kok Road. An additional traffic lane is suggested at Lai Chi Kok Road near the junction to increase the capacity of the critical carriageway.

5.3.9. The existing traffic signal phasing sequence will be maintained and the proposed junction arrangement as shown in **Figure 5.4**.

Suggested Improvement for Junction of Lai Chi Kok Road / Hing Wah Street (J11) – Figure 5.5

5.3.10. Similar to Junction J7, the operational performance of the junction of Lai Chi Kok Road / Hing Wah Street is dictated by the heavy traffic flows along both directions of Lai Chi Kok Road, however widening of the road is not feasible due to site constraint.

5.3.11. In order to enhance the operation, it is suggested to ban the right-turn movement of Hing Wah Street northbound, provide split phase for the right-turn of Hong Wah Street southbound and modify the vehicle phasing for the north-south directions along Hing Wah Street to runs concurrently.

5.3.12. It is anticipated that the affect right-turn from Hing Wah Street northbound would has 70 pcu/hr and 95 pcu/hr traffic during the morning and evening peak periods in the design year 2037. The affect traffic may choose the turn earlier at the junction with Tung Chau Street or turn later at the junction with Cheung Sha Wan Road. However, the diverted traffic may affect the already critical Junction J7.

5.3.13. The suggested junction arrangement and signal phasing are as shown in **Figure 5.5**.

Suggested Improvement for Junction of Tung Chau Street / Hing Wah Street (J12) – Figure 5.6

5.3.14. The junction of Tung Chau Street / Hing Wah Street would have the similar situation with Junctions J11 and thus junction improvement with ban turn, split phase and north-south traffic running concurrently at the traffic sign phasing are suggested. The affected ban turn for this junction would have only 5 pcu/hr at both peak period in the design year of 2037. Therefore, the diverted traffic would have neglectable impact to the surrounding road network. The suggested junction arrangement and signal phasing are as shown in **Figure 5.6**.

5.3.15. The operational performance of the proposed and suggested junction improvement schemes are summerised in **Table 5.4**.

Table 5.4 Junction Performance in Design Years with Improvement Measure

Index (1)	Location	RC%/ DFC (2)							
		2031 Reference		2031 Design		2037 Reference		2037 Design	
		AM	PM	AM	PM	AM	PM	AM	PM
J2	Fuk Wing Street / Cheung Wah Street	0.75	0.72	0.75	0.72	0.80	0.76	0.82	0.77
J5	Cheung Sha Wan Road / Tai Nan West Street	29%	34%	26%	32%	21%	26%	18%	24%
J7	Cheung Sha Wan Road / Hing Wah Street	15%	*11%*	*12%*	*10%*	*8%*	*4%*	*6%*	*3%*
J9	Lai Chi Kok Road / Cheung Lai Street	20%	37%	17%	34%	*14%*	29%	*11%*	27%
J11	Lai Chi Kok Road / Hing Wah Street	31%	34%	31%	34%	23%	26%	23%	26%
J12	Tung Chau Street / Hing Wah Street West	15%	22%	15%	22%	*8%*	15%	*8%*	*14%*

*Remarks: (1) Refer to **Figure 2.1**.*
(2) "RC%" means reserved capacity and "DFC" means design flow capacity.

5.3.16. As can be seen in the assessment results, three of the concerned junctions would be operated within the marginal capacity in the design year 2037 with the implementation of improvement scheme whilst the junction of Cheung Sah Wan Road / Hing Wah Street (J7), Lai Chi Kok Road / Cheung Lai Street (J9) and Tung Chau Street / Hing Wah Street (J12) would be operated below the marginal capacity (i.e. RC ≤ 15%).

5.3.17. As the critical vehicle phase for Junctions J7, J9 and J12 are on the mainstream Cheung Sha Wan Road, Lai Chi Kok Road and Tung Chau Street respectively and the capacity of those road could not be enhanced due to site constraint. Potential improvement to the three junctions is limited.

5.3.18. As indicated by the assessment results in **Tables 5.2** and **5.3**, the proposed/ suggested junction improvement scheme is proposed to be implemented by phases according to the schedule in **Table 5.5** to mitigate the foreseeable adverse traffic conditions.

Table 5.5 Junction Improvement Scheme Implementation Proposal

Index (1)	Location	Implementation Year
J2	Fuk Wing Street / Cheung Wah Street	By 2037
J5	Cheung Sha Wan Road / Tai Nan West Street	By 2031
J7	Cheung Sha Wan Road / Hing Wah Street	By 2031
J9	Lai Chi Kok Road / Cheung Lai Street	By 2031
J11	Lai Chi Kok Road / Hing Wah Street	By 2031

Index (1)	Location	Implementation Year
J12	Tung Chau Street / Hing Wah Street West	By 2031

Remarks: (1) Refer to ***Figure 2.1****.*

5.4. Pedestrian Walkway Assessment

5.4.1. Existing performance of the key footpath and pedestrian crossing facilities likely to be affected by the Scheme are assessed with the observed pedestrian traffic flows.

5.4.2. Current performance of the key pedestrian links is summarized in **Table 5.6** below in terms of Level-of-Service (LOS). The key footpath sections are currently operating desirably during the morning, noon and evening peak periods with all of those having LOS A. The evening peak was found to have higher pedestrian demand than the morning and noon peaks in most of these key pedestrian linkages. For details of the LOS, please refer to **Section 5.4.3** and **Table 5.7** below.

Table 5.6 Existing Key Pedestrain Link Performance

Ref (1)	Footpath Width (m)	Effective Width (m) (2)	Observed Pedestrian Demand (pph)			Flow Rate (ppm/m)			LOS		
			AM Peak	Noon Peak	PM Peak	AM Peak	Noon Peak	PM Peak	AM Peak	Noon Peak	PM Peak
P1	2.5	1.5	210	235	260	9.3	10.4	11.6	A	A	A
P2	3	1	60	105	130	4.0	7.0	8.7	A	A	A
P3	3.5	2.5	70	105	230	1.9	2.8	6.1	A	A	A
P4	3.5	2.5	150	45	140	4.0	1.2	3.7	A	A	A
P5	4.5	3.5	75	115	135	1.4	2.2	2.6	A	A	A
P6	4.7	3.7	75	120	145	1.4	2.2	2.6	A	A	A
P7	3.5	2	300	170	365	10.0	5.7	12.2	A	A	A

Remarks: (1) Refer to **Figure 4.2**.

(2) Effective Width = Footpath Width – Dead Width (0.5m for kerb/ wall/ fence, 0.7m for shop frontage and 1.0m for tree pits along the eastern footpath of Cheung Wah Street).

5.4.3. Performance of walkway is measured by LOS based on Highway Capacity Manual (HCM) 2000 (Exhibit 11-8). It illustrates the degree of congestion in pedestrian facilities. The definition of LOS is illustrated in **Table 5.7**. The TPDM states that the "LOS C is desirable for most design at streets with dominant 'living' pedestrian facilities".

Table 5.7 Pedestrian Walkway LOS

LOS	Flow Rate (ppm)	Description
A	≤ 16	Pedestrians move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 – 23	There is sufficient area for pedestrians to select walking speeds freely, to bypass other pedestrians, and to avoid crossing conflicts. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence when selecting a walking path.
C	23 – 33	Space is sufficient for normal walking speeds, and for bypassing other pedestrians in primarily unidirectional streams. Reverse-direction or crossing movements can cause minor conflicts, and speeds and flow rate are somewhat lower.
D	33 – 49	Freedom to select individual walkway speeds and to bypass other pedestrians is restricted. Crossing or reserve-flow movements face a high probability of conflict, requiring frequent changes in speed and position. The LOS provides reasonably fluid flow, but friction and interaction between pedestrians is likely.
E	49 – 75	Virtually all pedestrians restrict their normal walking speed, frequently adjusting their gait. At the lower range, forward movement is possible only by shuffling. Space is not sufficient for passing slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with stoppages and interruptions to flow.
F	> 75	All walking speeds are severely restricted, and forward progress is made only by shuffling. There is frequent, unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.

5.4.4. The performance of the key pedestrian links in the design years 2031 and 2037 reference (without the Scheme) and design (with the Scheme) scenarios are summarized in **Table 5.8** below in terms of LOS. The pedestrian walkway along the boundary of Site A will be widened in year 2037 due to the proposed building set back.

Table 5.8 Design Years Key Pedestrain Link Performance

Ref (1)	Effective Width (m) (2)	Scenario	Pedestrian Demand (pph)			Flow Rate (ppm/m)			LOS		
			AM Peak	Noon Peak	PM Peak	AM Peak	Noon Peak	PM Peak	AM Peak	Noon Peak	PM Peak
P1	1.5	2031 Reference	240	275	300	10.7	12.2	13.3	A	A	A
		2031 Design	260	290	315	11.6	12.9	14	A	A	A
		2037 Reference	260	290	320	11.6	12.9	14.2	A	A	A
		2037 Design	310	345	365	13.8	15.3	16.2	A	A	B
P2	1	2031 Reference	115	185	190	7.7	12.3	12.7	A	A	A
		2031 Design	125	195	200	8.3	13	13.3	A	A	A
		2037 Reference	120	195	200	8	13	13.3	A	A	A
	6 (3)	2037 Design	190	285	270	2.1	3.2	3	A	A	A
P3	2.5	2031 Reference	120	185	300	3.2	4.9	8	A	A	A
		2031 Design	205	245	365	5.5	6.5	9.7	A	A	A
		2037 Reference	125	190	320	3.3	5.1	8.5	A	A	A
		2037 Design	240	290	415	6.4	7.7	11.1	A	A	A
P4	2.5	2031 Reference	180	70	170	4.8	1.9	4.5	A	A	A
		2031 Design	235	110	210	6.3	2.9	5.6	A	A	A
		2037 Reference	190	75	180	5.1	2	4.8	A	A	A
	6.3 (3)	2037 Design	245	115	220	2.6	1.2	2.3	A	A	A
P5	3.5	2031 Reference	200	305	270	3.8	5.8	5.1	A	A	A
		2031 Design	255	345	310	4.9	6.6	5.9	A	A	A
		2037 Reference	205	315	280	3.9	6	5.3	A	A	A
	8.8 (3)	2037 Design	455	620	520	3.4	4.7	3.9	A	A	A
P6	3.7	2031 Reference	180	280	260	3.2	5	4.7	A	A	A
		2031 Design	235	320	300	4.2	5.8	5.4	A	A	A
		2037 Reference	185	290	270	3.3	5.2	4.9	A	A	A
		2037 Design	305	420	375	5.5	7.6	6.8	A	A	A
P7	2	2031 Reference	460	375	530	15.3	12.5	17.7	A	A	B
		2031 Design	490	395	555	16.3	13.2	18.5	B	A	B
		2037 Reference	480	390	560	16	13	18.7	A	A	B
		2037 Design	705	675	780	23.5	22.5	26	C	B	C

Remarks: (1) Refer to **Figures 4.5** and **4.6**.

(2) Effective Width = Footpath Width – Dead Width (0.5m for kerb/ wall/ fence, 0.7m for shop frontage and 1.0m for tree pits along the eastern footpath of Cheung Wah Street).

(3) Footpath widened due to proposed building set back of Site A.

5.4.5. As can be seen in the above assessment results, all of the key sections of footpath are still operating desirably during the morning, noon and evening peak periods with the additional pedestrian trip to be generated by the Scheme.

6. Summary and Conclusion

6.1. Summary

6.1.1. A Traffic Impact Assessment (TIA) Study was carried out to investigate the traffic impact induced by Site A and Site B of the Scheme in Sham Shui Po. Site A consist of residential blocks, retail, GIC facilities and underground public car park while Site B consist of public open space and a GIC building with the relocated indoor sport centre.

6.1.2. The proposed development parameters for Site A will meet the high-end of the HKPSG parking requirement for the proposed residential and retail development. The transport facilities would be provided at the ancillary basement car park at Site A and the ground floor loading/unloading area and ancillary basement carpark at Site B. Besides, car ramps are proposed for the two sites to facilitate vehicle manoeuvring and entering to the basement car park.

6.1.3. To facilitate the future operation needs of the GIC provision, the parking provision is proposed with reference to the same facilities at other development projects. The actual provision for GIC uses will be subject to liaison with the relevant government departments and services providers upon the Development Scheme Plan (DSP) approval.

6.1.4. Provision of public car park is proposed at Site A to accommodate some of the parking demand in the local area. The provision of underground public carpark at Site A may create opportunity for the replacement of some on-street parking spaces in the area. It makes way for pavement widening or partial pedestrianization to enhance walkability in the area under separated revitalization scheme.

6.1.5. Swept path analysis is conducted based on the notional layout. The notional layout for the development run-in/out and access road is technically feasible from traffic engineering point of view.

6.1.6. Building setback on all four side of Site A is proposed to provide wider pedestrian walkway and thus enhance the pedestrian walking environment.

6.1.7. Pedestrians can access the subject site via the surrounding footpaths and pedestrian crossings to/ from nearby bus, GMB and PLB servicing points as well as to/ from MTR Lai Chi Kok and Cheung Sha Wan Stations.

6.1.8. The key junctions within the study area were assessed with respect to traffic generation of the Scheme in design years 2031 and 2037 (three years after completion of each site), taking into account the traffic generation by the major planned/ approved developments in the vicinity of the subject site.

6.1.9. Based on the assessment results, it was found that some of identified junctions would be operating under the marginal capacity (i.e. RC ≤ 15%) or even over capacity (i.e. RC ≤ 0%) in design years 2031 and 2037 for the scenarios without the Scheme.

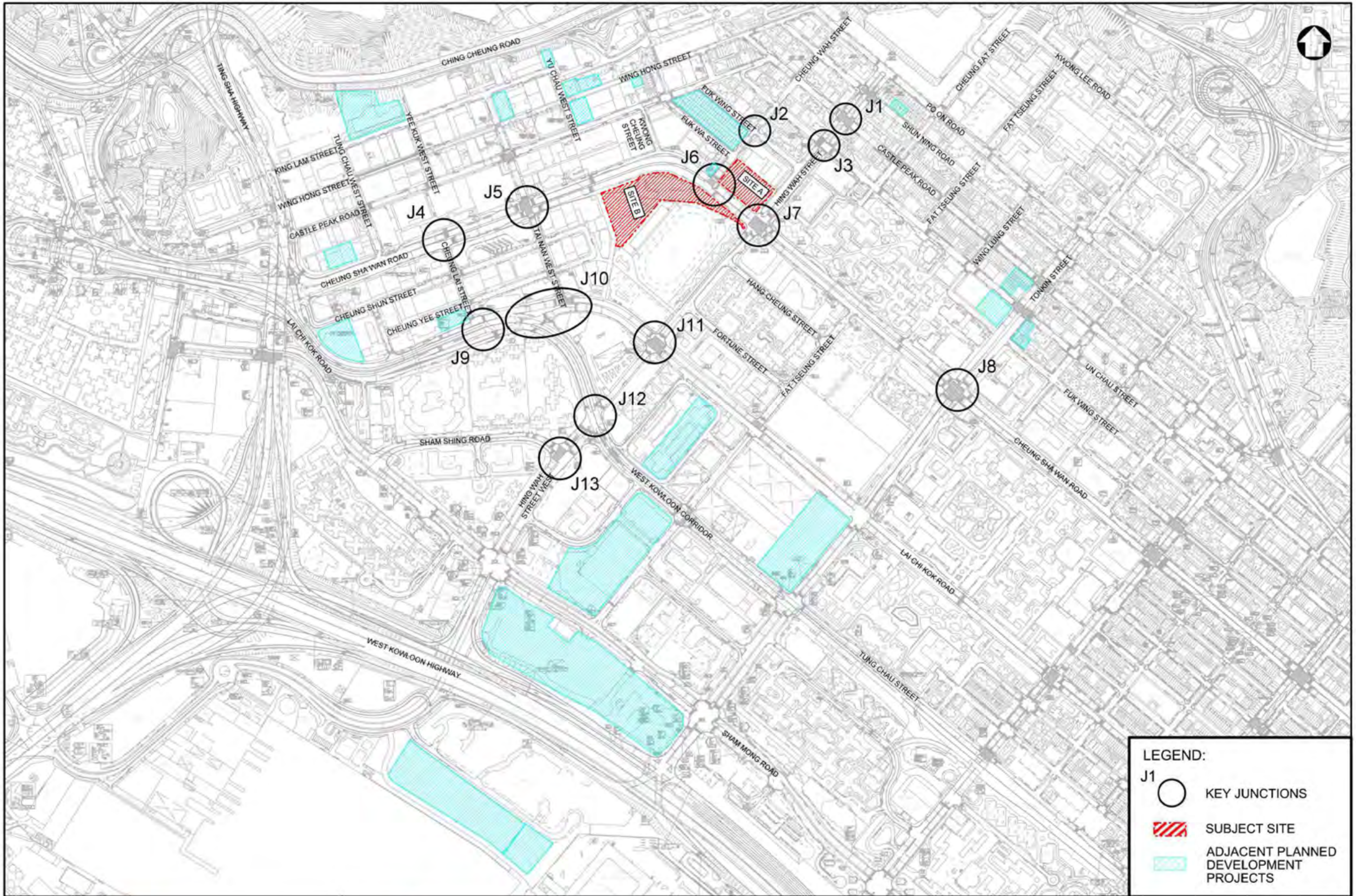
6.1.10. Traffic enhancement measure is proposed for one junction that would be overloaded by the development trips of the Scheme and suggested for five junctions that are expected to be overloaded in the design years by the local traffic growth even without the operation of the Scheme for TD consideration to enhance the traffic condition in the local area.

6.2. Conclusion

6.2.1. It is concluded that with the proposed and suggested junction improvement measures, the Scheme would not induce adverse traffic impact on the surrounding road network and would enhance the pedestrian walking environment of the adjacent local streets.

6.2.2. The proposed traffic provision to the Scheme, with reference to the notional layout, is considered technically feasible and acceptable.

Figures



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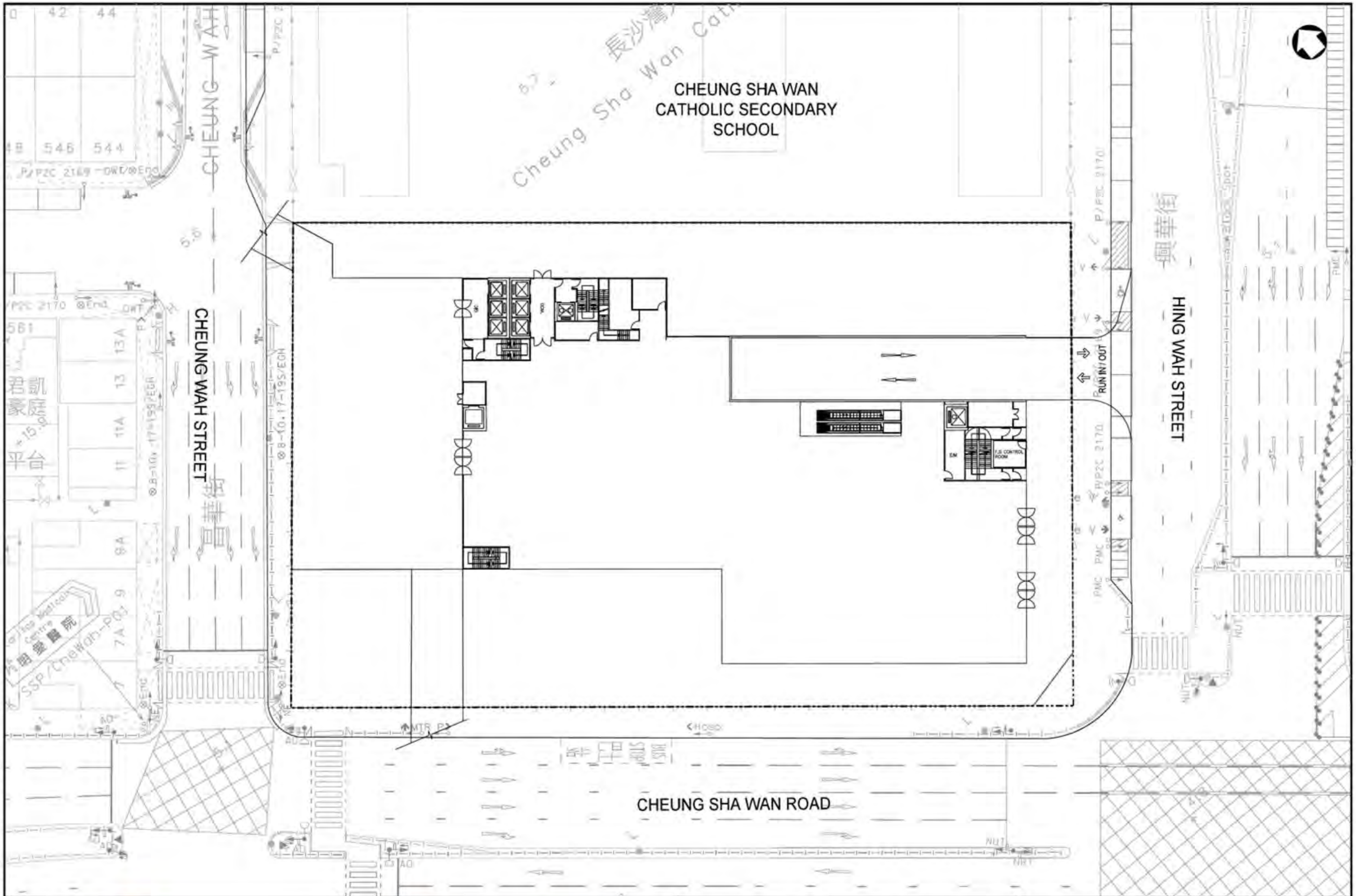
			Scale at A3: N.T.S. / Date: SEP 2021 / Figure No. 2.1



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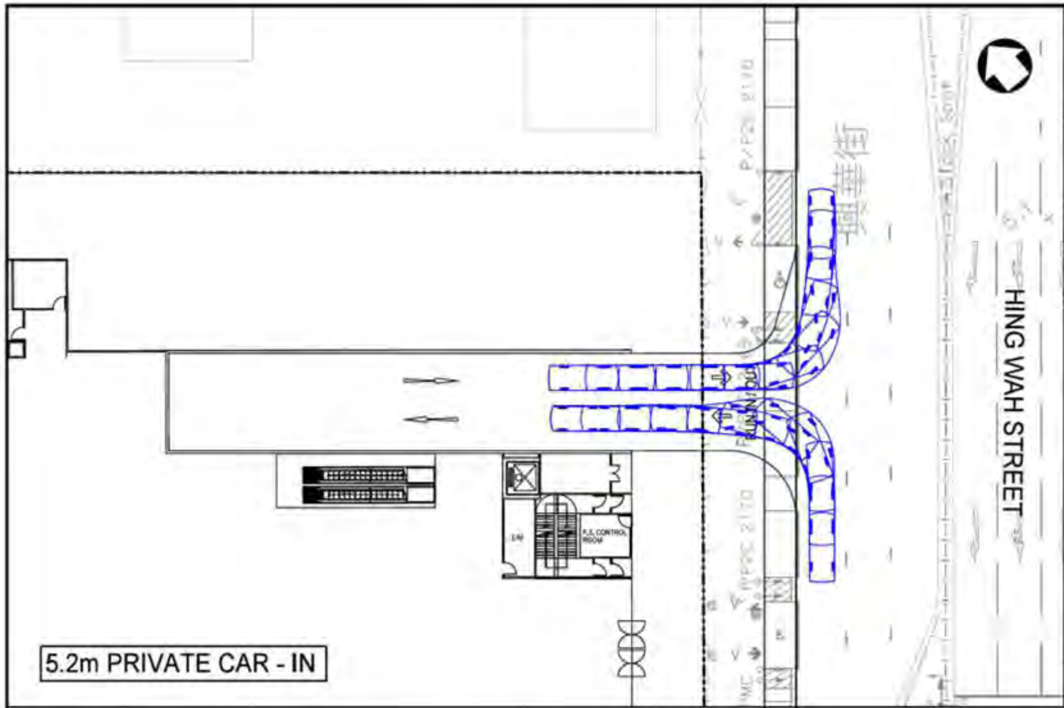
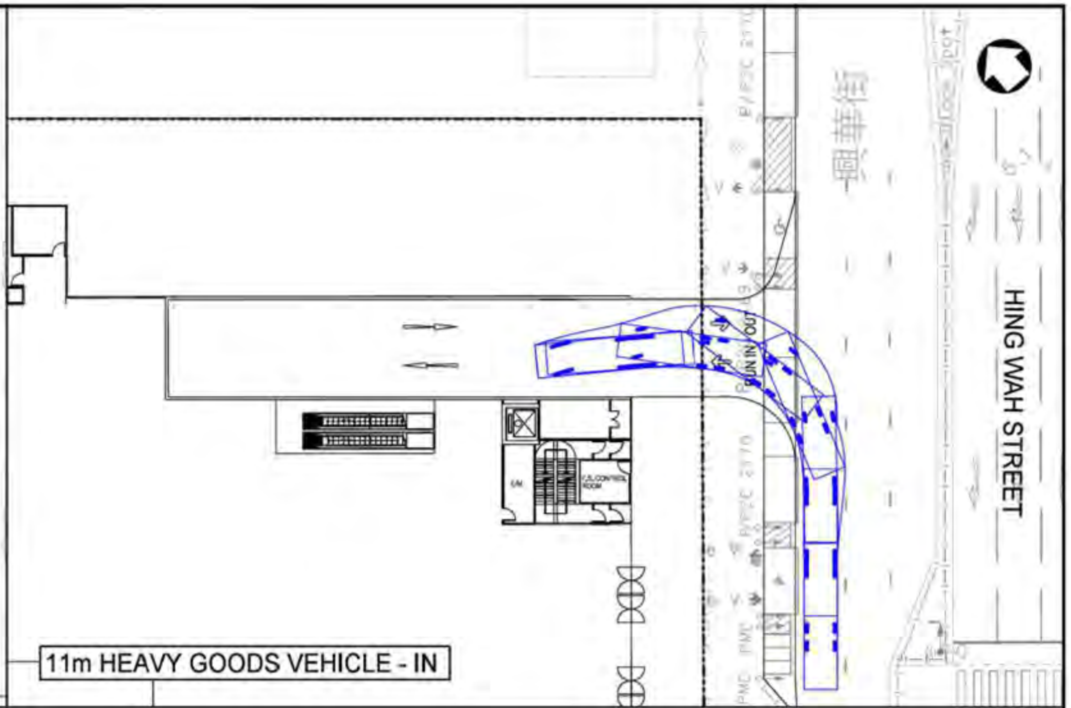
PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title: LAYOUT OF DEVELOPMENT SCHEME – SITE A GROUND FLOOR

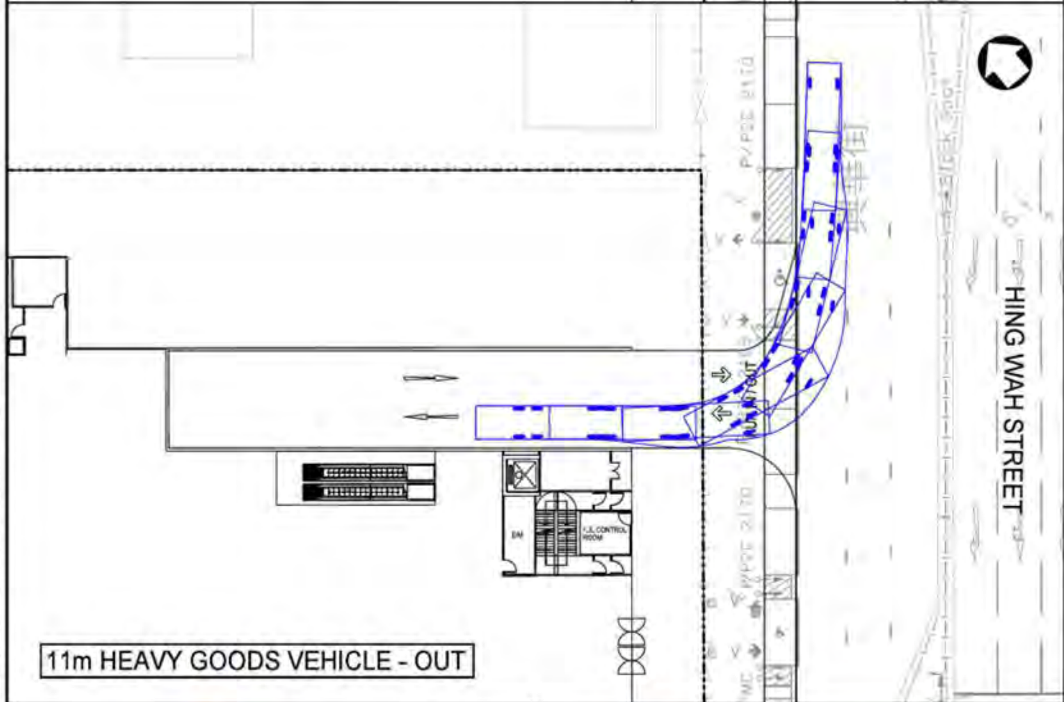
Scale at A3	Date	Figure No.
1 : 400	AUG 2021	2.2



5.2m PRIVATE CAR - IN



11m HEAVY GOODS VEHICLE - IN



11m HEAVY GOODS VEHICLE - OUT

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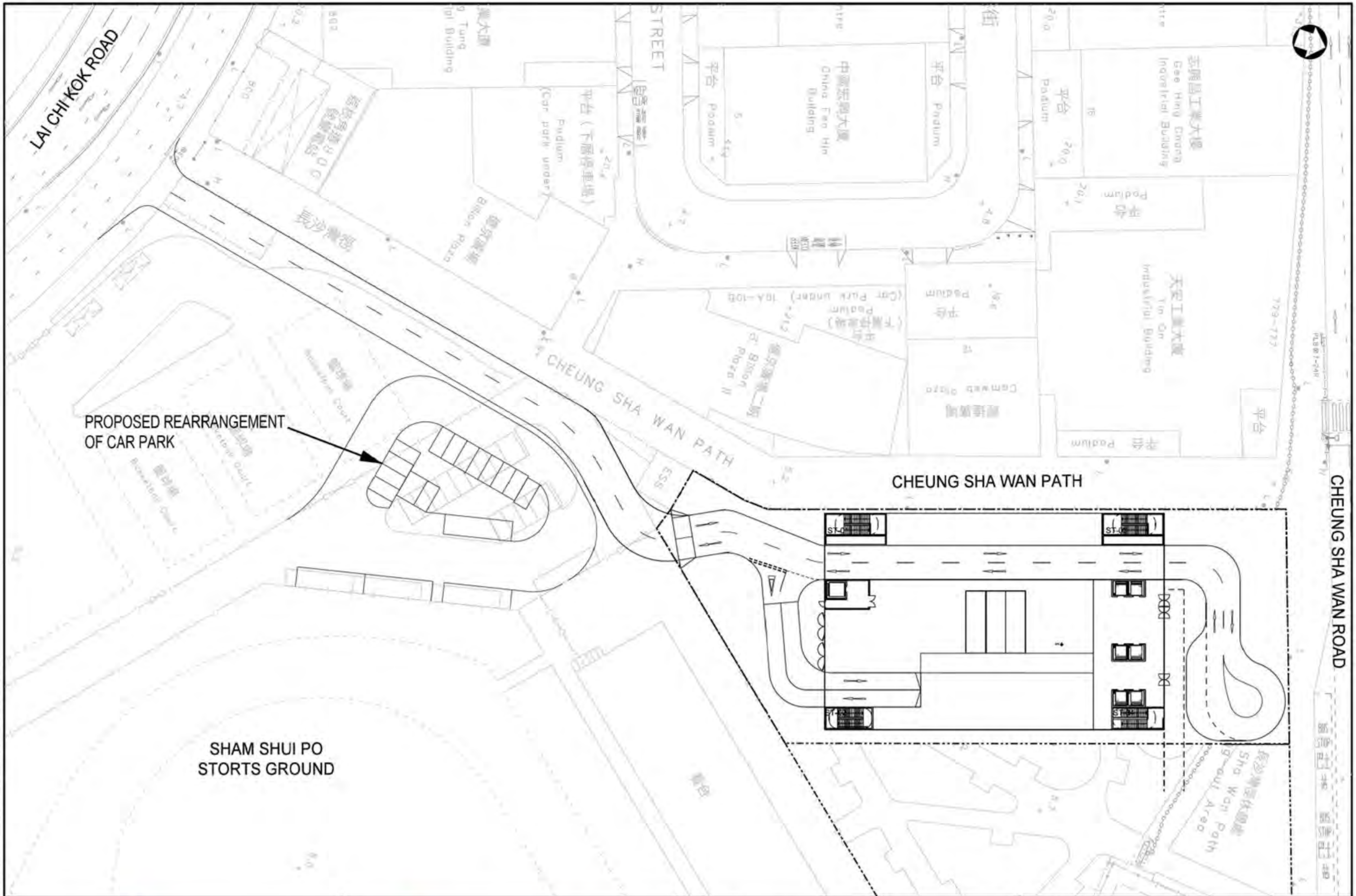
PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title		
LAYOUT OF DEVELOPMENT SCHEME – SITE A GROUND FLOOR (SWEPT PATH ANALYSIS)		
Scale at A3: 1 : 400	Date: AUG 2021	Figure No.: 2.3



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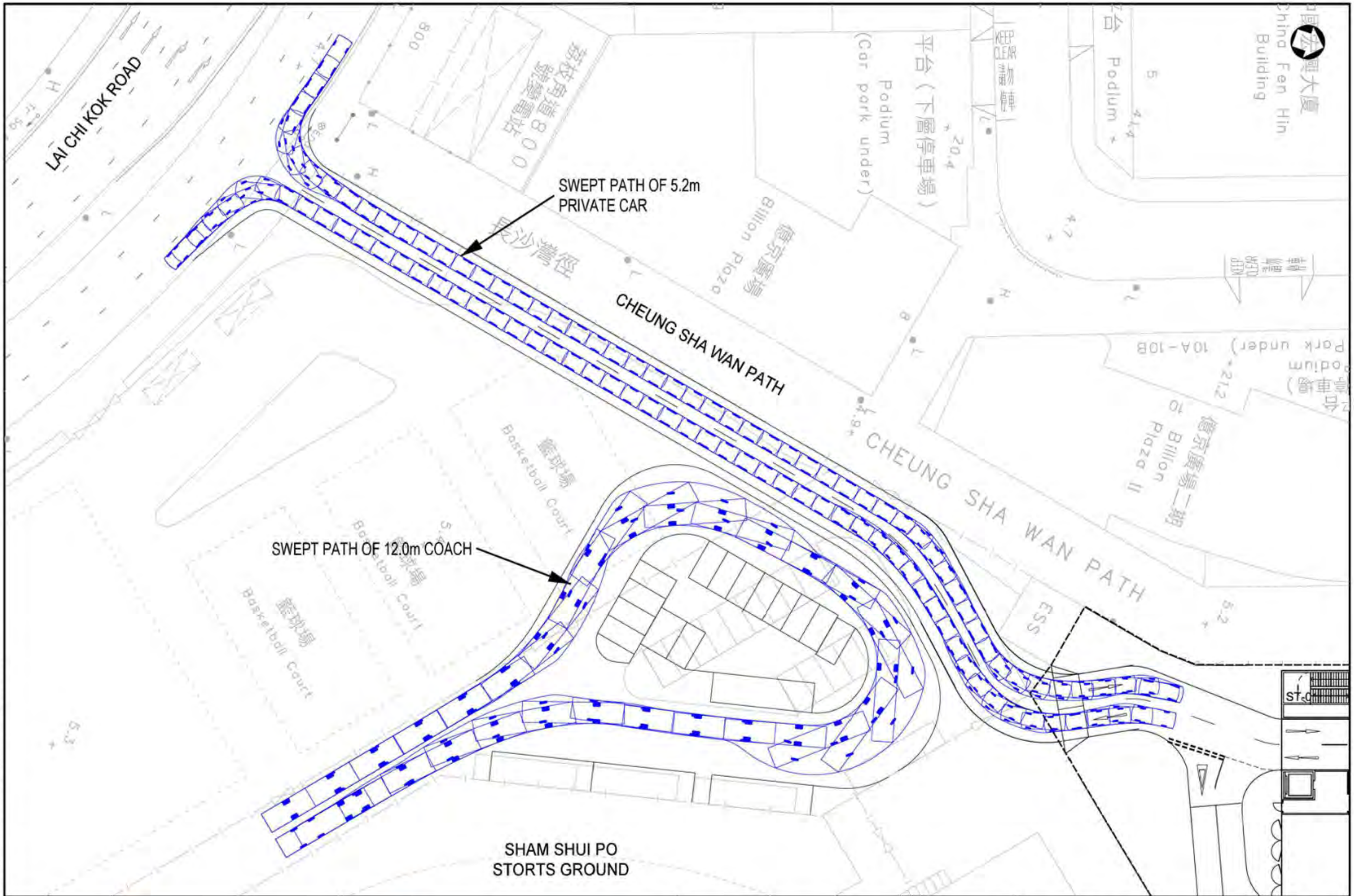
			Scale at A3: 1 : 600 — Date: SEP 2021 — Figure No. 2.4



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PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title		
LAYOUT OF DEVELOPMENT SCHEME AND PROPOSED ACCESS ROAD - SITE B GIC (SWEPT PATH ANALYSIS 1)		
Scale at A3: 1 : 400	Date: SEP 2021	Figure No. 2.5

11.0m HEAVY GOODS VEHICLE INGRESS MOVEMENT

11.0m HEAVY GOODS VEHICLE EGRESS MOVEMENT

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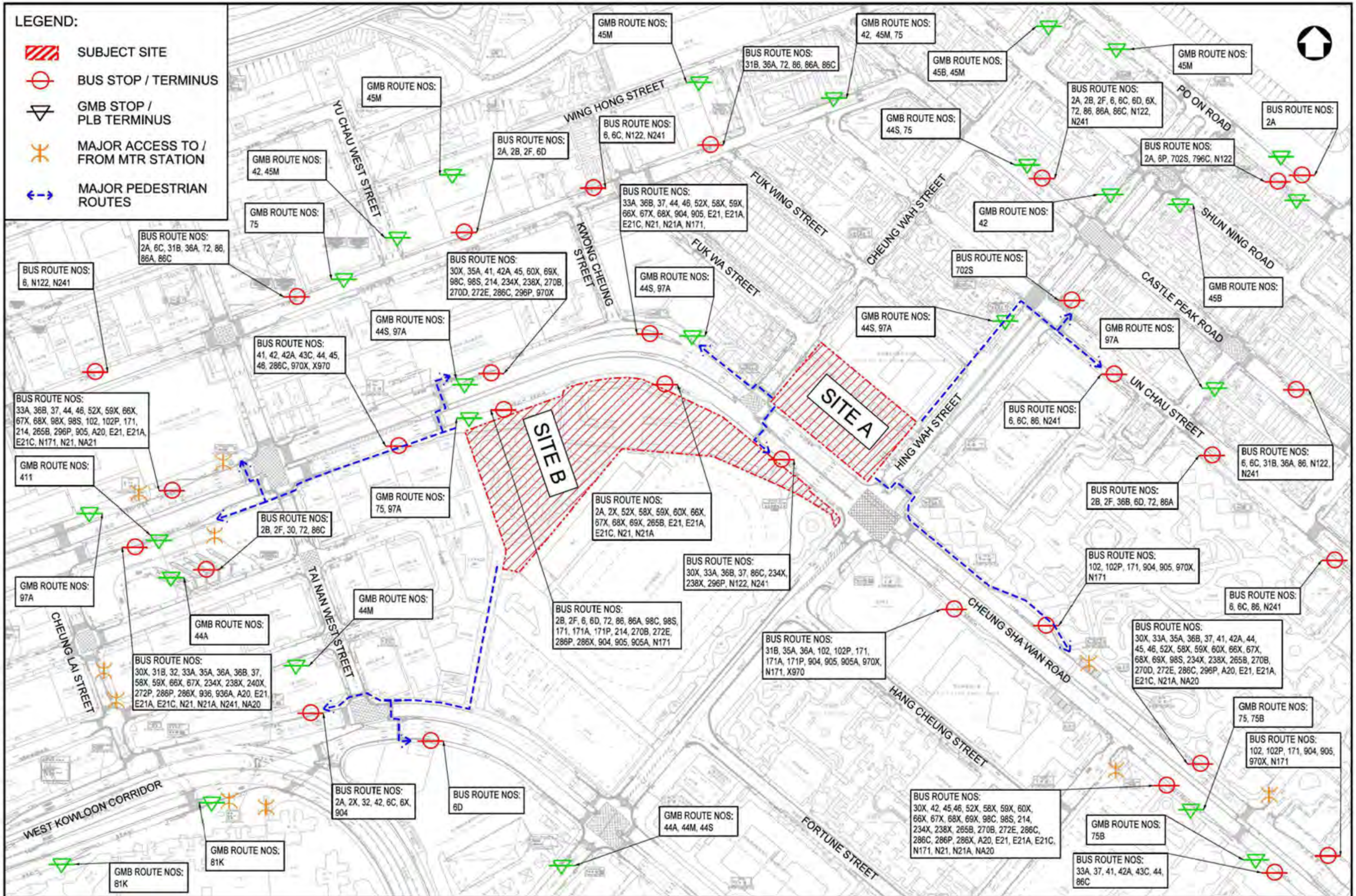
Title
LAYOUT OF DEVELOPMENT SCHEME AND PROPOSED ACCESS ROAD - SITE B GIC (SWEPT PATH ANALYSIS 2)

Scale at A3	Date	Figure No.
1 : 400	SEP 2021	2.6



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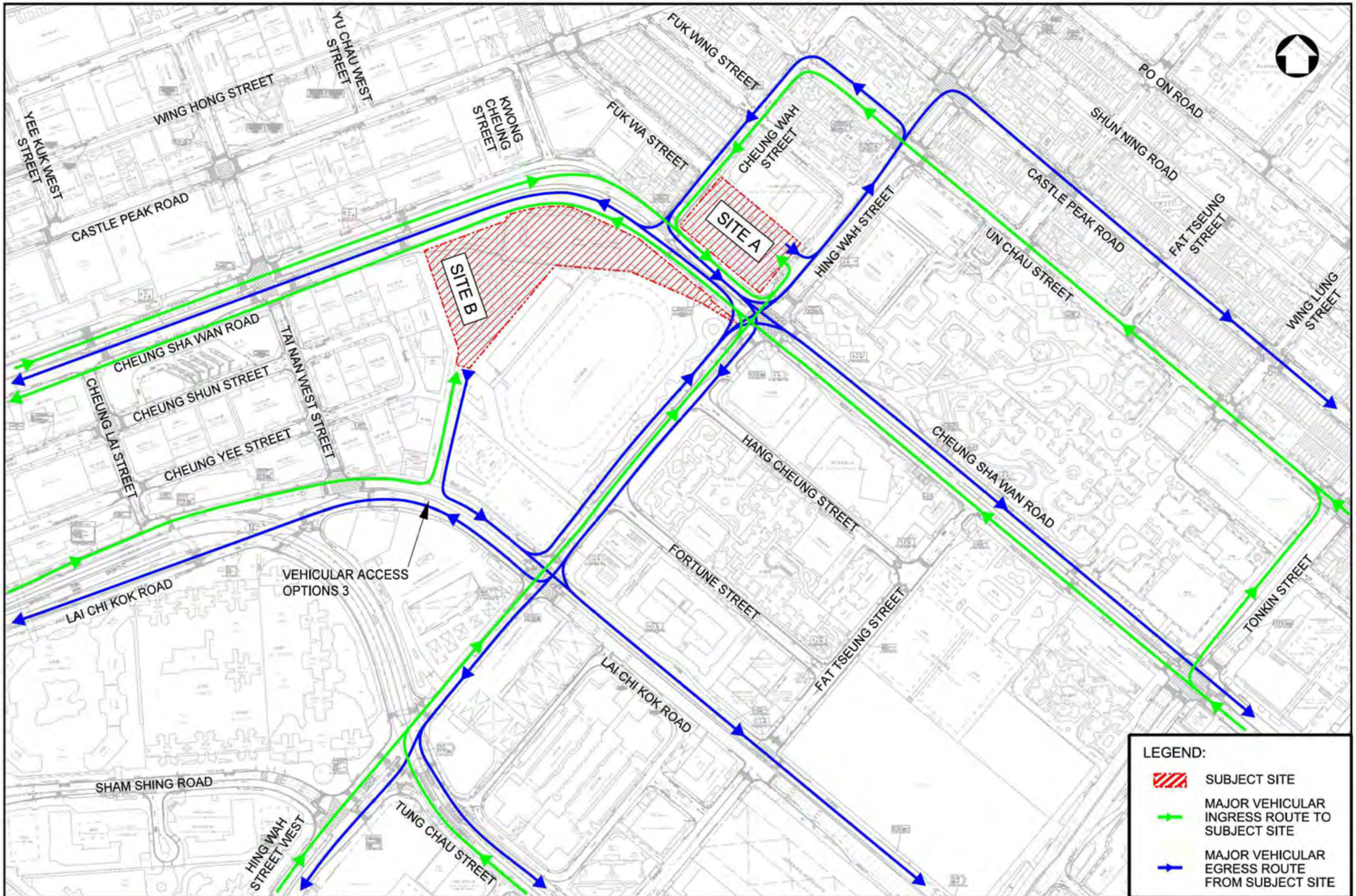
PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
PEDESTRIAN ACCESSES AND ADJACENT PUBLIC TRANSPORT NODES

Scale at A3	Date	Figure No.
N.T.S.	AUG 2021	2.7



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PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title: MAJOR VEHICULAR ACCESS ROUTE

Scale at A3	Date	Figure No.
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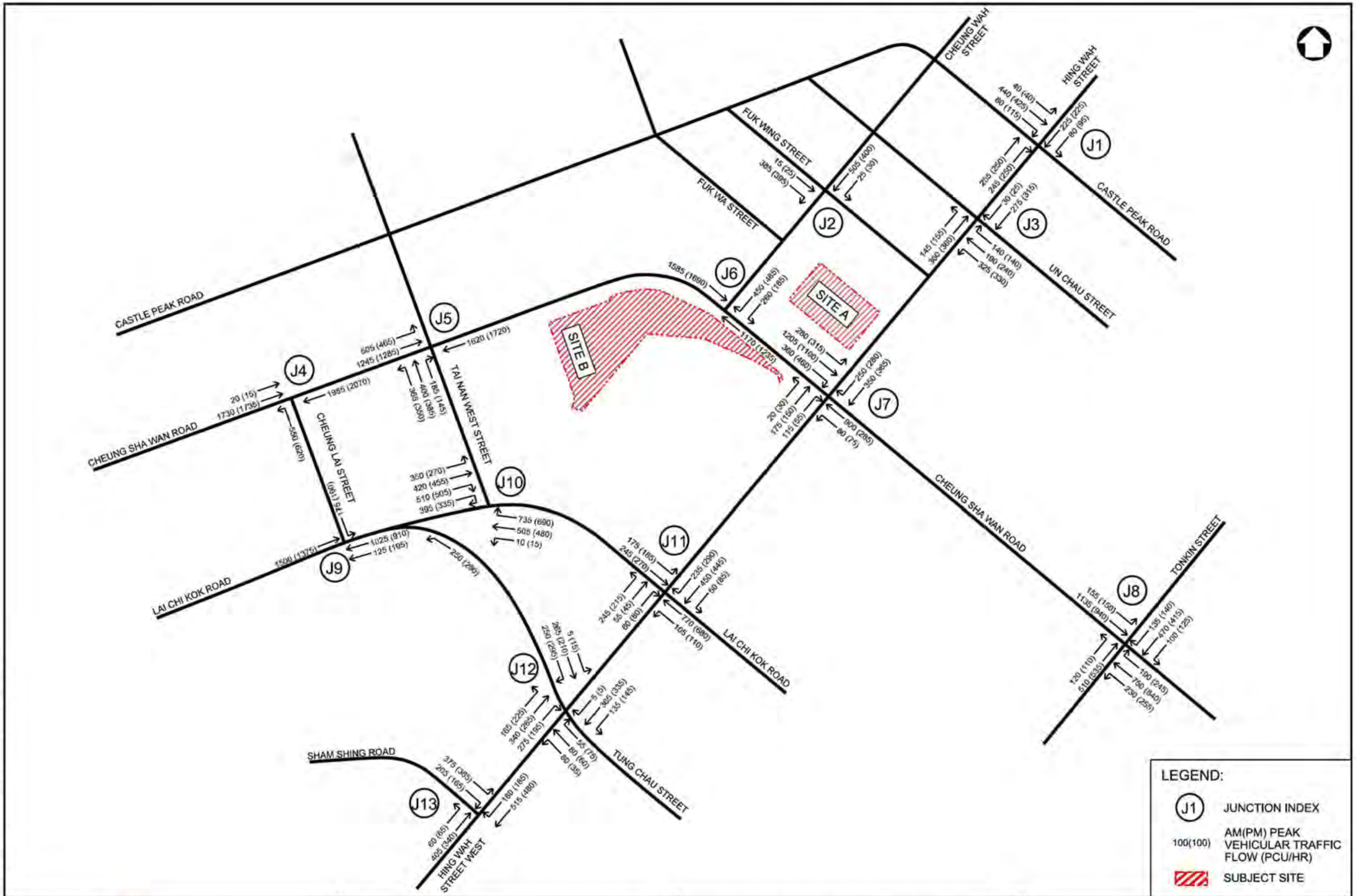

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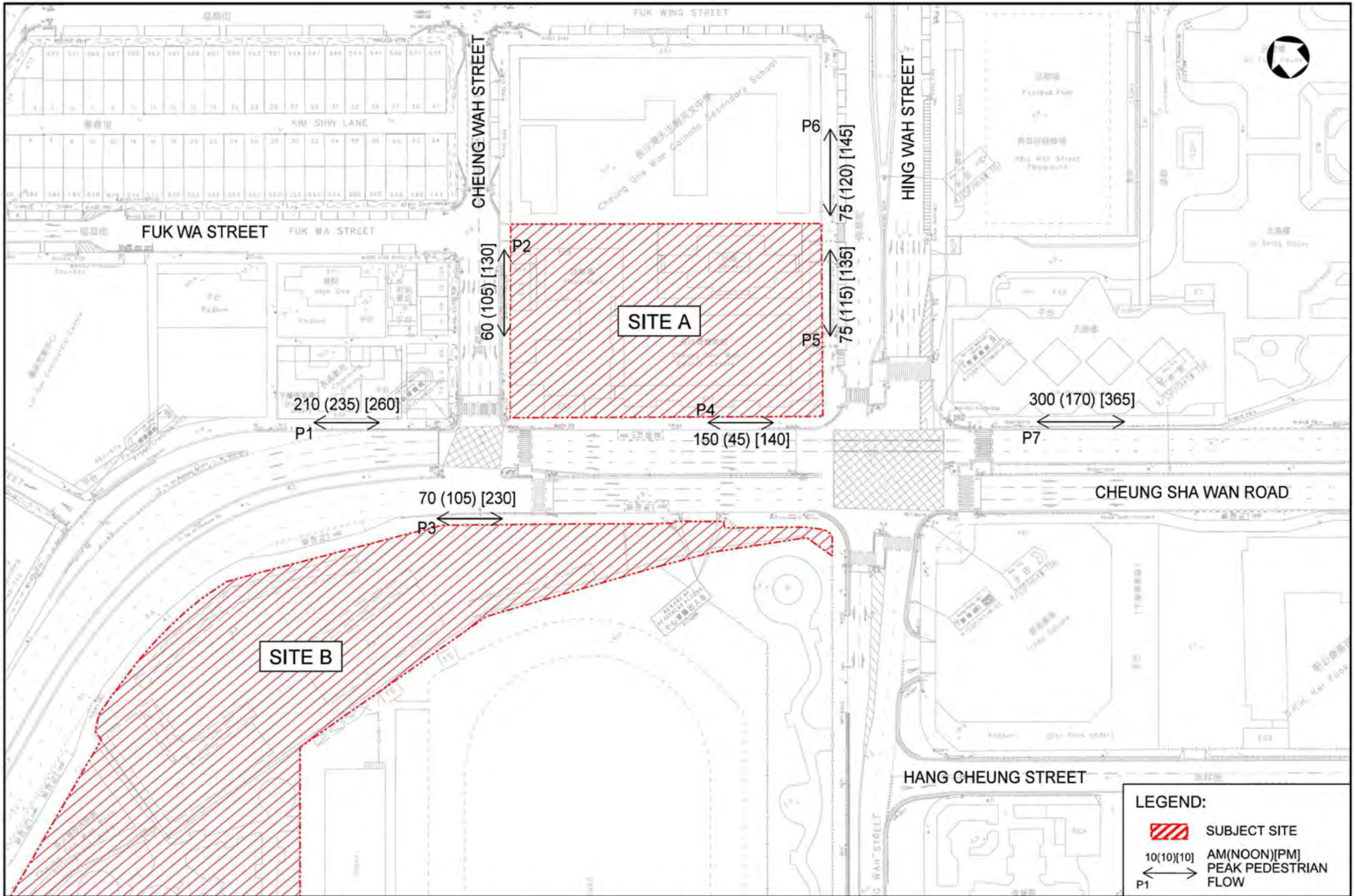
PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title: YEAR 2021 OBSERVED TRAFFIC FLOWS

Scale at A3	Date	Figure No.
N.T.S.	AUG 2021	4.1



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PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
YEAR 2021 OBSERVED PEDESTRIAN FLOWS

Scale at A3	Date	Figure No.
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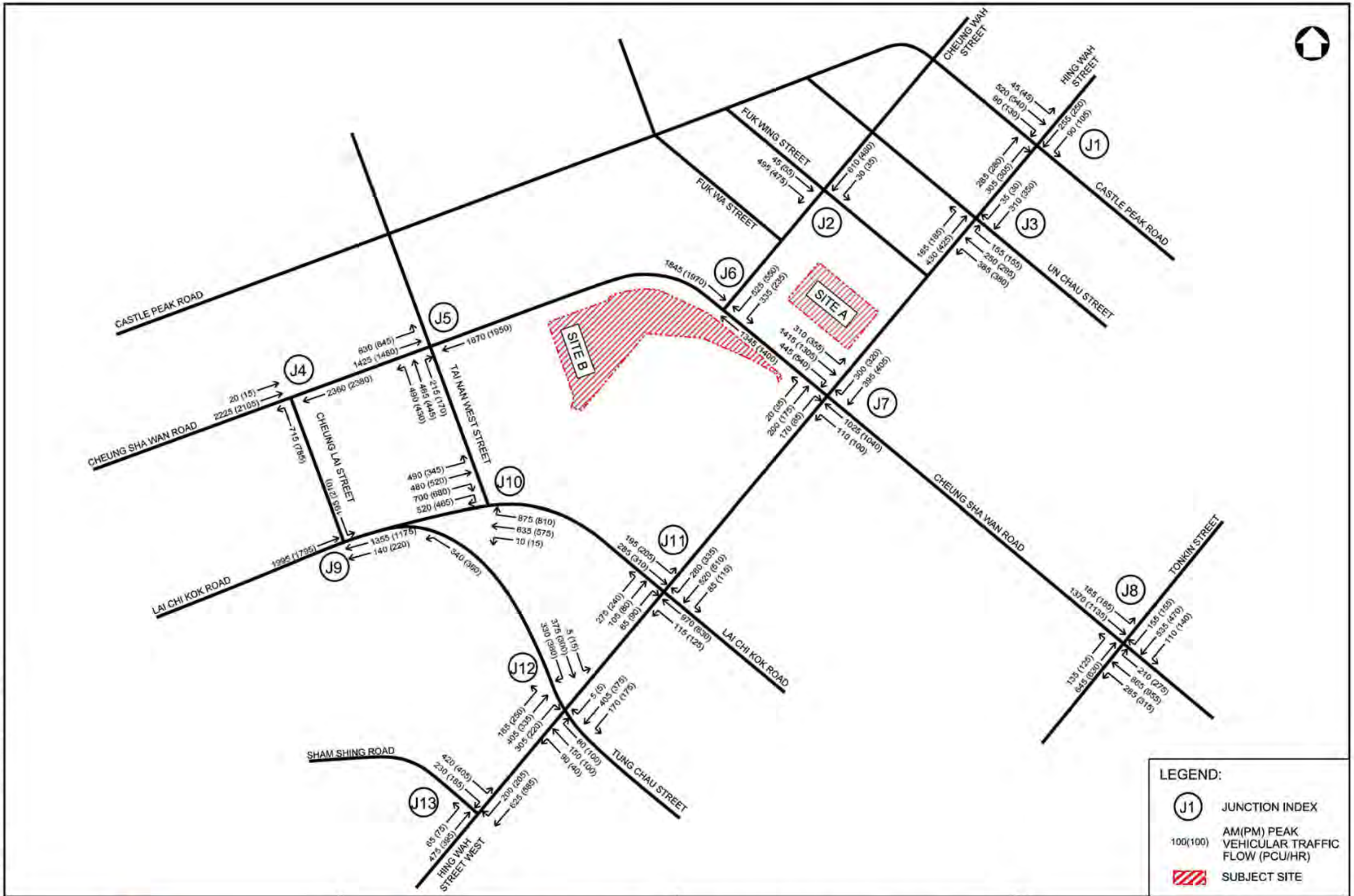

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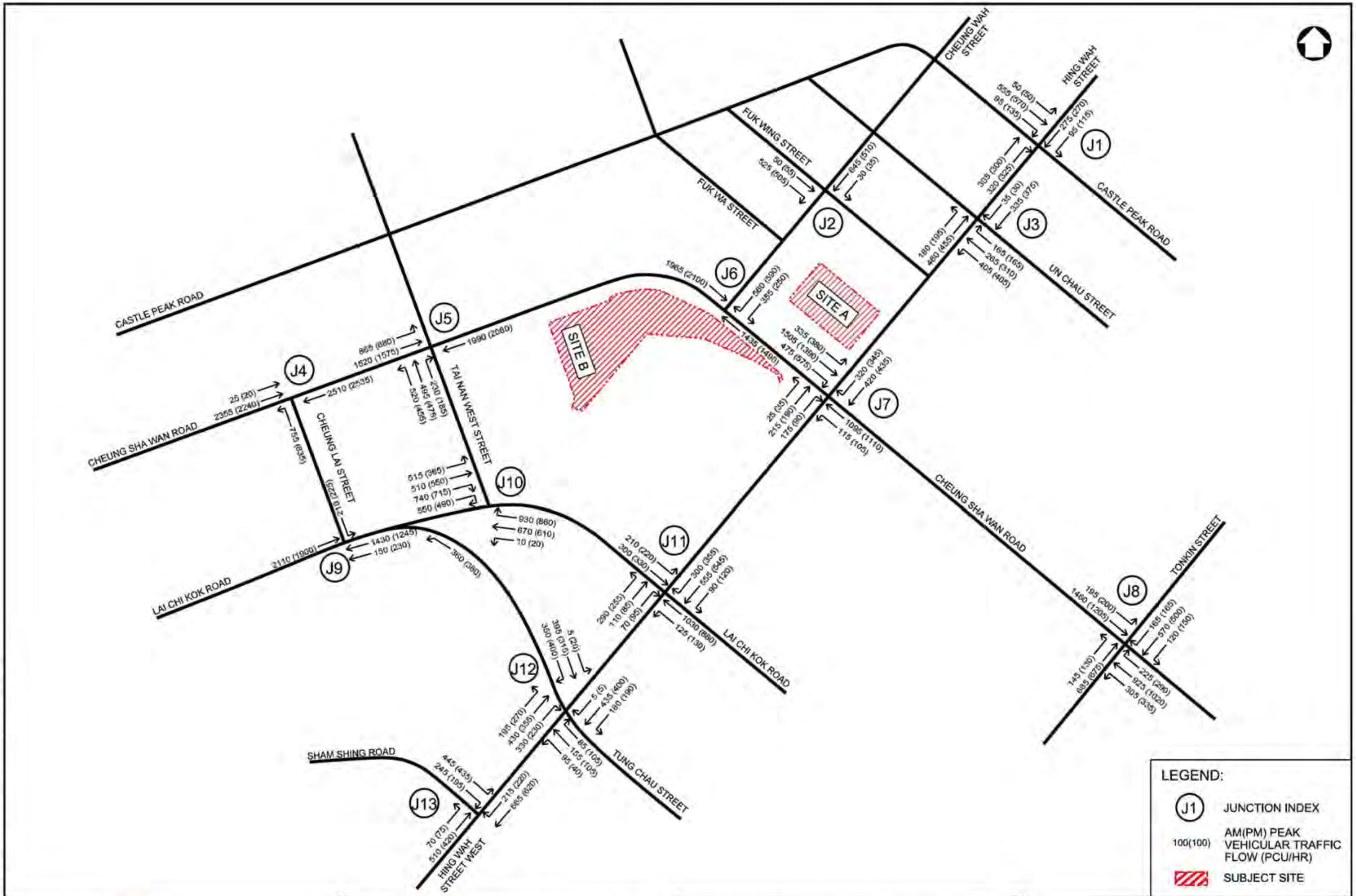
Title
YEAR 2031 REFERENCE TRAFFIC FLOWS

Scale at A3	Date	Figure No.
N.T.S.	SEP 2021	4.3



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PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
YEAR 2037 REFERENCE TRAFFIC FLOWS

Scale at A3	Date	Figure No.
N.T.S.	SEP 2021	4.4

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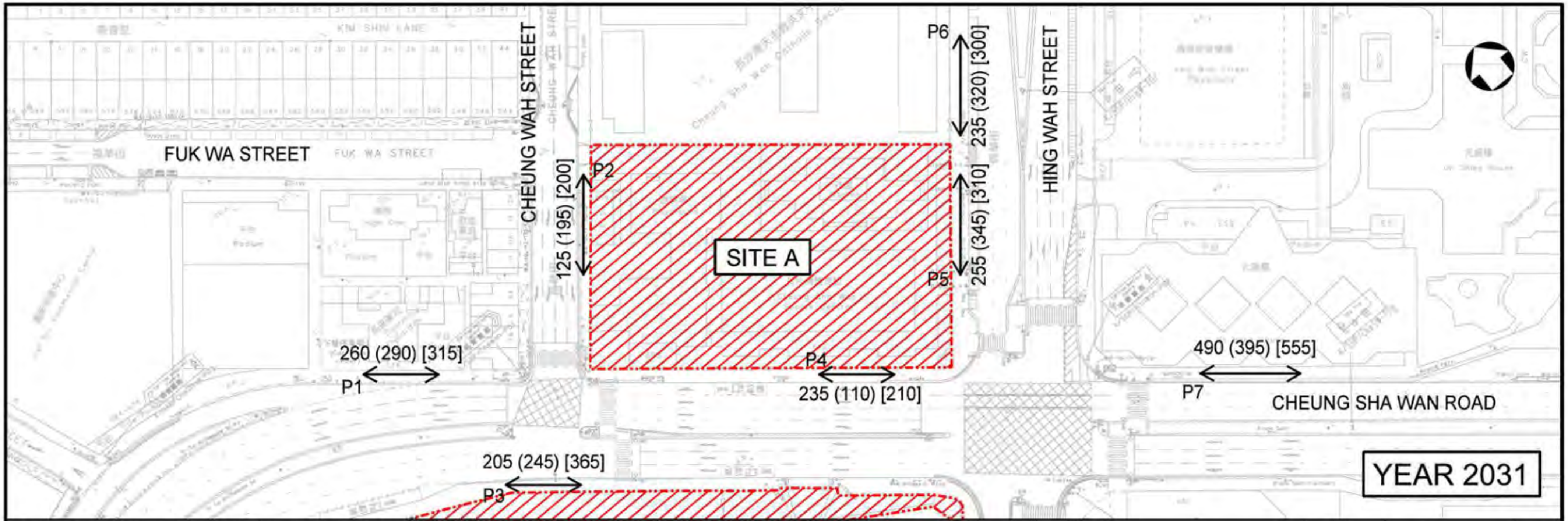
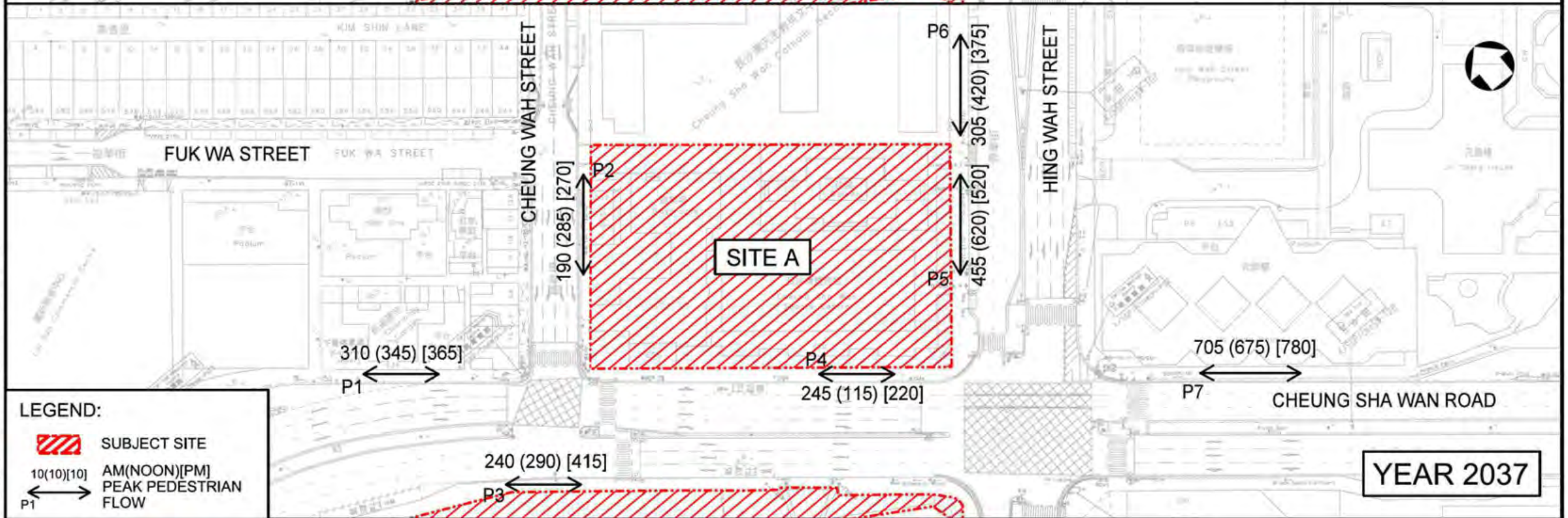
			Scale at A3: N.T.S. / Date: AUG 2021 / Figure No. 4.5





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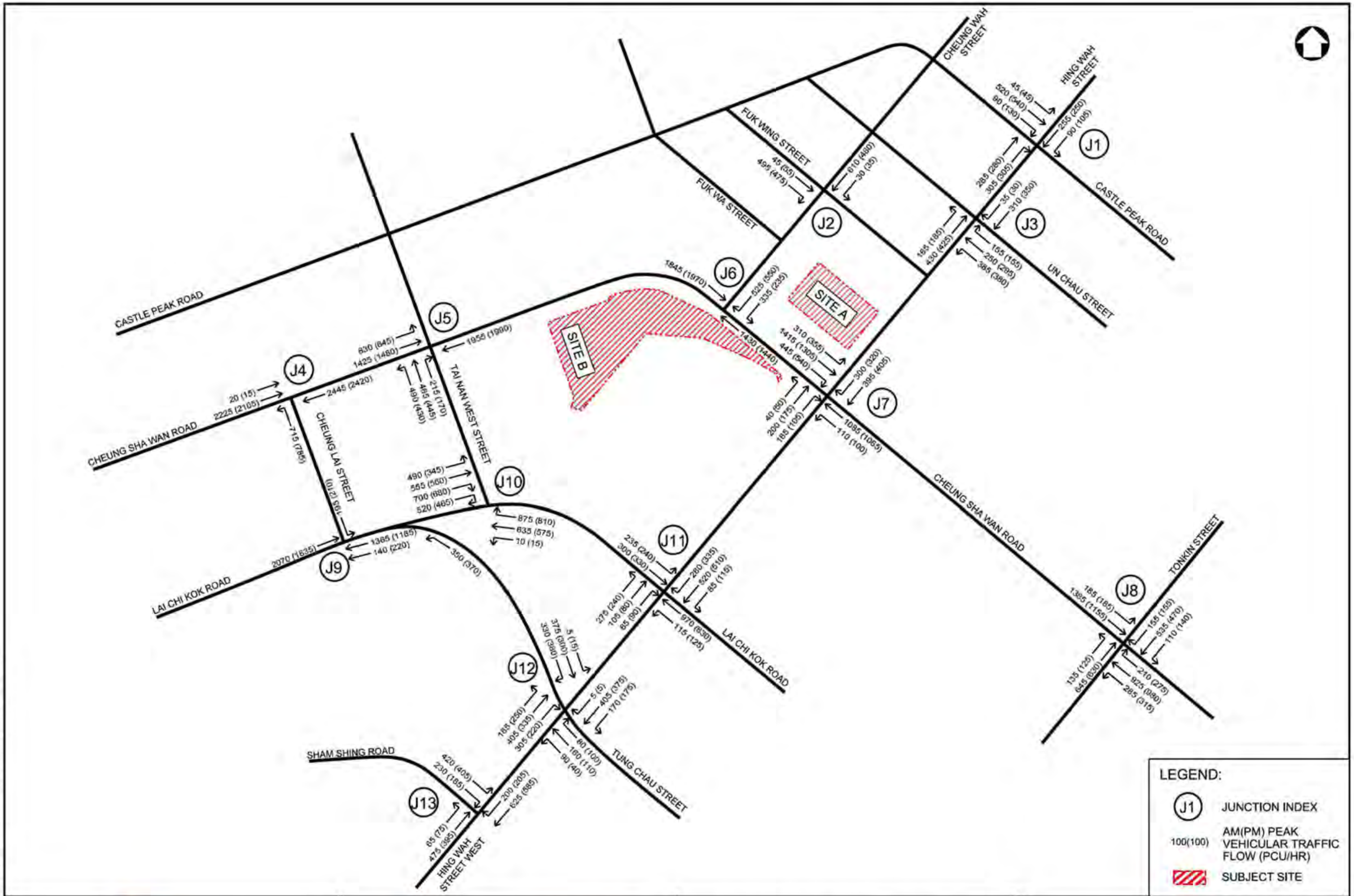
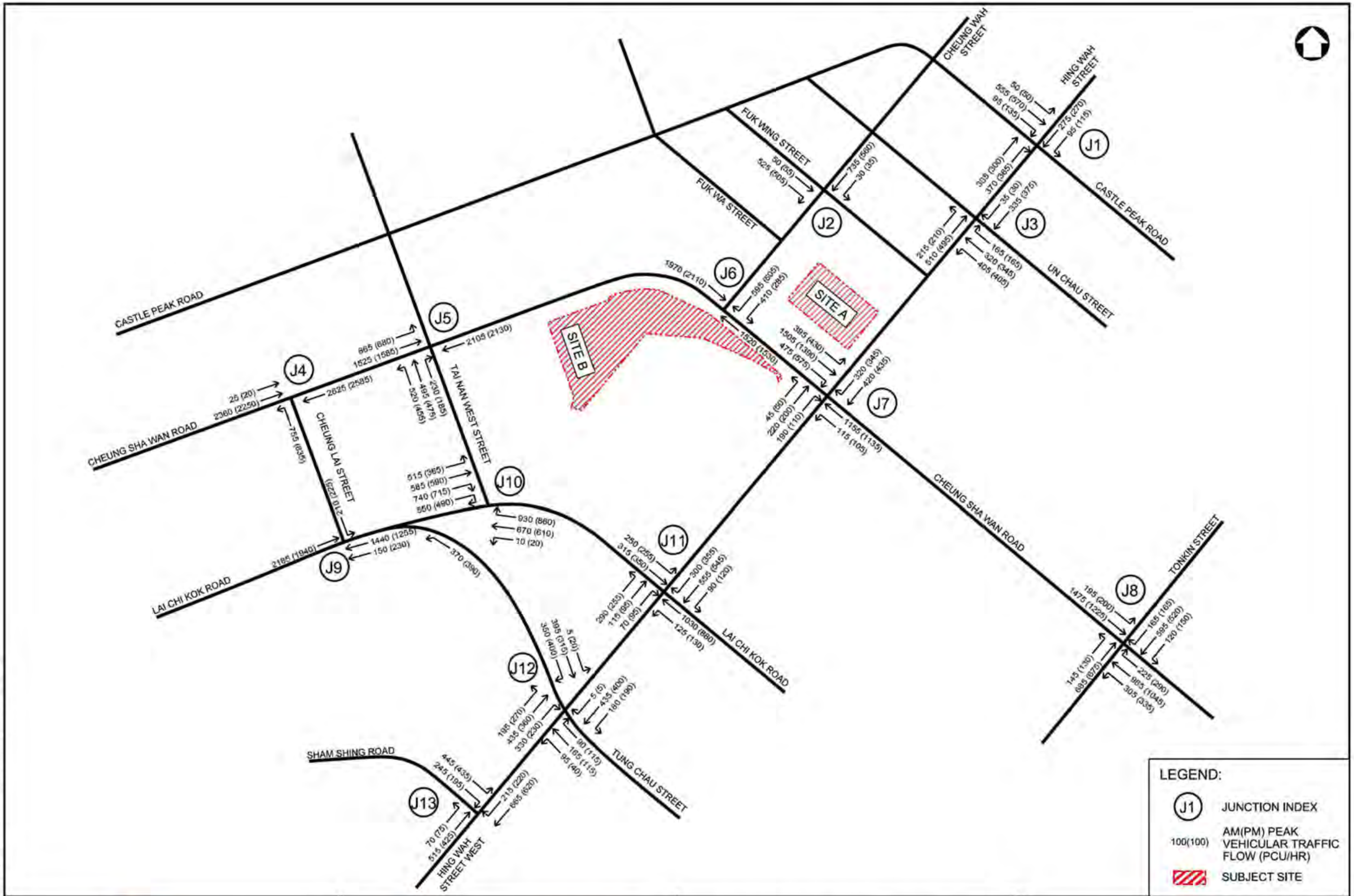
PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
YEARS 2031 AND 2037 DESIGN PEDESTRIAN FLOWS

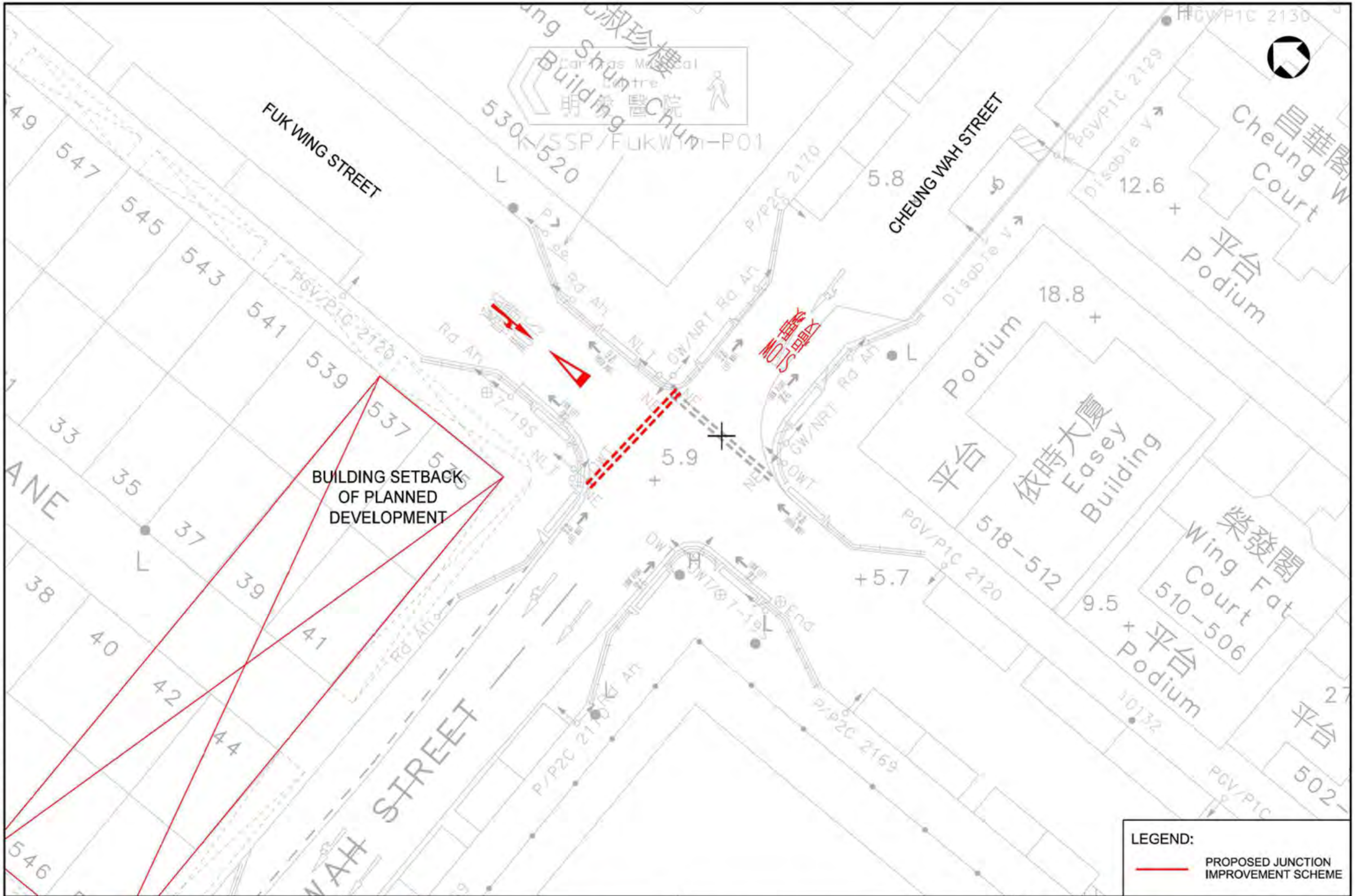
Scale at A3	Date	Figure No.
N.T.S.	AUG 2021	4.6



市區重建局 URBAN RENEWAL AUTHORITY	SNC·LAVALIN / ATKINS Member of the SNC-Lavalin Group	PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)	Title: YEAR 2031 DESIGN TRAFFIC FLOWS
			Scale at A3: N.T.S. / Date: SEP 2021 / Figure No. 4.7



市區重建局 URBAN RENEWAL AUTHORITY	SNC·LAVALIN / ATKINS Member of the SNC-Lavalin Group	PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)	Title: YEAR 2037 DESIGN TRAFFIC FLOWS
			Scale at A3: N.T.S. — Date: SEP 2021 — Figure No. 4.8



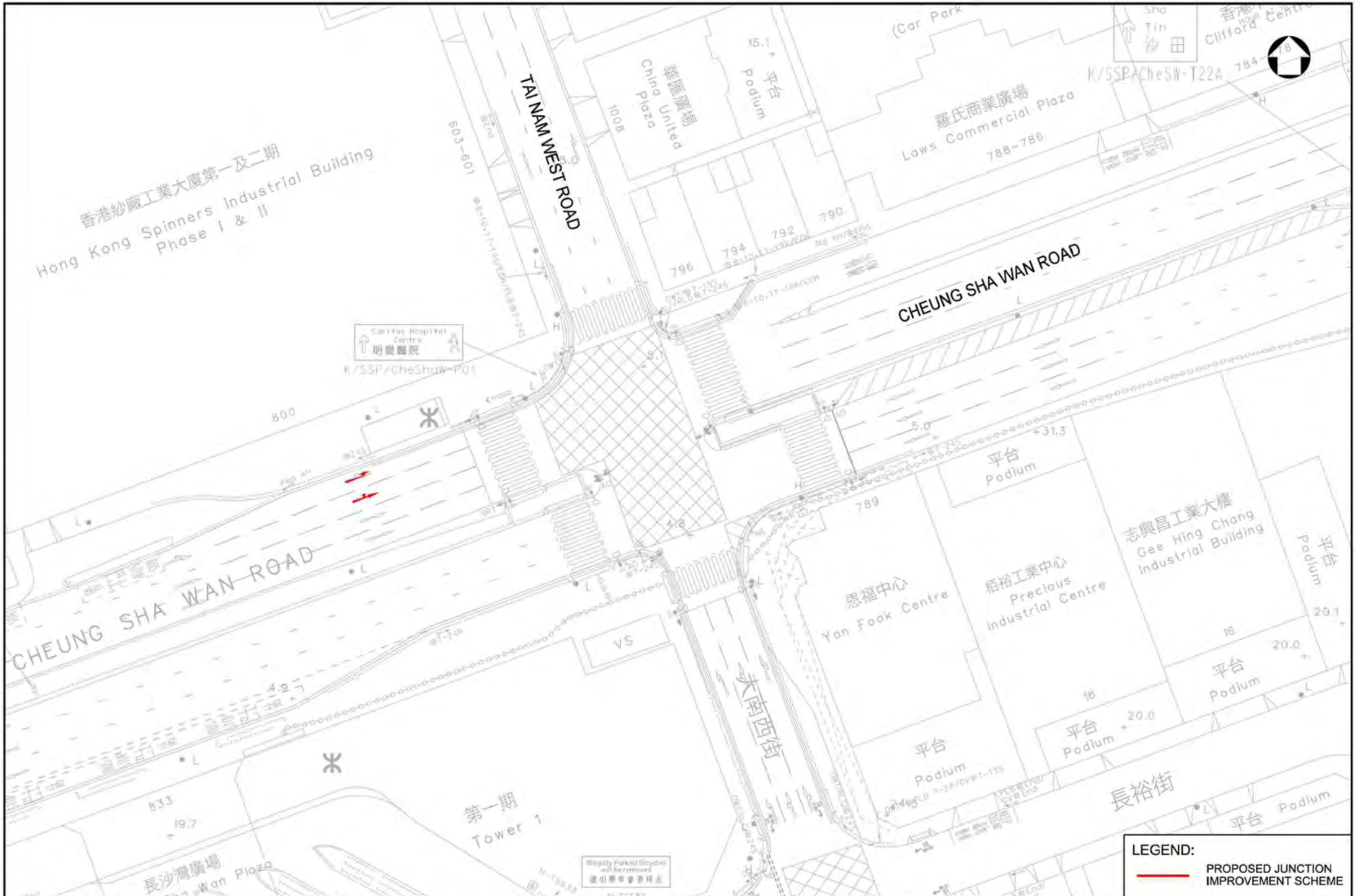
市區重建局
URBAN RENEWAL AUTHORITY

SNC·LAVALIN

ATKINS
Member of the SNC-Lavalin Group

PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title		
PROPOSED JUNCTION IMPROVEMENT SCHEME - J/O FUK WING STREET / CHEUNG WAH STREET (J2)		
Scale at A3: 1 : 250	Date: AUG 2021	Figure No. 5.1



市區重建局
URBAN RENEWAL AUTHORITY

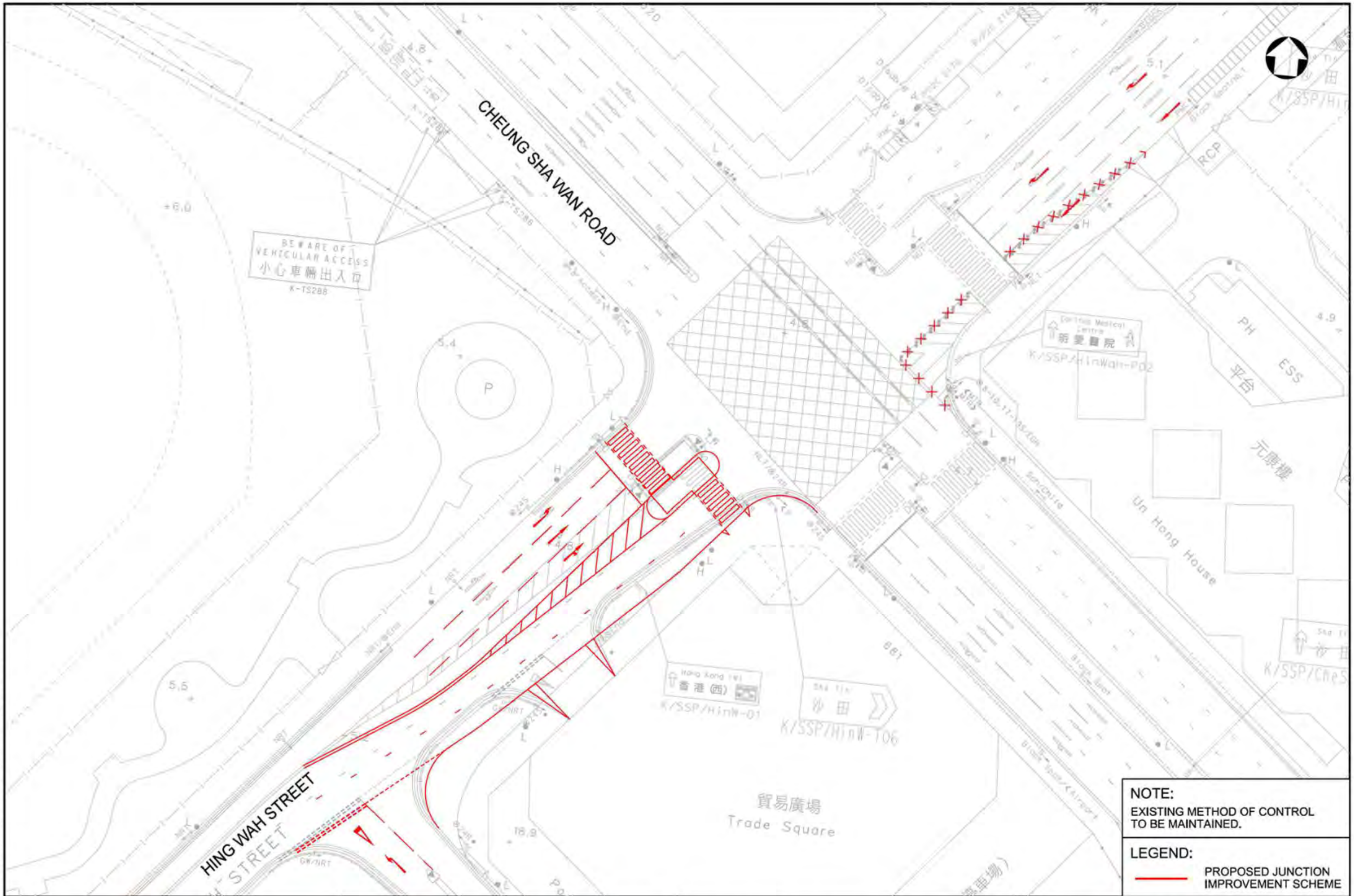
SNC·LAVALIN

ATKINS
Member of the SNC-Lavalin Group

PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
SUGGESTED JUNCTION IMPROVEMENT SCHEME - J/O CHEUNG SHA WAN ROAD / TAI NAN WEST STREET (J5)

Scale at A3	Date	Figure No.
1 : 500	AUG 2021	5.2



NOTE:
EXISTING METHOD OF CONTROL TO BE MAINTAINED.

LEGEND:
PROPOSED JUNCTION IMPROVEMENT SCHEME

URBAN RENEWAL AUTHORITY 市區重建局

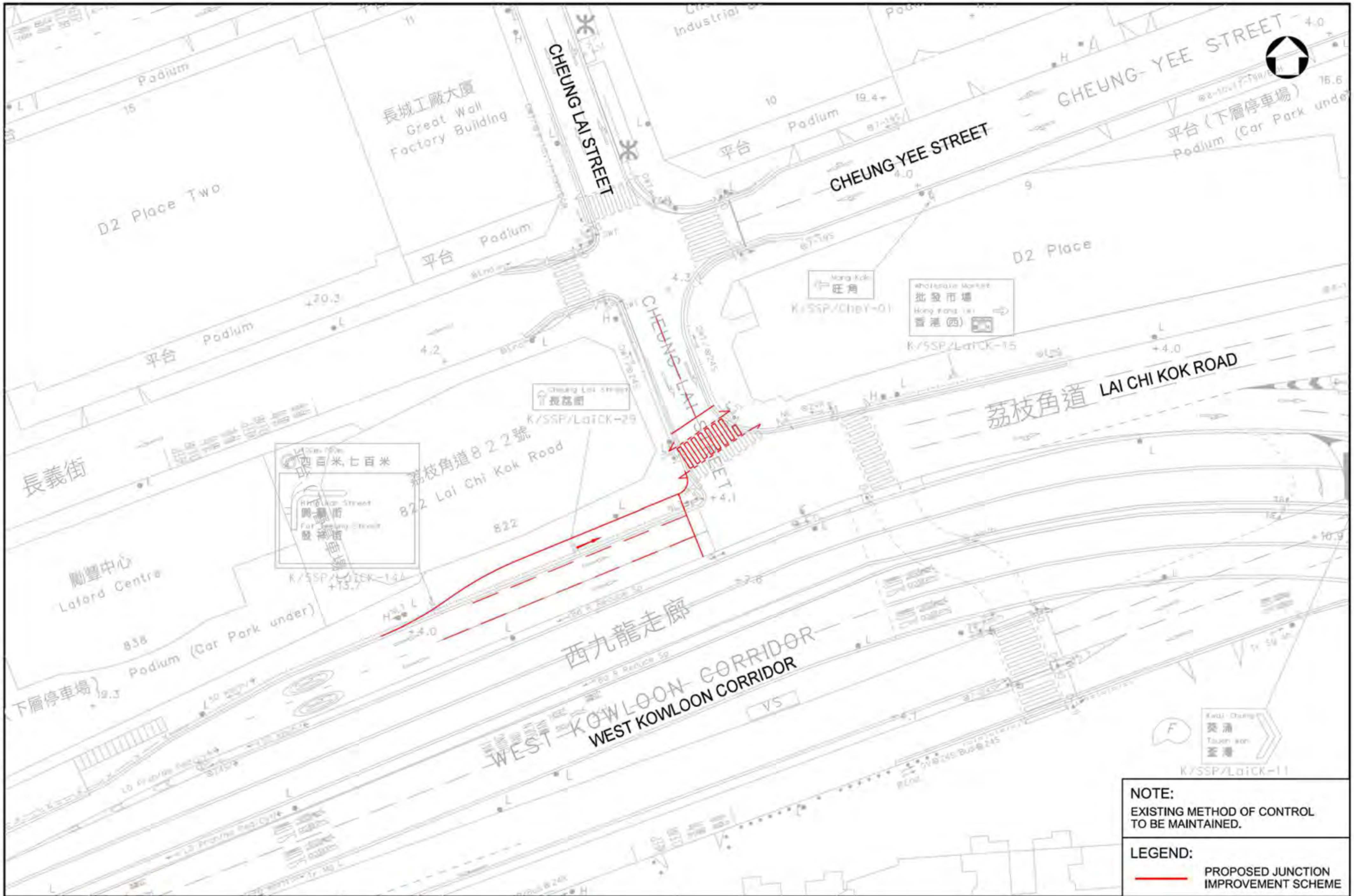
SNC·LAVALIN

ATKINS
Member of the SNC-Lavalin Group

PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
SUGGESTED JUNCTION IMPROVEMENT SCHEME - J/O CHEUNG SHA WAN ROAD/ HING WAH STREET (J7)

Scale at A3	Date	Figure No.
1 : 500	AUG 2021	5.3



NOTE:
EXISTING METHOD OF CONTROL TO BE MAINTAINED.

LEGEND:
PROPOSED JUNCTION IMPROVEMENT SCHEME

市區重建局
URBAN RENEWAL AUTHORITY

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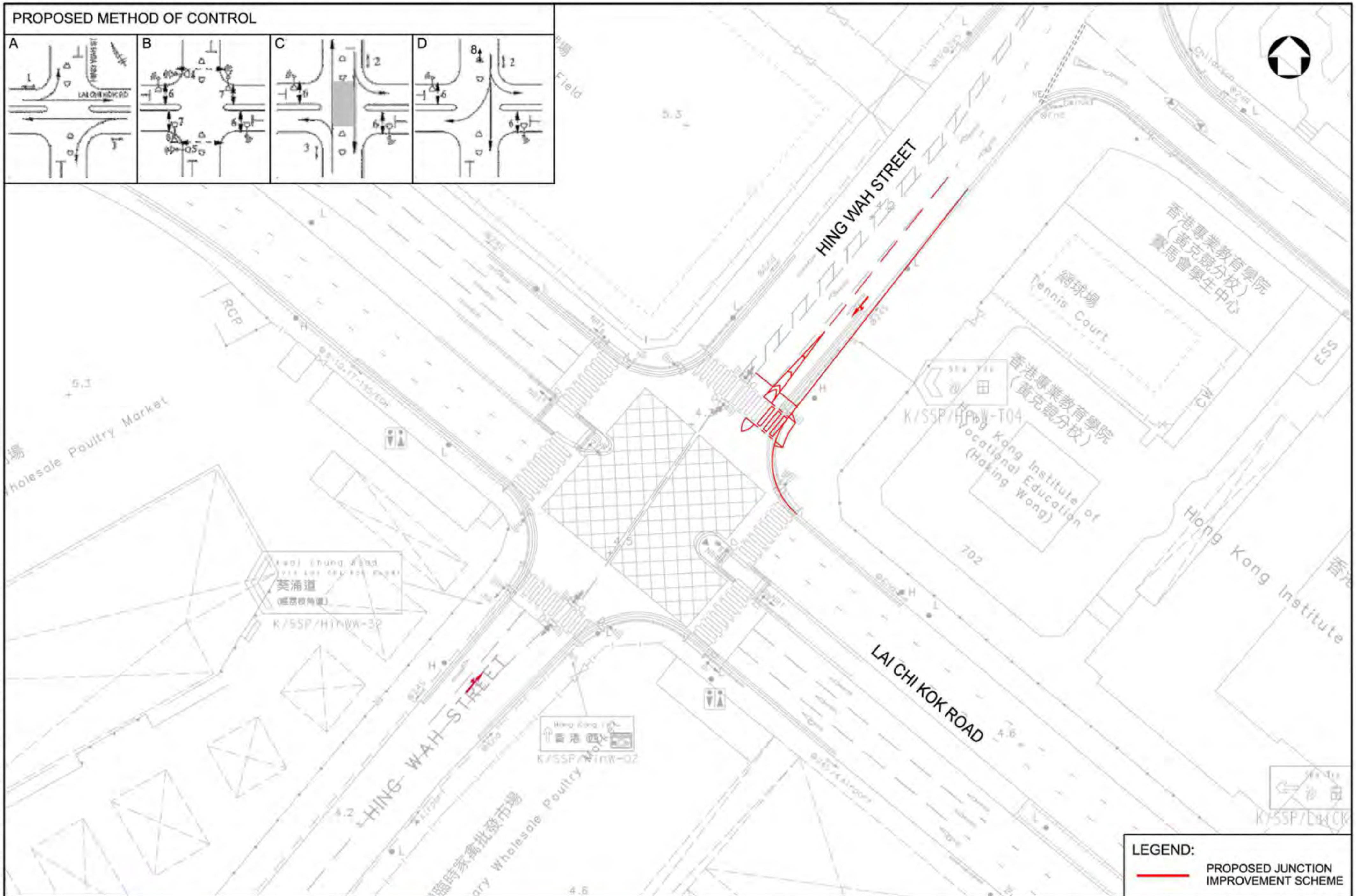
PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
SUGGESTED JUNCTION IMPROVEMENT SCHEME - J/O LAI CHI KOK ROAD / CHEUNG LAI STREET (J9)

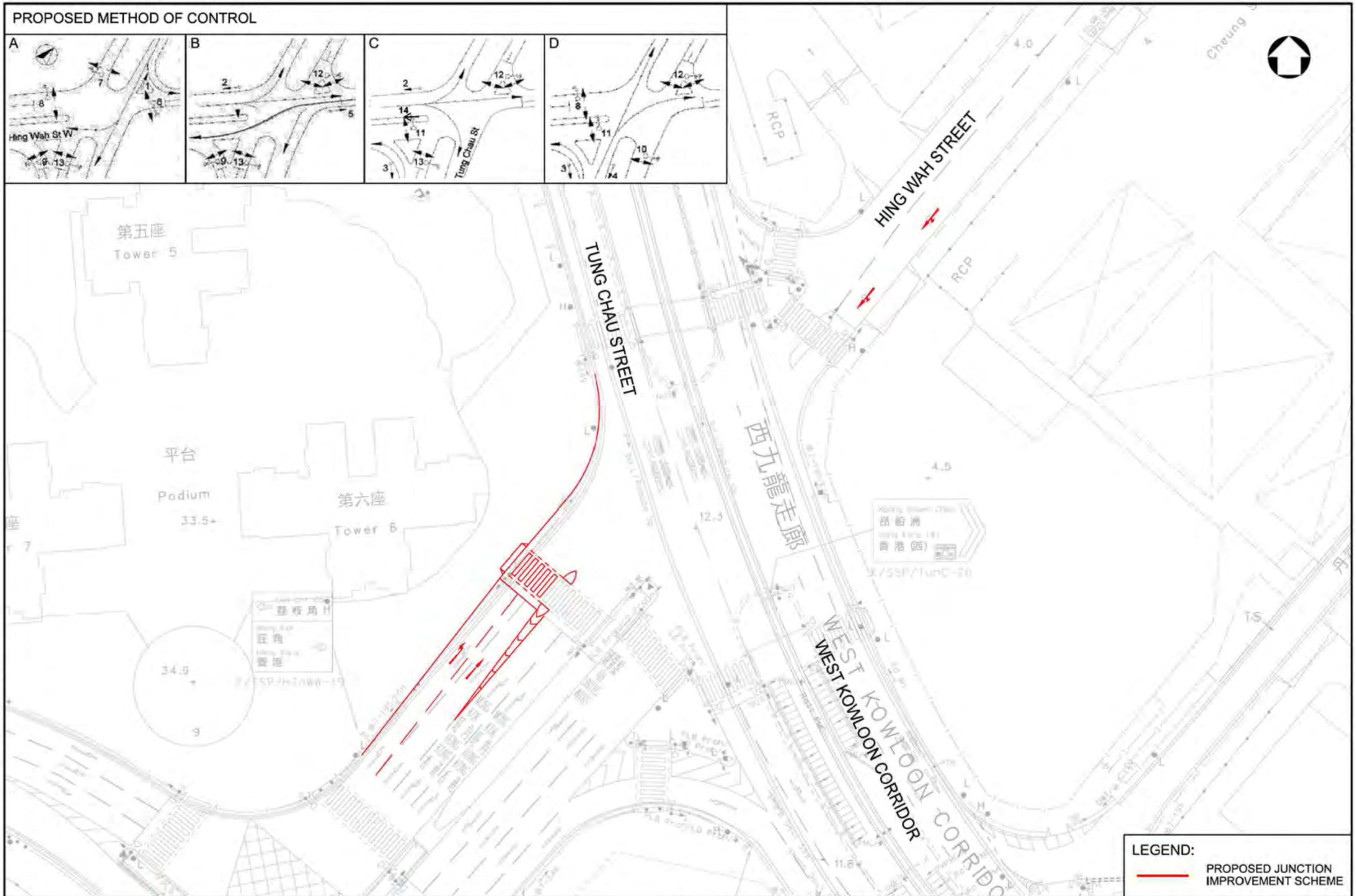
Scale at A3	Date	Figure No.
1 : 500	AUG 2021	5.4



PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title	SUGGESTED JUNCTION IMPROVEMENT SCHEME - J/O LAI CHI KOK ROAD / HING WAH STREET (J11)
Scale at A3	1 : 500
Date	AUG 2021
Figure No.	5.5

PROPOSED METHOD OF CONTROL



LEGEND:

PROPOSED JUNCTION IMPROVEMENT SCHEME

市區重建局
URBAN RENEWAL AUTHORITY

SNC·LAVALIN

ATKINS
Member of the SNC-Lavalin Group

PROPOSED DEVELOPMENT SCHEME AND DEVELOPMENT PROJECT IN SHAM SHUI PO (SSP-018)

Title
SUGGESTED JUNCTION IMPROVEMENT SCHEME - J/O TUNG CHAU STREET / HING WAH STREET (J12)

Scale at A3	Date	Figure No.
1 : 500	AUG 2021	5.6

Appendix A – Junction Calculation Sheets

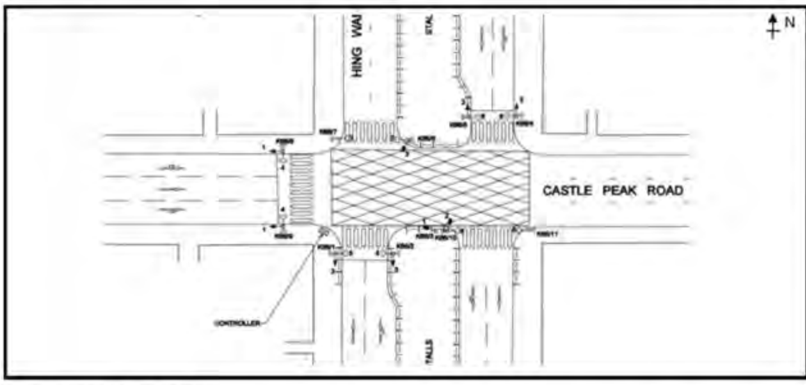
TRAFFIC SIGNAL CALCULATION SHEET

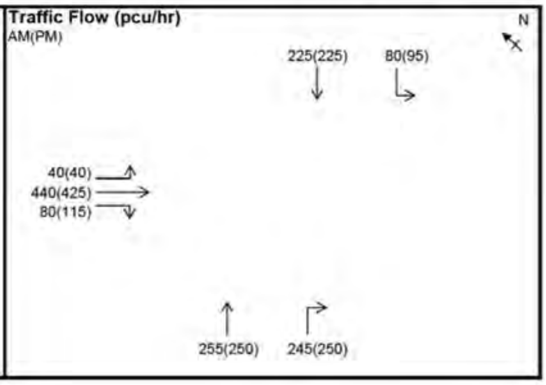
ATKINS

JOB NO. : 5190641

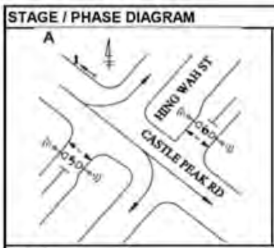
Junction : J1 - Castle Peak Road / Hing Wah Street | Design Year: 2021

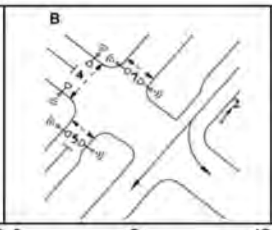
Scheme : Existing | Designed by: KH | Checked by: EC

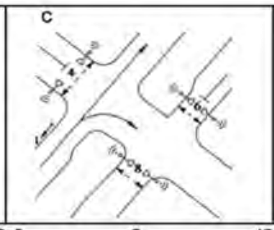




STAGE / PHASE DIAGRAM







1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=	
1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=	

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Castle Peak Road EB														
1A	A	4.00	Y	N	10		169	24%	1750	0.097	177	23%	1755	**0.101**
1B	A	4.00	N	N			208		2155	0.097	217		2155	0.101
1C	A	4.00	Y	N	10		183	44%	1890	**0.097**	186	62%	1845	0.101
Hing Wah Street SB														
2A	B	3.60	Y	N	10		141	57%	1820	0.077	147	65%	1800	0.082
2B	B	3.60	N	N			164		2115	**0.078**	173		2115	**0.082**
Hing Wah Street NB														
3A	C	3.60	Y	N			255		1975	0.129	250		1975	0.127
3B	C	3.60	N	N	13		245	100%	1890	**0.130**	250	100%	1890	**0.132**
4p	B,C		8GM +	10FG =	18	sec								
5p	A,B		6GM +	7FG =	13	sec								
6p	A,C		6GM +	7FG =	13	sec								
7p	B		8GM +	7FG =	15	sec								
8p	C		5GM +	10FG =	15	sec								

Notes:

AM Peak	1+2+3	PM Peak	1+2+3
Sum of Critical *y* ***Y***	0.304	Sum of Critical *y* ***Y***	0.315
Lost Time ***L*** (sec)	15	Lost Time ***L*** (sec)	15
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.782	Practical *Y* ***Ypr***	0.791
Reserve Capacity ***RC***	157%	Reserve Capacity ***RC***	151%

Date : 10/Sep/21 Junction : J1 - Castle Peak Road / Hing Wah Street

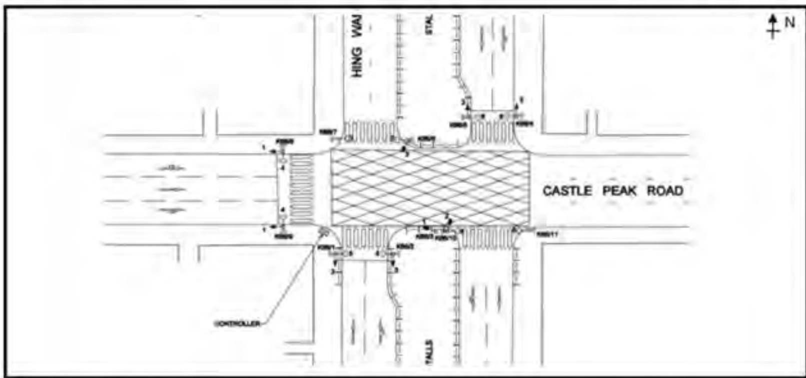
TRAFFIC SIGNAL CALCULATION SHEET

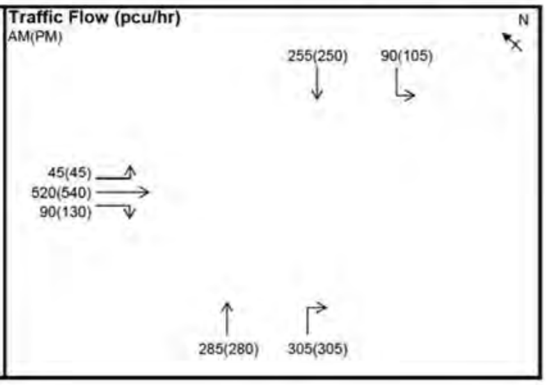
ATKINS

JOB NO. : 5190641

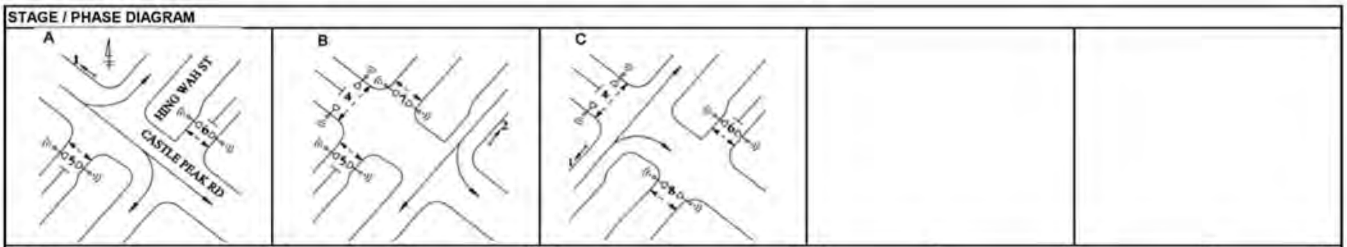
Junction : J1 - Castle Peak Road / Hing Wah Street | Design Year: 2031

Scheme : 2031 Reference | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Castle Peak Road EB														
1A	A	4.00	Y	N	10		198	23%	1755	0.113	218	21%	1760	0.124
1B	A	4.00	N	N			243		2155	0.113	267		2155	**0.124**
1C	A	4.00	Y	N	10		214	42%	1895	**0.113**	230	57%	1860	0.124
Hing Wah Street SB														
2A	B	3.60	Y	N	10		160	56%	1820	**0.088**	163	64%	1800	0.091
2B	B	3.60	N	N			185		2115	0.087	192		2115	**0.091**
Hing Wah Street NB														
3A	C	3.60	Y	N			285		1975	0.144	280		1975	0.142
3B	C	3.60	N	N	13		305	100%	1890	**0.161**	305	100%	1890	**0.161**
4p	B,C		8GM +	10FG =	18	sec								
5p	A,B		6GM +	7FG =	13	sec								
6p	A,C		6GM +	7FG =	13	sec								
7p	B		8GM +	7FG =	15	sec								
8p	C		5GM +	10FG =	15	sec								

Notes:

AM Peak	1+2+3	PM Peak	1+2+3
Sum of Critical *y* ***Y***	0.362	Sum of Critical *y* ***Y***	0.376
Lost Time ***L*** (sec)	15	Lost Time ***L*** (sec)	15
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.782	Practical *Y* ***Ypr***	0.791
Reserve Capacity ***RC***	116%	Reserve Capacity ***RC***	110%

Date : 10/Sep/21 Junction : J1 - Castle Peak Road / Hing Wah Street

TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

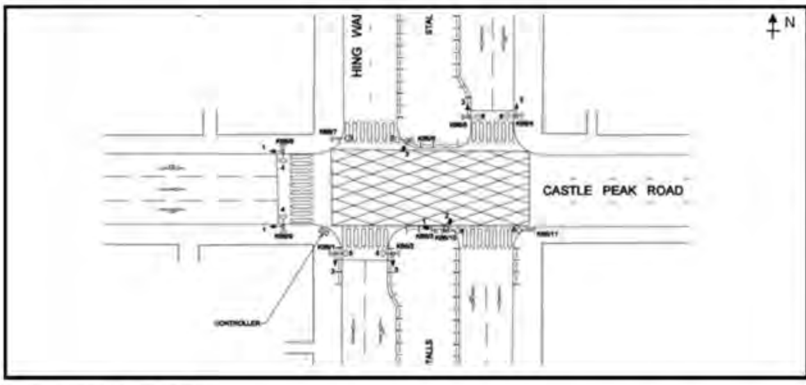
Junction : J1 - Castle Peak Road / Hing Wah Street

Design Year: 2031

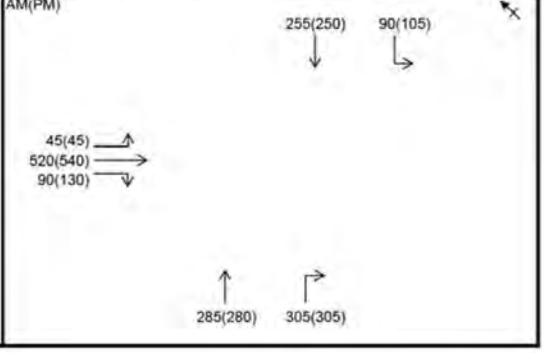
Scheme : 2031 Design

Designed by: KH

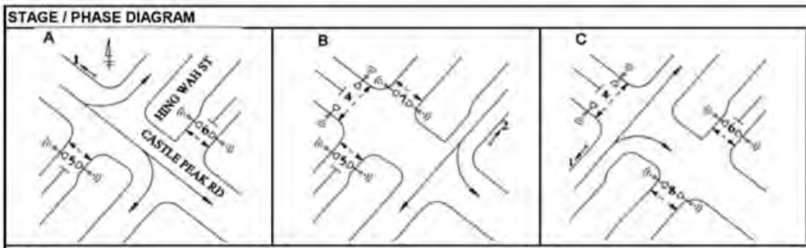
Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Castle Peak Road EB														
1A	A	4.00	Y	N	10		198	23%	1755	0.113	218	21%	1760	0.124
1B	A	4.00	N	N			243		2155	0.113	267		2155	**0.124**
1C	A	4.00	Y	N	10		214	42%	1895	**0.113**	230	57%	1860	0.124
Hing Wah Street SB														
2A	B	3.60	Y	N	10		160	56%	1820	**0.088**	163	64%	1800	0.091
2B	B	3.60	N	N			185		2115	0.087	192		2115	**0.091**
Hing Wah Street NB														
3A	C	3.60	Y	N			285		1975	0.144	280		1975	0.142
3B	C	3.60	N	N	13		305	100%	1890	**0.161**	305	100%	1890	**0.161**
4p	B,C		8GM +	10FG =	18	sec								
5p	A,B		6GM +	7FG =	13	sec								
6p	A,C		6GM +	7FG =	13	sec								
7p	B		8GM +	7FG =	15	sec								
8p	C		5GM +	10FG =	15	sec								

Notes:

AM Peak	**1+2+3**	**PM Peak**	**1+2+3**
Sum of Critical *y* ***Y***	**0.362**	Sum of Critical *y* ***Y***	**0.376**
Lost Time ***L*** (sec)	15	Lost Time ***L*** (sec)	15
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.782	Practical *Y* ***Ypr***	0.791
Reserve Capacity ***RC***	**116%**	Reserve Capacity ***RC***	**110%**

Date : 10/Sep/21 Junction : J1 - Castle Peak Road / Hing Wah Street

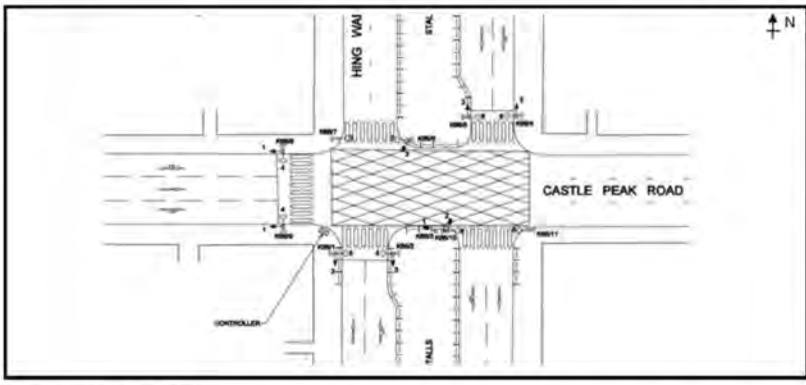
TRAFFIC SIGNAL CALCULATION SHEET

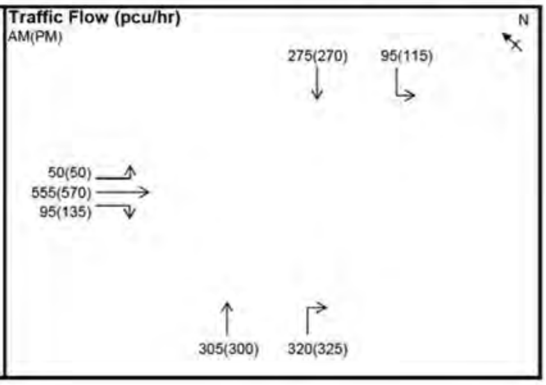
ATKINS

JOB NO. : 5190641

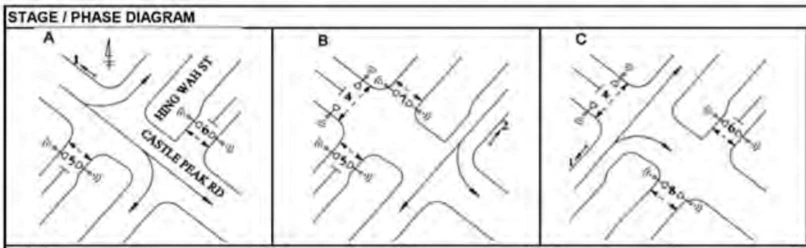
Junction : J1 - Castle Peak Road / Hing Wah Street | Design Year: 2037

Scheme : 2037 Reference | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Castle Peak Road EB														
1A	A	4.00	Y	N	10		211	24%	1750	0.121	230	22%	1755	**0.131**
1B	A	4.00	N	N			260		2155	0.121	282		2155	0.131
1C	A	4.00	Y	N	10		229	41%	1895	**0.121**	243	56%	1860	0.131
Hing Wah Street SB														
2A	B	3.60	Y	N	10		171	56%	1825	0.094	177	65%	1800	0.098
2B	B	3.60	N	N			199		2115	**0.094**	208		2115	**0.098**
Hing Wah Street NB														
3A	C	3.60	Y	N			305		1975	0.154	300		1975	0.152
3B	C	3.60	N	N	13		320	100%	1890	**0.169**	325	100%	1890	**0.172**
4p	B,C		8GM +	10FG =	18	sec								
5p	A,B		6GM +	7FG =	13	sec								
6p	A,C		6GM +	7FG =	13	sec								
7p	B		8GM +	7FG =	15	sec								
8p	C		5GM +	10FG =	15	sec								

Notes:

AM Peak	1+2+3	PM Peak	1+2+3
Sum of Critical *y* ***Y***	0.384	Sum of Critical *y* ***Y***	0.401
Lost Time ***L*** (sec)	15	Lost Time ***L*** (sec)	15
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.782	Practical *Y* ***Ypr***	0.791
Reserve Capacity ***RC***	103%	Reserve Capacity ***RC***	97%

Date : 10/Sep/21 Junction : J1 - Castle Peak Road / Hing Wah Street

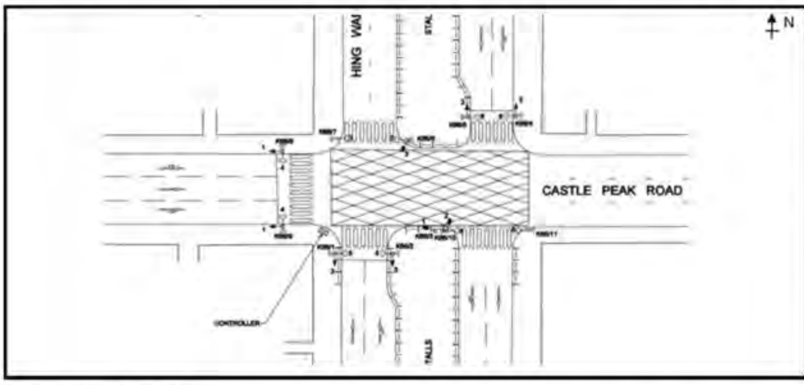
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

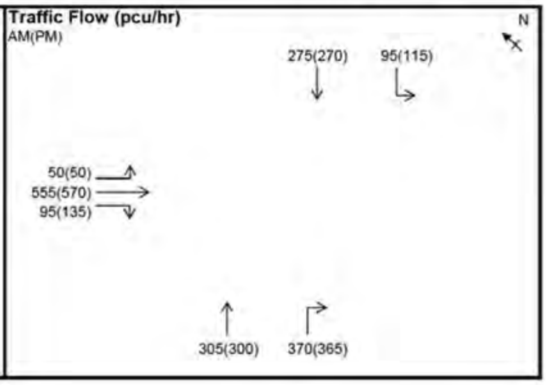
JOB NO. : 5190641

Junction : J1 - Castle Peak Road / Hing Wah Street   Design Year: 2037

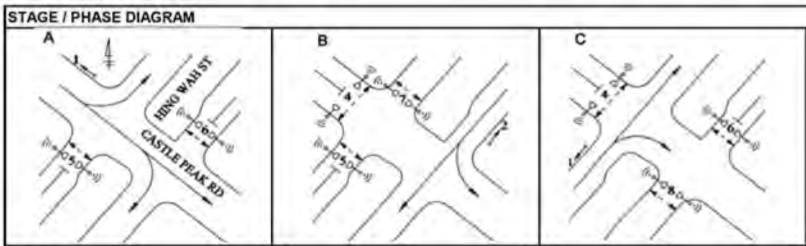
Scheme : 2037 Design   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=8	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Castle Peak Road EB														
1A	A	4.00	Y	N	10		211	24%	1750	0.121	230	22%	1755	**0.131**
1B	A	4.00	N	N			260		2155	0.121	282		2155	0.131
1C	A	4.00	Y	N	10		229	41%	1895	**0.121**	243	56%	1860	0.131
Hing Wah Street SB														
2A	B	3.60	Y	N	10		171	56%	1825	0.094	177	65%	1800	0.098
2B	B	3.60	N	N			199		2115	**0.094**	208		2115	**0.098**
Hing Wah Street NB														
3A	C	3.60	Y	N			305		1975	0.154	300		1975	0.152
3B	C	3.60	N	N	13		370	100%	1890	**0.196**	365	100%	1890	**0.193**
4p	B,C		8GM +	10FG =	18	sec								
5p	A,B		6GM +	7FG =	13	sec								
6p	A,C		6GM +	7FG =	13	sec								
7p	B		8GM +	7FG =	15	sec								
8p	C		5GM +	10FG =	15	sec								

Notes:

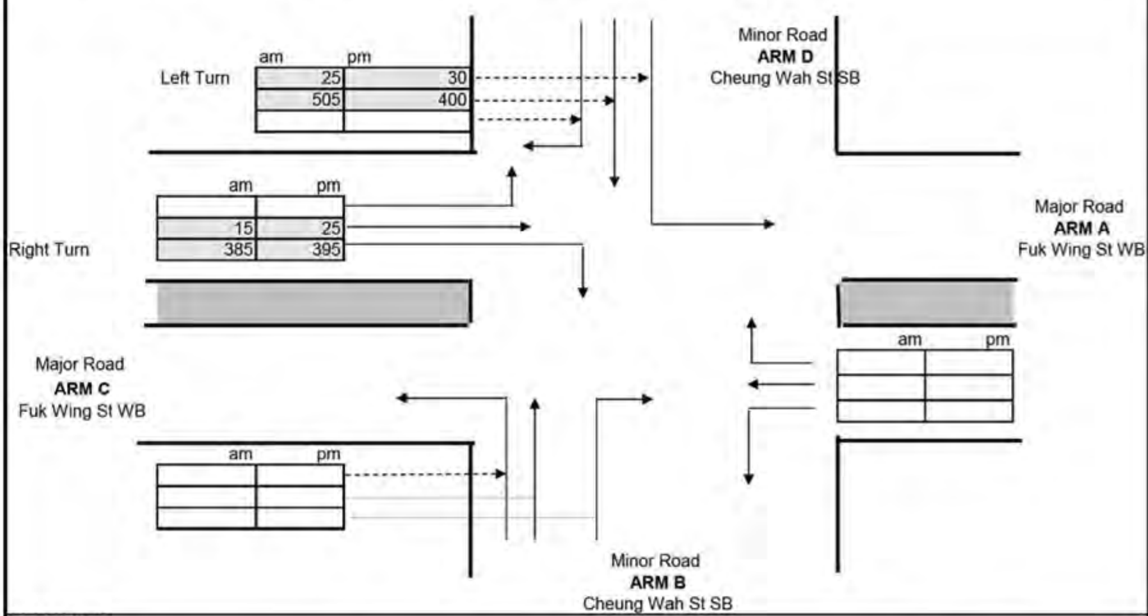
AM Peak	**1+2+3**	**PM Peak**	**1+2+3**
Sum of Critical *y* ***Y***	**0.411**	Sum of Critical *y* ***Y***	**0.423**
Lost Time ***L*** (sec)	15	Lost Time ***L*** (sec)	15
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.782	Practical *Y* ***Ypr***	0.791
Reserve Capacity ***RC***	**90%**	Reserve Capacity ***RC***	**87%**

Date : 10/Sep/21   Junction : J1 - Castle Peak Road / Hing Wah Street

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	Existing			Checked by:	EC
Design Year:	2021	Job No.:	5190641	Date :	10/9/2021
ARM A:	Fuk Wing St WB	ARM C:	Fuk Wing St WB		
ARM B:	Cheung Wah St SB	ARM D:	Cheung Wah St SB		



GEOMETRY

Major road width		W	13.30	Residual width		Wr(c-a)		6.65
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)		6.65
	Arm B				Arm D			
Lane widths		w(b-a)	7.00	Lane widths		w(d-c)		7.00
		w(b-c)	7.00			w(d-a)		7.00
		w(c-b)	6.65			w(a-d)		6.65
Visibilities	Vr(b-a)	250 D	1.56	Visibilities	Vr(d-c)	250 D		1.56
	Vl(b-a)	250 E	1.47		Vl(d-c)	250 E		1.21
	Vr(b-c)	250 F	1.17		Vr(d-a)	35 F		1.43
	Vr(c-b)	25 Y	0.54		Vr(a-d)	250 Y		0.54

ANALYSIS

		Arm B AM PEAK	Arm B PM PEAK			Arm D AM PEAK	Arm D PM PEAK
TRAFFIC FLOWS	q(c-a)	15	25	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	385	395		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	0	0		q(c-a)	15	25
	q(b-a)	0	0		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	25	30
	q(b-d)	0	0		q(d-b)	505	400
	f	0.00	0.00		f	1.00	1.00
CAPACITIES	Q(b-a)	642	666	CAPACITIES	Q(d-c)	853	847
	Q(b-c)	1094	1094		Q(d-a)	901	899
	Q(c-b)	873	873		Q(a-d)	907	901
	Q(b-ac)	642	666		Q(d-ca)	901	899
	Q(b-d)left	805	798		Q(d-b)left	706	701
	Q(b-d)right	805	798		Q(d-b)right	853	847
DFC's	b-ad	0.000	0.000	DFC's	d-c	0.296	0.236
	b-cd	0.000	0.000		d-a	0.386	0.319
	c-b	0.441	0.452		a-d	0.000	0.000
	b-acd	0.000	0.000		d-abc	0.676	0.550
DFC		**0.44**	**0.45**	**DFC**		**0.68**	**0.55**

	AM PEAK	PM PEAK
Critical DFC	0.68	0.55

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

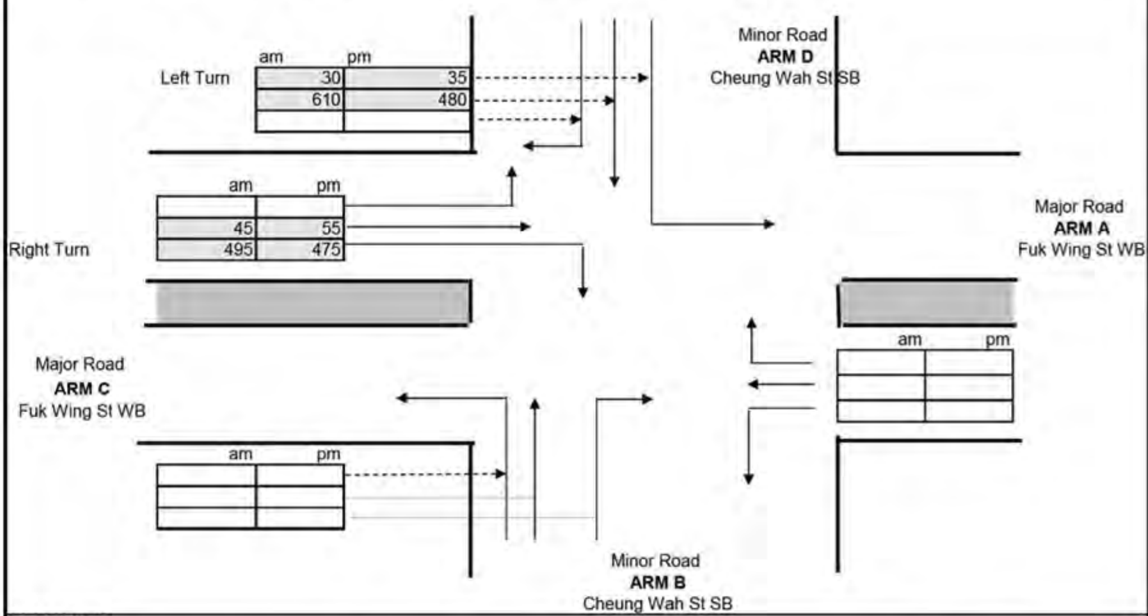
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2031 Reference			Checked by:	EC
Design Year:	2031	Job No.:	5190641	Date :	10/9/2021
ARM A:	Fuk Wing St WB	ARM C:	Fuk Wing St WB		
ARM B:	Cheung Wah St SB	ARM D:	Cheung Wah St SB		



GEOMETRY							
Major road width		W	13.30	Residual width		Wr(c-a)	6.65
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)	6.65
	Arm B				**Arm D**		
Lane widths		w(b-a)	7.00	Lane widths		w(d-c)	7.00
		w(b-c)	7.00			w(d-a)	7.00
		w(c-b)	6.65			w(a-d)	6.65
Visibilities	Vr(b-a)	250 D	1.56	Visibilities	Vr(d-c)	250 D	1.56
	Vl(b-a)	250 E	1.47		Vl(d-c)	250 E	1.21
	Vr(b-c)	250 F	1.40		Vr(d-a)	35 F	1.43
	Vr(c-b)	220 Y	0.54		Vr(a-d)	250 Y	0.54

ANALYSIS							
	Arm B				**Arm D**		
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	45	55	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	495	475		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	0	0		q(c-a)	45	55
	q(b-a)	0	0		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	30	35
	q(b-d)	0	0		q(d-b)	610	480
	f	0.00	0.00		f	1.00	1.00
CAPACITIES	Q(b-a)	554	600	CAPACITIES	Q(d-c)	811	814
	Q(b-c)	1094	1094		Q(d-a)	894	892
	Q(c-b)	1041	1041		Q(a-d)	855	860
	Q(b-ac)	554	600		Q(d-ca)	894	892
	Q(b-d)left	751	757		Q(d-b)left	670	673
	Q(b-d)right	751	757		Q(d-b)right	811	814
DFC's	b-ad	0.000	0.000	DFC's	d-c	0.376	0.295
	b-cd	0.000	0.000		d-a	0.489	0.396
	c-b	0.475	0.456		a-d	0.000	0.000
	b-acd	0.000	0.000		d-abc	0.857	0.685
DFC		**0.48**	**0.46**	**DFC**		**0.86**	**0.69**

	AM PEAK	PM PEAK
Critical DFC	0.86	0.69

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) — Capacity of combined streams

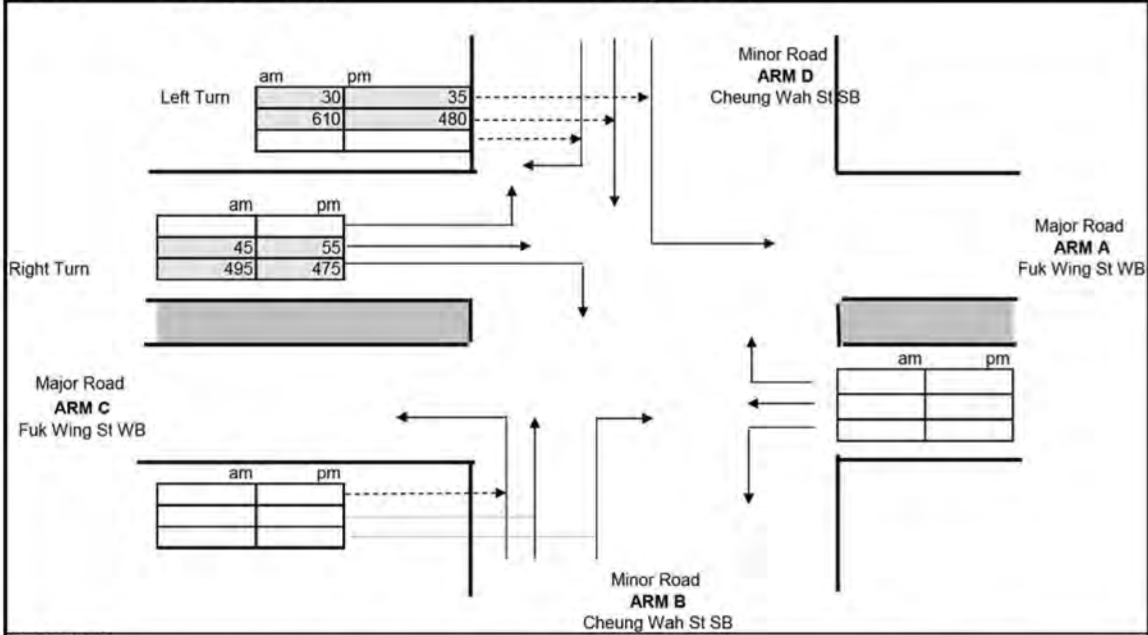
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2031 Design			Checked by:	EC
Design Year:	2031	Job No.:	5190641	Date :	10/9/2021
ARM A:	Fuk Wing St WB	ARM C:	Fuk Wing St WB		
ARM B:	Cheung Wah St SB	ARM D:	Cheung Wah St SB		



GEOMETRY

Major road width		W	13.30	Residual width		Wr(c-a)	6.65
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)	6.65
	Arm B				Arm D		
Lane widths		w(b-a)	7.00	Lane widths		w(d-c)	7.00
		w(b-c)	7.00			w(d-a)	7.00
		w(c-b)	6.65			w(a-d)	6.65

Visibilities	Vr(b-a)	250	D	1.56	Visibilities	Vr(d-c)	250	D	1.56
	Vl(b-a)	250	E	1.47		Vl(d-c)	250	E	1.21
	Vr(b-c)	250	F	1.40		Vr(d-a)	35	F	1.43
	Vr(c-b)	220	Y	0.54		Vr(a-d)	250	Y	0.54

ANALYSIS

		Arm B AM PEAK	Arm B PM PEAK			Arm D AM PEAK	Arm D PM PEAK
TRAFFIC FLOWS	q(c-a)	45	55	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	495	475		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	0	0		q(c-a)	45	55
	q(b-a)	0	0		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	30	35
	q(b-d)	0	0		q(d-b)	610	480
	f	0.00	0.00		f	1.00	1.00
CAPACITIES	Q(b-a)	554	600	CAPACITIES	Q(d-c)	811	814
	Q(b-c)	1094	1094		Q(d-a)	894	892
	Q(c-b)	1041	1041		Q(a-d)	855	860
	Q(b-ac)	554	600		Q(d-ca)	894	892
	Q(b-d)left	751	757		Q(d-b)left	670	673
	Q(b-d)right	751	757		Q(d-b)right	811	814
DFC's	b-ad	0.000	0.000	DFC's	d-c	0.376	0.295
	b-cd	0.000	0.000		d-a	0.489	0.396
	c-b	0.475	0.456		a-d	0.000	0.000
	b-acd	0.000	0.000		d-abc	0.857	0.685
DFC		0.48	0.46	DFC		0.86	0.69

	AM PEAK	PM PEAK
Critical DFC	0.86	0.69

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

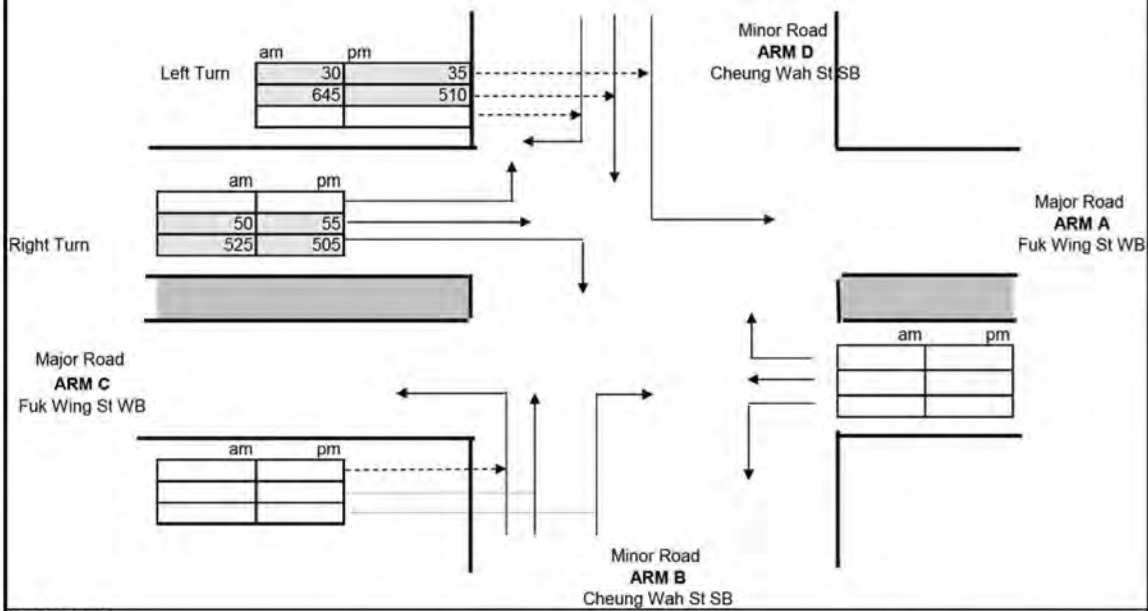
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2037 Reference			Checked by:	EC
Design Year:	2037	Job No.:	5190641	Date :	10/9/2021
ARM A:	Fuk Wing St WB	ARM C:	Fuk Wing St WB		
ARM B:	Cheung Wah St SB	ARM D:	Cheung Wah St SB		



GEOMETRY

Major road width	W	13.30	Residual width	Wr(c-a)	6.65
Central Reserve width	Wcr	0.00	Residual width	Wr(a-c)	6.65

Arm B					Arm D				
Lane widths			w(b-a)	7.00	Lane widths			w(d-c)	7.00
			w(b-c)	7.00				w(d-a)	7.00
			w(c-b)	6.65				w(a-d)	6.65
Visibilities	Vr(b-a)	250	D	1.56	Visibilities	Vr(d-c)	250	D	1.56
	Vl(b-a)	250	E	1.47		Vl(d-c)	250	E	1.21
	Vr(b-c)	250	F	1.40		Vr(d-a)	35	F	1.43
	Vr(c-b)	220	Y	0.54		Vr(a-d)	250	Y	0.54

ANALYSIS

Arm B		AM PEAK	PM PEAK	Arm D		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	50	55	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	525	505		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	0	0		q(c-a)	50	55
	q(b-a)	0	0		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	30	35
	q(b-d)	0	0		q(d-b)	645	510
	f	0.00	0.00		f	1.00	1.00
CAPACITIES	Q(b-a)	530	577	CAPACITIES	Q(d-c)	800	804
	Q(b-c)	1094	1094		Q(d-a)	893	892
	Q(c-b)	1041	1041		Q(a-d)	841	848
	Q(b-ac)	530	577		Q(d-ca)	893	892
	Q(b-d)left	737	744		Q(d-b)left	661	665
	Q(b-d)right	737	744		Q(d-b)right	800	804
DFC's	b-ad	0.000	0.000	DFC's	d-c	0.403	0.317
	b-cd	0.000	0.000		d-a	0.521	0.423
	c-b	0.504	0.485		a-d	0.000	0.000
	b-acd	0.000	0.000		d-abc	0.917	0.733
DFC		0.50	0.49	DFC		0.92	0.73

	AM PEAK	PM PEAK
Critical DFC	0.92	0.73

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

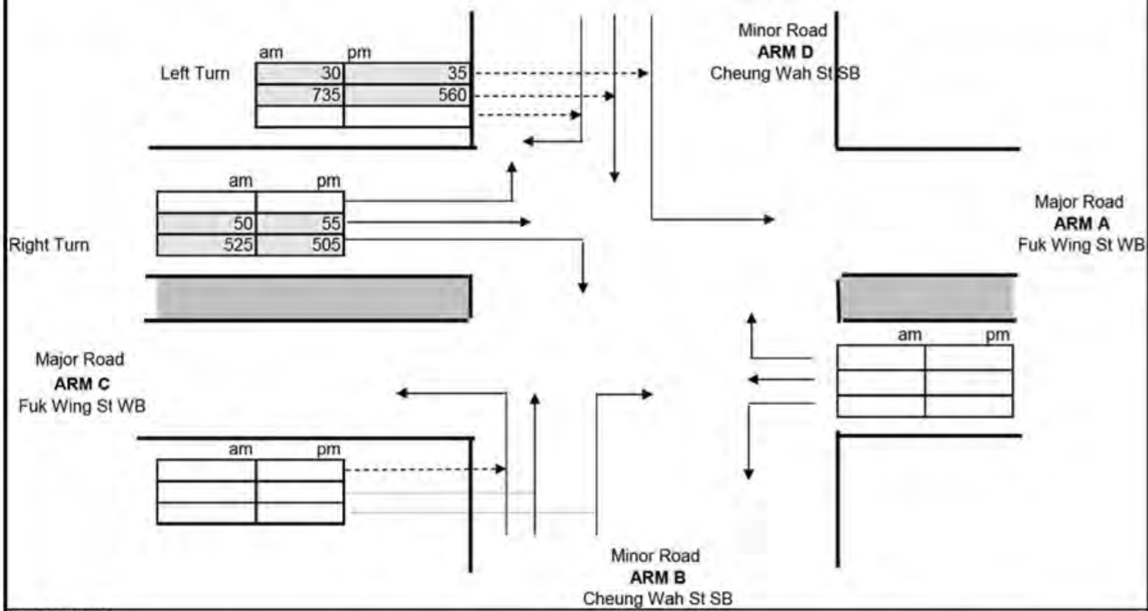
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2037 Design			Checked by:	EC
Design Year:	2037	Job No.:	5190641	Date :	10/9/2021
ARM A:	Fuk Wing St WB	ARM C:	Fuk Wing St WB		
ARM B:	Cheung Wah St SB	ARM D:	Cheung Wah St SB		



GEOMETRY

Major road width		W	13.30	Residual width		Wr(c-a)	6.65
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)	6.65
Arm B				**Arm D**			
Lane widths		w(b-a)	7.00	Lane widths		w(d-c)	7.00
		w(b-c)	7.00			w(d-a)	7.00
		w(c-b)	6.65			w(a-d)	6.65
Visibilities	Vr(b-a)	250 D	1.56	Visibilities	Vr(d-c)	250 D	1.56
	Vl(b-a)	250 E	1.47		Vl(d-c)	250 E	1.21
	Vr(b-c)	250 F	1.40		Vr(d-a)	35 F	1.43
	Vr(c-b)	220 Y	0.54		Vr(a-d)	250 Y	0.54

ANALYSIS

	Arm B				**Arm D**		
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	50	55	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	525	505		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	0	0		q(c-a)	50	55
	q(b-a)	0	0		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	30	35
	q(b-d)	0	0		q(d-b)	735	560
	f	0.00	0.00		f	1.00	1.00
CAPACITIES	Q(b-a)	502	562	CAPACITIES	Q(d-c)	800	804
	Q(b-c)	1094	1094		Q(d-a)	893	892
	Q(c-b)	1041	1041		Q(a-d)	841	848
	Q(b-ac)	502	562		Q(d-ca)	893	892
	Q(b-d)left	737	744		Q(d-b)left	661	665
	Q(b-d)right	737	744		Q(d-b)right	800	804
DFC's	b-ad	0.000	0.000	DFC's	d-c	0.459	0.348
	b-cd	0.000	0.000		d-a	0.589	0.460
	c-b	0.504	0.485		a-d	0.000	0.000
	b-acd	0.000	0.000		d-abc	1.040	0.801
DFC		**0.50**	**0.49**	**DFC**		**1.04**	**0.80**

	AM PEAK	PM PEAK
Critical DFC	1.04	0.80

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

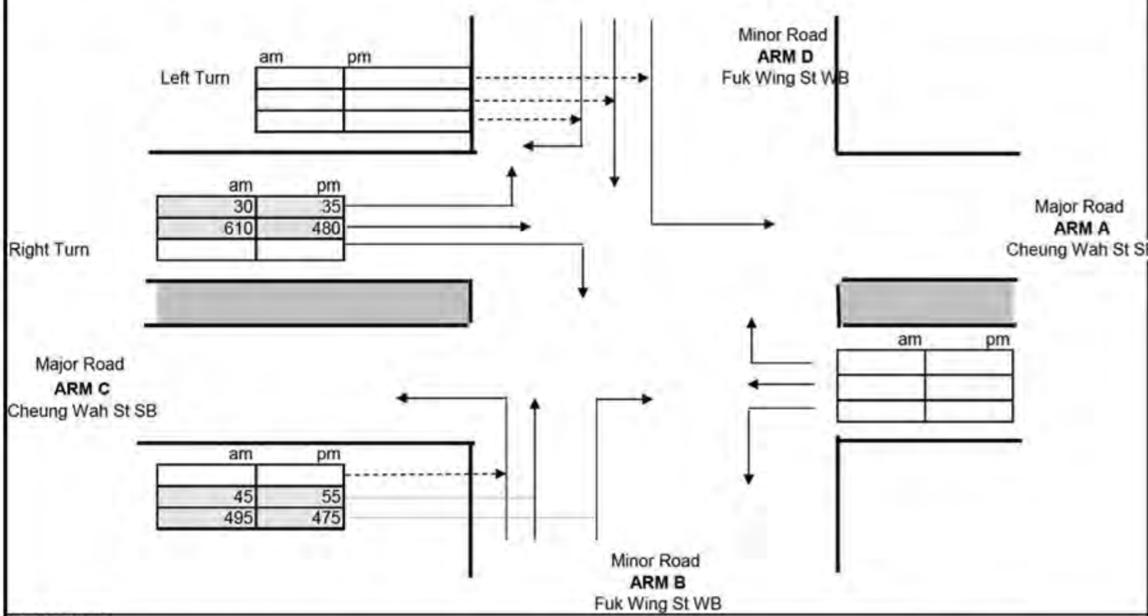
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2031 Reference (with junction improvement)			Checked by:	EC
Design Year:	2031	Job No.:	5190641	Date :	10/9/2021
ARM A:	Cheung Wah St SB	ARM C:	Cheung Wah St SB		
ARM B:	Fuk Wing St WB	ARM D:	Fuk Wing St WB		



GEOMETRY

Major road width		W	14.00	Residual width		Wr(c-a)	7.00
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)	7.00
	Arm B				**Arm D**		
Lane widths		w(b-a)	6.65	Lane widths		w(d-c)	6.65
		w(b-c)	6.65			w(d-a)	6.65
		w(c-b)	7.00			w(a-d)	7.00
Visibilities	Vr(b-a)	220 D	1.30	Visibilities	Vr(d-c)	250 D	1.52
	Vl(b-a)	30 E	1.43		Vl(d-c)	250 E	1.43
	Vr(b-c)	250 F	1.47		Vr(d-a)	250 F	1.47
	Vr(c-b)	250 Y	0.52		Vr(a-d)	250 Y	0.52

ANALYSIS

	Arm B				**Arm D**		
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	610	480	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	0	0		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	30	35
	q(a-c)	0	0		q(c-a)	610	480
	q(b-a)	495	475		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	0	0
	q(b-d)	45	55		q(d-b)	0	0
	f	0.00	0.00		f	0.00	0.00
CAPACITIES	Q(b-a)	719	739	CAPACITIES	Q(d-c)	691	727
	Q(b-c)	1067	1067		Q(d-a)	899	934
	Q(c-b)	1094	1094		Q(a-d)	917	952
	Q(b-ac)	719	739		Q(d-ca)	691	727
	Q(b-d)left	733	752		Q(d-b)left	774	811
	Q(b-d)right	715	734		Q(d-b)right	774	811
DFC's	b-ad	0.698	0.656	DFC's	d-c	0.000	0.000
	b-cd	0.052	0.060		d-a	0.000	0.000
	c-b	0.000	0.000		a-d	0.000	0.000
	b-acd	0.750	0.716		d-abc	0.000	0.000
DFC		**0.75**	**0.72**	**DFC**		**0.00**	**0.00**

	AM PEAK	PM PEAK
Critical DFC	0.75	0.72

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) — Capacity of combined streams

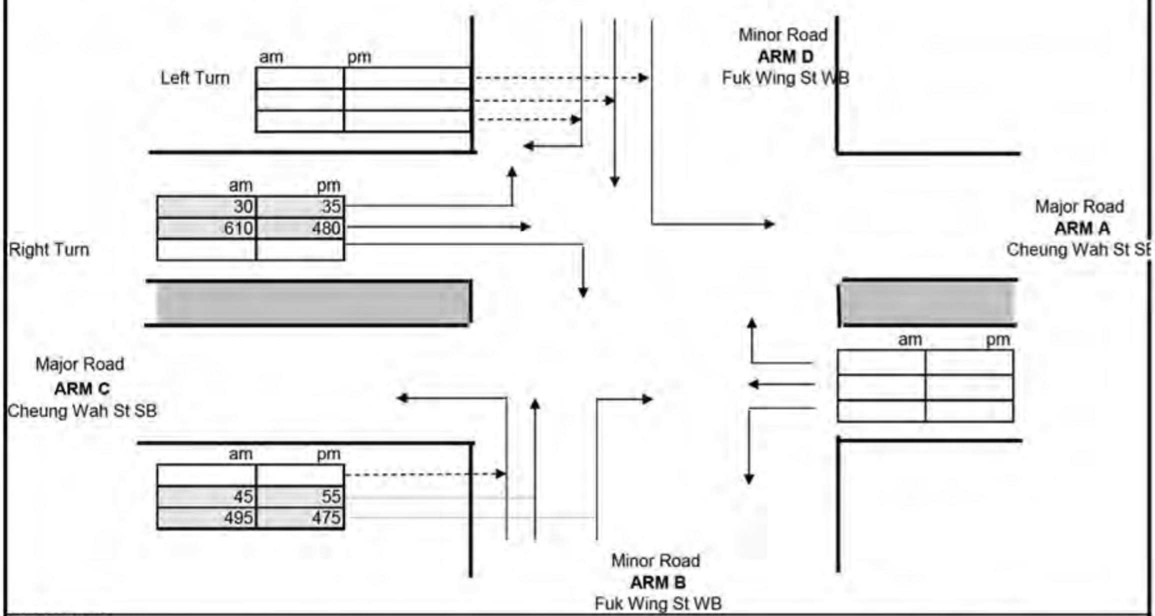
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2031 Design (with junction improvement)			Checked by:	EC
Design Year:	2031	Job No.:	5190641	Date :	10/9/2021
ARM A:	Cheung Wah St SB	ARM C:	Cheung Wah St SB		
ARM B:	Fuk Wing St WB	ARM D:	Fuk Wing St WB		



GEOMETRY

Major road width		W	14.00	Residual width		Wr(c-a)	7.00
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)	7.00
	Arm B				Arm D		
Lane widths		w(b-a)	6.65	Lane widths		w(d-c)	6.65
		w(b-c)	6.65			w(d-a)	6.65
		w(c-b)	7.00			w(a-d)	7.00
Visibilities	Vr(b-a)	220 D	1.30	Visibilities	Vr(d-c)	250 D	1.52
	Vl(b-a)	30 E	1.43		Vl(d-c)	250 E	1.43
	Vr(b-c)	250 F	1.47		Vr(d-a)	250 F	1.47
	Vr(c-b)	250 Y	0.52		Vr(a-d)	250 Y	0.52

ANALYSIS

		Arm B				Arm D	
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	610	480	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	0	0		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	30	35
	q(a-c)	0	0		q(c-a)	610	480
	q(b-a)	495	475		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	0	0
	q(b-d)	45	55		q(d-b)	0	0
	f	0.00	0.00		f	0.00	0.00
CAPACITIES	Q(b-a)	719	739	CAPACITIES	Q(d-c)	691	727
	Q(b-c)	1067	1067		Q(d-a)	899	934
	Q(c-b)	1094	1094		Q(a-d)	917	952
	Q(b-ac)	719	739		Q(d-ca)	691	727
	Q(b-d)left	733	752		Q(d-b)left	774	811
	Q(b-d)right	715	734		Q(d-b)right	774	811
DFC's	b-ad	0.698	0.656	DFC's	d-c	0.000	0.000
	b-cd	0.052	0.060		d-a	0.000	0.000
	c-b	0.000	0.000		a-d	0.000	0.000
	b-acd	0.750	0.716		d-abc	0.000	0.000
DFC		**0.75**	**0.72**	**DFC**		**0.00**	**0.00**

	AM PEAK	PM PEAK
Critical DFC	0.75	0.72

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

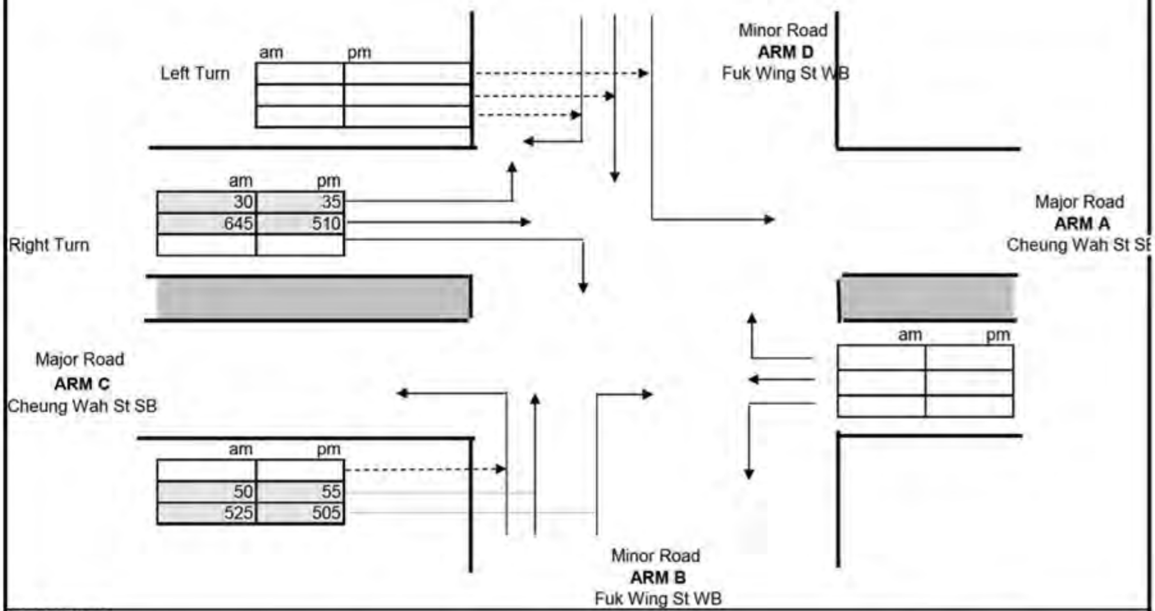
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2037 Reference (with junction improvement)			Checked by:	EC
Design Year:	2037	Job No.:	5190641	Date :	10/9/2021
ARM A:	Cheung Wah St SB	ARM C:	Cheung Wah St SB		
ARM B:	Fuk Wing St WB	ARM D:	Fuk Wing St WB		



GEOMETRY

Major road width		W	14.00	Residual width		Wr(c-a)	7.00
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)	7.00
	Arm B				Arm D		
Lane widths		w(b-a)	6.65	Lane widths		w(d-c)	6.65
		w(b-c)	6.65			w(d-a)	6.65
		w(c-b)	7.00			w(a-d)	7.00
Visibilities	Vr(b-a)	220 D	1.30	Visibilities	Vr(d-c)	250 D	1.52
	Vl(b-a)	30 E	1.43		Vl(d-c)	250 E	1.43
	Vr(b-c)	250 F	1.47		Vr(d-a)	250 F	1.47
	Vr(c-b)	250 Y	0.52		Vr(a-d)	250 Y	0.52

ANALYSIS

Arm B		AM PEAK	PM PEAK	Arm D		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	645	510	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	0	0		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	30	35
	q(a-c)	0	0		q(c-a)	645	510
	q(b-a)	525	505		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	0	0
	q(b-d)	50	55		q(d-b)	0	0
	f	0.00	0.00		f	0.00	0.00
CAPACITIES	Q(b-a)	714	735	CAPACITIES	Q(d-c)	675	714
	Q(b-c)	1067	1067		Q(d-a)	890	926
	Q(c-b)	1094	1094		Q(a-d)	908	944
	Q(b-ac)	714	735		Q(d-ca)	675	714
	Q(b-d)left	727	747		Q(d-b)left	764	802
	Q(b-d)right	709	729		Q(d-b)right	764	802
DFC's	b-ad	0.745	0.699	DFC's	d-c	0.000	0.000
	b-cd	0.060	0.062		d-a	0.000	0.000
	c-b	0.000	0.000		a-d	0.000	0.000
	b-acd	0.805	0.762		d-abc	0.000	0.000
DFC		**0.80**	**0.76**	**DFC**		**0.00**	**0.00**

	AM PEAK	PM PEAK
Critical DFC	0.80	0.76

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)

Capacity of combined streams

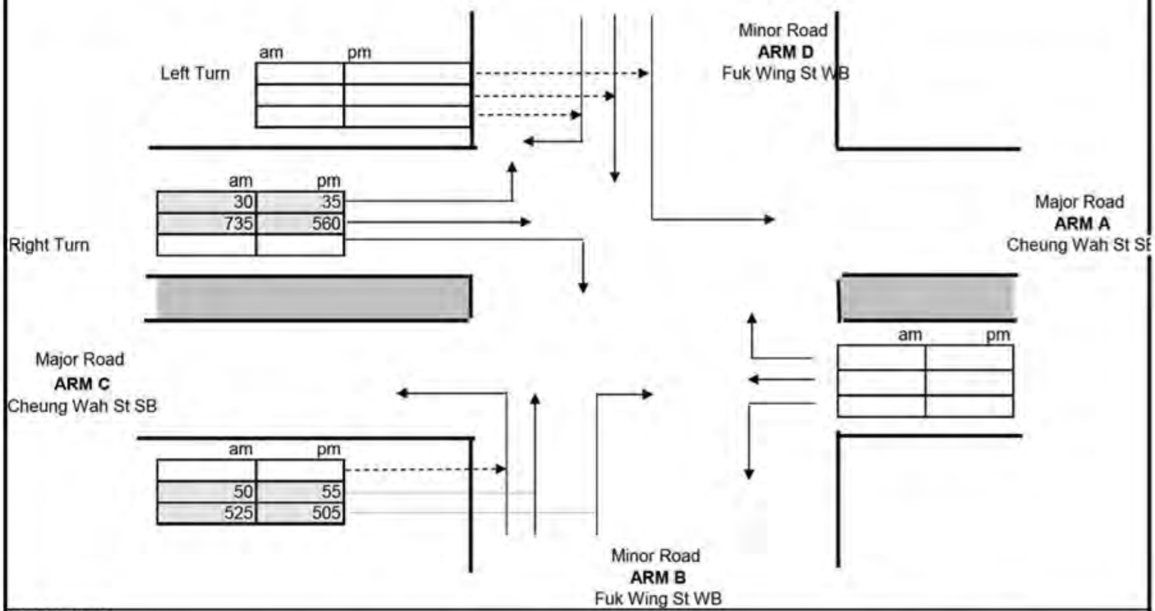
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

SNC·LAVALIN ATKINS

Job Title:	URA Term Traffic Consultancy Services				
Junction:	J2 - Fuk Wing Street / Cheung Wah Street			Designed by:	KH
Scheme:	2037 Design (with junction improvement)			Checked by:	EC
Design Year:	2037	Job No.:	5190641	Date :	10/9/2021
ARM A:	Cheung Wah St SB	ARM C:	Cheung Wah St SB		
ARM B:	Fuk Wing St WB	ARM D:	Fuk Wing St WB		



GEOMETRY

Major road width		W	14.00	Residual width		Wr(c-a)	7.00
Central Reserve width		Wcr	0.00	Residual width		Wr(a-c)	7.00
	Arm B				Arm D		
Lane widths		w(b-a)	6.65	Lane widths		w(d-c)	6.65
		w(b-c)	6.65			w(d-a)	6.65
		w(c-b)	7.00			w(a-d)	7.00
Visibilities	Vr(b-a)	220 D	1.30	Visibilities	Vr(d-c)	250 D	1.52
	Vl(b-a)	30 E	1.43		Vl(d-c)	250 E	1.43
	Vr(b-c)	250 F	1.47		Vr(d-a)	250 F	1.47
	Vr(c-b)	250 Y	0.52		Vr(a-d)	250 Y	0.52

ANALYSIS

	Arm B				Arm D		
		AM PEAK	PM PEAK			AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	735	560	TRAFFIC FLOWS	q(a-c)	0	0
	q(c-b)	0	0		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	30	35
	q(a-c)	0	0		q(c-a)	735	560
	q(b-a)	525	505		q(d-c)	0	0
	q(b-c)	0	0		q(d-a)	0	0
	q(b-d)	50	55		q(d-b)	0	0
	f	0.00	0.00		f	0.00	0.00
CAPACITIES	Q(b-a)	700	727	CAPACITIES	Q(d-c)	649	700
	Q(b-c)	1067	1067		Q(d-a)	866	912
	Q(c-b)	1094	1094		Q(a-d)	883	930
	Q(b-ac)	700	727		Q(d-ca)	649	700
	Q(b-d)left	713	740		Q(d-b)left	738	788
	Q(b-d)right	696	722		Q(d-b)right	738	788
DFC's	b-ad	0.759	0.706	DFC's	d-c	0.000	0.000
	b-cd	0.061	0.063		d-a	0.000	0.000
	c-b	0.000	0.000		a-d	0.000	0.000
	b-acd	0.821	0.770		d-abc	0.000	0.000
DFC		**0.82**	**0.77**	**DFC**		**0.00**	**0.00**

	AM PEAK	PM PEAK
Critical DFC	0.82	0.77

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) — Capacity of combined streams

T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

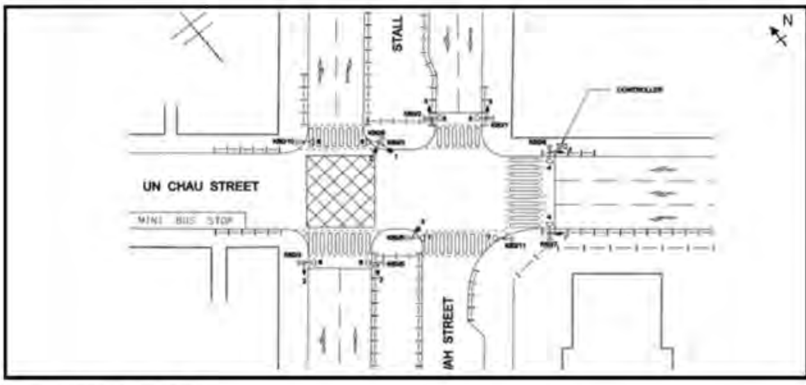
TRAFFIC SIGNAL CALCULATION SHEET

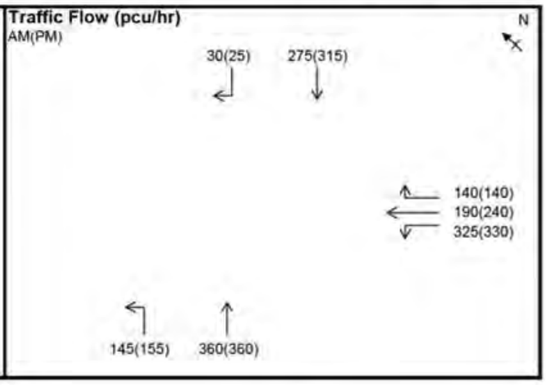
ATKINS

JOB NO. : 5190641

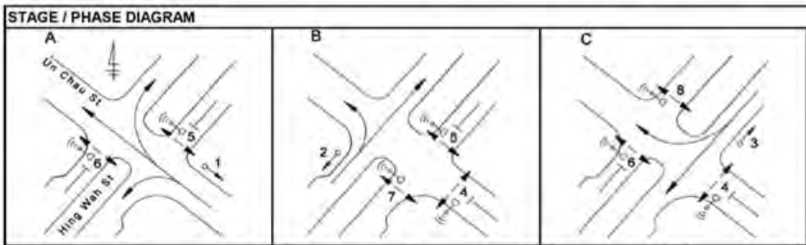
Junction : J3 - Un Chau Street / Hing Wah Street | Design Year: 2021

Scheme : Existing | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+2+8p	G=	IG=7	G=	IG=7	G=6	IG=16	G=	IG=	G=	IG=
1+2+3	G=	IG=7	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Un Chau Street WB														
1A	A	4.00	Y	N	10		325	100%	1750	**0.186**	330	100%	1750	**0.189**
1B	A	4.00	N	N			181		2155	0.084	207		2155	0.096
1C	A	4.00	Y	N	10		149	94%	1765	0.084	173	81%	1795	0.096
Hing Wah Street NB														
2A	B	3.60	Y	N	10		203	71%	1425	0.142	207	75%	1420	**0.146**
2B	B	3.60	N	N			302		2115	**0.143**	308		2115	0.146
Un Chau Street SB														
3A	C	3.60	Y	N			149		1975	0.075	166		1975	0.084
3B	C	3.60	N	N	10		156	19%	2055	0.076	174	14%	2070	**0.084**
4p	B,C		7GM +	11FG =	18	sec								
5p	A,B		6GM +	9FG =	15	sec								
6p	A,C		7GM +	12FG =	19	sec								
7p	B		7GM +	13FG =	20	sec								
8p	C		6GM +	11FG =	17	sec								

Notes:

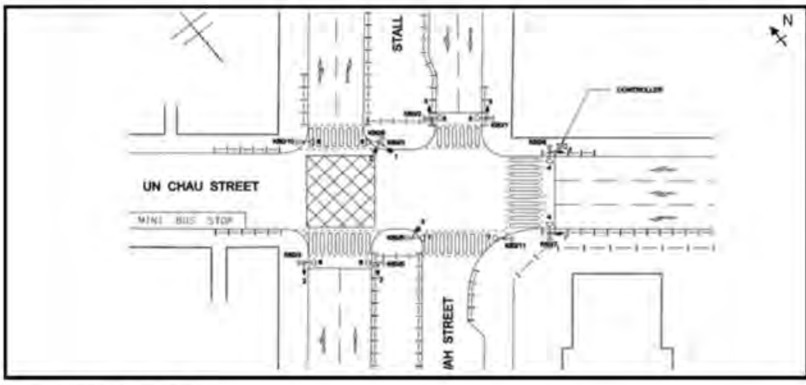
AM Peak	1+2+8p	PM Peak	1+2+3
Sum of Critical *y* ***Y***	0.329	Sum of Critical *y* ***Y***	0.418
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	14
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.632	Practical *Y* ***Ypr***	0.798
Reserve Capacity ***RC***	**92%**	Reserve Capacity ***RC***	**91%**

TRAFFIC SIGNAL CALCULATION SHEET

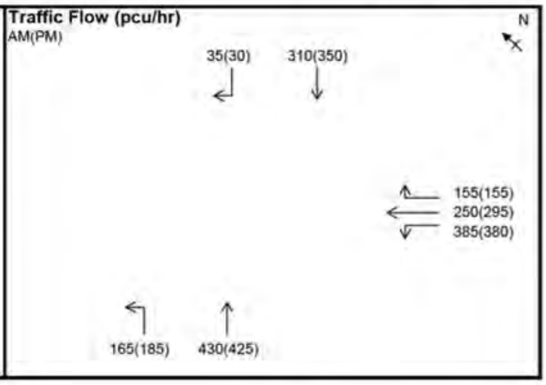
ATKINS

JOB NO. : 5190641

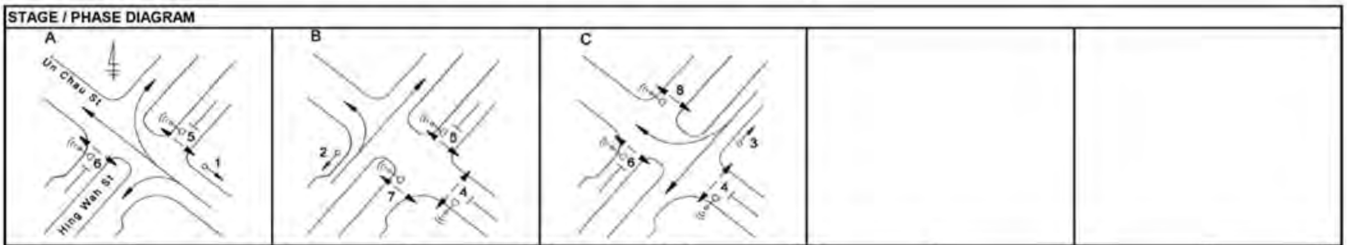
Junction :	J3 - Un Chau Street / Hing Wah Street	Design Year:	2031
Scheme :	2031 Reference	Designed by: KH	Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+8p	G=	IG=7	G=	IG=7	G=6	IG=16	G=	IG=	G=	IG=
1+2+3	G=	IG=7	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Un Chau Street WB														
1A	A	4.00	Y	N	10		385	100%	1750	**0.220**	380	100%	1750	**0.217**
1B	A	4.00	N	N			221		2155	0.103	245		2155	0.114
1C	A	4.00	Y	N	10		184	84%	1790	0.103	205	76%	1810	0.113
Hing Wah Street NB														
2A	B	3.60	Y	N	10		240	69%	1430	0.168	245	76%	1420	0.173
2B	B	3.60	N	N			355		2115	**0.168**	365		2115	**0.173**
Un Chau Street SB														
3A	C	3.60	Y	N			169		1975	0.086	186		1975	**0.094**
3B	C	3.60	N	N	10		176	20%	2055	0.086	194	15%	2065	0.094
4p	B,C		7GM +	11FG =	18	sec								
5p	A,B		6GM +	9FG =	15	sec								
6p	A,C		7GM +	12FG =	19	sec								
7p	B		7GM +	13FG =	20	sec								
8p	C		6GM +	11FG =	17	sec								

Notes:

AM Peak	1+2+8p	PM Peak	1+2+3
Sum of Critical *y* ***Y***	**0.388**	Sum of Critical *y* ***Y***	**0.484**
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	14
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.632	Practical *Y* ***Ypr***	0.798
Reserve Capacity ***RC***	**63%**	Reserve Capacity ***RC***	**65%**

Date : 10/Sep/21 Junction : J3 - Un Chau Street / Hing Wah Street

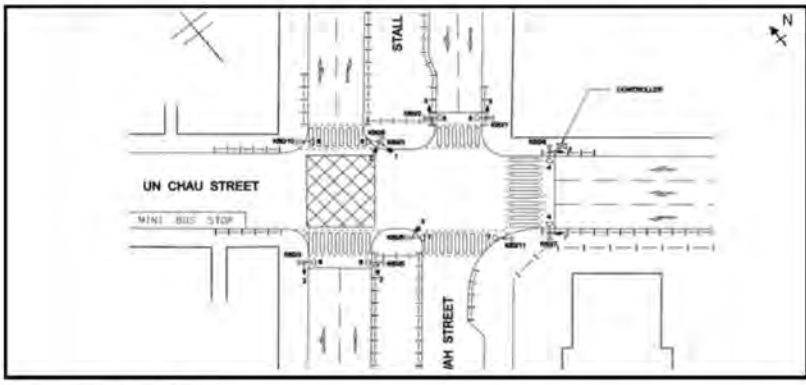
TRAFFIC SIGNAL CALCULATION SHEET

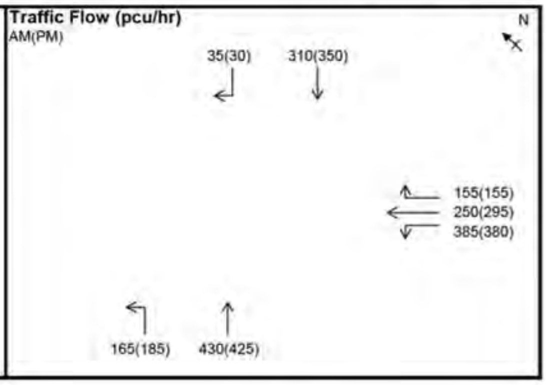
ATKINS

JOB NO. : 5190641

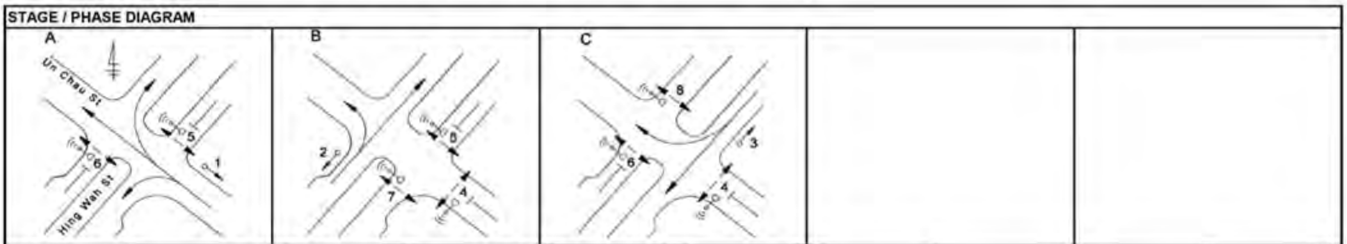
Junction : J3 - Un Chau Street / Hing Wah Street — Design Year: 2031

Scheme : 2031 Design — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



1+2+8p	G=	IG=7	G=	IG=7	G=6	IG=16	G=	IG=	G=	IG=
1+2+3	G=	IG=7	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Un Chau Street WB														
1A	A	4.00	Y	N	10		385	100%	1750	**0.220**	380	100%	1750	**0.217**
1B	A	4.00	N	N			221		2155	0.103	245		2155	0.114
1C	A	4.00	Y	N	10		184	84%	1790	0.103	205	76%	1810	0.113
Hing Wah Street NB														
2A	B	3.60	Y	N	10		240	69%	1430	0.168	245	76%	1420	0.173
2B	B	3.60	N	N			355		2115	**0.168**	365		2115	**0.173**
Un Chau Street SB														
3A	C	3.60	Y	N			169		1975	0.086	186		1975	**0.094**
3B	C	3.60	N	N	10		176	20%	2055	0.086	194	15%	2065	0.094
4p	B,C		7GM +	11FG =	18	sec								
5p	A,B		6GM +	9FG =	15	sec								
6p	A,C		7GM +	12FG =	19	sec								
7p	B		7GM +	13FG =	20	sec								
8p	C		6GM +	11FG =	17	sec								

Notes:

AM Peak	1+2+8p	PM Peak	1+2+3
Sum of Critical *y* ***Y***	**0.388**	Sum of Critical *y* ***Y***	**0.484**
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	14
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.632	Practical *Y* ***Ypr***	0.798
Reserve Capacity ***RC***	**63%**	Reserve Capacity ***RC***	**65%**

Date : 10/Sep/21 — Junction : J3 - Un Chau Street / Hing Wah Street

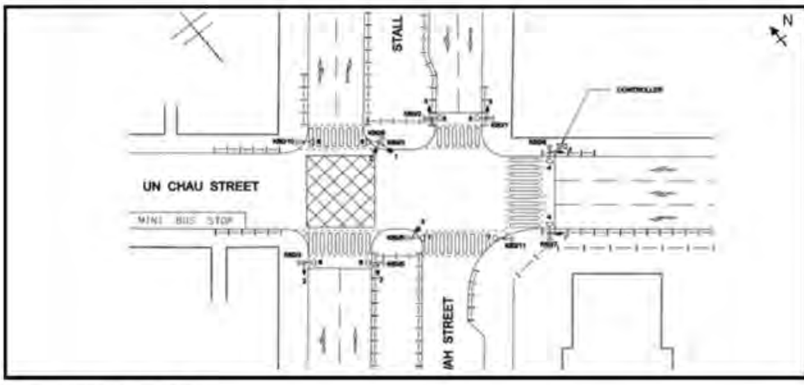
TRAFFIC SIGNAL CALCULATION SHEET

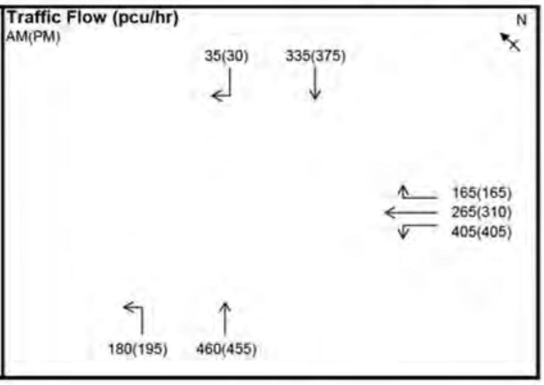
ATKINS

JOB NO. : 5190641

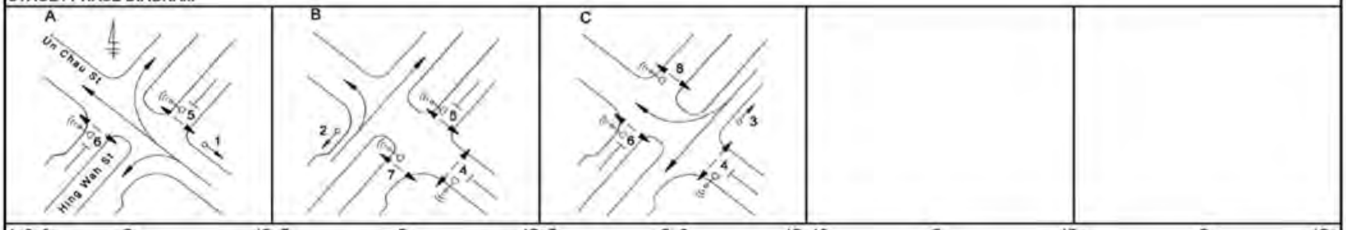
Junction : J3 - Un Chau Street / Hing Wah Street   Design Year: 2037

Scheme : 2037 Reference   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+2+8p	G=	IG=7	G=	IG=7	G=6	IG=16	G=	IG=	G=	IG=	
1+2+3	G=	IG=7	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=	

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Proportion turning (%) *f*	AM Peak: Saturation flow *S* (pcu/hr)	AM Peak: Flow factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Proportion turning (%) *f*	PM Peak: Saturation flow *S* (pcu/hr)	PM Peak: Flow factor *y*
Un Chau Street WB														
1A	A	4.00	Y	N	10		405	100%	1750	**0.231**	405	100%	1750	**0.231**
1B	A	4.00	N	N			235		2155	0.109	258		2155	0.120
1C	A	4.00	Y	N	10		195	85%	1790	0.109	217	76%	1810	0.120
Hing Wah Street NB														
2A	B	3.60	Y	N	10		258	70%	1430	0.180	261	75%	1420	0.184
2B	B	3.60	N	N			382		2115	**0.181**	389		2115	**0.184**
Un Chau Street SB														
3A	C	3.60	Y	N			181		1975	0.092	198		1975	**0.100**
3B	C	3.60	N	N	10		189	19%	2060	0.092	207	14%	2070	0.100
4p	B,C		7GM +	11FG =	18	sec								
5p	A,B		6GM +	9FG =	15	sec								
6p	A,C		7GM +	12FG =	19	sec								
7p	B		7GM +	13FG =	20	sec								
8p	C		6GM +	11FG =	17	sec								

Notes:

AM Peak	1+2+8p	PM Peak	1+2+3
Sum of Critical *y* ***Y***	0.412	Sum of Critical *y* ***Y***	0.516
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	14
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.632	Practical *Y* ***Ypr***	0.798
Reserve Capacity ***RC***	53%	Reserve Capacity ***RC***	55%

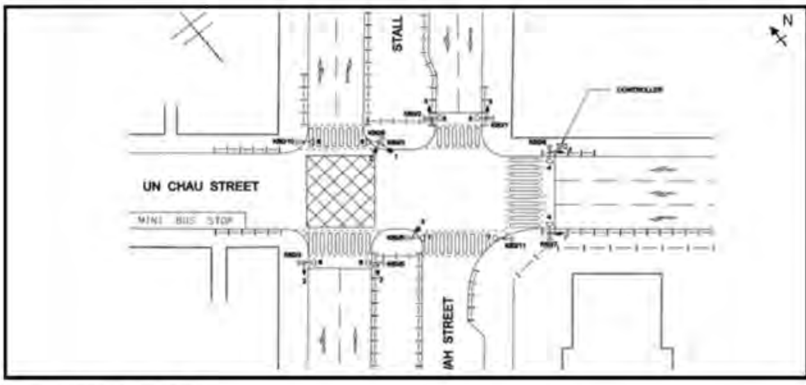
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

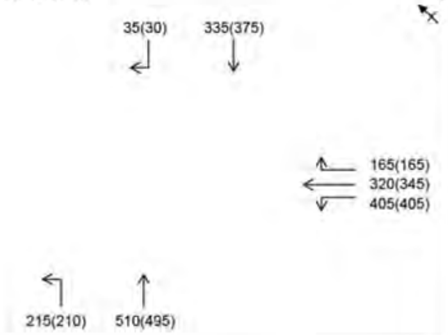
JOB NO. : 5190641

Junction : J3 - Un Chau Street / Hing Wah Street — Design Year: 2037

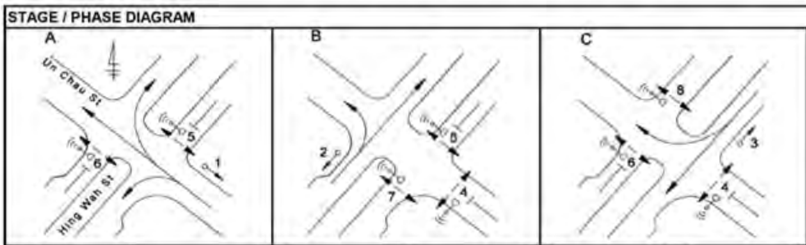
Scheme : 2037 Design — Designed by: KH — Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+8p	G=	IG=7	G=	IG=7	G=6	IG=16	G=	IG=	G=	IG=	
1+2+3	G=	IG=7	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=	

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Un Chau Street WB														
1A	A	4.00	Y	N	10		405	100%	1750	**0.231**	405	100%	1750	**0.231**
1B	A	4.00	N	N			263		2155	0.122	276		2155	0.128
1C	A	4.00	Y	N	10		222	74%	1815	0.122	234	71%	1820	0.129
Hing Wah Street NB														
2A	B	3.60	Y	N	10		292	74%	1425	**0.205**	283	74%	1420	0.199
2B	B	3.60	N	N			433		2115	0.205	422		2115	**0.200**
Un Chau Street SB														
3A	C	3.60	Y	N			181		1975	0.092	198		1975	**0.100**
3B	C	3.60	N	N	10		189	19%	2060	0.092	207	14%	2070	0.100
4p	B,C		7GM +	11FG =	18	sec								
5p	A,B		6GM +	9FG =	15	sec								
6p	A,C		7GM +	12FG =	19	sec								
7p	B		7GM +	13FG =	20	sec								
8p	C		6GM +	11FG =	17	sec								

Notes:

AM Peak	1+2+8p	PM Peak	1+2+3
Sum of Critical *y* ***Y***	**0.436**	Sum of Critical *y* ***Y***	**0.531**
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	14
Cycle Time ***c*** (sec)	114	Cycle Time ***c*** (sec)	124
Practical *Y* ***Ypr***	0.632	Practical *Y* ***Ypr***	0.798
Reserve Capacity ***RC***	**45%**	Reserve Capacity ***RC***	**50%**

Date : 10/Sep/21 Junction : J3 - Un Chau Street / Hing Wah Street

TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

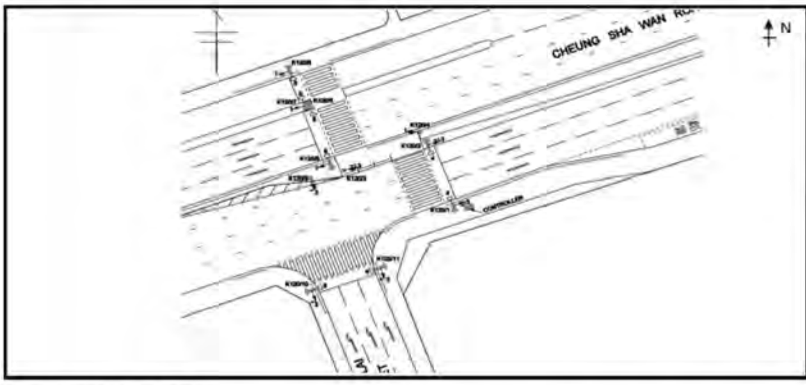
Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street

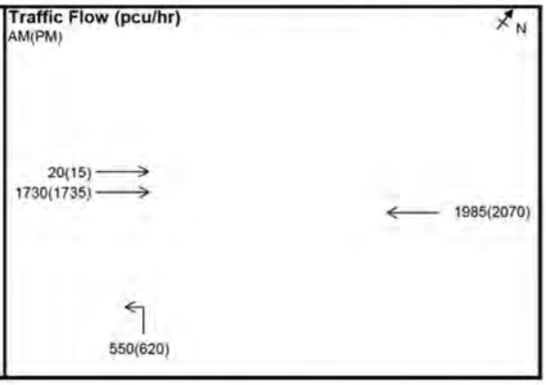
Design Year: 2021

Scheme : Existing

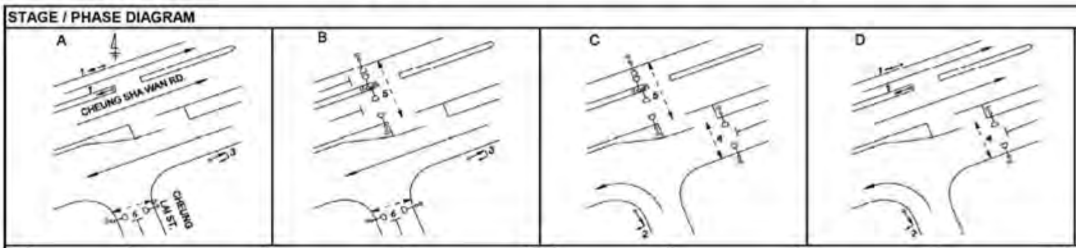
Designed by: KH

Checked by: EC





STAGE / PHASE DIAGRAM



3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=
3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A,D	5.30	Y	N			20		2145	0.009	15		2145	0.007
1B	A,D	3.30	N	N			577		2085	0.277	578		2085	0.277
1C	A,D	3.30	N	N			576		2085	0.276	579		2085	0.278
1D	A,D	3.30	N	N			577		2085	0.277	578		2085	0.277
Cheung Lai Street NB														
2A	C,D	3.50	Y	N	13		176	100%	1405	0.125	199	100%	1405	**0.142**
2B	C,D	3.50	N	N	15		192	100%	1530	0.125	216	100%	1530	0.141
2C	C,D	3.50	Y	N	18		182	100%	1450	**0.126**	205	100%	1450	0.141
Cheung Sha Wan Road WB														
3A	A,B	3.60	Y	N			540		1580	0.342	563		1580	0.356
3B	A,B	3.60	N	N			722		2115	0.341	753		2115	0.356
3C	A,B	3.60	N	N			723		2115	**0.342**	754		2115	**0.357**
4p	C,D		6GM +	9FG =	15	sec								
5p	B,C		6GM +	9FG =	15	sec								
6p	A,B		6GM +	18FG =	24	sec								

Notes:

AM Peak	3+2	PM Peak	3+2
Sum of Critical *y* ***Y***	**0.467**	Sum of Critical *y* ***Y***	**0.498**
Lost Time ***L*** (sec)	10	Lost Time ***L*** (sec)	10
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.827	Practical *Y* ***Ypr***	0.831
Reserve Capacity ***RC***	**77%**	Reserve Capacity ***RC***	**67%**

Date : 10/Sep/21 Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street

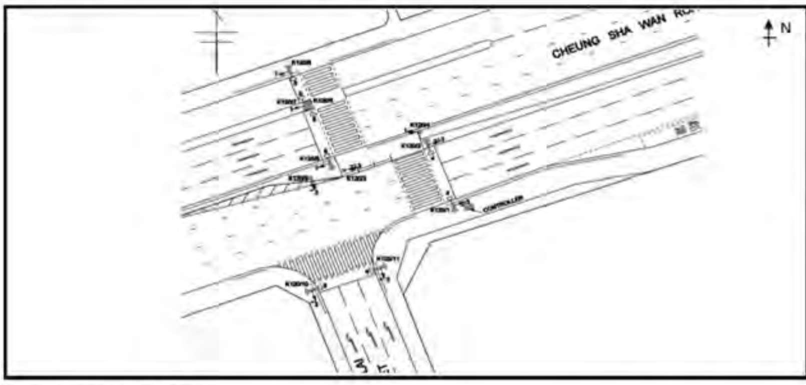
TRAFFIC SIGNAL CALCULATION SHEET

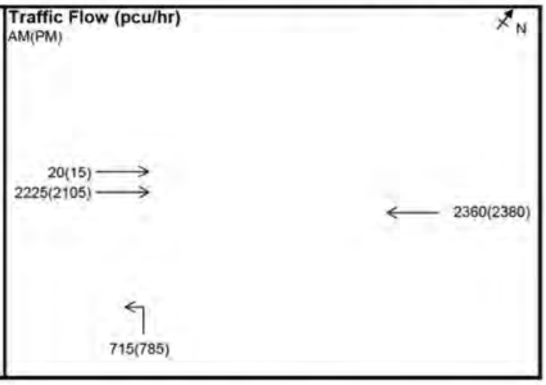
ATKINS

JOB NO. : 5190641

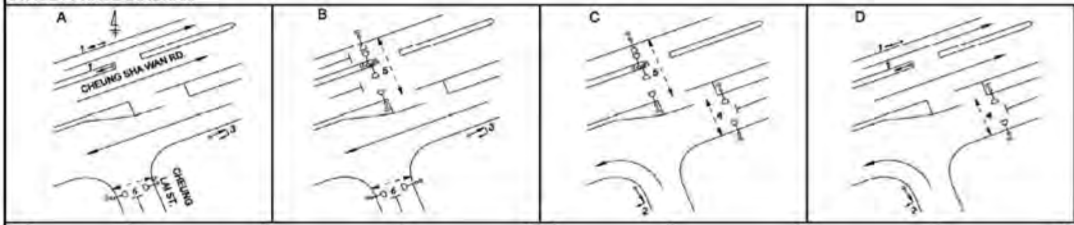
Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street   Design Year: 2031

Scheme : 2031 Reference   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=
3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A,D	5.30	Y	N			20		2145	0.009	15		2145	0.007
1B	A,D	3.30	N	N			742		2085	0.356	702		2085	0.337
1C	A,D	3.30	N	N			741		2085	0.355	701		2085	0.336
1D	A,D	3.30	N	N			742		2085	0.356	702		2085	0.337
Cheung Lai Street NB														
2A	C,D	3.50	Y	N	13		229	100%	1405	0.163	252	100%	1405	**0.179**
2B	C,D	3.50	N	N	15		250	100%	1530	**0.163**	273	100%	1530	0.178
2C	C,D	3.50	Y	N	18		236	100%	1450	0.163	260	100%	1450	0.179
Cheung Sha Wan Road WB														
3A	A,B	3.60	Y	N			642		1580	**0.406**	647		1580	0.409
3B	A,B	3.60	N	N			859		2115	0.406	867		2115	**0.410**
3C	A,B	3.60	N	N			859		2115	0.406	866		2115	0.409
4p	C,D		6GM +	9FG =	15	sec								
5p	B,C		6GM +	9FG =	15	sec								
6p	A,B		6GM +	18FG =	24	sec								

Notes:

AM Peak	3+2	PM Peak	3+2
Sum of Critical *y* ***Y***	**0.570**	Sum of Critical *y* ***Y***	**0.589**
Lost Time ***L*** (sec)	10	Lost Time ***L*** (sec)	10
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.827	Practical *Y* ***Ypr***	0.831
Reserve Capacity ***RC***	**45%**	Reserve Capacity ***RC***	**41%**

Date : 10/Sep/21   Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street

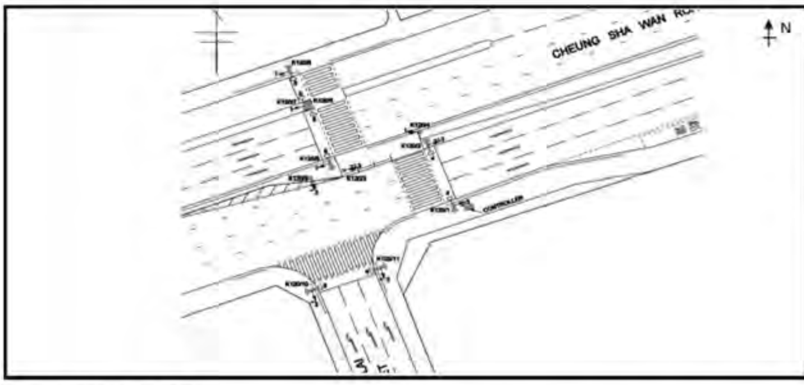
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

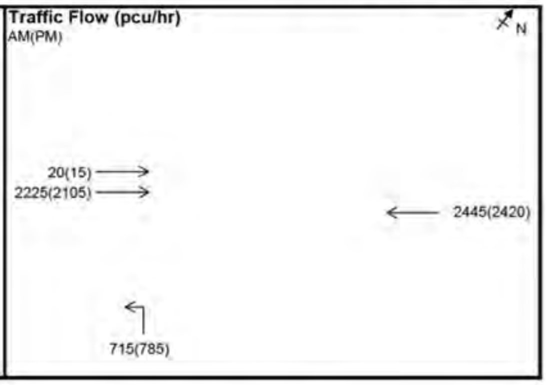
JOB NO. : 5190641

Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street | Design Year: 2031

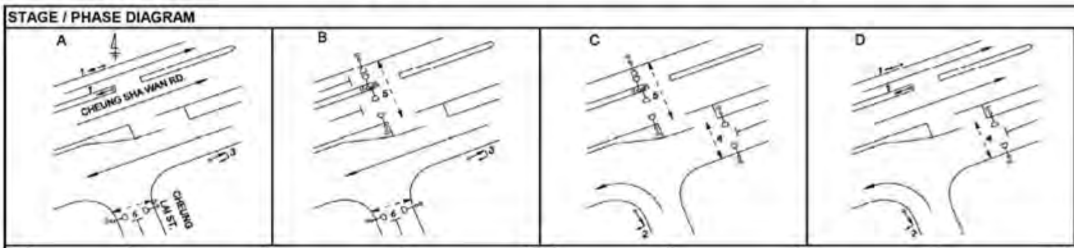
Scheme : 2031 Design | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=
3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A,D	5.30	Y	N			20		2145	0.009	15		2145	0.007
1B	A,D	3.30	N	N			742		2085	0.356	702		2085	0.337
1C	A,D	3.30	N	N			741		2085	0.355	701		2085	0.336
1D	A,D	3.30	N	N			742		2085	0.356	702		2085	0.337
Cheung Lai Street NB														
2A	C,D	3.50	Y	N	13		229	100%	1405	0.163	252	100%	1405	**0.179**
2B	C,D	3.50	N	N	15		250	100%	1530	**0.163**	273	100%	1530	0.178
2C	C,D	3.50	Y	N	18		236	100%	1450	0.163	260	100%	1450	0.179
Cheung Sha Wan Road WB														
3A	A,B	3.60	Y	N			665		1580	**0.421**	658		1580	0.416
3B	A,B	3.60	N	N			890		2115	0.421	881		2115	**0.417**
3C	A,B	3.60	N	N			890		2115	0.421	881		2115	**0.417**
4p	C,D		6GM +	9FG =	15	sec								
5p	B,C		6GM +	9FG =	15	sec								
6p	A,B		6GM +	18FG =	24	sec								

Notes:

AM Peak	3+2	PM Peak	3+2
Sum of Critical *y* ***Y***	**0.584**	Sum of Critical *y* ***Y***	**0.596**
Lost Time ***L*** (sec)	10	Lost Time ***L*** (sec)	10
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.827	Practical *Y* ***Ypr***	0.831
Reserve Capacity ***RC***	**42%**	Reserve Capacity ***RC***	**39%**

Date : 10/Sep/21 Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street

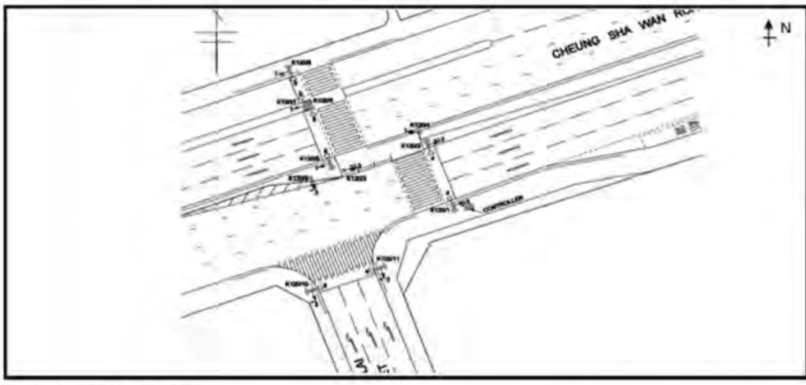
TRAFFIC SIGNAL CALCULATION SHEET

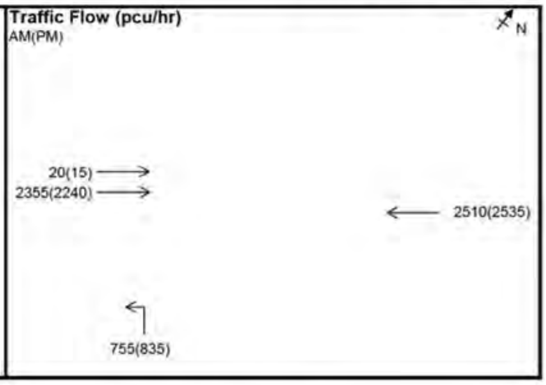
ATKINS

JOB NO. : 5190641

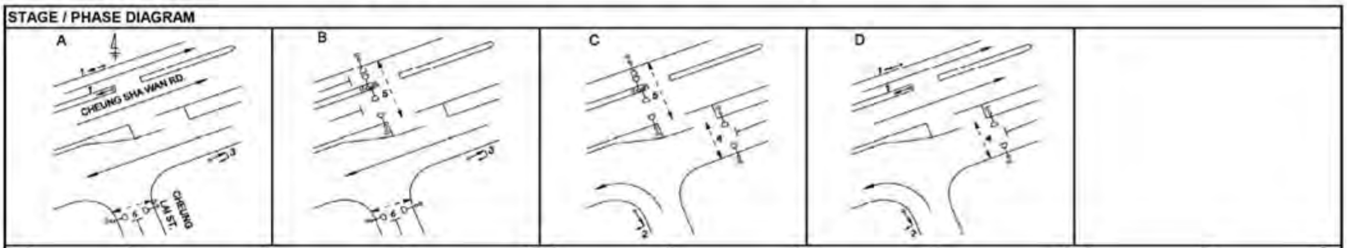
Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street | Design Year: 2037

Scheme : 2037 Refernece | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=
3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A,D	5.30	Y	N			20		2145	0.009	15		2145	0.007
1B	A,D	3.30	N	N			785		2085	0.376	747		2085	0.358
1C	A,D	3.30	N	N			785		2085	0.376	746		2085	0.358
1D	A,D	3.30	N	N			785		2085	0.376	747		2085	0.358
Cheung Lai Street NB														
2A	C,D	3.50	Y	N	13		242	100%	1405	0.172	268	100%	1405	**0.191**
2B	C,D	3.50	N	N	15		263	100%	1530	0.172	291	100%	1530	0.190
2C	C,D	3.50	Y	N	18		250	100%	1450	**0.172**	276	100%	1450	0.190
Cheung Sha Wan Road WB														
3A	A,B	3.60	Y	N			683		1580	**0.432**	689		1580	0.436
3B	A,B	3.60	N	N			913		2115	0.432	923		2115	**0.436**
3C	A,B	3.60	N	N			914		2115	0.432	923		2115	**0.436**
4p	C,D		6GM +	9FG =	15	sec								
5p	B,C		6GM +	9FG =	15	sec								
6p	A,B		6GM +	18FG =	24	sec								

Notes:

AM Peak	3+2	PM Peak	3+2
Sum of Critical *y* ***Y***	**0.605**	Sum of Critical *y* ***Y***	**0.627**
Lost Time ***L*** (sec)	10	Lost Time ***L*** (sec)	10
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.827	Practical *Y* ***Ypr***	0.831
Reserve Capacity ***RC***	**37%**	Reserve Capacity ***RC***	**32%**

Date : 10/Sep/21 | Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street

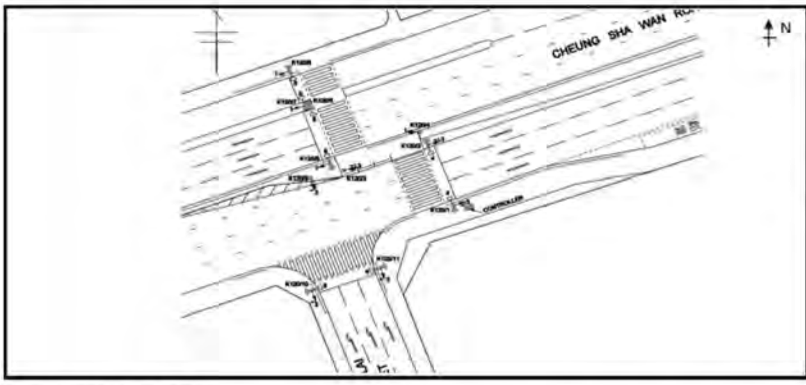
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

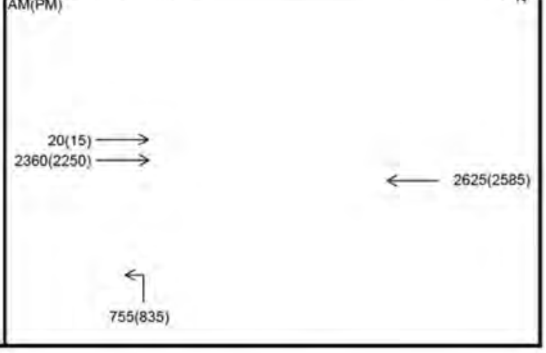
JOB NO. : 5190641

Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street | Design Year: 2037

Scheme : 2037 Design | Designed by: KH | Checked by: EC

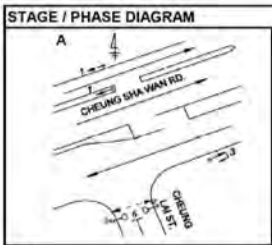


Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM

A



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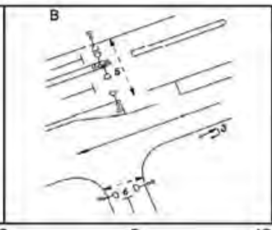
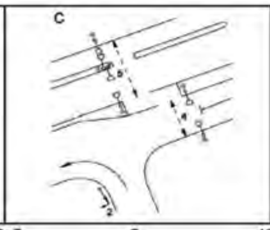


C



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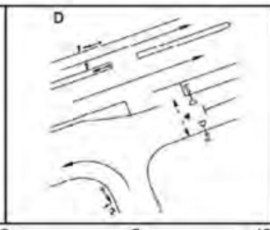


3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=
3+2	G=	IG=	G=	IG=7	G=	IG=	G=	IG=5	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A,D	5.30	Y	N			20		2145	0.009	15		2145	0.007
1B	A,D	3.30	N	N			787		2085	0.377	750		2085	0.360
1C	A,D	3.30	N	N			786		2085	0.377	750		2085	0.360
1D	A,D	3.30	N	N			787		2085	0.377	750		2085	0.360
Cheung Lai Street NB														
2A	C,D	3.50	Y	N	13		242	100%	1405	0.172	268	100%	1405	**0.191**
2B	C,D	3.50	N	N	15		263	100%	1530	0.172	291	100%	1530	0.190
2C	C,D	3.50	Y	N	18		250	100%	1450	**0.172**	276	100%	1450	0.190
Cheung Sha Wan Road WB														
3A	A,B	3.60	Y	N			714		1580	0.452	703		1580	**0.445**
3B	A,B	3.60	N	N			955		2115	0.452	941		2115	0.445
3C	A,B	3.60	N	N			956		2115	**0.452**	941		2115	0.445
4p	C,D		6GM +	9FG =	15	sec								
5p	B,C		6GM +	9FG =	15	sec								
6p	A,B		6GM +	18FG =	24	sec								

Notes:

AM Peak	3+2	PM Peak	3+2
Sum of Critical *y* ***Y***	**0.624**	Sum of Critical *y* ***Y***	**0.636**
Lost Time ***L*** (sec)	10	Lost Time ***L*** (sec)	10
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.827	Practical *Y* ***Ypr***	0.831
Reserve Capacity ***RC***	**33%**	Reserve Capacity ***RC***	**31%**

Date : 10/Sep/21 Junction : J4 - Cheung Sha Wan Road / Cheung Lai Street

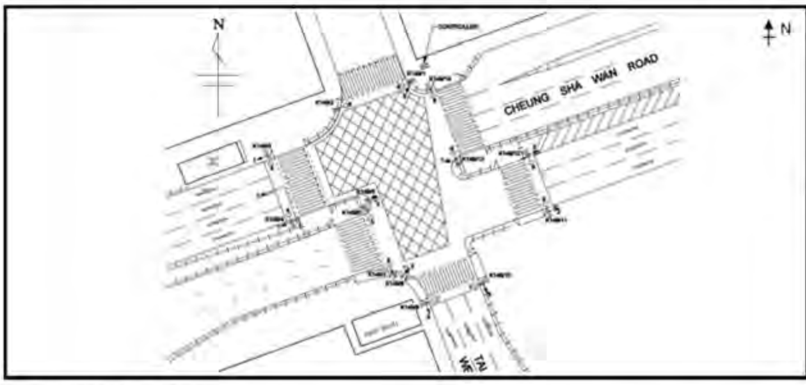
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

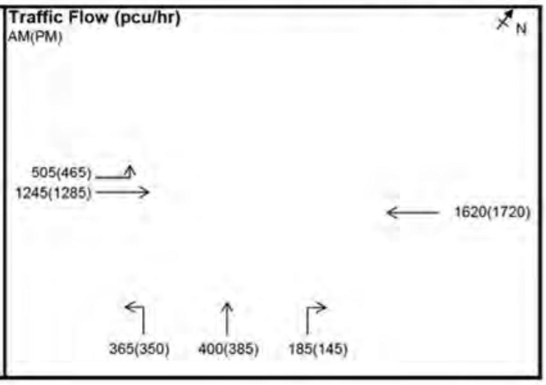
JOB NO. : 5190641

Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2021

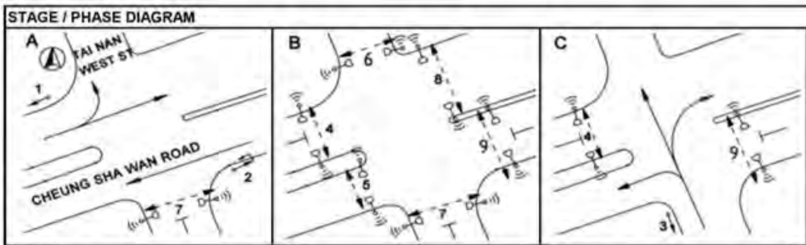
Scheme : Existing | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=
1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		505	100%	1565	**0.323**	465	100%	1565	**0.297**
1B	A	3.00	N	N			415		2055	0.202	428		2055	0.208
1C	A	3.00	N	N			415		2055	0.202	428		2055	0.208
1D	A	3.00	N	N			415		2055	0.202	429		2055	0.209
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			515		1955	0.263	547		1955	0.280
2B	A	3.40	N	N			553		2095	0.264	587		2095	0.280
2C	A	3.40	N	N			552		2095	0.263	586		2095	0.280
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		289	100%	1690	0.171	267	100%	1690	0.158
3B	C	3.30	N	N	13		347	22%	2030	0.171	320	26%	2020	**0.158**
3C	C	3.30	Y	N	15		314	59%	1835	**0.171**	293	49%	1855	0.158
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	1+6p+3	PM Peak	1+6p+3
Sum of Critical *y* ***Y***	0.494	Sum of Critical *y* ***Y***	0.456
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	34
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.653	Practical *Y* ***Ypr***	0.665
Reserve Capacity ***RC***	32%	Reserve Capacity ***RC***	46%

Date : 10/Sep/21 | Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street

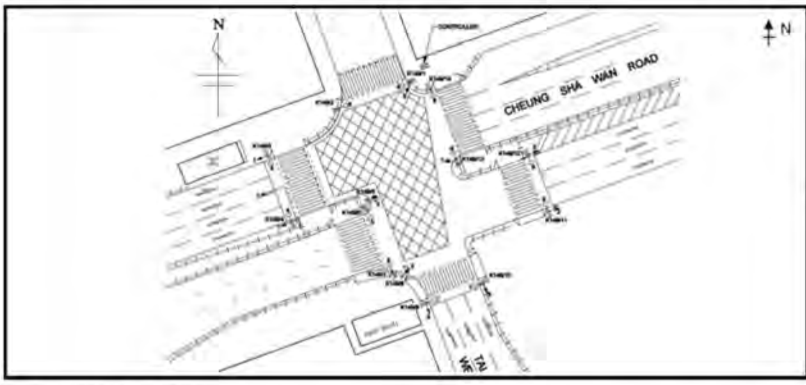
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

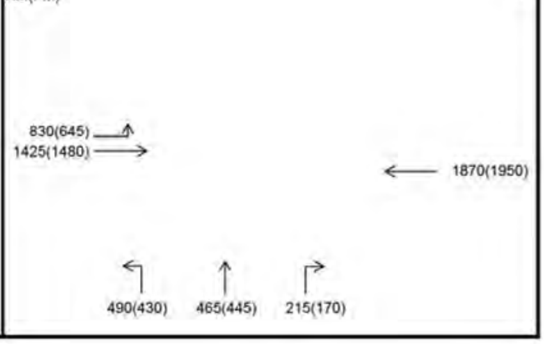
JOB NO. : 5190641

Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2031

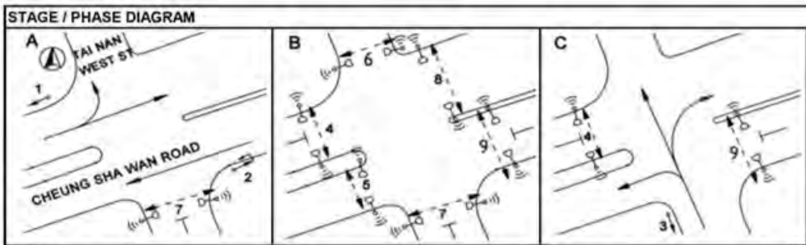
Scheme : 2031 Reference | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=	G=	IG=
1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		830	100%	1565	**0.530**	645	100%	1565	**0.412**
1B	A	3.00	N	N			475		2055	0.231	493		2055	0.240
1C	A	3.00	N	N			475		2055	0.231	493		2055	0.240
1D	A	3.00	N	N			475		2055	0.231	494		2055	0.240
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			595		1955	0.304	620		1955	0.317
2B	A	3.40	N	N			637		2095	0.304	665		2095	0.317
2C	A	3.40	N	N			638		2095	0.305	665		2095	0.317
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		357	100%	1690	**0.211**	318	100%	1690	**0.188**
3B	C	3.30	N	N	13		424	31%	2010	0.211	378	30%	2015	0.188
3C	C	3.30	Y	N	15		389	55%	1845	0.211	349	49%	1855	0.188
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	1+6p+3	PM Peak	1+6p+3
Sum of Critical *y* ***Y***	**0.742**	Sum of Critical *y* ***Y***	**0.600**
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	34
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.653	Practical *Y* ***Ypr***	0.665
Reserve Capacity ***RC***	**-12%**	Reserve Capacity ***RC***	**11%**

Date : 10/Sep/21 | Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street

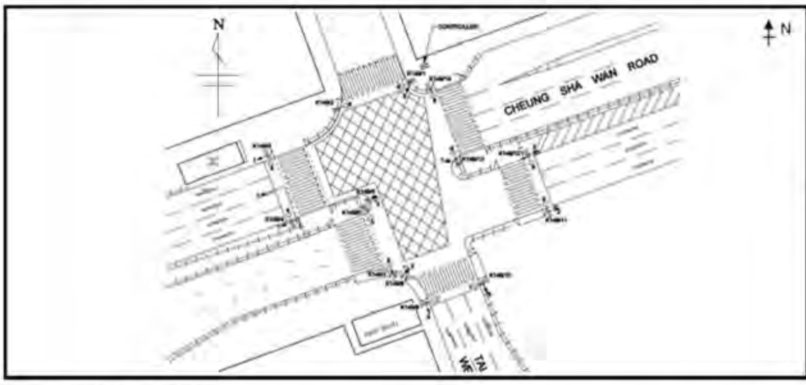
TRAFFIC SIGNAL CALCULATION SHEET

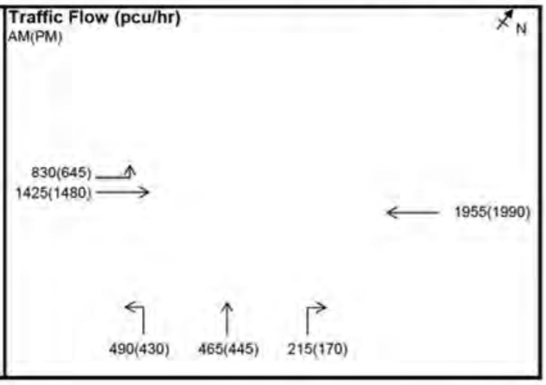
ATKINS

JOB NO. : 5190641

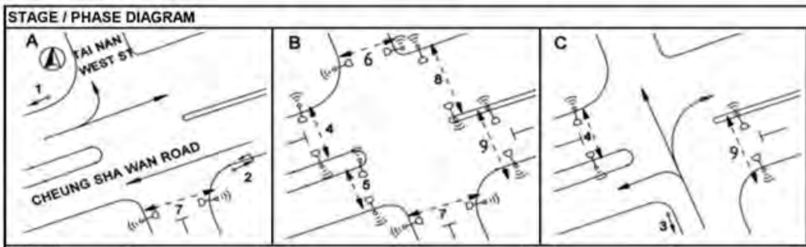
Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2031

Scheme : 2031 Design | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=
1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		830	100%	1565	**0.530**	645	100%	1565	**0.412**
1B	A	3.00	N	N			475		2055	0.231	493		2055	0.240
1C	A	3.00	N	N			475		2055	0.231	493		2055	0.240
1D	A	3.00	N	N			475		2055	0.231	494		2055	0.240
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			622		1955	0.318	633		1955	0.324
2B	A	3.40	N	N			666		2095	0.318	679		2095	0.324
2C	A	3.40	N	N			667		2095	0.318	678		2095	0.324
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		357	100%	1690	**0.211**	318	100%	1690	**0.188**
3B	C	3.30	N	N	13		424	31%	2010	0.211	378	30%	2015	0.188
3C	C	3.30	Y	N	15		389	55%	1845	0.211	349	49%	1855	0.188
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	1+6p+3	PM Peak	1+6p+3
Sum of Critical *y* ***Y***	**0.742**	Sum of Critical *y* ***Y***	**0.600**
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	34
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.653	Practical *Y* ***Ypr***	0.665
Reserve Capacity ***RC***	**-12%**	Reserve Capacity ***RC***	**11%**

Date : 10/Sep/21 | Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street

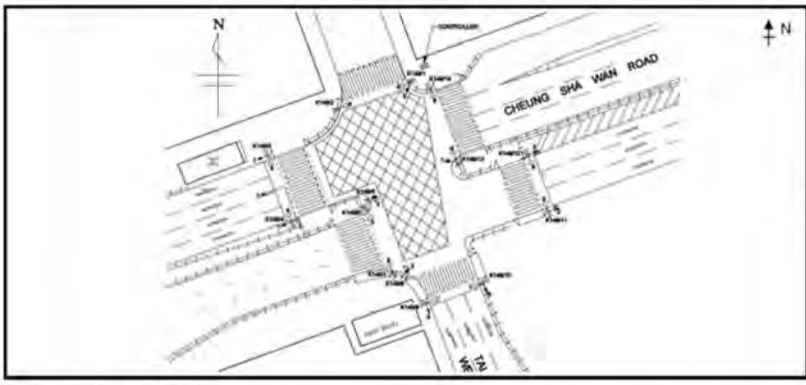
TRAFFIC SIGNAL CALCULATION SHEET

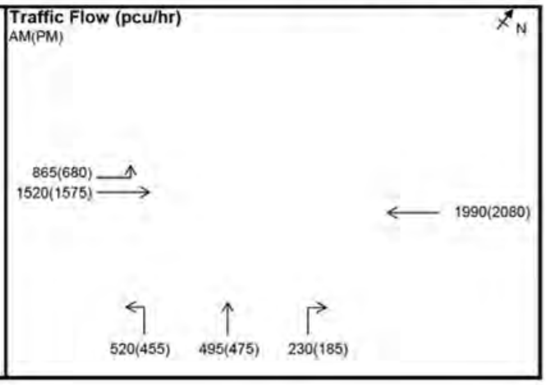
ATKINS

JOB NO. : 5190641

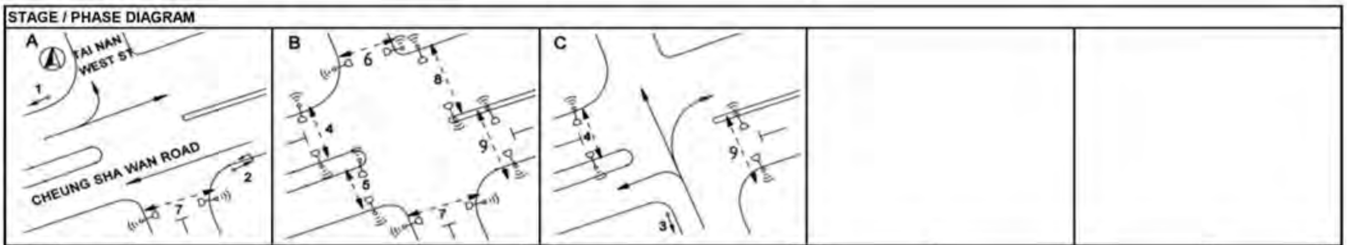
Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2037

Scheme : 2037 Reference | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=				
1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=				

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		865	100%	1565	**0.553**	680	100%	1565	**0.435**
1B	A	3.00	N	N			507		2055	0.247	525		2055	0.255
1C	A	3.00	N	N			507		2055	0.247	525		2055	0.255
1D	A	3.00	N	N			506		2055	0.246	525		2055	0.255
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			633		1955	0.324	662		1955	0.339
2B	A	3.40	N	N			679		2095	0.324	709		2095	0.338
2C	A	3.40	N	N			678		2095	0.324	709		2095	0.338
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		380	100%	1690	**0.225**	339	100%	1690	**0.201**
3B	C	3.30	N	N	13		451	31%	2010	0.224	404	29%	2015	0.200
3C	C	3.30	Y	N	15		414	56%	1845	0.224	372	50%	1855	0.201
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	1+6p+3	PM Peak	1+6p+3
Sum of Critical *y* ***Y***	0.778	Sum of Critical *y* ***Y***	0.635
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	34
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.653	Practical *Y* ***Ypr***	0.665
Reserve Capacity ***RC***	-16%	Reserve Capacity ***RC***	5%

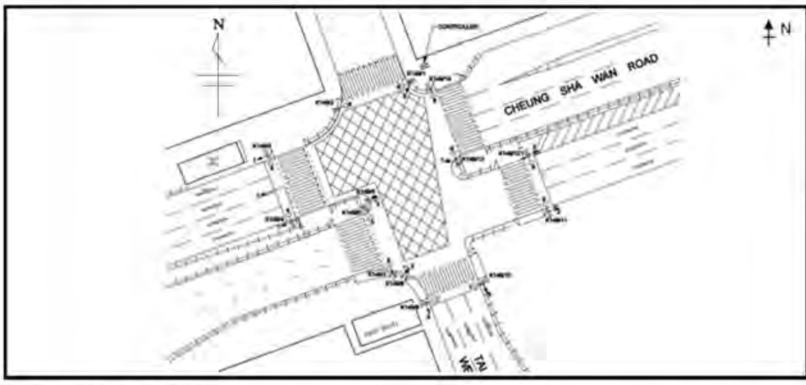
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

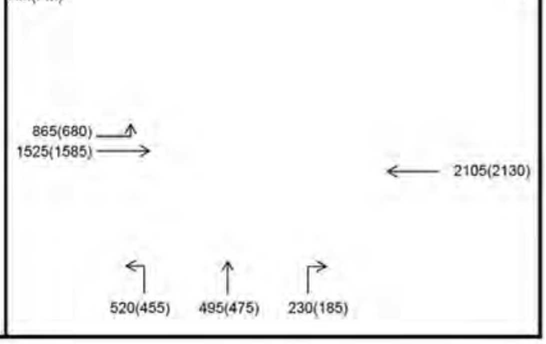
JOB NO. : 5190641

Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2037

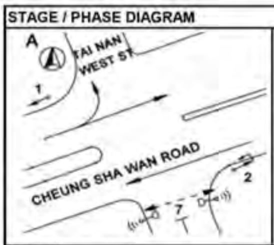
Scheme : 2037 Design | Designed by: KH | Checked by: EC

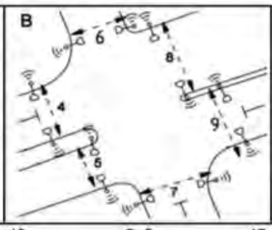


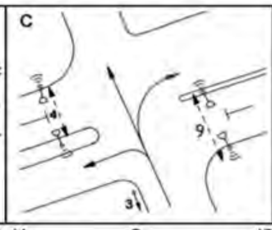
Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM







1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=
1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Proportion turning (%) *f*	AM Peak: Saturation flow *S* (pcu/hr)	AM Peak: Flow factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Proportion turning (%) *f*	PM Peak: Saturation flow *S* (pcu/hr)	PM Peak: Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		865	100%	1565	**0.553**	680	100%	1565	**0.435**
1B	A	3.00	N	N			508		2055	0.247	528		2055	0.257
1C	A	3.00	N	N			508		2055	0.247	528		2055	0.257
1D	A	3.00	N	N			509		2055	0.248	529		2055	0.257
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			670		1955	0.343	678		1955	0.347
2B	A	3.40	N	N			717		2095	0.342	726		2095	0.347
2C	A	3.40	N	N			718		2095	0.343	726		2095	0.347
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		380	100%	1690	**0.225**	339	100%	1690	**0.201**
3B	C	3.30	N	N	13		451	31%	2010	0.224	404	29%	2015	0.200
3C	C	3.30	Y	N	15		414	56%	1845	0.224	372	50%	1855	0.201
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	1+6p+3	PM Peak	1+6p+3
Sum of Critical *y* ***Y***	**0.778**	Sum of Critical *y* ***Y***	**0.635**
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	34
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.653	Practical *Y* ***Ypr***	0.665
Reserve Capacity ***RC***	**-16%**	Reserve Capacity ***RC***	**5%**

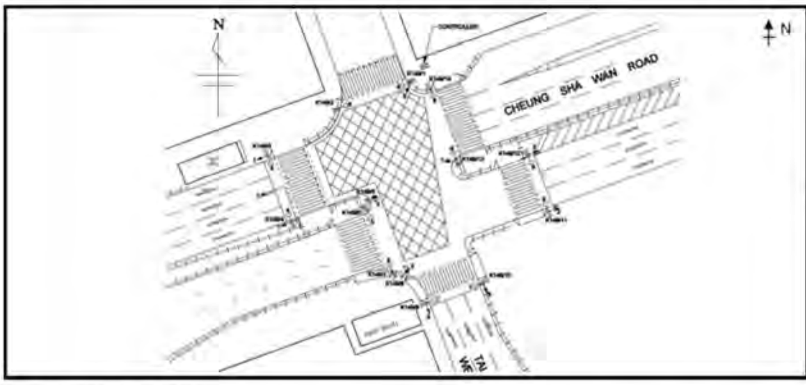
TRAFFIC SIGNAL CALCULATION SHEET

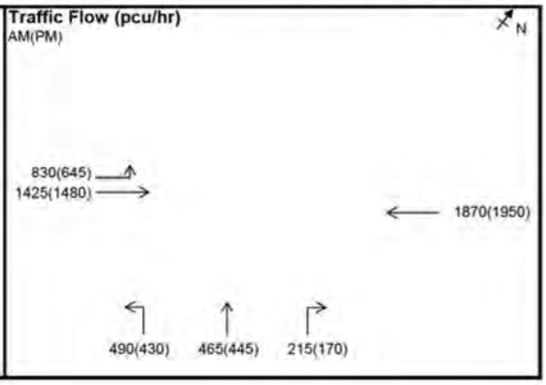
ATKINS

JOB NO. : 5190641

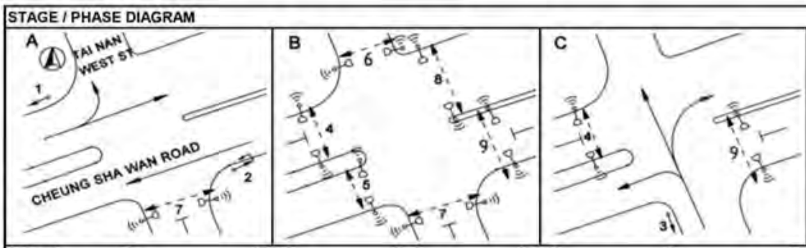
Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street   Design Year: 2031

Scheme : 2031 Reference (with improvement)   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=
2+6p+3	G=	IG=10	G=5	IG=14	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		463	100%	1565	0.296	434	100%	1565	0.277
1B	A	3.00	N	N	18		576	64%	1950	0.295	551	38%	1990	0.277
1C	A	3.00	N	N			608		2055	**0.296**	570		2055	0.277
1D	A	3.00	N	N			608		2055	**0.296**	570		2055	0.277
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			595		1955	0.304	620		1955	0.317
2B	A	3.40	N	N			637		2095	0.304	665		2095	**0.317**
2C	A	3.40	N	N			638		2095	0.305	665		2095	**0.317**
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		357	100%	1690	**0.211**	318	100%	1690	**0.188**
3B	C	3.30	N	N	13		424	31%	2010	0.211	378	30%	2015	0.188
3C	C	3.30	Y	N	15		389	55%	1845	0.211	349	49%	1855	0.188
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	1+6p+3	PM Peak	2+6p+3
Sum of Critical *y* ***Y***	0.507	Sum of Critical *y* ***Y***	0.506
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	32
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.653	Practical *Y* ***Ypr***	0.678
Reserve Capacity ***RC***	**29%**	Reserve Capacity ***RC***	**34%**

Date : 10/Sep/21   Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street

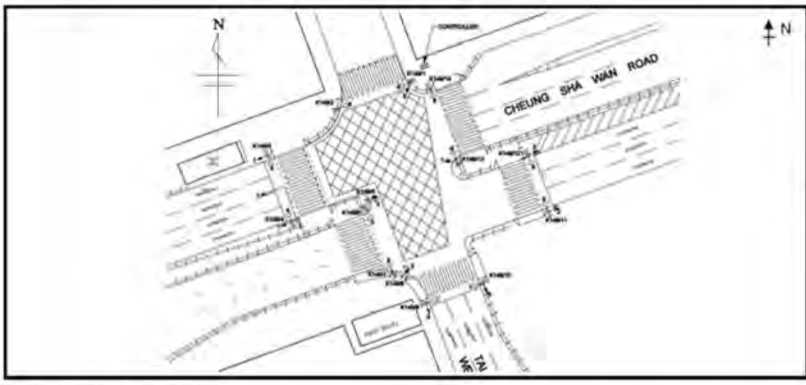
TRAFFIC SIGNAL CALCULATION SHEET

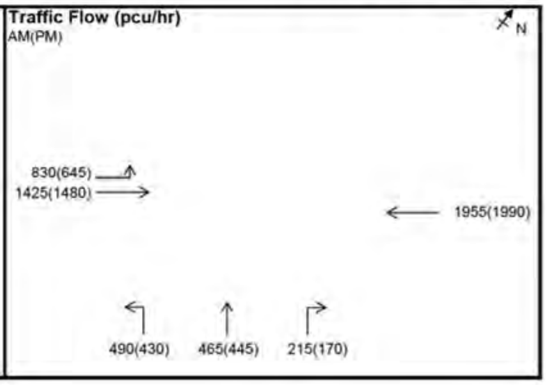
ATKINS

JOB NO. : 5190641

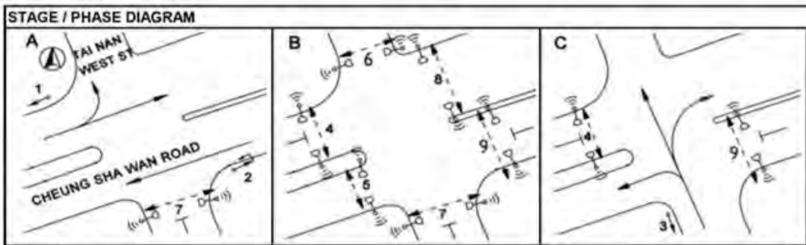
Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2031

Scheme : 2031 Design (with improvement) | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



2+6p+3	G=	IG=10	G=5	IG=14	G=	IG=5	G=	IG=	G=	IG=
2+6p+3	G=	IG=10	G=5	IG=14	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		463	100%	1565	0.296	434	100%	1565	0.277
1B	A	3.00	N	N	18		576	64%	1950	0.295	551	38%	1990	0.277
1C	A	3.00	N	N			608		2055	0.296	570		2055	0.277
1D	A	3.00	N	N			608		2055	0.296	570		2055	0.277
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			622		1955	0.318	633		1955	0.324
2B	A	3.40	N	N			666		2095	0.318	679		2095	**0.324**
2C	A	3.40	N	N			667		2095	**0.318**	678		2095	0.324
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		357	100%	1690	**0.211**	318	100%	1690	**0.188**
3B	C	3.30	N	N	13		424	31%	2010	0.211	378	30%	2015	0.188
3C	C	3.30	Y	N	15		389	55%	1845	0.211	349	49%	1855	0.188
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	2+6p+3	PM Peak	2+6p+3
Sum of Critical *y* ***Y***	**0.530**	Sum of Critical *y* ***Y***	**0.512**
Lost Time ***L*** (sec)	32	Lost Time ***L*** (sec)	32
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.668	Practical *Y* ***Ypr***	0.678
Reserve Capacity ***RC***	**26%**	Reserve Capacity ***RC***	**32%**

Date : 10/Sep/21 Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street

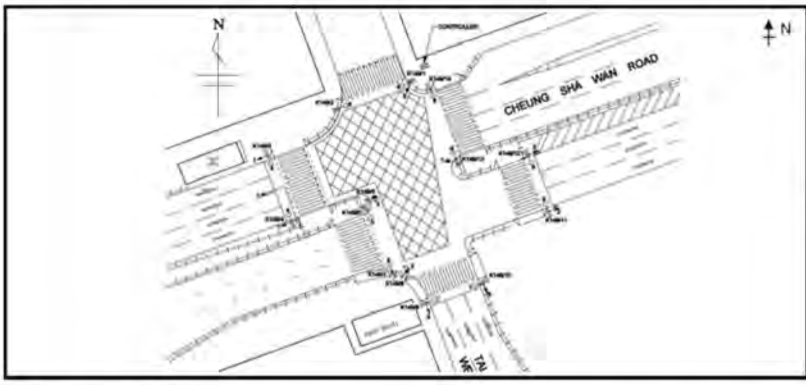
TRAFFIC SIGNAL CALCULATION SHEET

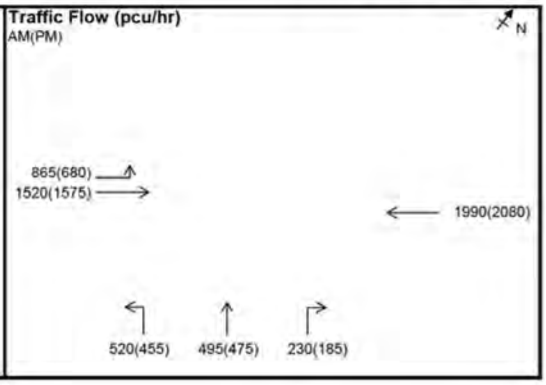
ATKINS

JOB NO. : 5190641

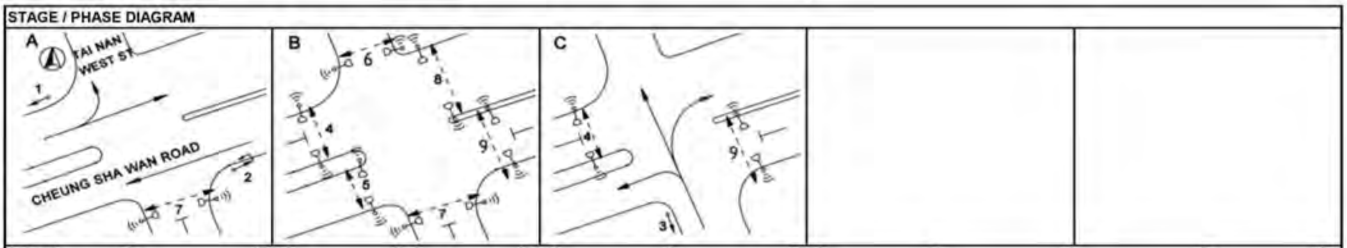
Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2037

Scheme : 2037 Reference (with improvement) | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+6p+3	G=	IG=10	G=5	IG=14	G=	IG=7	G=	IG=	G=	IG=
2+6p+3	G=	IG=10	G=5	IG=14	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		489	100%	1565	0.312	460	100%	1565	0.294
1B	A	3.00	N	N	18		610	62%	1950	0.313	586	38%	1990	0.294
1C	A	3.00	N	N			643		2055	**0.313**	605		2055	0.294
1D	A	3.00	N	N			643		2055	**0.313**	604		2055	0.294
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			633		1955	0.324	662		1955	**0.339**
2B	A	3.40	N	N			679		2095	0.324	709		2095	0.338
2C	A	3.40	N	N			678		2095	0.324	709		2095	0.338
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		380	100%	1690	**0.225**	339	100%	1690	**0.201**
3B	C	3.30	N	N	13		451	31%	2010	0.224	404	29%	2015	0.200
3C	C	3.30	Y	N	15		414	56%	1845	0.224	372	50%	1855	0.201
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	1+6p+3	PM Peak	2+6p+3
Sum of Critical *y* ***Y***	**0.538**	Sum of Critical *y* ***Y***	**0.539**
Lost Time ***L*** (sec)	34	Lost Time ***L*** (sec)	32
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.653	Practical *Y* ***Ypr***	0.678
Reserve Capacity ***RC***	**21%**	Reserve Capacity ***RC***	**26%**

Date : 10/Sep/21 Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street

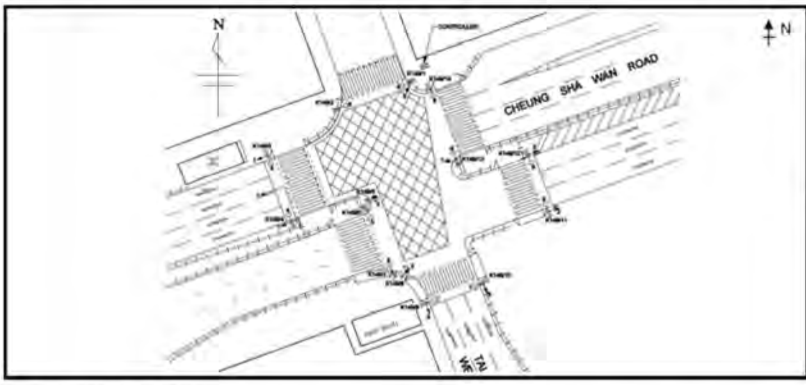
TRAFFIC SIGNAL CALCULATION SHEET

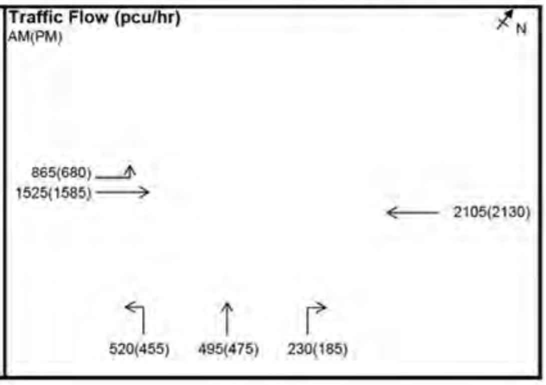
ATKINS

JOB NO. : 5190641

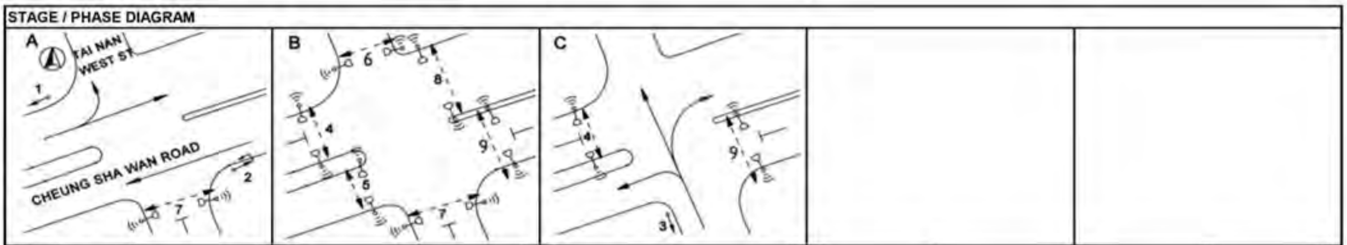
Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street | Design Year: 2037

Scheme : 2037 Design (with improvement) | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



2+6p+3	G=	IG=10	G=5	IG=14	G=	IG=5	G=	IG=	G=	IG=
2+6p+3	G=	IG=10	G=5	IG=14	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

							AM Peak				PM Peak			
Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.00	Y	N	15		490	100%	1565	0.313	462	100%	1565	0.295
1B	A	3.00	N	N	18		612	61%	1950	0.314	589	37%	1990	0.296
1C	A	3.00	N	N			644		2055	0.313	607		2055	0.295
1D	A	3.00	N	N			644		2055	0.313	607		2055	0.295
Cheung Sha Wan Road WB														
2A	A	3.40	Y	N			670		1955	0.343	678		1955	**0.347**
2B	A	3.40	N	N			717		2095	0.342	726		2095	0.347
2C	A	3.40	N	N			718		2095	**0.343**	726		2095	0.347
Tai Nan West Street NB														
3A	C	3.30	Y	N	10		380	100%	1690	**0.225**	339	100%	1690	**0.201**
3B	C	3.30	N	N	13		451	31%	2010	0.224	404	29%	2015	0.200
3C	C	3.30	Y	N	15		414	56%	1845	0.224	372	50%	1855	0.201
4p	B,C		5GM +	12FG =	17	sec								
5p	B		5GM +	11FG =	16	sec								
6p	B		5GM +	12FG =	17	sec								
7p	A,B		5GM +	11FG =	16	sec								
8p	B		5GM +	12FG =	17	sec								
9p	B,C		5GM +	11FG =	16	sec								

Notes:

AM Peak	2+6p+3	PM Peak	2+6p+3
Sum of Critical *y* ***Y***	**0.568**	Sum of Critical *y* ***Y***	**0.547**
Lost Time ***L*** (sec)	32	Lost Time ***L*** (sec)	32
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.668	Practical *Y* ***Ypr***	0.678
Reserve Capacity ***RC***	**18%**	Reserve Capacity ***RC***	**24%**

Date : 10/Sep/21 Junction : J5 - Cheung Sha Wan Road / Tai Nan West Street

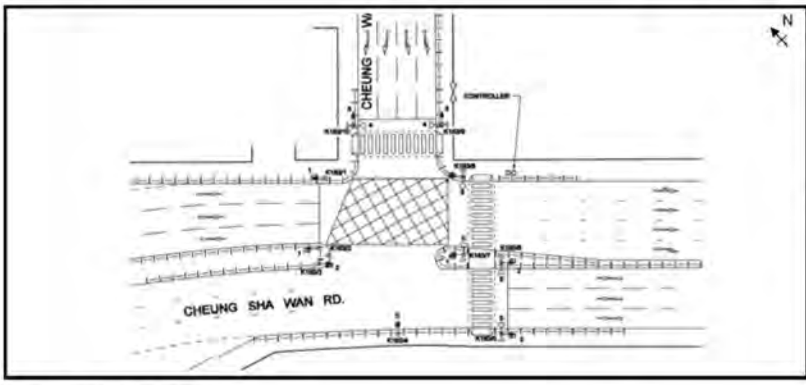
TRAFFIC SIGNAL CALCULATION SHEET

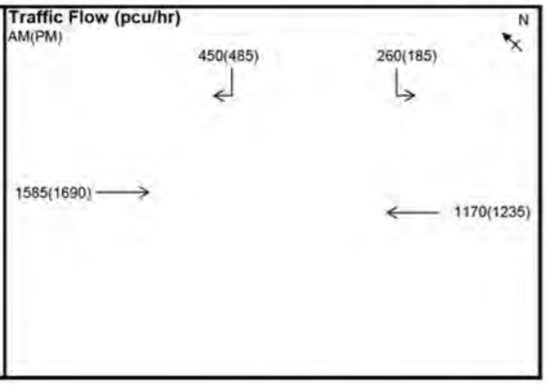
ATKINS

JOB NO. : 5190641

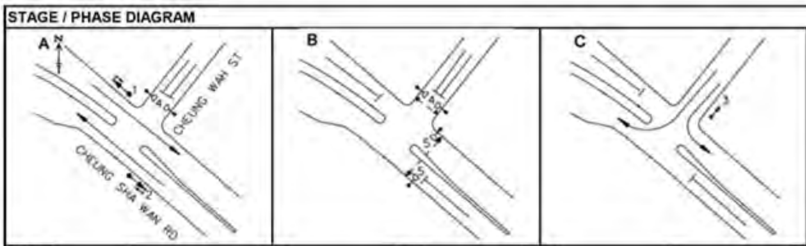
Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street — Design Year: 2021

Scheme : Existing — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=
1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.30	Y	N			504		1945	0.259	538		1945	**0.277**
1B	A	3.30	N	N			541		2085	**0.259**	576		2085	0.276
1C	A	3.30	N	N			540		2085	0.259	576		2085	0.276
Cheung Sha Wan Road WB														
2A	A	3.30	Y	N			222		975	0.228	234		975	0.240
2B	A	3.30	N	N			474		2085	0.227	500		2085	0.240
2C	A	3.30	N	N			474		2085	0.227	501		2085	0.240
Cheung Wah Street SB														
3A	C	3.00	Y	N	10		124	100%	1665	0.074	88	100%	1665	0.053
3B	C	3.00	N	N	13		136	100%	1835	0.074	97	100%	1835	0.053
3C	C	3.00	N	N	18		235	100%	1895	**0.124**	253	100%	1895	**0.134**
3D	C	3.00	Y	N	15		215	100%	1740	0.124	232	100%	1740	0.133
4p	A,B		11GM +	11FG =	22	sec								
5p	B		14GM +	12FG =	26	sec								

Notes:

AM Peak	1+5p+3	PM Peak	1+5p+3
Sum of Critical *y* ***Y***	0.383	Sum of Critical *y* ***Y***	0.410
Lost Time ***L*** (sec)	40	Lost Time ***L*** (sec)	40
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.610	Practical *Y* ***Ypr***	0.623
Reserve Capacity ***RC***	**59%**	Reserve Capacity ***RC***	**52%**

Date : 10/Sep/21 — Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street

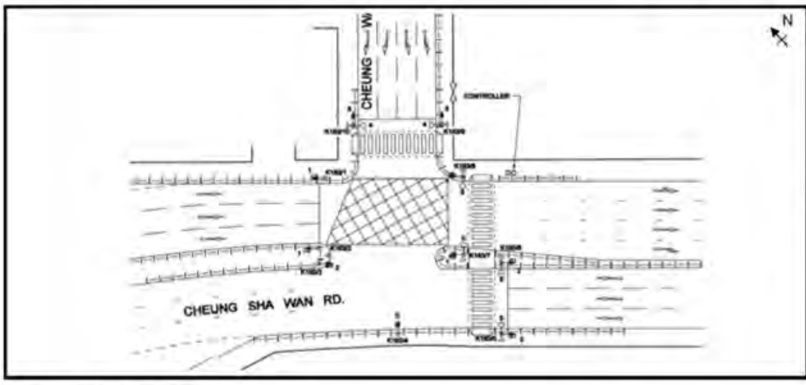
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

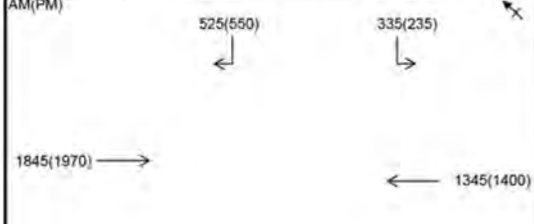
JOB NO. : 5190641

Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street   Design Year: 2031

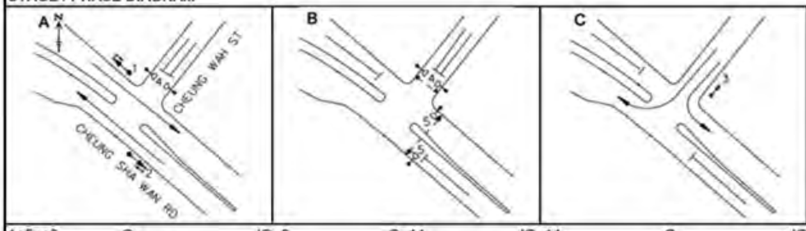
Scheme : 2031 Reference   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=
1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Proportion turning (%) *f*	AM Peak: Saturation flow *S* (pcu/hr)	AM Peak: Flow factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Proportion turning (%) *f*	PM Peak: Saturation flow *S* (pcu/hr)	PM Peak: Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.30	Y	N			587		1945	**0.302**	627		1945	**0.322**
1B	A	3.30	N	N			629		2085	0.302	671		2085	0.322
1C	A	3.30	N	N			629		2085	0.302	672		2085	0.322
Cheung Sha Wan Road WB														
2A	A	3.30	Y	N			255		975	0.262	265		975	0.272
2B	A	3.30	N	N			545		2085	0.261	567		2085	0.272
2C	A	3.30	N	N			545		2085	0.261	568		2085	0.272
Cheung Wah Street SB														
3A	C	3.00	Y	N	10		159	100%	1665	0.095	112	100%	1665	0.067
3B	C	3.00	N	N	13		176	100%	1835	0.096	123	100%	1835	0.067
3C	C	3.00	N	N	18		274	100%	1895	**0.145**	287	100%	1895	**0.151**
3D	C	3.00	Y	N	15		251	100%	1740	0.144	263	100%	1740	0.151
4p	A,B		11GM +	11FG =	22	sec								
5p	B		14GM +	12FG =	26	sec								

Notes:

AM Peak	1+5p+3	PM Peak	1+5p+3
Sum of Critical *y* ***Y***	**0.446**	Sum of Critical *y* ***Y***	**0.474**
Lost Time ***L*** (sec)	40	Lost Time ***L*** (sec)	40
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.610	Practical *Y* ***Ypr***	0.623
Reserve Capacity ***RC***	**37%**	Reserve Capacity ***RC***	**32%**

Date : 10/Sep/21   Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street

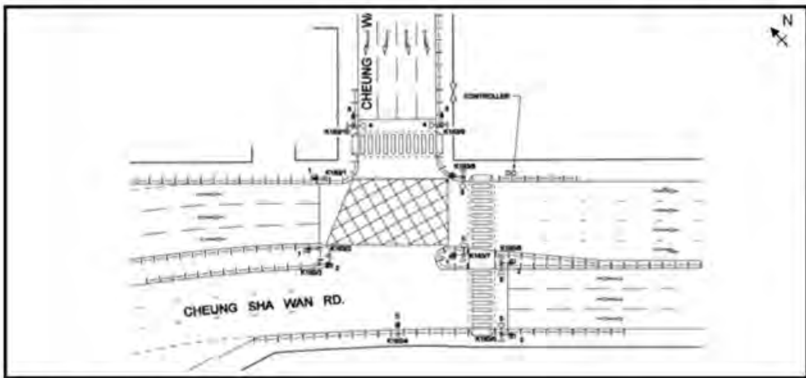
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

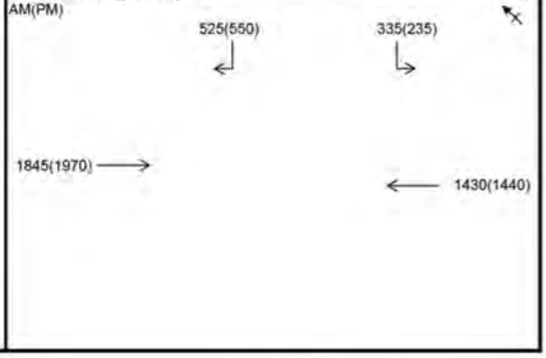
JOB NO. : 5190641

Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street   Design Year: 2031

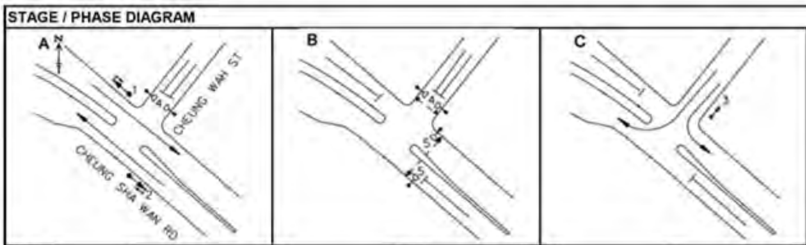
Scheme : 2031 Design   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)



STAGE / PHASE DIAGRAM



1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=
1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.30	Y	N			587		1945	**0.302**	627		1945	**0.322**
1B	A	3.30	N	N			629		2085	0.302	671		2085	0.322
1C	A	3.30	N	N			629		2085	0.302	672		2085	0.322
Cheung Sha Wan Road WB														
2A	A	3.30	Y	N			271		975	0.278	273		975	0.280
2B	A	3.30	N	N			579		2085	0.278	583		2085	0.280
2C	A	3.30	N	N			580		2085	0.278	584		2085	0.280
Cheung Wah Street SB														
3A	C	3.00	Y	N	10		159	100%	1665	0.095	112	100%	1665	0.067
3B	C	3.00	N	N	13		176	100%	1835	0.096	123	100%	1835	0.067
3C	C	3.00	N	N	18		274	100%	1895	**0.145**	287	100%	1895	**0.151**
3D	C	3.00	Y	N	15		251	100%	1740	0.144	263	100%	1740	0.151
4p	A,B		11GM +	11FG =	22	sec								
5p	B		14GM +	12FG =	26	sec								

Notes:

AM Peak	**1+5p+3**	**PM Peak**	**1+5p+3**
Sum of Critical *y* ***Y***	**0.446**	Sum of Critical *y* ***Y***	**0.474**
Lost Time ***L*** (sec)	40	Lost Time ***L*** (sec)	40
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.610	Practical *Y* ***Ypr***	0.623
Reserve Capacity ***RC***	**37%**	Reserve Capacity ***RC***	**32%**

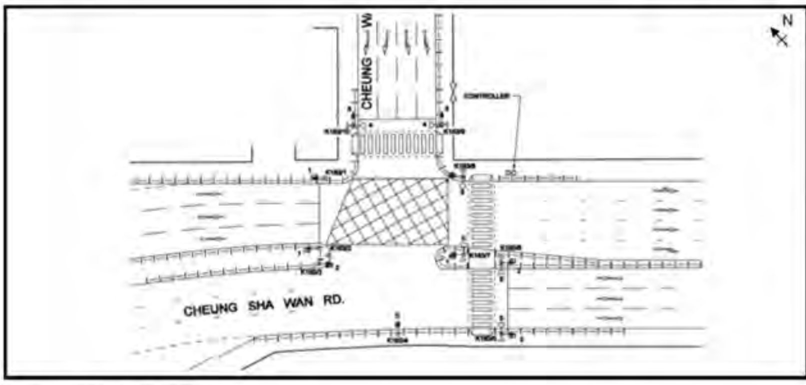
TRAFFIC SIGNAL CALCULATION SHEET

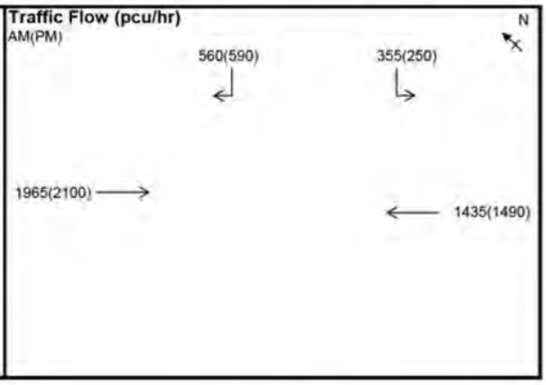
ATKINS

JOB NO. : 5190641

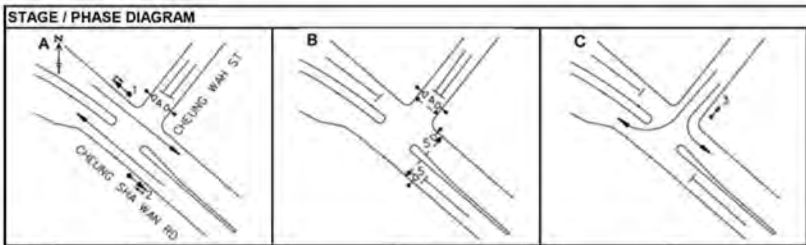
Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street | Design Year: 2037

Scheme : 2037 Reference | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=
1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.30	Y	N			625		1945	0.321	668		1945	**0.343**
1B	A	3.30	N	N			670		2085	**0.321**	716		2085	0.343
1C	A	3.30	N	N			670		2085	**0.321**	716		2085	0.343
Cheung Sha Wan Road WB														
2A	A	3.30	Y	N			272		975	0.279	282		975	0.289
2B	A	3.30	N	N			581		2085	0.279	604		2085	0.290
2C	A	3.30	N	N			582		2085	0.279	604		2085	0.290
Cheung Wah Street SB														
3A	C	3.00	Y	N	10		169	100%	1665	0.102	119	100%	1665	0.071
3B	C	3.00	N	N	13		186	100%	1835	0.101	131	100%	1835	0.071
3C	C	3.00	N	N	18		292	100%	1895	**0.154**	308	100%	1895	**0.163**
3D	C	3.00	Y	N	15		268	100%	1740	0.154	282	100%	1740	0.162
4p	A,B		11GM +	11FG =	22	sec								
5p	B		14GM +	12FG =	26	sec								

Notes:

AM Peak	1+5p+3	PM Peak	1+5p+3
Sum of Critical *y* ***Y***	0.475	Sum of Critical *y* ***Y***	0.506
Lost Time ***L*** (sec)	40	Lost Time ***L*** (sec)	40
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.610	Practical *Y* ***Ypr***	0.623
Reserve Capacity ***RC***	**28%**	Reserve Capacity ***RC***	**23%**

Date : 10/Sep/21 Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street

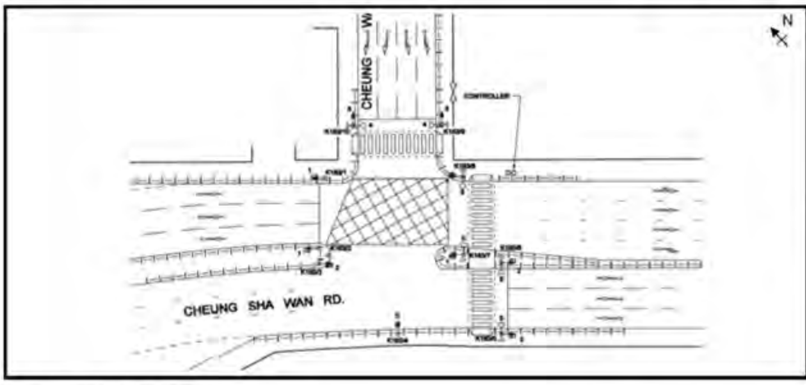
TRAFFIC SIGNAL CALCULATION SHEET

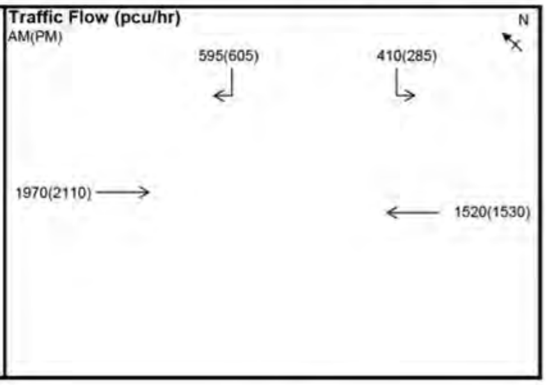
ATKINS

JOB NO. : 5190641

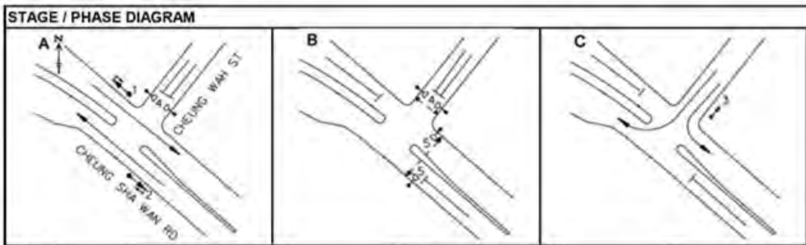
Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street | Design Year: 2037

Scheme : 2037 Design | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=
1+5p+3	G=	IG=8	G=14	IG=14	G=	IG=6	G=	IG=	G=	IG=

Capacity Calculations

							AM Peak				PM Peak			
Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*
Cheung Sha Wan Road EB														
1A	A	3.30	Y	N			627		1945	**0.322**	671		1945	0.345
1B	A	3.30	N	N			671		2085	0.322	720		2085	**0.345**
1C	A	3.30	N	N			672		2085	0.322	719		2085	0.345
Cheung Sha Wan Road WB														
2A	A	3.30	Y	N			288		975	0.295	290		975	0.297
2B	A	3.30	N	N			616		2085	0.295	620		2085	0.297
2C	A	3.30	N	N			616		2085	0.295	620		2085	0.297
Cheung Wah Street SB														
3A	C	3.00	Y	N	10		195	100%	1665	0.117	136	100%	1665	0.082
3B	C	3.00	N	N	13		215	100%	1835	0.117	149	100%	1835	0.081
3C	C	3.00	N	N	18		310	100%	1895	0.164	315	100%	1895	0.166
3D	C	3.00	Y	N	15		285	100%	1740	**0.164**	290	100%	1740	**0.167**
4p	A,B		11GM +	11FG =	22	sec								
5p	B		14GM +	12FG =	26	sec								

Notes:

AM Peak	1+5p+3	PM Peak	1+5p+3
Sum of Critical *y* ***Y***	**0.486**	Sum of Critical *y* ***Y***	**0.512**
Lost Time ***L*** (sec)	40	Lost Time ***L*** (sec)	40
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.610	Practical *Y* ***Ypr***	0.623
Reserve Capacity ***RC***	**25%**	Reserve Capacity ***RC***	**22%**

Date : 10/Sep/21 Junction : J6 - Cheung Sha Wan Road / Cheung Wah Street

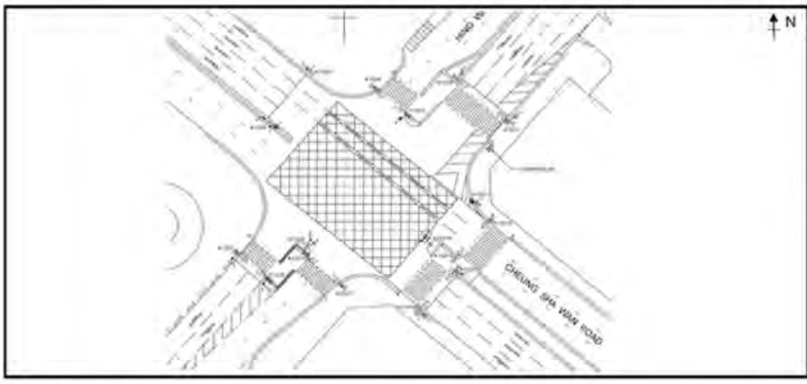
TRAFFIC SIGNAL CALCULATION SHEET

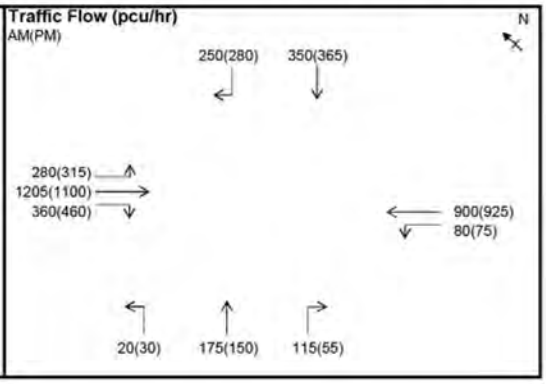
ATKINS

JOB NO. : 5190641

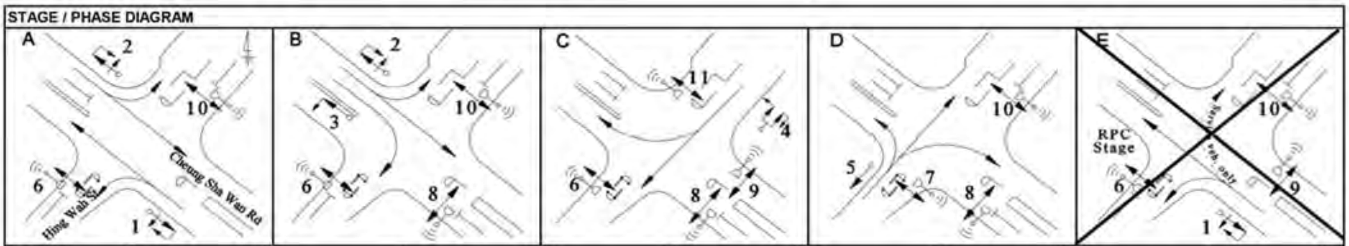
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street   Design Year: 2021

Scheme : Existing   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Proportion turning (%) *f*	AM Peak: Saturation flow *S* (pcu/hr)	AM Peak: Flow factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Proportion turning (%) *f*	PM Peak: Saturation flow *S* (pcu/hr)	PM Peak: Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		305	26%	1905	0.160	312	24%	1910	0.163
1B	A,E	3.50	N	N			338		2105	**0.161**	344		2105	**0.163**
1C	A,E	3.50	N	N			337		2105	0.160	344		2105	**0.163**
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		449	62%	1800	0.249	424	74%	1775	0.239
2B	A,B	3.20	N	N			518		2075	0.250	496		2075	0.239
2C	A,B	3.20	N	N			518		2075	0.250	495		2075	0.239
3A	B	3.20	N	N	23		360	100%	1945	**0.185**	460	100%	1945	**0.237**
Hing Wah Street SB														
4A	C	3.30	Y	N			195		1945	0.100	210		1945	0.108
4B	C	3.30	N	N	30		207	25%	2060	**0.100**	222	30%	2055	**0.108**
4C	C	3.30	N	N	28		198	100%	1975	0.100	213	100%	1975	0.108
Hing Wah Street NB														
5A	D	3.50	Y	N	15		160	13%	1940	**0.082**	120	25%	1915	**0.063**
5B	D	3.50	N	N	30		150	77%	1825	0.082	115	48%	1850	0.062
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	**1+3+4+5**	**PM Peak**	**1+3+4+5**
Sum of Critical *y* ***Y***	**0.529**	Sum of Critical *y* ***Y***	**0.571**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	26
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.711	Practical *Y* ***Ypr***	0.720
Reserve Capacity ***RC***	**35%**	Reserve Capacity ***RC***	**26%**

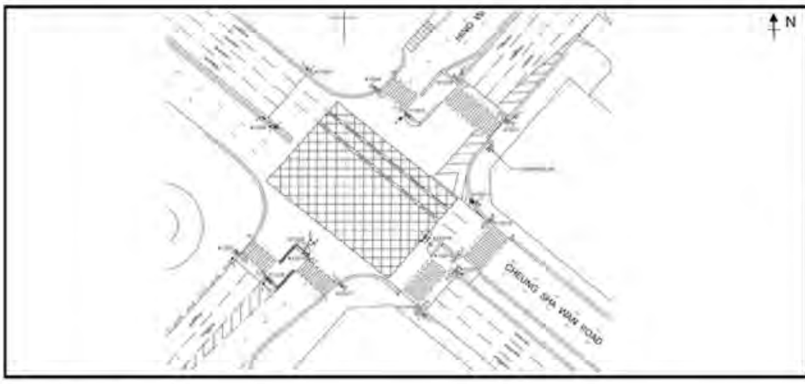
Date : 10/Sep/21   Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

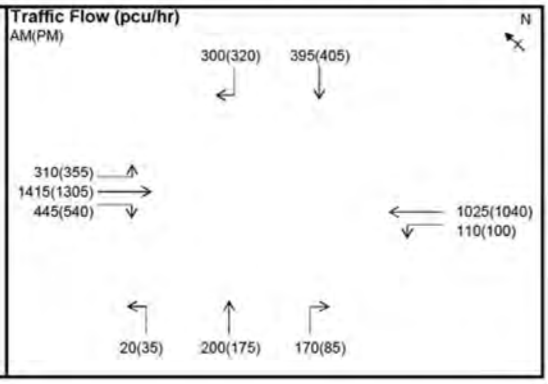
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

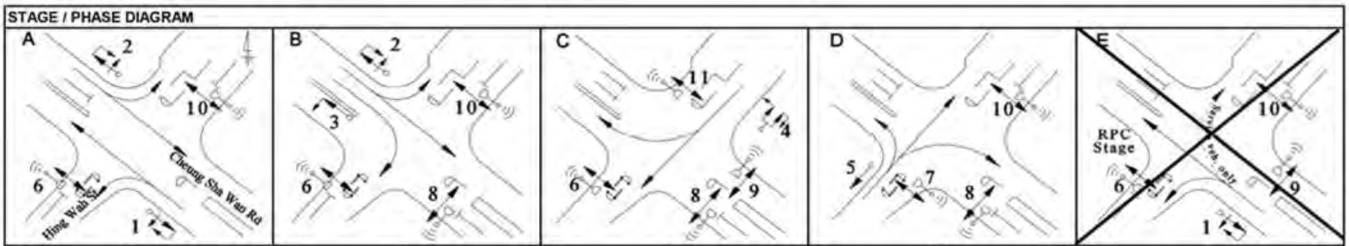
JOB NO. : 5190641

Junction :	J7 - Cheung Sha Wan Road / Hing Wah Street			Design Year:	2031
Scheme :	2031 Reference	Designed by:	KH	Checked by:	EC





STAGE / PHASE DIAGRAM



1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		352	31%	1895	0.186	355	28%	1900	**0.187**
1B	A,E	3.50	N	N			392		2105	**0.186**	393		2105	0.187
1C	A,E	3.50	N	N			391		2105	0.186	392		2105	0.186
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		523	59%	1805	0.290	499	71%	1785	0.280
2B	A,B	3.20	N	N			601		2075	0.290	581		2075	0.280
2C	A,B	3.20	N	N			601		2075	0.290	580		2075	0.280
3A	B	3.20	N	N	23		445	100%	1945	**0.229**	540	100%	1945	**0.278**
Hing Wah Street SB														
4A	C	3.30	Y	N			226		1945	0.116	236		1945	0.121
4B	C	3.30	N	N	30		239	29%	2055	0.116	249	32%	2050	0.121
4C	C	3.30	N	N	28		230	100%	1975	**0.116**	240	100%	1975	**0.122**
Hing Wah Street NB														
5A	D	3.50	Y	N	15		202	10%	1945	**0.104**	151	23%	1920	**0.079**
5B	D	3.50	N	N	30		188	90%	1815	0.104	144	59%	1840	0.078
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+5
Sum of Critical *y* ***Y***	**0.635**	Sum of Critical *y* ***Y***	**0.665**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	26
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.711	Practical Y ***Ypr***	0.720
Reserve Capacity ***RC***	**12%**	Reserve Capacity ***RC***	**8%**

Date : 10/Sep/21 Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

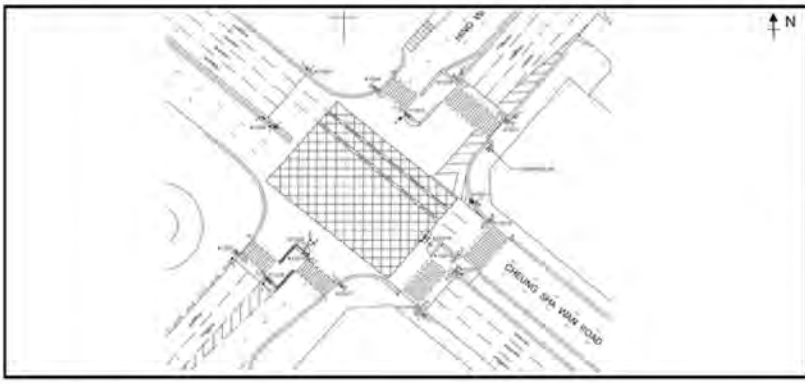
TRAFFIC SIGNAL CALCULATION SHEET

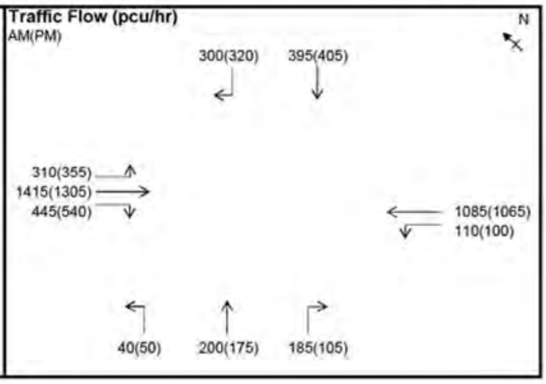
ATKINS

JOB NO. : 5190641

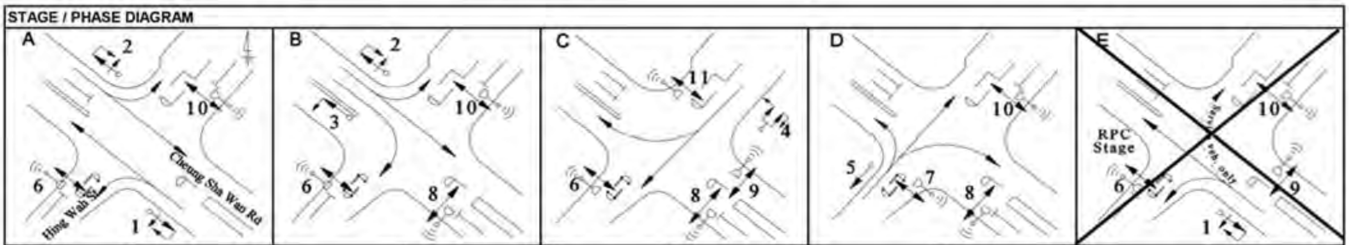
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street   Design Year: 2031

Scheme : 2031 Design   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		371	30%	1895	**0.196**	363	28%	1900	**0.191**
1B	A,E	3.50	N	N			412		2105	0.196	401		2105	0.190
1C	A,E	3.50	N	N			412		2105	0.196	401		2105	0.190
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		523	59%	1805	0.290	499	71%	1785	0.280
2B	A,B	3.20	N	N			601		2075	0.290	581		2075	0.280
2C	A,B	3.20	N	N			601		2075	0.290	580		2075	0.280
3A	B	3.20	N	N	23		445	100%	1945	**0.229**	540	100%	1945	**0.278**
Hing Wah Street SB														
4A	C	3.30	Y	N			226		1945	0.116	236		1945	0.121
4B	C	3.30	N	N	30		239	29%	2055	0.116	249	32%	2050	0.121
4C	C	3.30	N	N	28		230	100%	1975	**0.116**	240	100%	1975	**0.122**
Hing Wah Street NB														
5A	D	3.50	Y	N	15		219	18%	1930	0.113	168	30%	1910	0.088
5B	D	3.50	N	N	30		206	90%	1815	**0.113**	162	65%	1835	**0.088**
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+5
Sum of Critical *y* ***Y***	**0.655**	Sum of Critical *y* ***Y***	**0.678**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	26
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.711	Practical *Y* ***Ypr***	0.720
Reserve Capacity ***RC***	**9%**	Reserve Capacity ***RC***	**6%**

Date : 10/Sep/21   Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

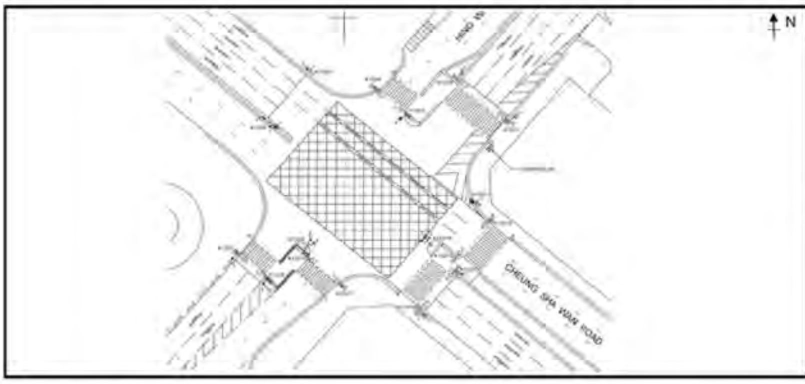
TRAFFIC SIGNAL CALCULATION SHEET

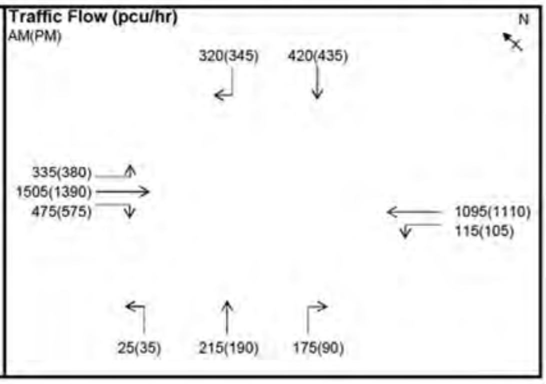
ATKINS

JOB NO. : 5190641

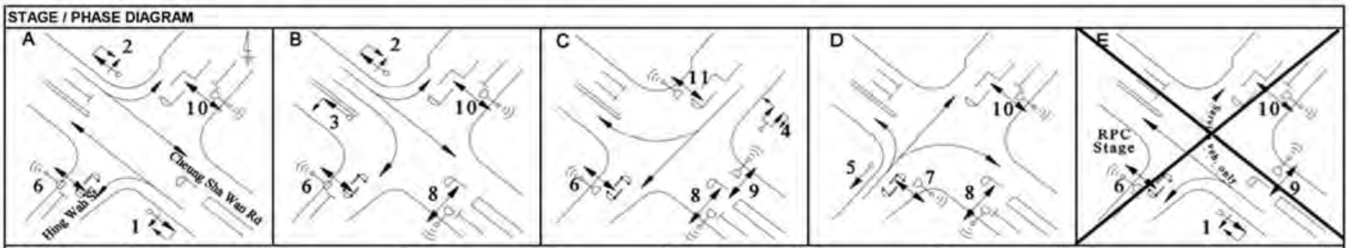
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street — Design Year: 2037

Scheme : 2037 Reference — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		376	31%	1895	**0.198**	378	28%	1900	0.199
1B	A,E	3.50	N	N			417		2105	0.198	419		2105	**0.199**
1C	A,E	3.50	N	N			417		2105	0.198	418		2105	0.199
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		558	60%	1805	0.309	532	71%	1780	0.299
2B	A,B	3.20	N	N			641		2075	0.309	619		2075	0.298
2C	A,B	3.20	N	N			641		2075	0.309	619		2075	0.298
3A	B	3.20	N	N	23		475	100%	1945	**0.244**	575	100%	1945	**0.296**
Hing Wah Street SB														
4A	C	3.30	Y	N			241		1945	0.124	254		1945	0.131
4B	C	3.30	N	N	30		254	30%	2055	0.124	268	32%	2050	**0.131**
4C	C	3.30	N	N	28		245	100%	1975	**0.124**	258	100%	1975	0.131
Hing Wah Street NB														
5A	D	3.50	Y	N	15		215	12%	1940	**0.111**	161	22%	1925	0.084
5B	D	3.50	N	N	30		200	88%	1815	0.110	154	58%	1840	**0.084**
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+5
Sum of Critical *y* ***Y***	**0.678**	Sum of Critical *y* ***Y***	**0.709**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	26
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.711	Practical *Y* ***Ypr***	0.720
Reserve Capacity ***RC***	**5%**	Reserve Capacity ***RC***	**2%**

Date : 10/Sep/21 — Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

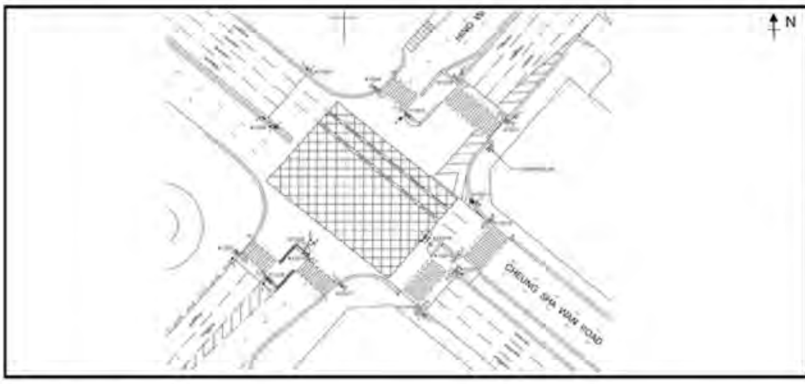
TRAFFIC SIGNAL CALCULATION SHEET

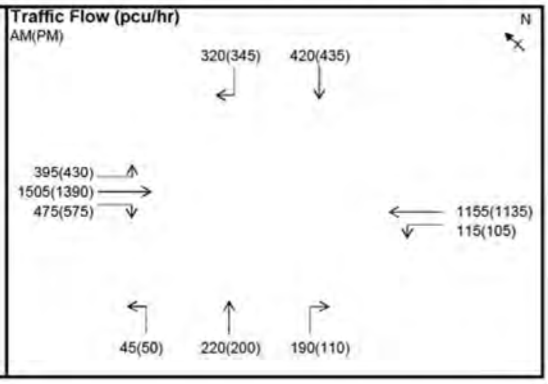
ATKINS

JOB NO. : 5190641

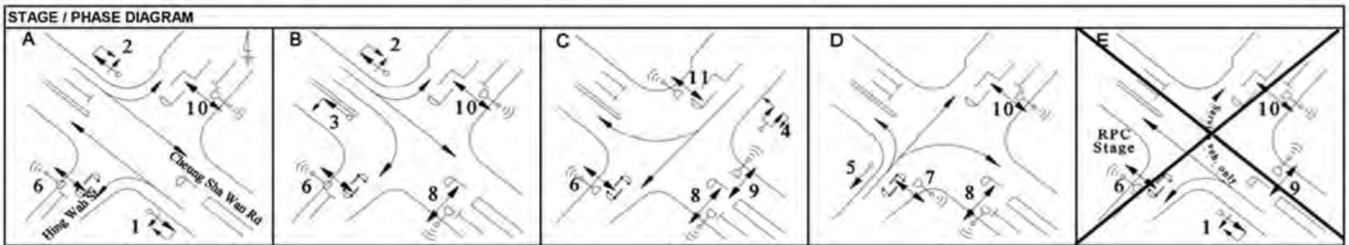
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street | Design Year: 2037

Scheme : 2037 Design | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		395	29%	1900	0.208	386	27%	1905	0.203
1B	A,E	3.50	N	N			438		2105	**0.208**	427		2105	**0.203**
1C	A,E	3.50	N	N			437		2105	0.208	427		2105	**0.203**
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		572	69%	1785	0.320	544	79%	1765	0.308
2B	A,B	3.20	N	N			664		2075	0.320	638		2075	0.307
2C	A,B	3.20	N	N			664		2075	0.320	638		2075	0.307
3A	B	3.20	N	N	23		475	100%	1945	**0.244**	575	100%	1945	**0.296**
Hing Wah Street SB														
4A	C	3.30	Y	N			241		1945	0.124	254		1945	0.131
4B	C	3.30	N	N	30		254	30%	2055	0.124	268	32%	2050	**0.131**
4C	C	3.30	N	N	28		245	100%	1975	**0.124**	258	100%	1975	0.131
Hing Wah Street NB														
5A	D	3.50	Y	N	15		234	19%	1930	0.121	184	27%	1915	**0.096**
5B	D	3.50	N	N	30		221	86%	1815	**0.122**	176	63%	1835	0.096
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+5
Sum of Critical *y* ***Y***	0.698	Sum of Critical *y* ***Y***	0.725
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	26
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.711	Practical *Y* ***Ypr***	0.720
Reserve Capacity ***RC***	2%	Reserve Capacity ***RC***	-1%

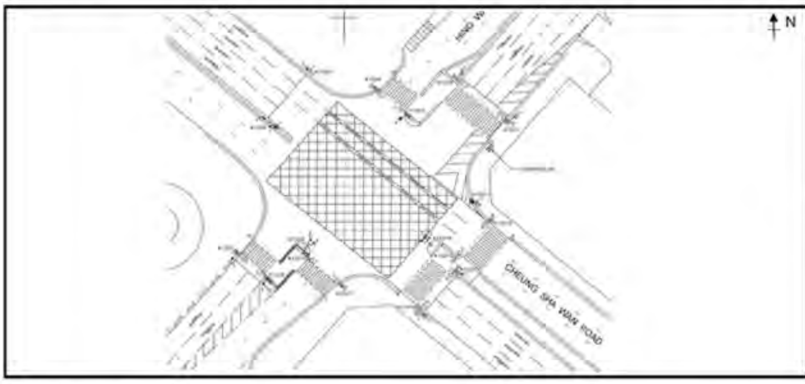
TRAFFIC SIGNAL CALCULATION SHEET

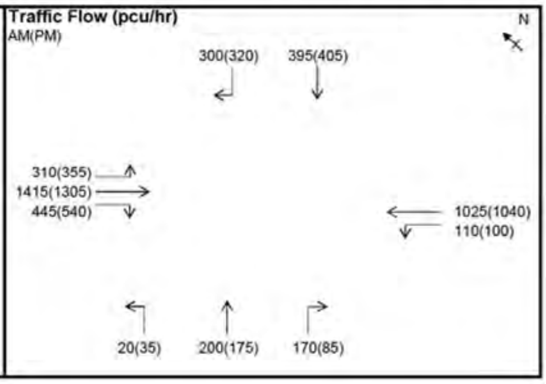
ATKINS

JOB NO. : 5190641

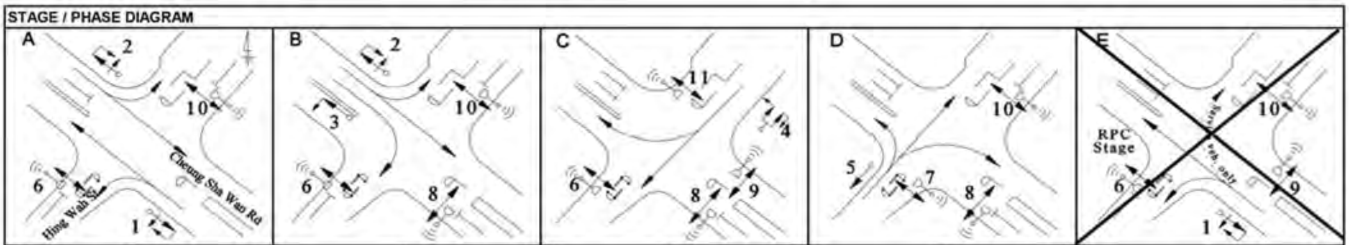
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street — Design Year: 2031

Scheme : 2031 Reference (with junction improvement) — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



	A		B		C		D		E	
1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+7p	G=	IG=5	G=	IG=6	G=	IG=11	G=8	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		352	31%	1895	0.186	355	28%	1900	**0.187**
1B	A,E	3.50	N	N			392		2105	**0.186**	393		2105	0.187
1C	A,E	3.50	N	N			391		2105	0.186	392		2105	0.186
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		523	59%	1805	0.290	499	71%	1785	0.280
2B	A,B	3.20	N	N			601		2075	0.290	581		2075	0.280
2C	A,B	3.20	N	N			601		2075	0.290	580		2075	0.280
3A	B	3.20	N	N	23		445	100%	1945	**0.229**	540	100%	1945	**0.278**
Hing Wah Street SB														
4A	C	3.30	Y	N			156		1360	**0.115**	160		1360	**0.118**
4B	C	3.30	N	N			239		2085	0.115	245		2085	0.118
4C	C	3.30	N	N	30		150	100%	1985	0.076	160	100%	1985	0.081
4D	C	3.30	N	N	28		150	100%	1975	0.076	160	100%	1975	0.081
Hing Wah Street NB														
5A	D	3.50	Y	N	15		20	100%	1785	0.011	35	100%	1785	0.020
5B	D	3.50	N	N			189		2105	0.090	132		2105	0.063
5C	D	3.50	N	N	30		181	94%	2010	**0.090**	128	66%	2035	0.063
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+7p
Sum of Critical *y* ***Y***	**0.620**	Sum of Critical *y* ***Y***	**0.582**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	37
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.711	Practical *Y* ***Ypr***	0.644
Reserve Capacity ***RC***	**15%**	Reserve Capacity ***RC***	**11%**

Date : 10/Sep/21 — Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

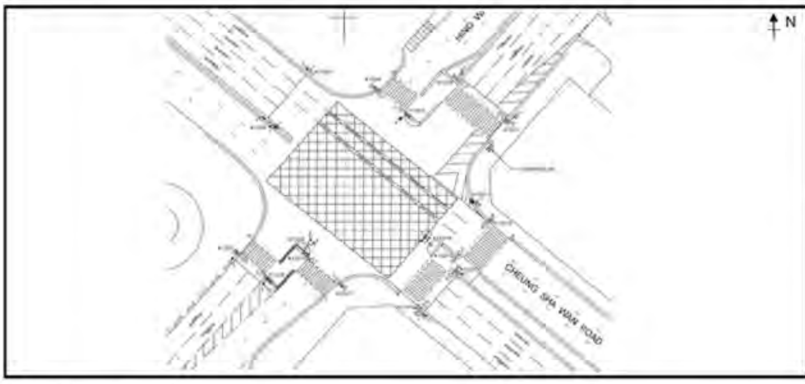
TRAFFIC SIGNAL CALCULATION SHEET

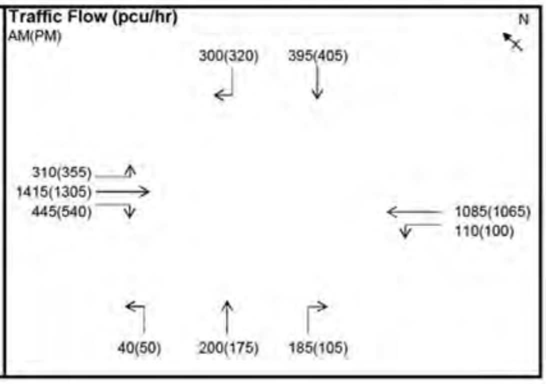
ATKINS

JOB NO. : 5190641

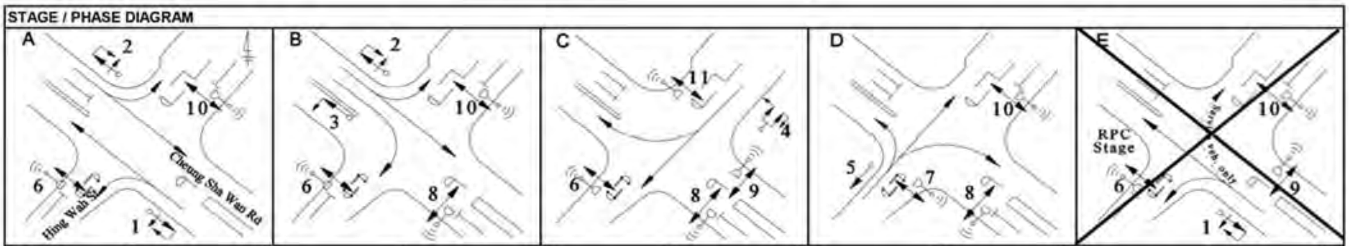
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street — Design Year: 2031

Scheme : 2031 Design (with junction improvement) — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+7p	G=	IG=5	G=	IG=6	G=	IG=11	G=8	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		371	30%	1895	**0.196**	363	28%	1900	**0.191**
1B	A,E	3.50	N	N			412		2105	0.196	401		2105	0.190
1C	A,E	3.50	N	N			412		2105	0.196	401		2105	0.190
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		523	59%	1805	0.290	499	71%	1785	0.280
2B	A,B	3.20	N	N			601		2075	0.290	581		2075	0.280
2C	A,B	3.20	N	N			601		2075	0.290	580		2075	0.280
3A	B	3.20	N	N	23		445	100%	1945	**0.229**	540	100%	1945	**0.278**
Hing Wah Street SB														
4A	C	3.30	Y	N			156		1360	**0.115**	160		1360	**0.118**
4B	C	3.30	N	N			239		2085	0.115	245		2085	0.118
4C	C	3.30	N	N	30		150	100%	1985	0.076	160	100%	1985	0.081
4D	C	3.30	N	N	28		150	100%	1975	0.076	160	100%	1975	0.081
Hing Wah Street NB														
5A	D	3.50	Y	N	15		40	100%	1785	0.022	50	100%	1785	0.028
5B	D	3.50	N	N			197		2105	0.094	143		2105	0.068
5C	D	3.50	N	N	30		188	98%	2005	**0.094**	137	77%	2025	0.068
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+7p
Sum of Critical *y* ***Y***	**0.633**	Sum of Critical *y* ***Y***	**0.586**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	37
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.711	Practical *Y* ***Ypr***	0.644
Reserve Capacity ***RC***	**12%**	Reserve Capacity ***RC***	**10%**

Date : 10/Sep/21 — Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

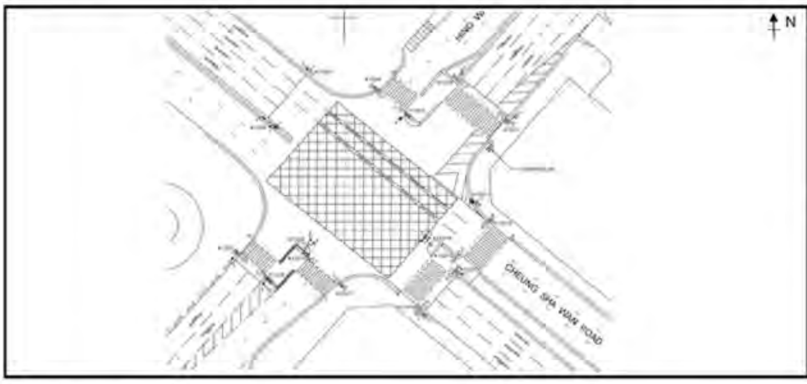
TRAFFIC SIGNAL CALCULATION SHEET

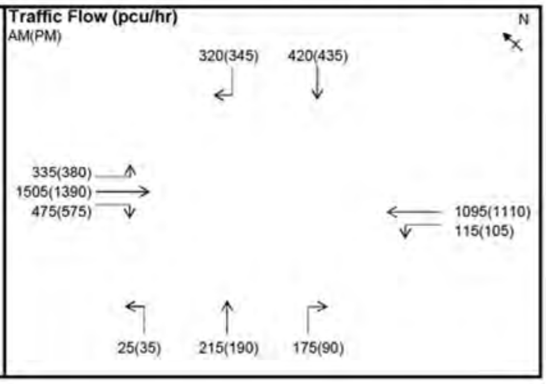
ATKINS

JOB NO. : 5190641

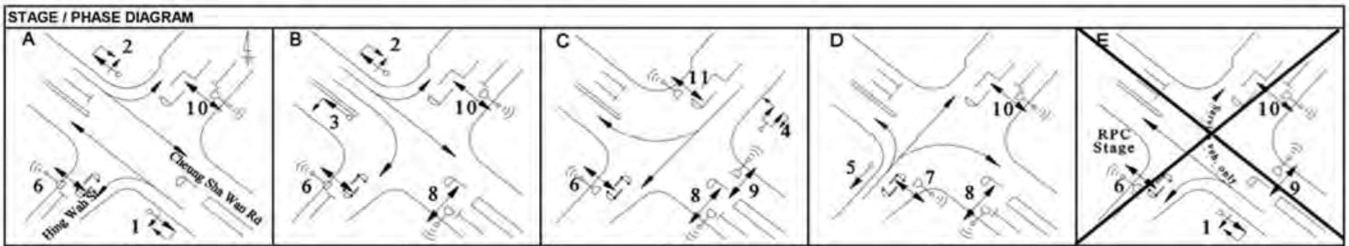
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street   Design Year: 2037

Scheme : 2037 Reference (with junction improvement)   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+3+4+5	G=	IG=5	G=	IG=6	G=	IG=9	G=	IG=10	G=	IG=
1+3+4+7p	G=	IG=5	G=	IG=6	G=	IG=11	G=8	IG=10	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		376	31%	1895	**0.198**	378	28%	1900	0.199
1B	A,E	3.50	N	N			417		2105	0.198	419		2105	**0.199**
1C	A,E	3.50	N	N			417		2105	0.198	418		2105	0.199
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		558	60%	1805	0.309	532	71%	1780	0.299
2B	A,B	3.20	N	N			641		2075	0.309	619		2075	0.298
2C	A,B	3.20	N	N			641		2075	0.309	619		2075	0.298
3A	B	3.20	N	N	23		475	100%	1945	**0.244**	575	100%	1945	**0.296**
Hing Wah Street SB														
4A	C	3.30	Y	N			166		1360	**0.122**	172		1360	**0.126**
4B	C	3.30	N	N			254		2085	0.122	263		2085	0.126
4C	C	3.30	N	N	30		160	100%	1985	0.081	173	100%	1985	0.087
4D	C	3.30	N	N	28		160	100%	1975	0.081	172	100%	1975	0.087
Hing Wah Street NB														
5A	D	3.50	Y	N	15		25	100%	1785	0.014	35	100%	1785	0.020
5B	D	3.50	N	N			199		2105	0.095	142		2105	0.067
5C	D	3.50	N	N	30		191	92%	2015	**0.095**	138	65%	2040	0.068
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+7p
Sum of Critical *y* ***Y***	**0.659**	Sum of Critical *y* ***Y***	**0.621**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	37
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.711	Practical *Y* ***Ypr***	0.644
Reserve Capacity ***RC***	**8%**	Reserve Capacity ***RC***	**4%**

Date : 10/Sep/21   Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

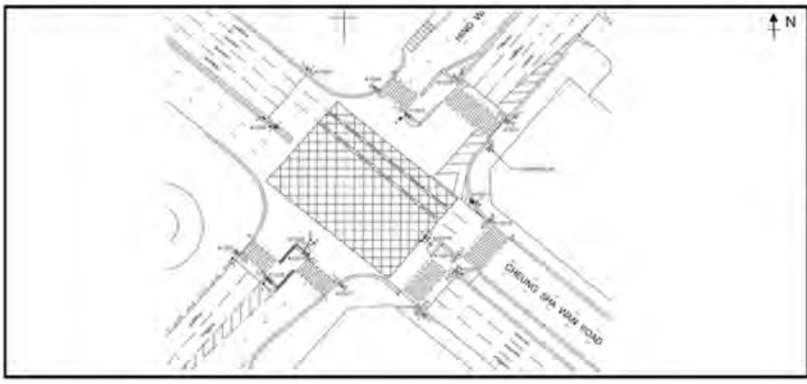
TRAFFIC SIGNAL CALCULATION SHEET

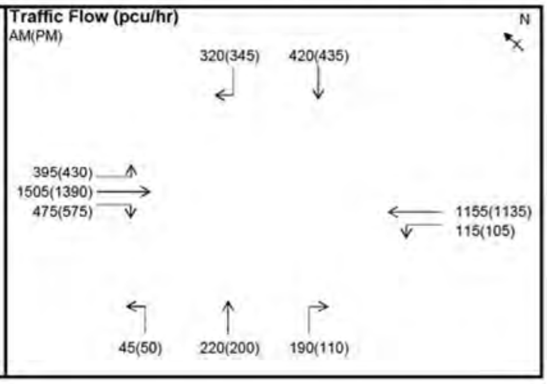
ATKINS

JOB NO. : 5190641

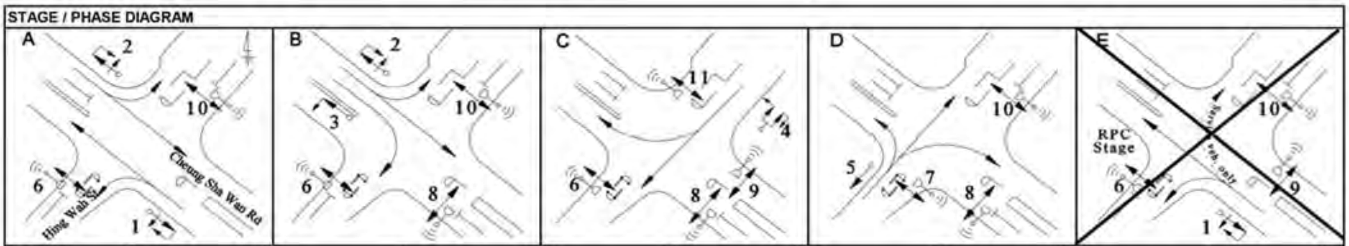
Junction : J7 - Cheung Sha Wan Road / Hing Wah Street | Design Year: 2037

Scheme : 2037 Design (with junction improvement) | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



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Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road WB														
1A	A,E	3.50	Y	N	13		395	29%	1900	0.208	386	27%	1905	0.203
1B	A,E	3.50	N	N			438		2105	**0.208**	427		2105	**0.203**
1C	A,E	3.50	N	N			437		2105	0.208	427		2105	**0.203**
Cheung Sha Wan Road EB														
2A	A,B	3.20	Y	N	13		572	69%	1785	0.320	544	79%	1765	0.308
2B	A,B	3.20	N	N			664		2075	0.320	638		2075	0.307
2C	A,B	3.20	N	N			664		2075	0.320	638		2075	0.307
3A	B	3.20	N	N	23		475	100%	1945	**0.244**	575	100%	1945	**0.296**
Hing Wah Street SB														
4A	C	3.30	Y	N			166		1360	**0.122**	172		1360	**0.126**
4B	C	3.30	N	N			254		2085	0.122	263		2085	0.126
4C	C	3.30	N	N	30		160	100%	1985	0.081	173	100%	1985	0.087
4D	C	3.30	N	N	28		160	100%	1975	0.081	172	100%	1975	0.087
Hing Wah Street NB														
5A	D	3.50	Y	N	15		45	100%	1785	0.025	50	100%	1785	0.028
5B	D	3.50	N	N			210		2105	**0.100**	158		2105	**0.075**
5C	D	3.50	N	N	30		200	95%	2010	0.100	152	72%	2030	0.075
6p	A,B,C,E		7GM +	7FG =	14	sec								
7p	D		8GM +	8FG =	16	sec								
8p	B,C,D		9GM +	9FG =	18	sec								
9p	C,E		9GM +	9FG =	18	sec								
10p	A,B,D,E		11GM +	11FG =	22	sec								
11p	C		7GM +	7FG =	14	sec								

Notes:

AM Peak	1+3+4+5	PM Peak	1+3+4+5
Sum of Critical *y* ***Y***	**0.674**	Sum of Critical *y* ***Y***	**0.700**
Lost Time ***L*** (sec)	26	Lost Time ***L*** (sec)	26
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.711	Practical Y ***Ypr***	0.720
Reserve Capacity ***RC***	**6%**	Reserve Capacity ***RC***	**3%**

Date : 10/Sep/21 Junction : J7 - Cheung Sha Wan Road / Hing Wah Street

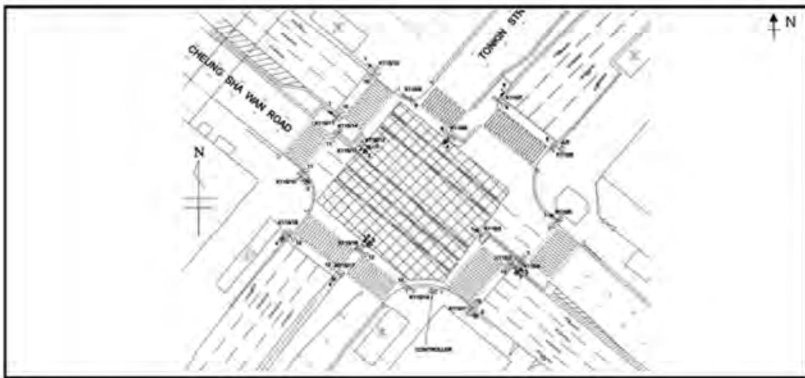
TRAFFIC SIGNAL CALCULATION SHEET

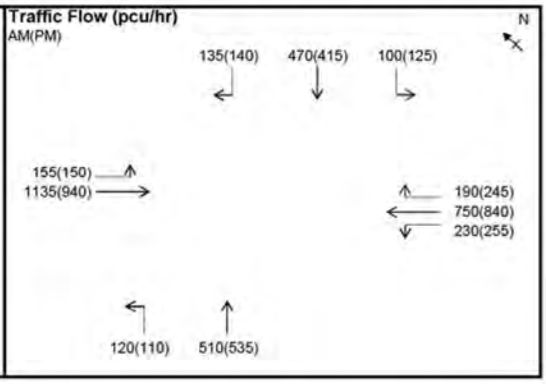
ATKINS

JOB NO. : 5190641

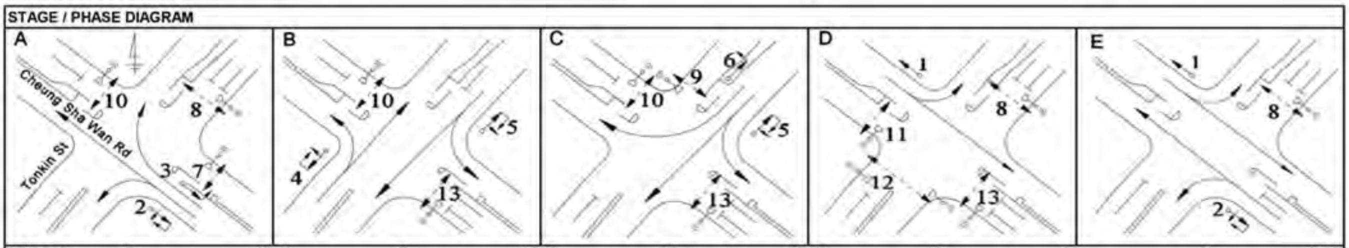
Junction : J8 -Cheung Sha Wan Road / Tonkin Street | Design Year: 2021

Scheme : Existing | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7
3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	D,E	3.50	Y	N	13		398	39%	1875	**0.212**	335	45%	1865	**0.180**
1B	D,E	3.50	N	N			446		2105	0.212	378		2105	0.180
1C	D,E	3.50	N	N			446		2105	0.212	377		2105	0.179
Cheung Sha Wan Road WB														
2A	A,E	3.00	Y	N	18		298	77%	1795	0.166	333	77%	1795	0.186
2B	A,E	3.00	N	N			341		2055	0.166	381		2055	0.185
2C	A,E	3.00	N	N			341		2055	0.166	381		2055	0.185
3A	A	3.00	N	N	28		190	100%	1560	**0.122**	245	100%	1560	**0.157**
Tonkin Street NB														
4A	B	3.00	Y	N	13		120	100%	1370	**0.088**	110	100%	1370	0.080
4B	B	3.00	N	N			170		2055	0.083	178		2055	0.087
4C	B	3.00	N	N			170		2055	0.083	179		2055	**0.087**
4D	B	3.00	N	N			170		2055	0.083	178		2055	0.087
Tonkin Street SB														
5A	B,C	3.50	Y	N	15		83	100%	715	0.116	79	100%	715	0.110
5B	B,C	3.50	N	N	18		243	7%	2090	0.116	229	20%	2070	0.111
5C	B,C	3.50	N	N			244		2105	0.116	232		2105	0.110
6A	C	3.50	N	N	25		135	100%	1985	**0.068**	140	100%	1985	**0.071**
7p	A		5GM +	9FG =	14	sec								
8p	A,D,E		7GM +	13FG =	20	sec								
9p	C		5GM +	9FG =	14	sec								
10p	A,B,C		5GM +	10FG =	15	sec								
11p	D		5GM +	9FG =	14	sec								
12p	D		6GM +	11FG =	17	sec								
13p	B,C,D		6GM +	11FG =	17	sec								

Notes:

AM Peak	3+4+6+1	PM Peak	3+4+6+1
Sum of Critical *y* ***Y***	**0.490**	Sum of Critical *y* ***Y***	**0.494**
Lost Time ***L*** (sec)	24	Lost Time ***L*** (sec)	24
Cycle Time ***c*** (sec)	136	Cycle Time ***c*** (sec)	136
Practical *Y* ***Ypr***	0.741	Practical *Y* ***Ypr***	0.741
Reserve Capacity ***RC***	**51%**	Reserve Capacity ***RC***	**50%**

Date : 10/Sep/21 Junction : J8 -Cheung Sha Wan Road / Tonkin Street

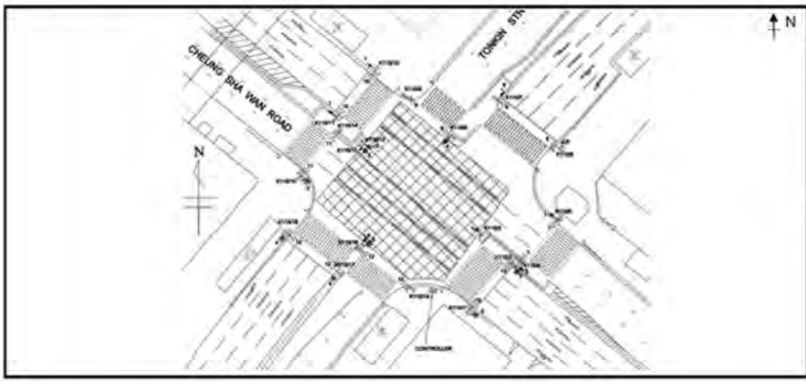
TRAFFIC SIGNAL CALCULATION SHEET

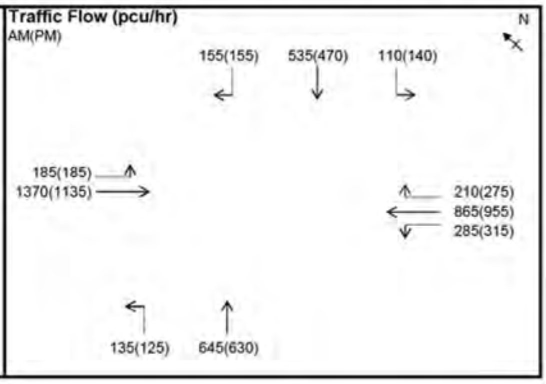
ATKINS

JOB NO. : 5190641

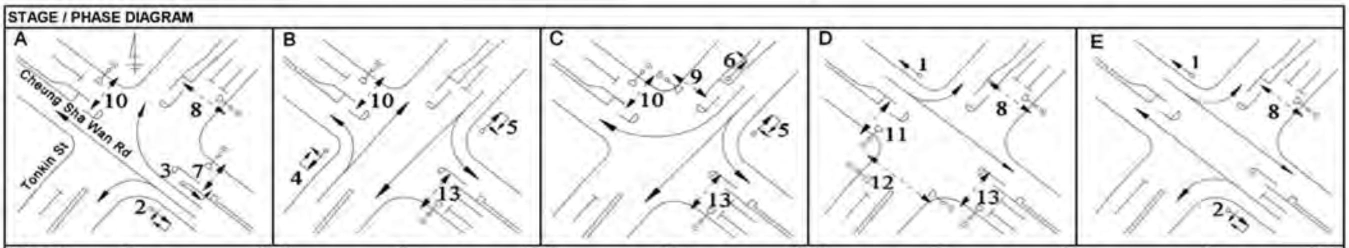
Junction : J8 -Cheung Sha Wan Road / Tonkin Street   Design Year: 2031

Scheme : 2031 Reference   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



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Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	D,E	3.50	Y	N	13		480	39%	1880	0.255	405	46%	1865	0.217
1B	D,E	3.50	N	N			538		2105	**0.256**	458		2105	**0.218**
1C	D,E	3.50	N	N			537		2105	0.255	457		2105	0.217
Cheung Sha Wan Road WB														
2A	A,E	3.00	Y	N	18		349	82%	1790	0.195	385	82%	1790	0.215
2B	A,E	3.00	N	N			401		2055	0.195	443		2055	0.216
2C	A,E	3.00	N	N			400		2055	0.195	442		2055	0.215
3A	A	3.00	N	N	28		210	100%	1560	**0.135**	275	100%	1560	**0.176**
Tonkin Street NB														
4A	B	3.00	Y	N	13		135	100%	1370	0.099	125	100%	1370	0.091
4B	B	3.00	N	N			215		2055	**0.105**	210		2055	**0.102**
4C	B	3.00	N	N			215		2055	**0.105**	210		2055	**0.102**
4D	B	3.00	N	N			215		2055	**0.105**	210		2055	**0.102**
Tonkin Street SB														
5A	B,C	3.50	Y	N	15		94	100%	715	0.131	89	100%	715	0.124
5B	B,C	3.50	N	N	18		275	6%	2095	0.131	258	20%	2070	0.125
5C	B,C	3.50	N	N			276		2105	0.131	263		2105	0.125
6A	C	3.50	N	N	25		155	100%	1985	**0.078**	155	100%	1985	**0.078**
7p	A		5GM +	9FG =	14	sec								
8p	A,D,E		7GM +	13FG =	20	sec								
9p	C		5GM +	9FG =	14	sec								
10p	A,B,C		5GM +	10FG =	15	sec								
11p	D		5GM +	9FG =	14	sec								
12p	D		6GM +	11FG =	17	sec								
13p	B,C,D		6GM +	11FG =	17	sec								

Notes:

AM Peak	3+4+6+1	PM Peak	3+4+6+1
Sum of Critical *y* ***Y***	**0.573**	Sum of Critical *y* ***Y***	**0.574**
Lost Time ***L*** (sec)	24	Lost Time ***L*** (sec)	24
Cycle Time ***c*** (sec)	136	Cycle Time ***c*** (sec)	136
Practical *Y* ***Ypr***	0.741	Practical *Y* ***Ypr***	0.741
Reserve Capacity ***RC***	**29%**	Reserve Capacity ***RC***	**29%**

Date : 10/Sep/21   Junction : J8 -Cheung Sha Wan Road / Tonkin Street

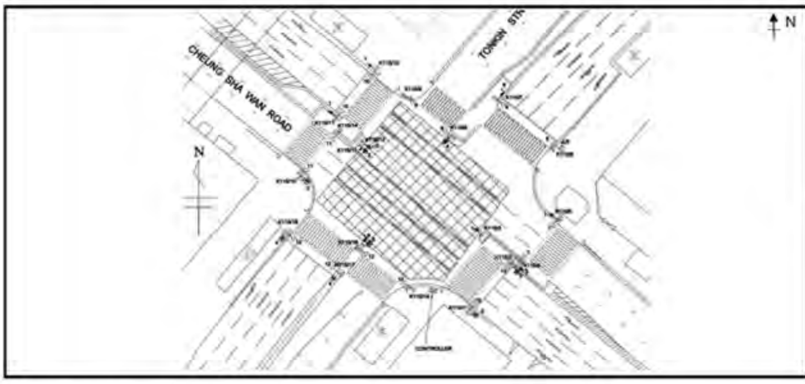
TRAFFIC SIGNAL CALCULATION SHEET

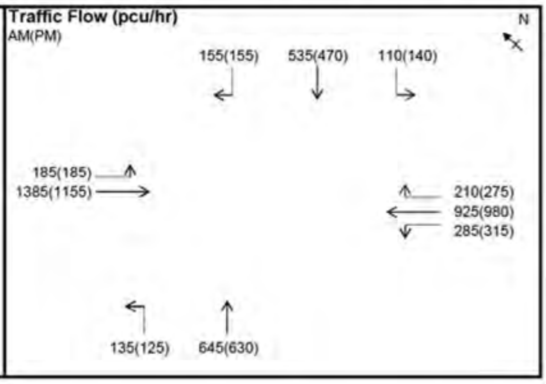
ATKINS

JOB NO. : 5190641

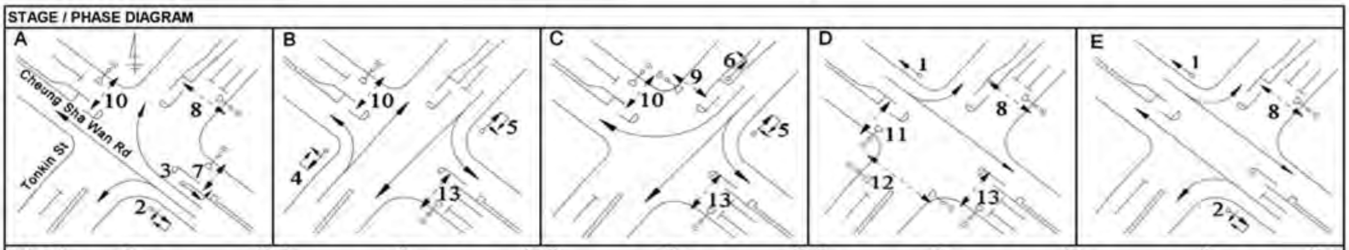
Junction : J8 -Cheung Sha Wan Road / Tonkin Street   Design Year: 2031

Scheme : 2031 Design   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7
3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	D,E	3.50	Y	N	13		484	38%	1880	0.257	411	45%	1865	0.220
1B	D,E	3.50	N	N			543		2105	**0.258**	465		2105	**0.221**
1C	D,E	3.50	N	N			543		2105	**0.258**	464		2105	0.220
Cheung Sha Wan Road WB														
2A	A,E	3.00	Y	N	18		368	77%	1795	0.205	393	80%	1790	0.220
2B	A,E	3.00	N	N			421		2055	0.205	451		2055	0.219
2C	A,E	3.00	N	N			421		2055	0.205	451		2055	0.219
3A	A	3.00	N	N	28		210	100%	1560	**0.135**	275	100%	1560	**0.176**
Tonkin Street NB														
4A	B	3.00	Y	N	13		135	100%	1370	0.099	125	100%	1370	0.091
4B	B	3.00	N	N			215		2055	**0.105**	210		2055	**0.102**
4C	B	3.00	N	N			215		2055	**0.105**	210		2055	**0.102**
4D	B	3.00	N	N			215		2055	**0.105**	210		2055	**0.102**
Tonkin Street SB														
5A	B,C	3.50	Y	N	15		94	100%	715	0.131	89	100%	715	0.124
5B	B,C	3.50	N	N	18		275	6%	2095	0.131	258	20%	2070	0.125
5C	B,C	3.50	N	N			276		2105	0.131	263		2105	0.125
6A	C	3.50	N	N	25		155	100%	1985	**0.078**	155	100%	1985	**0.078**
7p	A		5GM +	9FG =	14	sec								
8p	A,D,E		7GM +	13FG =	20	sec								
9p	C		5GM +	9FG =	14	sec								
10p	A,B,C		5GM +	10FG =	15	sec								
11p	D		5GM +	9FG =	14	sec								
12p	D		6GM +	11FG =	17	sec								
13p	B,C,D		6GM +	11FG =	17	sec								

Notes:

AM Peak	3+4+6+1	PM Peak	3+4+6+1
Sum of Critical *y* ***Y***	**0.575**	Sum of Critical *y* ***Y***	**0.577**
Lost Time ***L*** (sec)	24	Lost Time ***L*** (sec)	24
Cycle Time ***c*** (sec)	136	Cycle Time ***c*** (sec)	136
Practical *Y* ***Ypr***	0.741	Practical *Y* ***Ypr***	0.741
Reserve Capacity ***RC***	**29%**	Reserve Capacity ***RC***	**28%**

Date : 10/Sep/21   Junction : J8 -Cheung Sha Wan Road / Tonkin Street

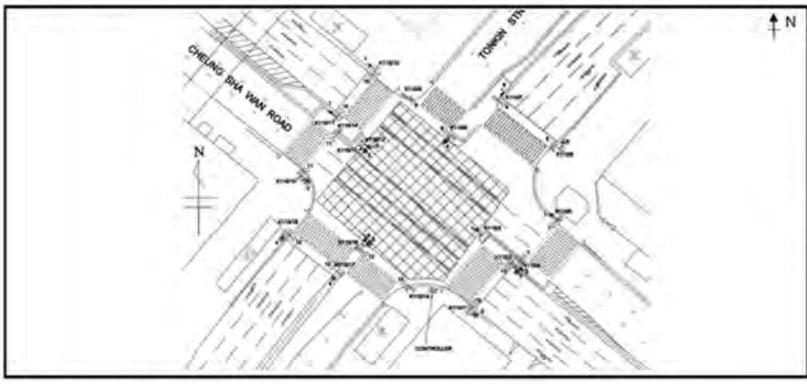
TRAFFIC SIGNAL CALCULATION SHEET

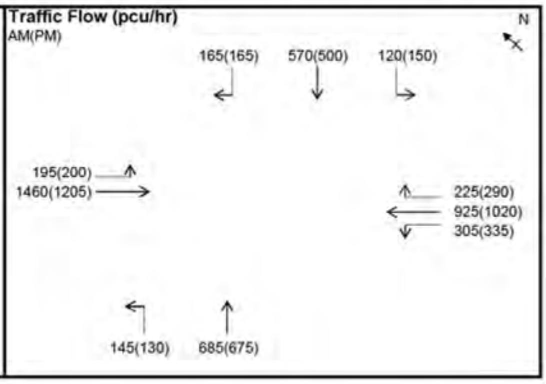
ATKINS

JOB NO. : 5190641

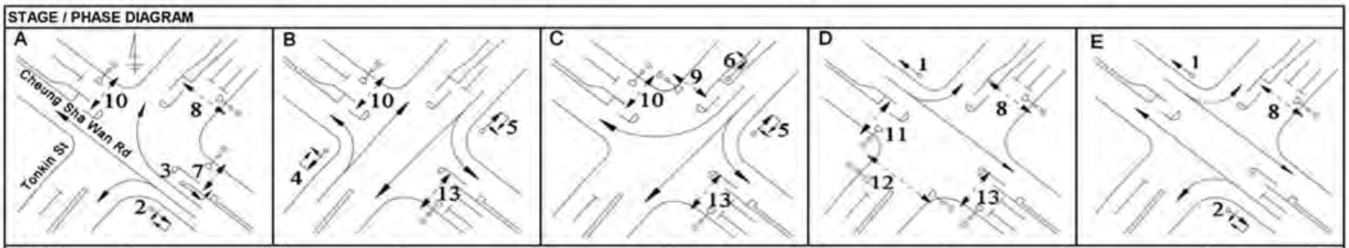
Junction : J8 -Cheung Sha Wan Road / Tonkin Street   Design Year: 2037

Scheme : 2037 Reference   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7
3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	D,E	3.50	Y	N	13		511	38%	1880	**0.272**	431	46%	1860	**0.232**
1B	D,E	3.50	N	N			572		2105	0.272	487		2105	0.231
1C	D,E	3.50	N	N			572		2105	0.272	487		2105	0.231
Cheung Sha Wan Road WB														
2A	A,E	3.00	Y	N	18		373	82%	1790	0.208	411	82%	1790	0.230
2B	A,E	3.00	N	N			429		2055	0.209	472		2055	0.230
2C	A,E	3.00	N	N			428		2055	0.208	472		2055	0.230
3A	A	3.00	N	N	28		225	100%	1560	**0.144**	290	100%	1560	**0.186**
Tonkin Street NB														
4A	B	3.00	Y	N	13		145	100%	1370	0.106	130	100%	1370	0.095
4B	B	3.00	N	N			228		2055	0.111	225		2055	**0.109**
4C	B	3.00	N	N			229		2055	**0.111**	225		2055	**0.109**
4D	B	3.00	N	N			228		2055	0.111	225		2055	**0.109**
Tonkin Street SB														
5A	B,C	3.50	Y	N	15		100	100%	715	0.140	95	100%	715	0.133
5B	B,C	3.50	N	N	18		294	7%	2095	0.140	275	20%	2070	0.133
5C	B,C	3.50	N	N			296		2105	0.141	280		2105	0.133
6A	C	3.50	N	N	25		165	100%	1985	**0.083**	165	100%	1985	**0.083**
7p	A		5GM +	9FG =	14	sec								
8p	A,D,E		7GM +	13FG =	20	sec								
9p	C		5GM +	9FG =	14	sec								
10p	A,B,C		5GM +	10FG =	15	sec								
11p	D		5GM +	9FG =	14	sec								
12p	D		6GM +	11FG =	17	sec								
13p	B,C,D		6GM +	11FG =	17	sec								

Notes:

AM Peak	3+4+6+1	PM Peak	3+4+6+1
Sum of Critical *y* ***Y***	**0.611**	Sum of Critical *y* ***Y***	**0.610**
Lost Time ***L*** (sec)	24	Lost Time ***L*** (sec)	24
Cycle Time ***c*** (sec)	136	Cycle Time ***c*** (sec)	136
Practical *Y* ***Ypr***	0.741	Practical *Y* ***Ypr***	0.741
Reserve Capacity ***RC***	**21%**	Reserve Capacity ***RC***	**21%**

Date : 10/Sep/21   Junction : J8 -Cheung Sha Wan Road / Tonkin Street

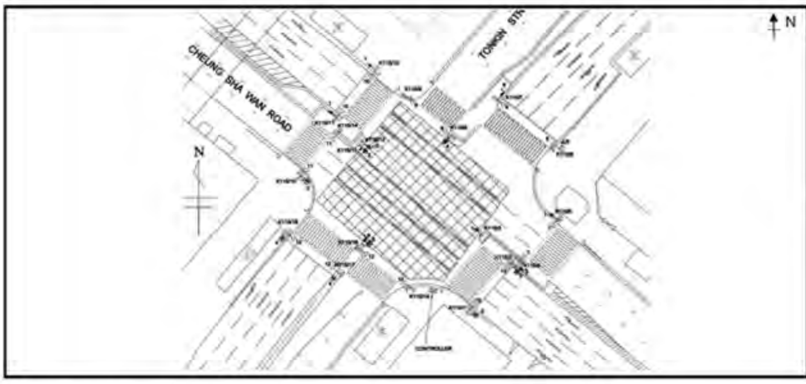
TRAFFIC SIGNAL CALCULATION SHEET

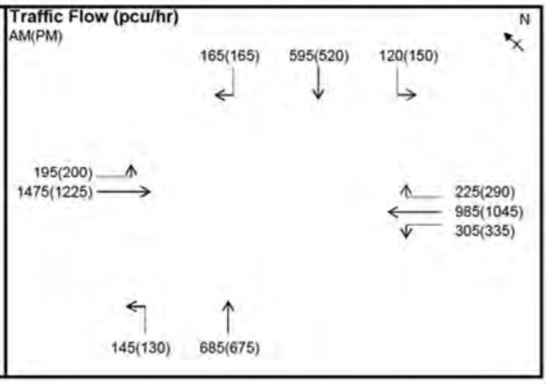
ATKINS

JOB NO. : 5190641

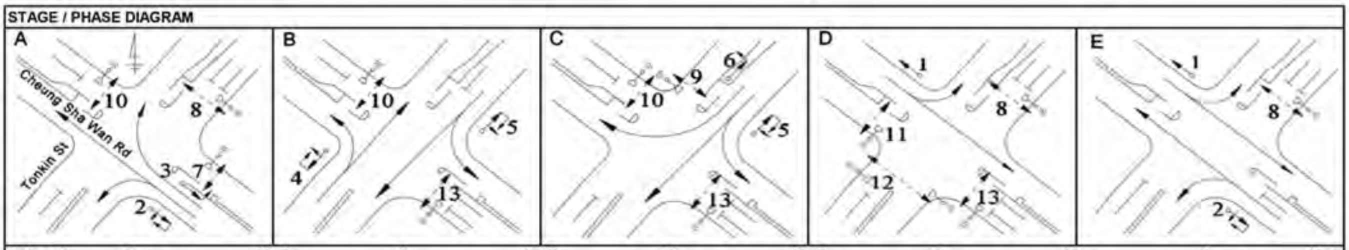
Junction : J8 -Cheung Sha Wan Road / Tonkin Street — Design Year: 2037

Scheme : 2037 Design — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7
3+4+6+1	G=	IG=7	G=	IG=7	G=	IG=7	G=	IG=	G=	IG=7

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Cheung Sha Wan Road EB														
1A	D,E	3.50	Y	N	13		515	38%	1880	0.274	437	46%	1865	0.234
1B	D,E	3.50	N	N			578		2105	**0.275**	494		2105	**0.235**
1C	D,E	3.50	N	N			577		2105	0.274	494		2105	**0.235**
Cheung Sha Wan Road WB														
2A	A,E	3.00	Y	N	18		392	78%	1795	0.218	419	80%	1790	0.234
2B	A,E	3.00	N	N			449		2055	0.218	481		2055	0.234
2C	A,E	3.00	N	N			449		2055	0.218	480		2055	0.234
3A	A	3.00	N	N	28		225	100%	1560	**0.144**	290	100%	1560	**0.186**
Tonkin Street NB														
4A	B	3.00	Y	N	13		145	100%	1370	0.106	130	100%	1370	0.095
4B	B	3.00	N	N			228		2055	0.111	225		2055	**0.109**
4C	B	3.00	N	N			229		2055	**0.111**	225		2055	**0.109**
4D	B	3.00	N	N			228		2055	0.111	225		2055	**0.109**
Tonkin Street SB														
5A	B,C	3.50	Y	N	15		104	100%	715	0.145	98	100%	715	0.137
5B	B,C	3.50	N	N	18		305	5%	2095	0.146	284	18%	2070	0.137
5C	B,C	3.50	N	N			306		2105	0.145	288		2105	0.137
6A	C	3.50	N	N	25		165	100%	1985	**0.083**	165	100%	1985	**0.083**
7p	A		5GM +	9FG =	14	sec								
8p	A,D,E		7GM +	13FG =	20	sec								
9p	C		5GM +	9FG =	14	sec								
10p	A,B,C		5GM +	10FG =	15	sec								
11p	D		5GM +	9FG =	14	sec								
12p	D		6GM +	11FG =	17	sec								
13p	B,C,D		6GM +	11FG =	17	sec								

Notes:

AM Peak	3+4+6+1	PM Peak	3+4+6+1
Sum of Critical *y* ***Y***	**0.613**	Sum of Critical *y* ***Y***	**0.613**
Lost Time ***L*** (sec)	24	Lost Time ***L*** (sec)	24
Cycle Time ***c*** (sec)	136	Cycle Time ***c*** (sec)	136
Practical *Y* ***Ypr***	0.741	Practical *Y* ***Ypr***	0.741
Reserve Capacity ***RC***	**21%**	Reserve Capacity ***RC***	**21%**

Date : 10/Sep/21 — Junction : J8 -Cheung Sha Wan Road / Tonkin Street

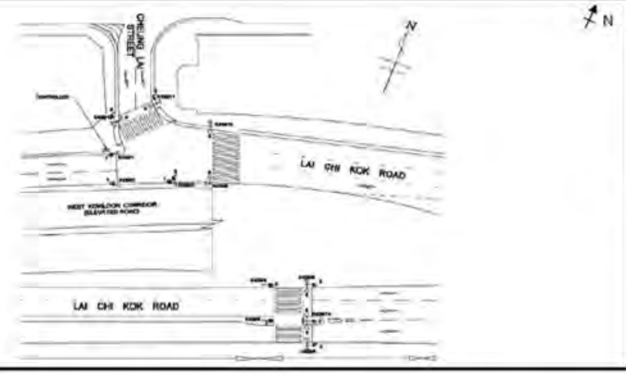
TRAFFIC SIGNAL CALCULATION SHEET

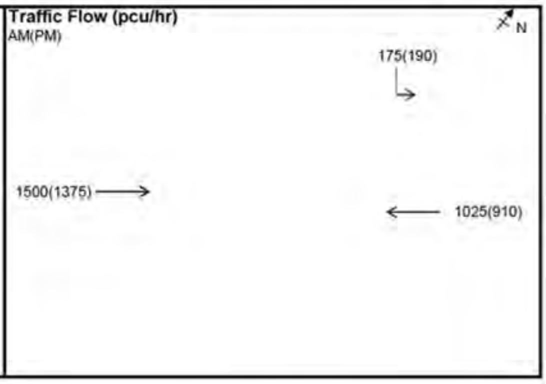
ATKINS

JOB NO. : 5190641

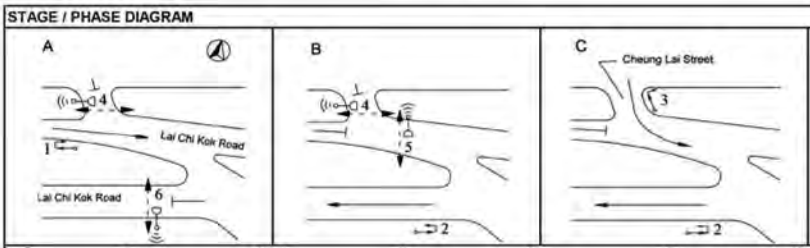
Junction : J9 - Lai Chi Kok Road / Cheung Lai Street   Design Year: 2021

Scheme : Existing   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	Y	N			724		1975	0.367	664		1975	**0.336**
1B	A	3.60	N	N			776		2115	**0.367**	711		2115	0.336
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			125		2065	0.061	195		2065	0.094
2B	B,C	3.50	N	N			513		2105	**0.244**	455		2105	**0.216**
2C	B,C	3.50	N	N			512		2105	0.243	455		2105	**0.216**
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		87	100%	1070	0.081	94	100%	1070	0.088
3B	C	3.50	Y	N	18		88	100%	1085	0.081	96	100%	1085	0.088
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.611**	Sum of Critical *y* ***Y***	**0.552**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**32%**	Reserve Capacity ***RC***	**47%**

Date : 10/Sep/21   Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

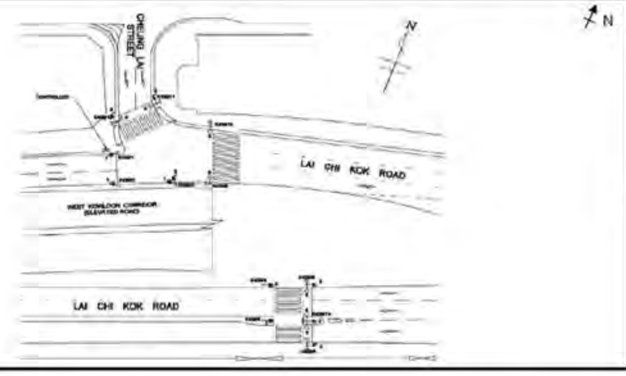
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

Junction : J9 - Lai Chi Kok Road / Cheung Lai Street | Design Year: 2031

Scheme : 2031 Reference | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)

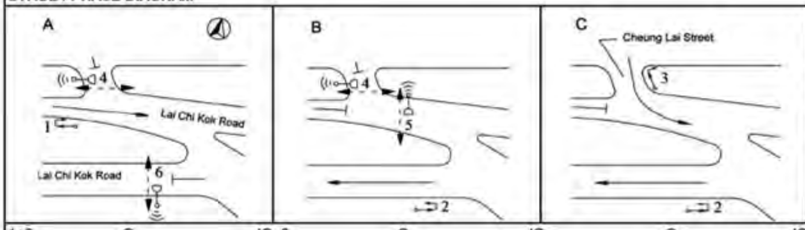
N

195(210)

1995(1795) →

← 1355(1175)

STAGE / PHASE DIAGRAM



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	Y	N			963		1975	0.488	867		1975	**0.439**
1B	A	3.60	N	N			1032		2115	**0.488**	928		2115	0.439
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			140		2065	0.068	220		2065	0.107
2B	B,C	3.50	N	N			678		2105	**0.322**	588		2105	**0.279**
2C	B,C	3.50	N	N			677		2105	0.322	587		2105	0.279
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		97	100%	1070	0.091	104	100%	1070	0.097
3B	C	3.50	Y	N	18		98	100%	1085	0.090	106	100%	1085	0.098
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.810**	Sum of Critical *y* ***Y***	**0.718**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**-1%**	Reserve Capacity ***RC***	**13%**

Date : 10/Sep/21 Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

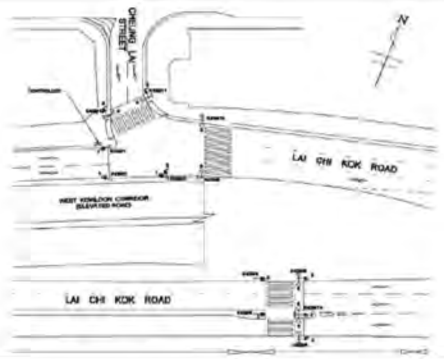
Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

Design Year: 2031

Scheme : 2031 Design

Designed by: KH

Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)

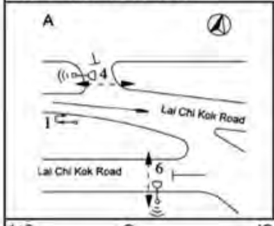
195(210)

2070(1835) ⟶

⟵ 1365(1185)

STAGE / PHASE DIAGRAM

A



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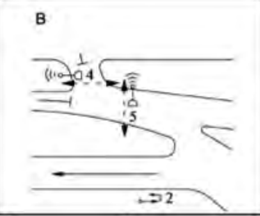
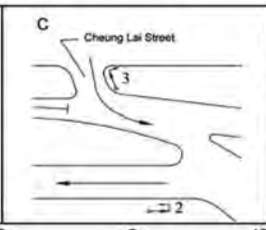


C



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	Y	N			1000		1975	**0.506**	886		1975	0.449
1B	A	3.60	N	N			1070		2115	0.506	949		2115	**0.449**
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			140		2065	0.068	220		2065	0.107
2B	B,C	3.50	N	N			683		2105	**0.324**	593		2105	**0.282**
2C	B,C	3.50	N	N			682		2105	0.324	592		2105	0.281
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		97	100%	1070	0.091	104	100%	1070	0.097
3B	C	3.50	Y	N	18		98	100%	1085	0.090	106	100%	1085	0.098
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.831**	Sum of Critical *y* ***Y***	**0.730**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**-3%**	Reserve Capacity ***RC***	**11%**

Date : 10/Sep/21 Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

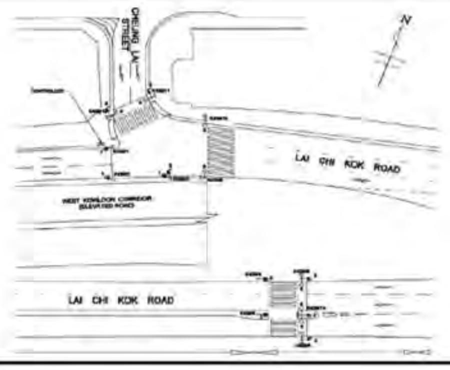
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

Junction : J9 - Lai Chi Kok Road / Cheung Lai Street — Design Year: 2037

Scheme : 2037 Reference — Designed by: KH — Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)

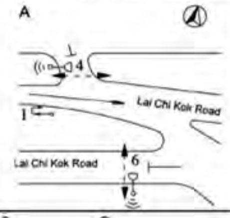
210(225)

2110(1900) →

← 1430(1245)

STAGE / PHASE DIAGRAM

A



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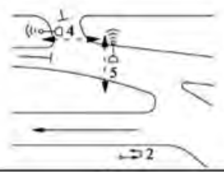

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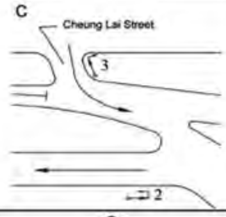


1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G= IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G= IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	Y	N			1019		1975	**0.516**	917		1975	0.464
1B	A	3.60	N	N			1091		2115	0.516	983		2115	**0.465**
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			150		2065	0.073	230		2065	0.111
2B	B,C	3.50	N	N			715		2105	**0.340**	623		2105	**0.296**
2C	B,C	3.50	N	N			715		2105	**0.340**	622		2105	0.295
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		104	100%	1070	0.097	112	100%	1070	0.105
3B	C	3.50	Y	N	18		106	100%	1085	0.098	113	100%	1085	0.104
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.856**	Sum of Critical *y* ***Y***	**0.761**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**-6%**	Reserve Capacity ***RC***	**6%**

Date : 10/Sep/21 — Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

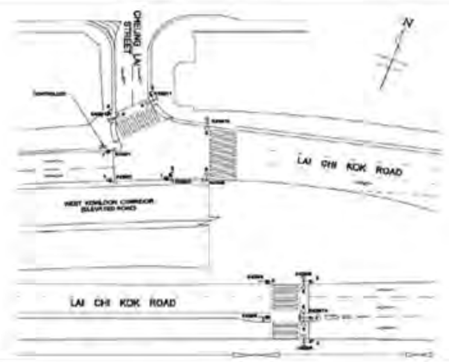
Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

Design Year: 2037

Scheme : 2037 Design

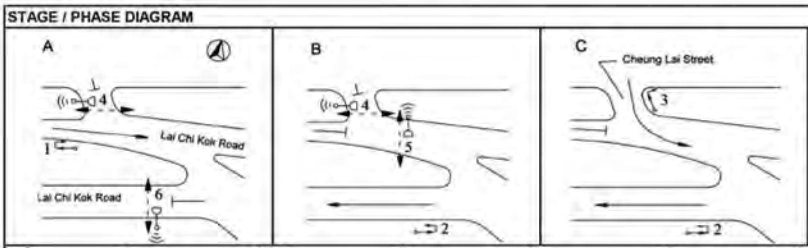
Designed by: KH

Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)

STAGE / PHASE DIAGRAM



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	Y	N			1055		1975	0.534	937		1975	**0.474**
1B	A	3.60	N	N			1130		2115	**0.534**	1003		2115	0.474
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			150		2065	0.073	230		2065	0.111
2B	B,C	3.50	N	N			720		2105	**0.342**	628		2105	**0.298**
2C	B,C	3.50	N	N			720		2105	**0.342**	627		2105	0.298
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		104	100%	1070	0.097	112	100%	1070	0.105
3B	C	3.50	Y	N	18		106	100%	1085	0.098	113	100%	1085	0.104
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.876**	Sum of Critical *y* ***Y***	**0.773**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**-8%**	Reserve Capacity ***RC***	**5%**

Date : 10/Sep/21 Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

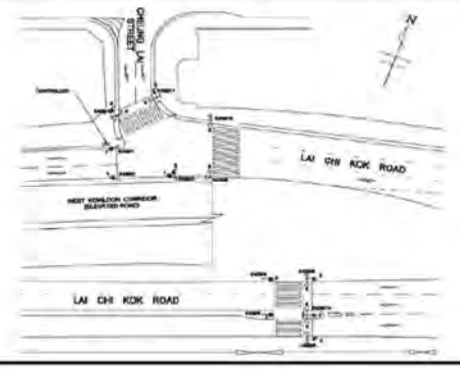
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

Junction : J9 - Lai Chi Kok Road / Cheung Lai Street   Design Year: 2031

Scheme : 2031 Reference (with junction improvement)   Designed by: KH   Checked by: EC



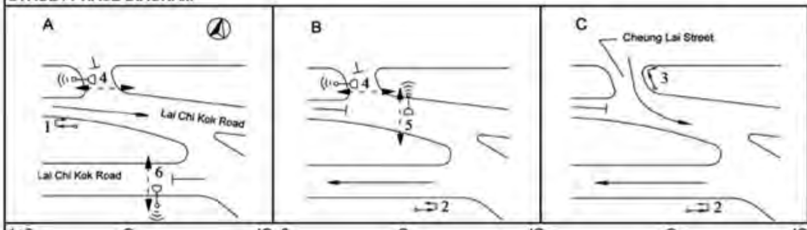
Traffic Flow (pcu/hr)
AM(PM)

195(210)

1995(1795) ⟶

⟵ 1355(1175)

STAGE / PHASE DIAGRAM



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=	
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=	

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N			542		1555	0.349	487		1555	0.313
1B	A	3.30	N	N			727		2085	**0.349**	654		2085	**0.314**
1C	A	3.30	N	N			726		2085	0.348	654		2085	**0.314**
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			150		2065	0.073	230		2065	0.111
2B	B,C	3.50	N	N			678		2105	**0.322**	588		2105	**0.279**
2C	B,C	3.50	N	N			677		2105	0.322	587		2105	0.279
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		97	100%	895	0.108	104	100%	895	0.116
3B	C	3.50	Y	N	18		98	100%	905	0.108	106	100%	905	0.117
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.671**	Sum of Critical *y* ***Y***	**0.593**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**20%**	Reserve Capacity ***RC***	**37%**

Date : 10/Sep/21   Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

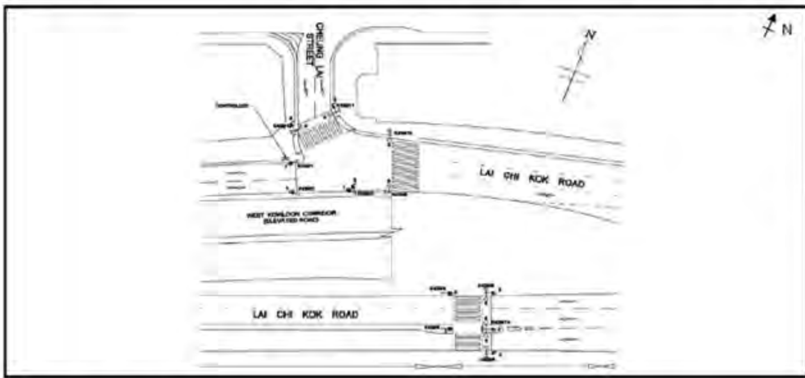
TRAFFIC SIGNAL CALCULATION SHEET

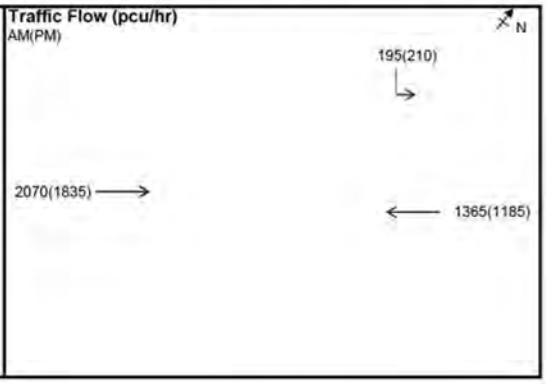
ATKINS

JOB NO. : 5190641

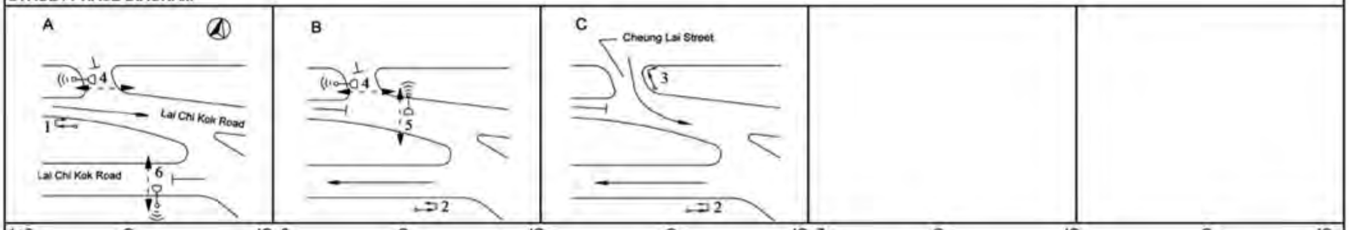
Junction : J9 - Lai Chi Kok Road / Cheung Lai Street   Design Year: 2031

Scheme : 2031 Design (with junction improvement)   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N			562		1555	0.361	498		1555	0.320
1B	A	3.30	N	N			754		2085	**0.362**	669		2085	**0.321**
1C	A	3.30	N	N			754		2085	**0.362**	668		2085	0.320
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			150		2065	0.073	230		2065	0.111
2B	B,C	3.50	N	N			683		2105	**0.324**	593		2105	**0.282**
2C	B,C	3.50	N	N			682		2105	0.324	592		2105	0.281
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		97	100%	895	0.108	104	100%	895	0.116
3B	C	3.50	Y	N	18		98	100%	905	0.108	106	100%	905	0.117
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.686**	Sum of Critical *y* ***Y***	**0.603**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**17%**	Reserve Capacity ***RC***	**34%**

Date : 10/Sep/21   Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

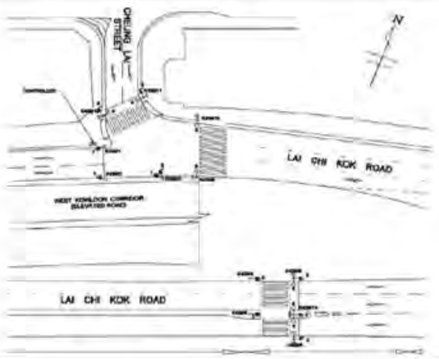
Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

Design Year: 2037

Scheme : 2037 Reference (with junction improvement)

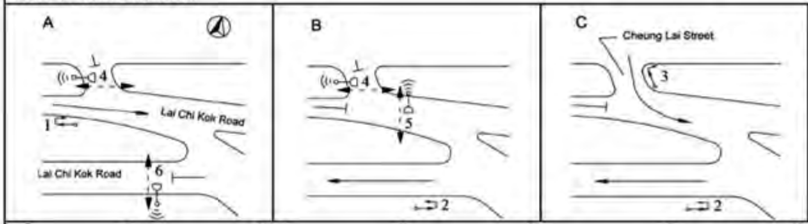
Designed by: KH

Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)

STAGE / PHASE DIAGRAM



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) w	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) r	Gradient in % g	AM Peak Design Flow q (pcu/hr)	AM Peak Proportion turning (%) f	AM Peak Saturation flow S (pcu/hr)	AM Peak Flow factor y	PM Peak Design Flow q (pcu/hr)	PM Peak Proportion turning (%) f	PM Peak Saturation flow S (pcu/hr)	PM Peak Flow factor y
Lai Chi Kok Road EB														
1A	A	3.30	Y	N			573		1555	0.368	516		1555	0.332
1B	A	3.30	N	N			769		2085	**0.369**	692		2085	**0.332**
1C	A	3.30	N	N			768		2085	0.368	692		2085	**0.332**
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			150		2065	0.073	230		2065	0.111
2B	B,C	3.50	N	N			715		2105	**0.340**	623		2105	**0.296**
2C	B,C	3.50	N	N			715		2105	**0.340**	622		2105	0.295
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		104	100%	895	0.116	112	100%	895	0.125
3B	C	3.50	Y	N	18		106	100%	905	0.117	113	100%	905	0.125
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical y *Y*	**0.708**	Sum of Critical y *Y*	**0.628**
Lost Time *L* (sec)	13	Lost Time *L* (sec)	13
Cycle Time *c* (sec)	124	Cycle Time *c* (sec)	130
Practical Y *Ypr*	0.806	Practical Y *Ypr*	0.810
Reserve Capacity *RC*	**14%**	Reserve Capacity *RC*	**29%**

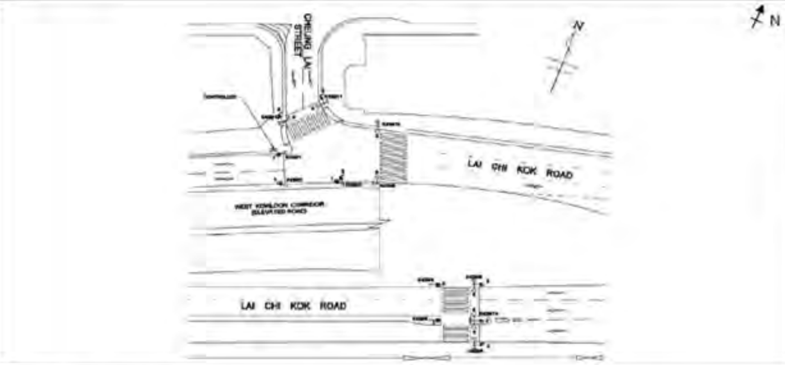
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

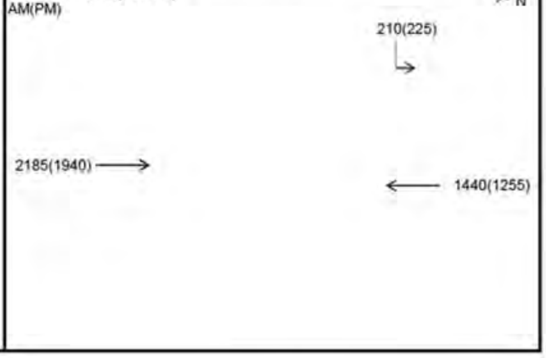
JOB NO. : 5190641

Junction : J9 - Lai Chi Kok Road / Cheung Lai Street   Design Year: 2037

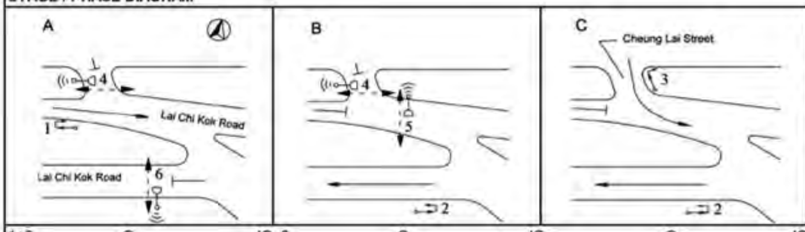
Scheme : 2037 Design (with junction improvement)   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=
1+2	G=	IG=8	G=	IG=	G=	IG=7	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N			593		1555	0.381	527		1555	0.339
1B	A	3.30	N	N			796		2085	**0.382**	707		2085	**0.339**
1C	A	3.30	N	N			796		2085	**0.382**	706		2085	0.339
Lai Chi Kok Road WB														
2A	B,C	4.50	Y	N			150		2065	0.073	230		2065	0.111
2B	B,C	3.50	N	N			720		2105	**0.342**	628		2105	**0.298**
2C	B,C	3.50	N	N			720		2105	**0.342**	627		2105	0.298
Cheung Lai Street SB														
3A	C	3.50	Y	N	15		104	100%	895	0.116	112	100%	895	0.125
3B	C	3.50	Y	N	18		106	100%	905	0.117	113	100%	905	0.125
4p	A,B		10GM +	11FG =	21	sec								
5p	B		11GM +	12FG =	23	sec								
6p	A		11GM +	13FG =	24	sec								

Notes:

AM Peak	1+2	PM Peak	1+2
Sum of Critical *y* ***Y***	**0.724**	Sum of Critical *y* ***Y***	**0.637**
Lost Time ***L*** (sec)	13	Lost Time ***L*** (sec)	13
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.806	Practical *Y* ***Ypr***	0.810
Reserve Capacity ***RC***	**11%**	Reserve Capacity ***RC***	**27%**

Date : 10/Sep/21   Junction : J9 - Lai Chi Kok Road / Cheung Lai Street

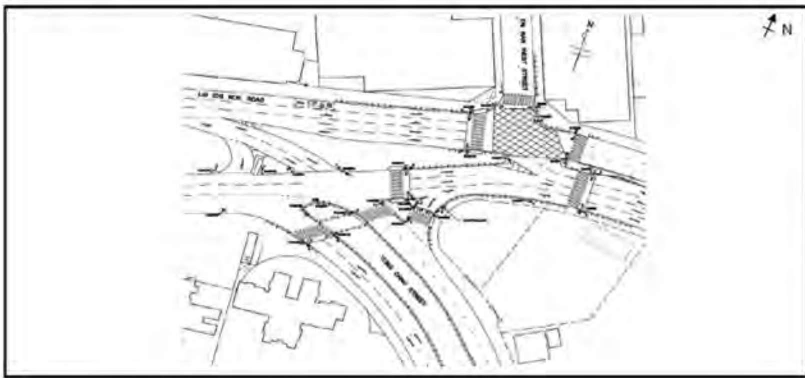
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

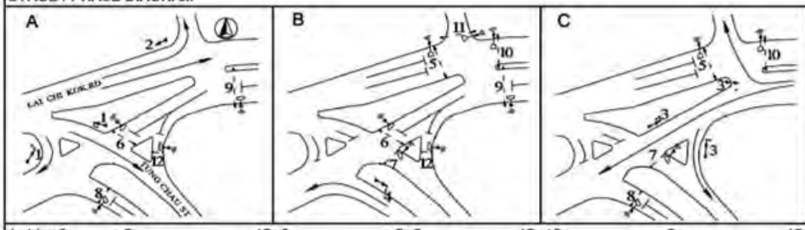
Junction : J10 - Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street   Design Year: 2021

Scheme : Existing   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)

STAGE / PHASE DIAGRAM



1+11p+3	G=	IG=8	G=5	IG=12	G=	IG=12	G=	IG=	G=	IG=
1+4+3	G=	IG=5	G=	IG=5	G=	IG=12	G=	IG=	G=	IG=

Capacity Calculations

							AM Peak				PM Peak			
Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	N	N			482		2115	0.228	445		2115	0.210
1B	A	3.60	N	N	10		423	93%	1855	**0.228**	395	85%	1875	**0.211**
Lai Chi Kok Road EB														
2A	A	3.30	Y	N	10		168	100%	1690	0.099	157	100%	1690	0.093
2B	A	3.30	N	N	13		186	98%	1865	0.100	180	63%	1940	0.093
2C	A	3.30	N	N			208		2085	0.100	194		2085	0.093
2D	A	3.30	N	N			208		2085	0.100	194		2085	0.093
Lai Chi Kok Road WB														
3A	C	3.40	Y	N			249		1955	0.127	239		1955	0.122
3B	C	3.40	N	N			266		2095	0.127	256		2095	0.122
3C	C	3.40	N	N	23		369	100%	1965	**0.188**	346	100%	1965	0.176
3D	C	3.40	N	N	20		366	100%	1950	0.188	344	100%	1950	**0.176**
3E	C	3.50	Y	N	18		182	5%	1955	0.093	175	9%	1950	0.090
3F	C	3.50	N	N			196		2105	0.093	188		2105	0.089
3G	C	3.50	N	N			137		1475	0.093	132		1475	0.089
Tung Chau Street NB														
4A	B	3.80	Y	N	30		120	100%	1900	0.063	140	100%	1900	**0.074**
4B	B	3.80	N	N	35		130	100%	2045	0.064	150	100%	2045	0.073
5p	B,C		6GM +	12FG =	18	sec								
6p	A,B		5GM +	9FG =	14	sec								
7p	B,C		5GM +	8FG =	13	sec								
8p	A,C		5GM +	9FG =	14	sec								
9p	A,B		6GM +	11FG =	17	sec								
10p	B,C		5GM +	9FG =	14	sec								
11p	B		5GM +	10FG =	15	sec								
12p	A,B		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+11p+3	PM Peak	1+4+3
Sum of Critical *y* ***Y***	**0.416**	Sum of Critical *y* ***Y***	**0.461**
Lost Time ***L*** (sec)	35	Lost Time ***L*** (sec)	19
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.646	Practical *Y* ***Ypr***	0.768
Reserve Capacity ***RC***	**55%**	Reserve Capacity ***RC***	**67%**

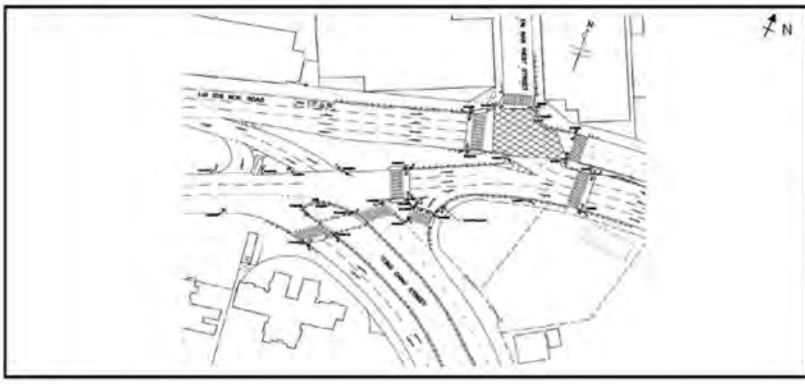
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

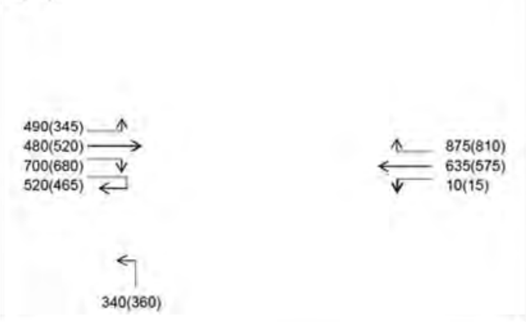
JOB NO. : 5190641

Junction : J10 - Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street   Design Year: 2031

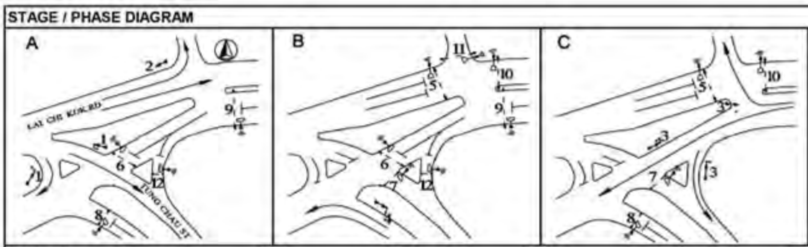
Scheme : 2031 Reference   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+11p+3	G=	IG=8	G=5	IG=12	G=	IG=12	G=	IG=	G=	IG=				
1+4+3	G=	IG=5	G=	IG=5	G=	IG=12	G=	IG=	G=	IG=				

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	N	N			649		2115	0.307	607		2115	0.287
1B	A	3.60	N	N	10		571	91%	1860	**0.307**	538	86%	1870	**0.288**
Lai Chi Kok Road EB														
2A	A	3.30	Y	N	10		233	100%	1690	0.138	188	100%	1690	0.111
2B	A	3.30	N	N	13		257	100%	1860	0.138	213	74%	1915	0.111
2C	A	3.30	N	N			240		2085	0.115	232		2085	0.111
2D	A	3.30	N	N			240		2085	0.115	232		2085	0.111
Lai Chi Kok Road WB														
3A	C	3.40	Y	N			311		1955	0.159	285		1955	0.146
3B	C	3.40	N	N			334		2095	0.159	305		2095	0.146
3C	C	3.40	N	N	23		439	100%	1965	0.223	407	100%	1965	**0.207**
3D	C	3.40	N	N	20		436	100%	1950	**0.224**	403	100%	1950	0.207
3E	C	3.50	Y	N	18		228	4%	1960	0.116	208	7%	1955	0.106
3F	C	3.50	N	N			245		2105	0.116	225		2105	0.107
3G	C	3.50	N	N			172		1475	0.117	157		1475	0.106
Tung Chau Street NB														
4A	B	3.80	Y	N	30		164	100%	1900	0.086	173	100%	1900	0.091
4B	B	3.80	N	N	35		176	100%	2045	0.086	187	100%	2045	**0.091**
5p	B,C		6GM +	12FG =	18	sec								
6p	A,B		5GM +	9FG =	14	sec								
7p	B,C		5GM +	8FG =	13	sec								
8p	A,C		5GM +	9FG =	14	sec								
9p	A,B		6GM +	11FG =	17	sec								
10p	B,C		5GM +	9FG =	14	sec								
11p	B		5GM +	10FG =	15	sec								
12p	A,B		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+11p+3	PM Peak	1+4+3
Sum of Critical *y* ***Y***	**0.531**	Sum of Critical *y* ***Y***	**0.586**
Lost Time ***L*** (sec)	35	Lost Time ***L*** (sec)	19
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.646	Practical *Y* ***Ypr***	0.768
Reserve Capacity ***RC***	**22%**	Reserve Capacity ***RC***	**31%**

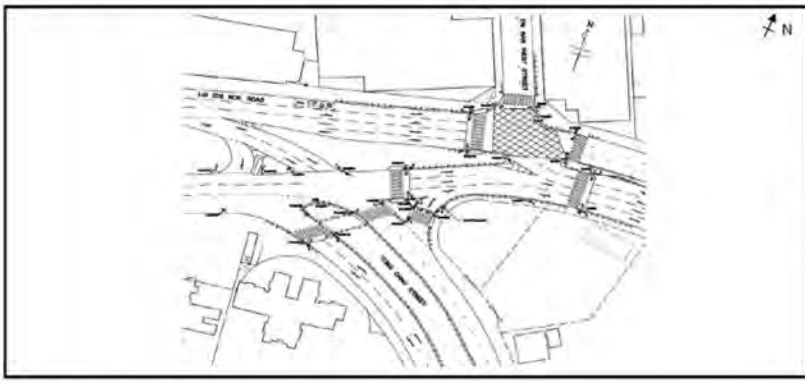
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

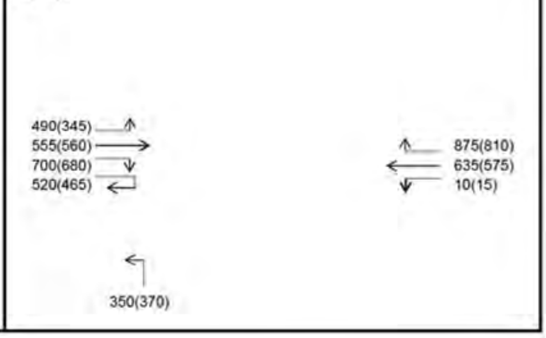
JOB NO. : 5190641

Junction : J10 - Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street | Design Year: 2031

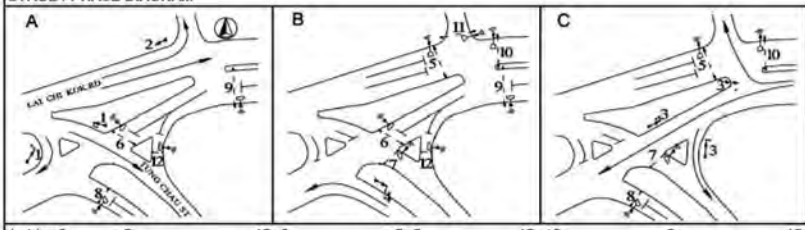
Scheme : 2031 Design | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+11p+3	G=	IG=8	G=5	IG=12	G=	IG=12	G=	IG=	G=	IG=
1+4+3	G=	IG=5	G=	IG=5	G=	IG=12	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	N	N			649		2115	0.307	607		2115	0.287
1B	A	3.60	N	N	10		571	91%	1860	**0.307**	538	86%	1870	**0.288**
Lai Chi Kok Road EB														
2A	A	3.30	Y	N	10		233	100%	1690	0.138	196	100%	1690	0.116
2B	A	3.30	N	N	13		257	100%	1860	0.138	225	66%	1930	0.117
2C	A	3.30	N	N			277		2085	0.133	242		2085	0.116
2D	A	3.30	N	N			278		2085	0.133	242		2085	0.116
Lai Chi Kok Road WB														
3A	C	3.40	Y	N			311		1955	0.159	285		1955	0.146
3B	C	3.40	N	N			334		2095	0.159	305		2095	0.146
3C	C	3.40	N	N	23		439	100%	1965	0.223	407	100%	1965	**0.207**
3D	C	3.40	N	N	20		436	100%	1950	**0.224**	403	100%	1950	0.207
3E	C	3.50	Y	N	18		228	4%	1960	0.116	208	7%	1955	0.106
3F	C	3.50	N	N			245		2105	0.116	225		2105	0.107
3G	C	3.50	N	N			172		1475	0.117	157		1475	0.106
Tung Chau Street NB														
4A	B	3.80	Y	N	30		169	100%	1900	0.089	178	100%	1900	0.094
4B	B	3.80	N	N	35		181	100%	2045	0.089	192	100%	2045	**0.094**
5p	B,C		6GM +	12FG =	18	sec								
6p	A,B		5GM +	9FG =	14	sec								
7p	B,C		5GM +	8FG =	13	sec								
8p	A,C		5GM +	9FG =	14	sec								
9p	A,B		6GM +	11FG =	17	sec								
10p	B,C		5GM +	9FG =	14	sec								
11p	B		5GM +	10FG =	15	sec								
12p	A,B		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+11p+3	PM Peak	1+4+3
Sum of Critical *y* ***Y***	**0.531**	Sum of Critical *y* ***Y***	**0.589**
Lost Time ***L*** (sec)	35	Lost Time ***L*** (sec)	19
Cycle Time ***c*** (sec)	124	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.646	Practical *Y* ***Ypr***	0.768
Reserve Capacity ***RC***	**22%**	Reserve Capacity ***RC***	**31%**

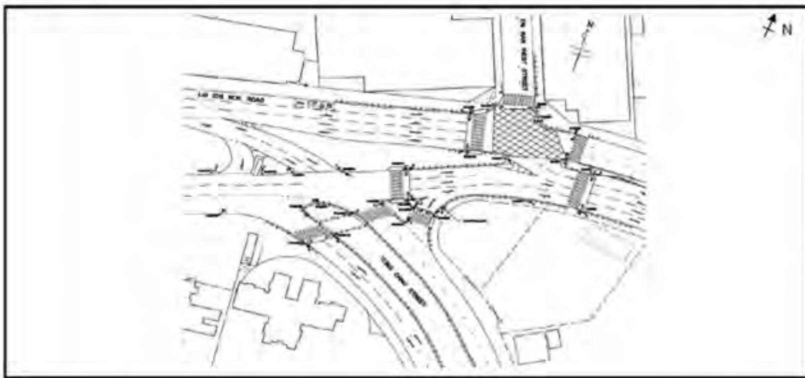
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

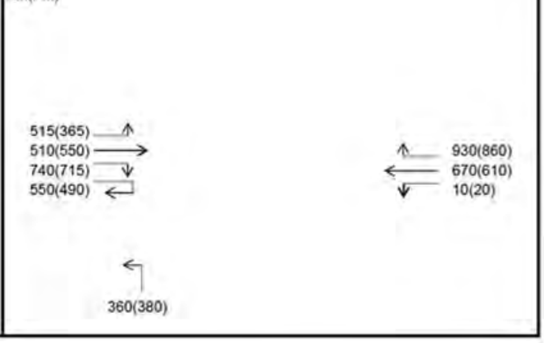
JOB NO. : 5190641

Junction : J10 - Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street   Design Year: 2037

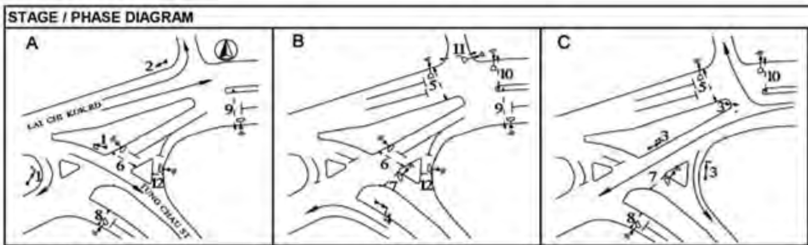
Scheme : 2037 Reference   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+11p+3	G=	IG=8	G=5	IG=12	G=	IG=12	G=	IG=	G=	IG=	
1+4+3	G=	IG=5	G=	IG=5	G=	IG=12	G=	IG=	G=	IG=	

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Proportion turning (%) *f*	AM Peak: Saturation flow *S* (pcu/hr)	AM Peak: Flow factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Proportion turning (%) *f*	PM Peak: Saturation flow *S* (pcu/hr)	PM Peak: Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.60	N	N			686		2115	0.324	639		2115	0.302
1B	A	3.60	N	N	10		604	91%	1860	**0.325**	566	87%	1870	**0.303**
Lai Chi Kok Road EB														
2A	A	3.30	Y	N	10		245	100%	1690	0.145	199	100%	1690	0.118
2B	A	3.30	N	N	13		270	100%	1860	0.145	226	73%	1915	0.118
2C	A	3.30	N	N			255		2085	0.122	245		2085	0.118
2D	A	3.30	N	N			255		2085	0.122	245		2085	0.118
Lai Chi Kok Road WB														
3A	C	3.40	Y	N			328		1955	0.168	304		1955	0.155
3B	C	3.40	N	N			352		2095	0.168	326		2095	0.156
3C	C	3.40	N	N	23		467	100%	1965	**0.238**	432	100%	1965	**0.220**
3D	C	3.40	N	N	20		463	100%	1950	0.237	428	100%	1950	0.219
3E	C	3.50	Y	N	18		240	4%	1960	0.122	222	9%	1950	0.114
3F	C	3.50	N	N			259		2105	0.123	240		2105	0.114
3G	C	3.50	N	N			181		1475	0.123	168		1475	0.114
Tung Chau Street NB														
4A	B	3.80	Y	N	30		173	100%	1900	0.091	183	100%	1900	0.096
4B	B	3.80	N	N	35		187	100%	2045	0.091	197	100%	2045	**0.096**
5p	B,C		6GM +	12FG =	18	sec								
6p	A,B		5GM +	9FG =	14	sec								
7p	B,C		5GM +	8FG =	13	sec								
8p	A,C		5GM +	9FG =	14	sec								
9p	A,B		6GM +	11FG =	17	sec								
10p	B,C		5GM +	9FG =	14	sec								
11p	B		5GM +	10FG =	15	sec								
12p	A,B		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+11p+3	PM Peak	1+4+3
Sum of Critical *y* *Y*	**0.562**	Sum of Critical *y* *Y*	**0.619**
Lost Time *L* (sec)	35	Lost Time *L* (sec)	19
Cycle Time *c* (sec)	124	Cycle Time *c* (sec)	130
Practical *Y* *Ypr*	0.646	Practical *Y* *Ypr*	0.768
Reserve Capacity *RC*	**15%**	Reserve Capacity *RC*	**24%**

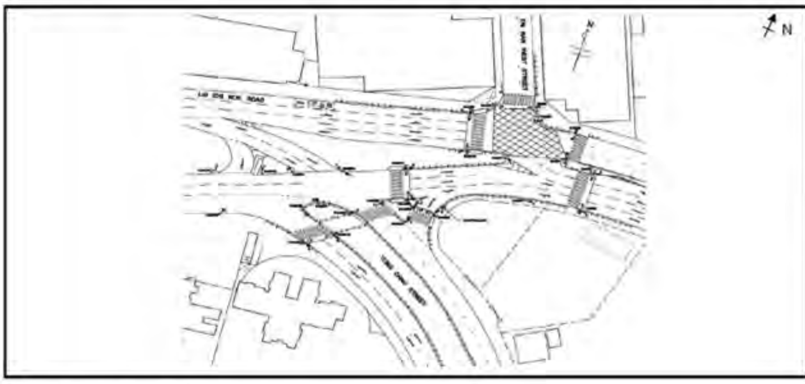
TRAFFIC SIGNAL CALCULATION SHEET

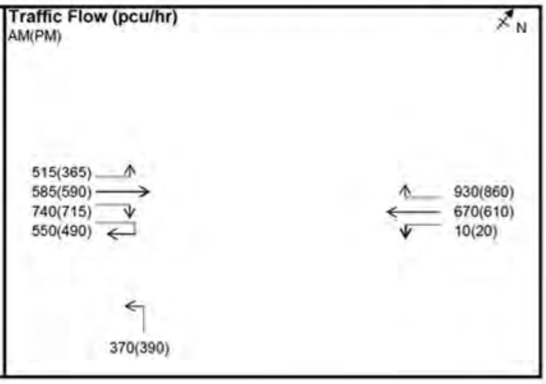
ATKINS

JOB NO. : 5190641

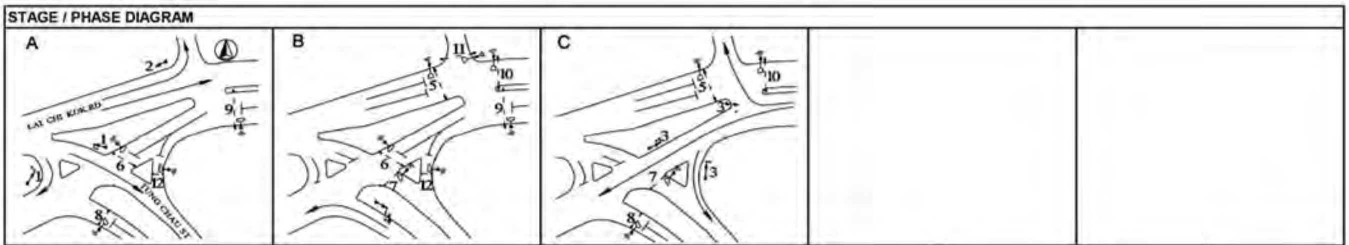
Junction : J10 - Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street | Design Year: 2037

Scheme : 2037 Design | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+11p+3	G=	IG=8	G=5	IG=12	G=	IG=12	G=	IG=	G=	IG=
1+4+3	G=	IG=5	G=	IG=5	G=	IG=12	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) w	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) r	Gradient in % g	AM Peak Design Flow q (pcu/hr)	AM Peak Proportion turning (%) f	AM Peak Saturation flow S (pcu/hr)	AM Peak Flow factor y	PM Peak Design Flow q (pcu/hr)	PM Peak Proportion turning (%) f	PM Peak Saturation flow S (pcu/hr)	PM Peak Flow factor y
Lai Chi Kok Road EB														
1A	A	3.60	N	N			686		2115	0.324	639		2115	0.302
1B	A	3.60	N	N	10		604	91%	1860	**0.325**	566	87%	1870	**0.303**
Lai Chi Kok Road EB														
2A	A	3.30	Y	N	10		245	100%	1690	0.145	207	100%	1690	0.122
2B	A	3.30	N	N	13		270	100%	1860	0.145	237	67%	1930	0.123
2C	A	3.30	N	N			292		2085	0.140	255		2085	0.122
2D	A	3.30	N	N			293		2085	0.141	256		2085	0.123
Lai Chi Kok Road WB														
3A	C	3.40	Y	N			328		1955	0.168	304		1955	0.155
3B	C	3.40	N	N			352		2095	0.168	326		2095	0.156
3C	C	3.40	N	N	23		467	100%	1965	**0.238**	432	100%	1965	**0.220**
3D	C	3.40	N	N	20		463	100%	1950	0.237	428	100%	1950	0.219
3E	C	3.50	Y	N	18		240	4%	1960	0.122	222	9%	1950	0.114
3F	C	3.50	N	N			259		2105	0.123	240		2105	0.114
3G	C	3.50	N	N			181		1475	0.123	168		1475	0.114
Tung Chau Street NB														
4A	B	3.80	Y	N	30		178	100%	1900	0.094	188	100%	1900	**0.099**
4B	B	3.80	N	N	35		192	100%	2045	0.094	202	100%	2045	0.099
5p	B,C		6GM +	12FG =	18	sec								
6p	A,B		5GM +	9FG =	14	sec								
7p	B,C		5GM +	8FG =	13	sec								
8p	A,C		5GM +	9FG =	14	sec								
9p	A,B		6GM +	11FG =	17	sec								
10p	B,C		5GM +	9FG =	14	sec								
11p	B		5GM +	10FG =	15	sec								
12p	A,B		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+11p+3	PM Peak	1+4+3
Sum of Critical y Y	**0.562**	Sum of Critical y Y	**0.621**
Lost Time L (sec)	35	Lost Time L (sec)	19
Cycle Time c (sec)	124	Cycle Time c (sec)	130
Practical Y Ypr	0.646	Practical Y Ypr	0.768
Reserve Capacity RC	**15%**	Reserve Capacity RC	**24%**

Date : 10/Sep/21 Junction : J10 - Lai Chi Kok Road / Tung Chau Street / Tai Nan West Street

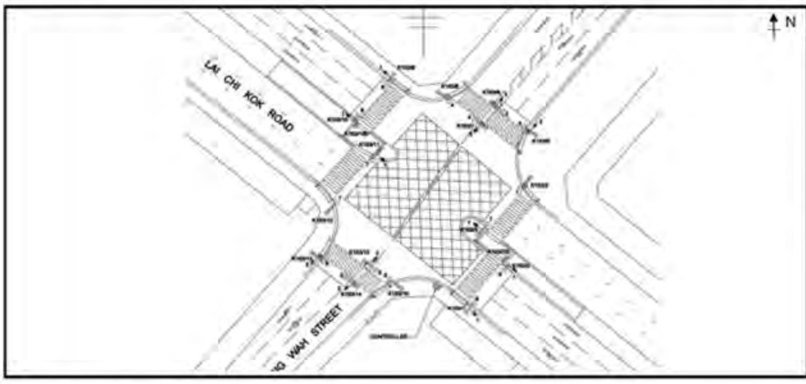
TRAFFIC SIGNAL CALCULATION SHEET

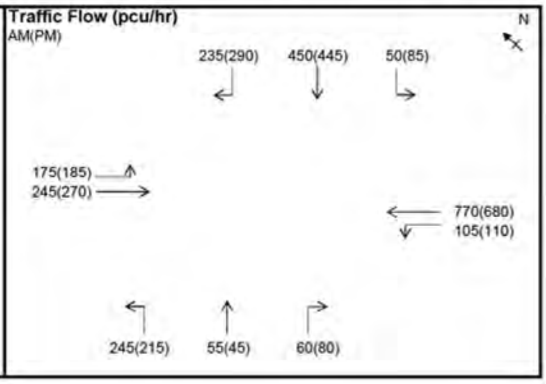
ATKINS

JOB NO. : 5190641

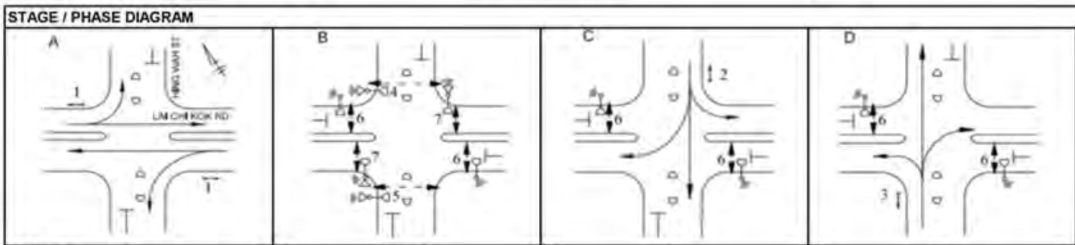
Junction : J11 - Lai Chi Kok Road / Hing Wah Street   Design Year: 2021

Scheme : Existing   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=
1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=

Capacity Calculations

							AM Peak				PM Peak			
Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		175	100%	1690	0.104	185	100%	1690	0.109
1B	A	3.30	N	N			123		2085	0.059	135		2085	0.065
1C	A	3.30	N	N			122		2085	0.059	135		2085	0.065
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		271	39%	1880	0.144	244	45%	1870	**0.130**
1E	A	3.40	N	N			302		2095	**0.144**	273		2095	0.130
1F	A	3.40	N	N			302		2095	**0.144**	273		2095	0.130
Hing Wah Street SB														
2A	C	3.30	Y	N	15		500	10%	1925	**0.260**	530	16%	1915	**0.277**
2B	C	3.30	N	N	28		235	100%	1975	0.119	290	100%	1975	0.147
Hing Wah Street NB														
3A	D	3.20	Y	N	10		108	100%	840	0.129	102	100%	840	0.121
3B	D	3.20	N	N	17.5/22.5		252	54% / 24%	1955	**0.129**	238	47% / 34%	1950	**0.122**
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2+3	PM Peak	1+7p+2+3
Sum of Critical *y* ***Y***	**0.533**	Sum of Critical *y* ***Y***	**0.529**
Lost Time ***L*** (sec)	43	Lost Time ***L*** (sec)	43
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.598	Practical *Y* ***Ypr***	0.602
Reserve Capacity ***RC***	**12%**	Reserve Capacity ***RC***	**14%**

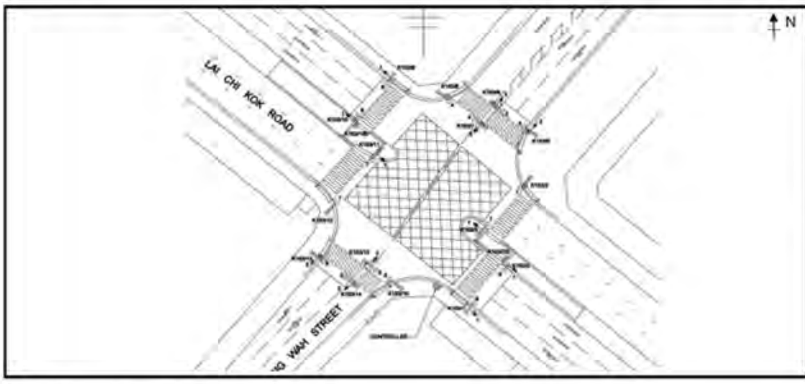
TRAFFIC SIGNAL CALCULATION SHEET

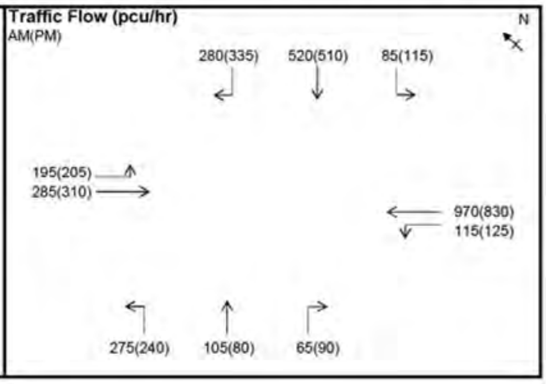
ATKINS

JOB NO. : 5190641

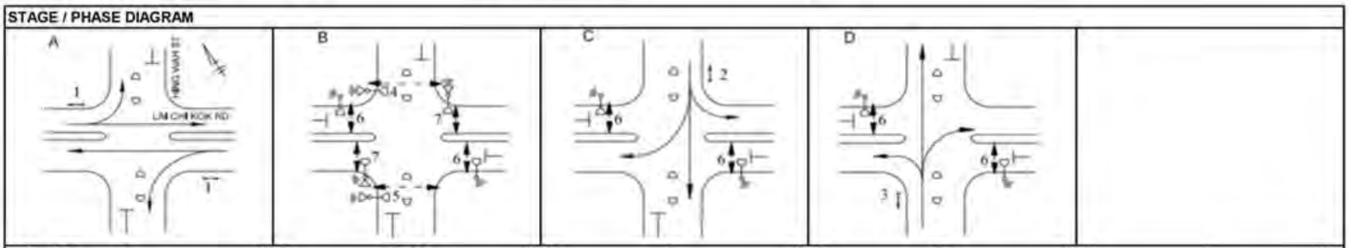
Junction : J11 - Lai Chi Kok Road / Hing Wah Street   Design Year: 2031

Scheme : 2031 Reference   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=
1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		195	100%	1690	0.115	205	100%	1690	0.121
1B	A	3.30	N	N			143		2085	0.069	155		2085	0.074
1C	A	3.30	N	N			142		2085	0.068	155		2085	0.074
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		337	34%	1890	0.178	295	42%	1875	0.157
1E	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
1F	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
Hing Wah Street SB														
2A	C	3.30	Y	N	15		605	14%	1920	**0.315**	625	18%	1910	**0.327**
2B	C	3.30	N	N	28		280	100%	1975	0.142	335	100%	1975	0.170
Hing Wah Street NB														
3A	D	3.20	Y	N	10		133	100%	840	0.158	123	100%	840	**0.146**
3B	D	3.20	N	N	17.5/22.5		312	46% / 21%	1970	**0.158**	287	41% / 31%	1965	0.146
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2+3	PM Peak	1+7p+2+3
Sum of Critical *y* ***Y***	**0.652**	Sum of Critical *y* ***Y***	**0.631**
Lost Time ***L*** (sec)	43	Lost Time ***L*** (sec)	43
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.598	Practical *Y* ***Ypr***	0.602
Reserve Capacity ***RC***	**-8%**	Reserve Capacity ***RC***	**-5%**

Date : 10/Sep/21   Junction : J11 - Lai Chi Kok Road / Hing Wah Street

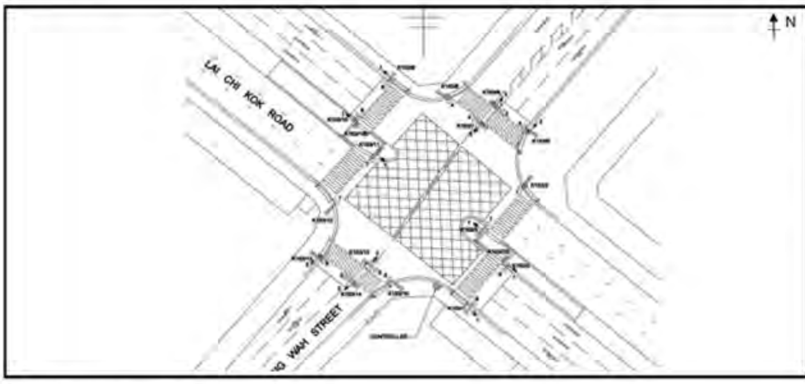
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

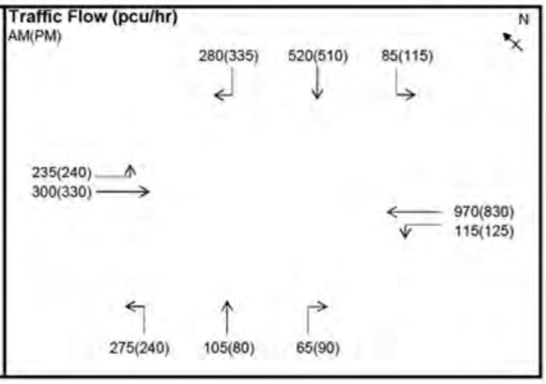
JOB NO. : 5190641

Junction : J11 - Lai Chi Kok Road / Hing Wah Street   Design Year: 2031

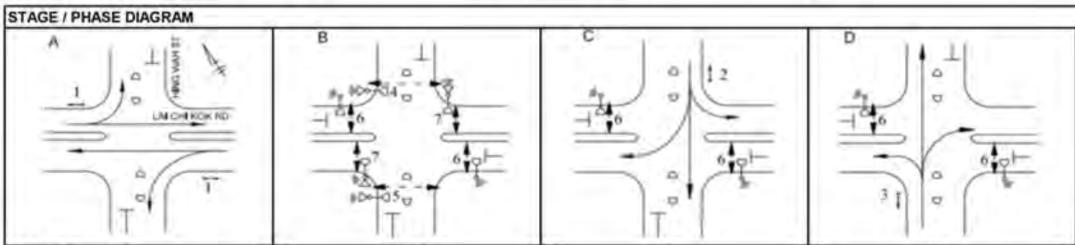
Scheme : 2031 Design   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=
1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		235	100%	1690	0.139	240	100%	1690	0.142
1B	A	3.30	N	N			150		2085	0.072	165		2085	0.079
1C	A	3.30	N	N			150		2085	0.072	165		2085	0.079
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		337	34%	1890	0.178	295	42%	1875	0.157
1E	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
1F	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
Hing Wah Street SB														
2A	C	3.30	Y	N	15		605	14%	1920	**0.315**	625	18%	1910	**0.327**
2B	C	3.30	N	N	28		280	100%	1975	0.142	335	100%	1975	0.170
Hing Wah Street NB														
3A	D	3.20	Y	N	10		133	100%	840	0.158	123	100%	840	**0.146**
3B	D	3.20	N	N	17.5/22.5		312	46% / 21%	1970	**0.158**	287	41% / 31%	1965	0.146
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2+3	PM Peak	1+7p+2+3
Sum of Critical *y* ***Y***	**0.652**	Sum of Critical *y* ***Y***	**0.631**
Lost Time ***L*** (sec)	43	Lost Time ***L*** (sec)	43
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.598	Practical *Y* ***Ypr***	0.602
Reserve Capacity ***RC***	**-8%**	Reserve Capacity ***RC***	**-5%**

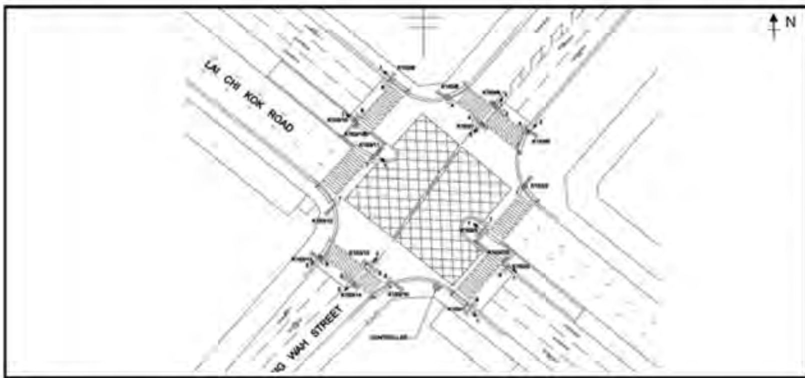
TRAFFIC SIGNAL CALCULATION SHEET

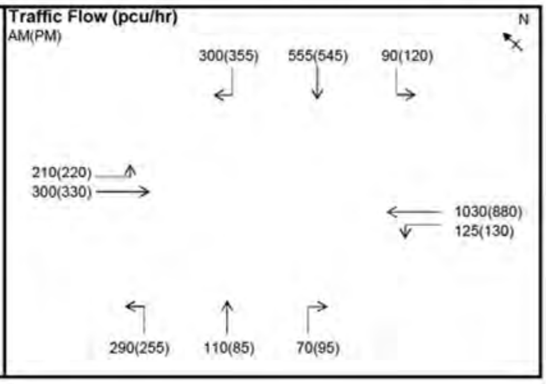
ATKINS

JOB NO. : 5190641

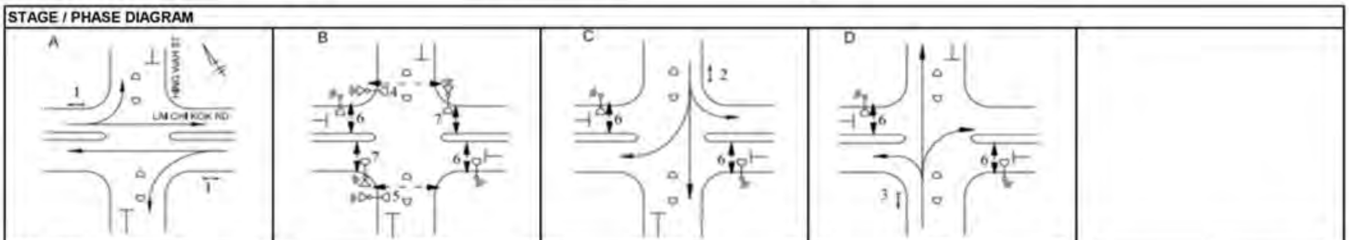
Junction : J11 - Lai Chi Kok Road / Hing Wah Street | Design Year: 2037

Scheme : 2037 Reference | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=
1+7p+2+3	G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		210	100%	1690	0.124	220	100%	1690	0.130
1B	A	3.30	N	N			150		2085	0.072	165		2085	0.079
1C	A	3.30	N	N			150		2085	0.072	165		2085	0.079
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		359	35%	1890	0.190	312	42%	1875	0.166
1E	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
1F	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
Hing Wah Street SB														
2A	C	3.30	Y	N	15		645	14%	1920	**0.336**	665	18%	1910	**0.348**
2B	C	3.30	N	N	28		300	100%	1975	0.152	355	100%	1975	0.180
Hing Wah Street NB														
3A	D	3.20	Y	N	10		140	100%	840	0.167	130	100%	840	0.155
3B	D	3.20	N	N	17.5/22.5		330	45% / 21%	1970	**0.168**	305	41% / 31%	1965	**0.155**
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2+3	PM Peak	1+7p+2+3
Sum of Critical *y* *Y*	0.693	Sum of Critical *y* *Y*	0.670
Lost Time *L* (sec)	43	Lost Time *L* (sec)	43
Cycle Time *c* (sec)	128	Cycle Time *c* (sec)	130
Practical Y *Ypr*	0.598	Practical Y *Ypr*	0.602
Reserve Capacity *RC*	-14%	Reserve Capacity *RC*	-10%

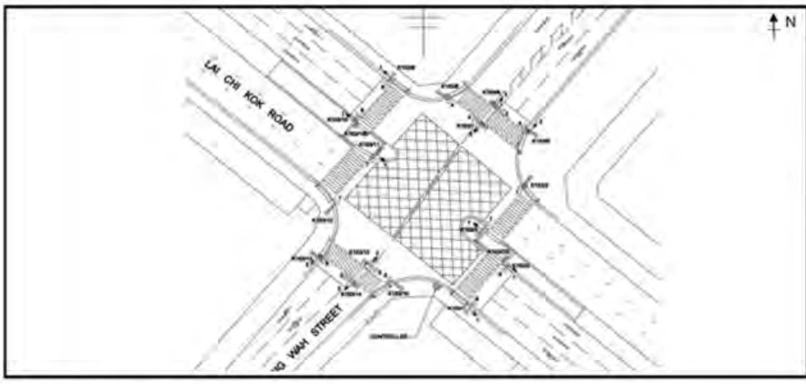
TRAFFIC SIGNAL CALCULATION SHEET

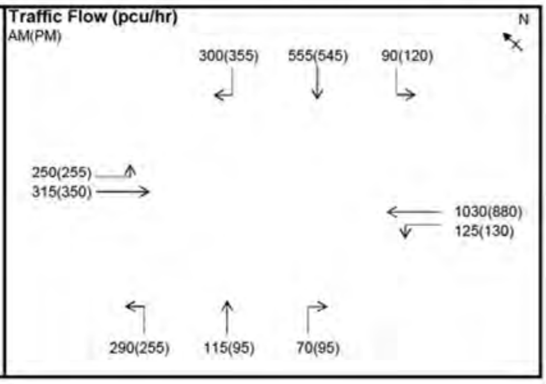
ATKINS

JOB NO. : 5190641

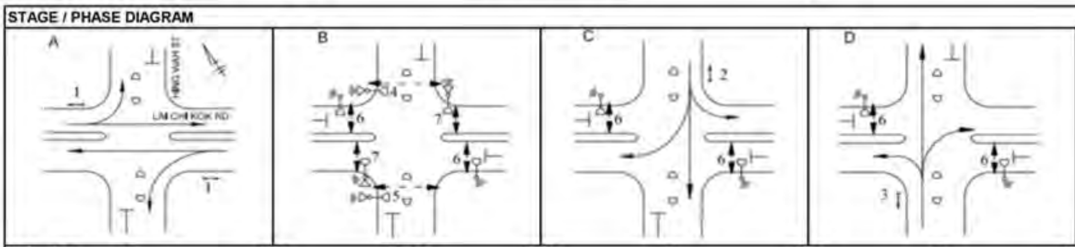
Junction : J11 - Lai Chi Kok Road / Hing Wah Street   Design Year: 2037

Scheme : 2037 Design   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+7p+2+3 G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=
1+7p+2+3 G=	IG=9	G=10	IG=12	G=	IG=8	G=	IG=7	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		250	100%	1690	0.148	255	100%	1690	0.151
1B	A	3.30	N	N			158		2085	0.076	175		2085	0.084
1C	A	3.30	N	N			157		2085	0.075	175		2085	0.084
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		359	35%	1890	0.190	312	42%	1875	0.166
1E	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
1F	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
Hing Wah Street SB														
2A	C	3.30	Y	N	15		645	14%	1920	**0.336**	665	18%	1910	**0.348**
2B	C	3.30	N	N	28		300	100%	1975	0.152	355	100%	1975	0.180
Hing Wah Street NB														
3A	D	3.20	Y	N	10		142	100%	840	**0.169**	133	100%	840	0.158
3B	D	3.20	N	N	17.5/22.5		333	44% / 21%	1970	0.169	312	39% / 30%	1970	**0.158**
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2+3	PM Peak	1+7p+2+3
Sum of Critical *y* ***Y***	**0.695**	Sum of Critical *y* ***Y***	**0.673**
Lost Time ***L*** (sec)	43	Lost Time ***L*** (sec)	43
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.598	Practical Y ***Ypr***	0.602
Reserve Capacity ***RC***	**-14%**	Reserve Capacity ***RC***	**-11%**

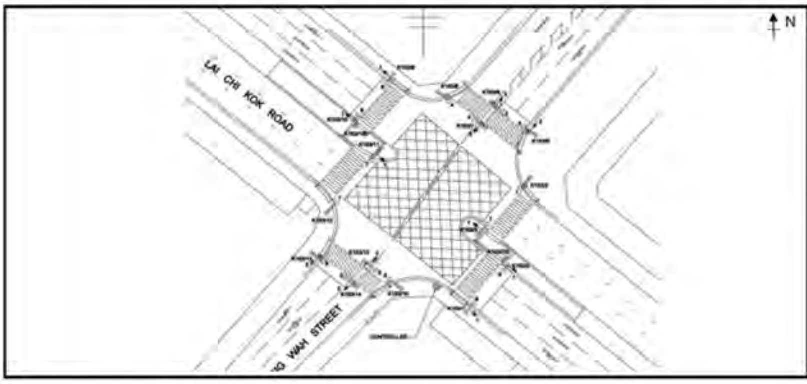
TRAFFIC SIGNAL CALCULATION SHEET

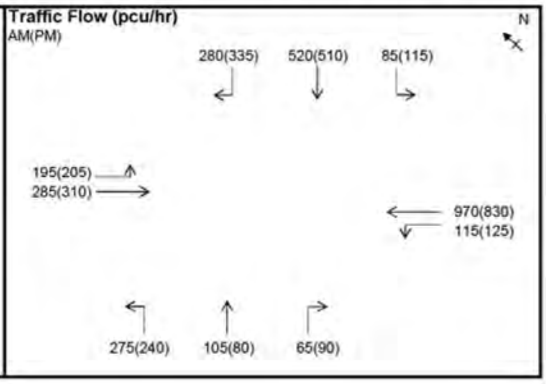
ATKINS

JOB NO. : 5190641

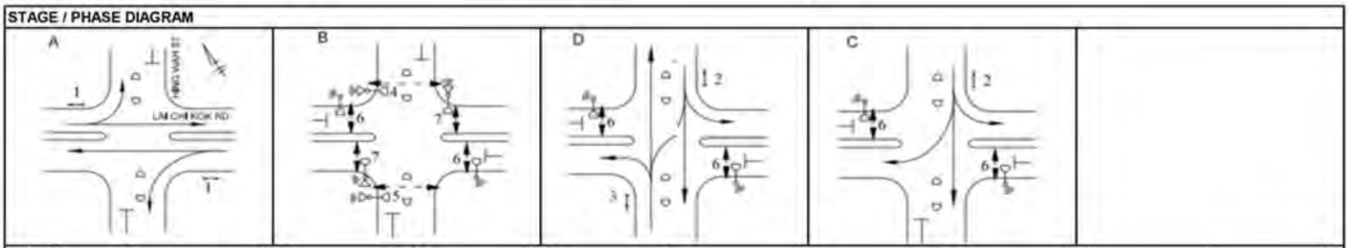
Junction : J11 - Lai Chi Kok Road / Hing Wah Street   Design Year: 2031

Scheme : 2031 Reference (with junction improvement)   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=
1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		195	100%	1690	0.115	205	100%	1690	0.121
1B	A	3.30	N	N			143		2085	0.069	155		2085	0.074
1C	A	3.30	N	N			142		2085	0.068	155		2085	0.074
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		337	34%	1890	0.178	295	42%	1875	0.157
1E	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
1F	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
Hing Wah Street SB														
2A	C,D	3.30	Y	N	15		605	14%	1920	**0.315**	625	18%	1910	**0.327**
8A	D	3.30	N	N	28		280	100%	1975	0.142	335	100%	1975	0.170
Hing Wah Street NB														
3A	C	3.20	Y	N	10		203	100%	1685	0.120	187	100%	1685	0.111
3B	C	3.20	N	N	13		242	30%	2005	0.121	223	24%	2015	0.111
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2	PM Peak	1+7p+2
Sum of Critical *y* ***Y***	**0.494**	Sum of Critical *y* ***Y***	**0.485**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.647	Practical *Y* ***Ypr***	0.651
Reserve Capacity ***RC***	**31%**	Reserve Capacity ***RC***	**34%**

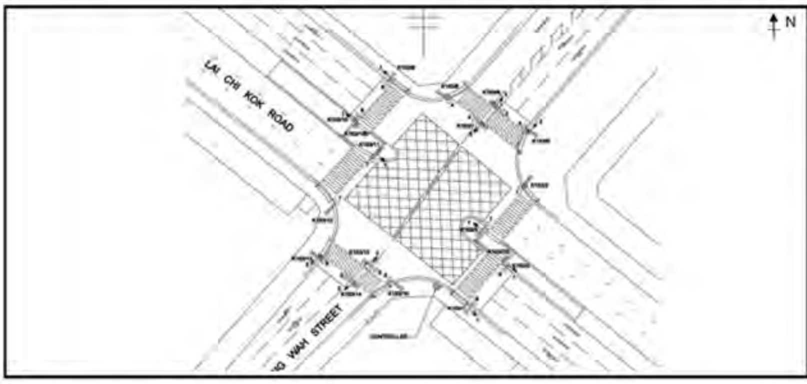
TRAFFIC SIGNAL CALCULATION SHEET

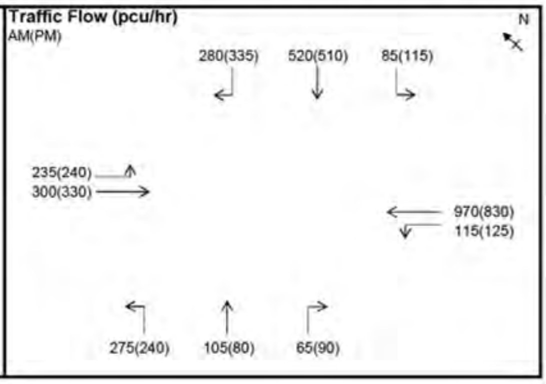
ATKINS

JOB NO. : 5190641

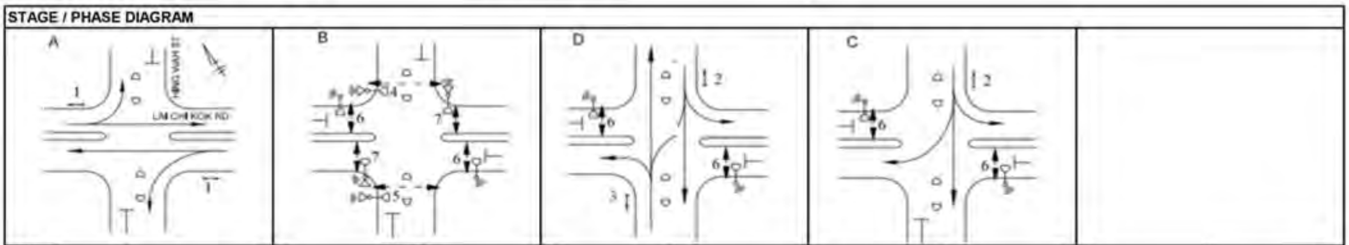
Junction : J11 - Lai Chi Kok Road / Hing Wah Street | Design Year: 2031

Scheme : 2031 Design (with junction improvement) | Designed by: KH | Checked by: EC





STAGE / PHASE DIAGRAM



1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=
1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		235	100%	1690	0.139	240	100%	1690	0.142
1B	A	3.30	N	N			150		2085	0.072	165		2085	0.079
1C	A	3.30	N	N			150		2085	0.072	165		2085	0.079
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		337	34%	1890	0.178	295	42%	1875	0.157
1E	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
1F	A	3.40	N	N			374		2095	**0.179**	330		2095	**0.158**
Hing Wah Street SB														
2A	C,D	3.30	Y	N	15		605	14%	1920	**0.315**	625	18%	1910	**0.327**
8A	D	3.30	N	N	28		280	100%	1975	0.142	335	100%	1975	0.170
Hing Wah Street NB														
3A	C	3.20	Y	N	10		203	100%	1685	0.120	187	100%	1685	0.111
3B	C	3.20	N	N	13		242	30%	2005	0.121	223	24%	2015	0.111
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2	PM Peak	1+7p+2
Sum of Critical *y* ***Y***	**0.494**	Sum of Critical *y* ***Y***	**0.485**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.647	Practical *Y* ***Ypr***	0.651
Reserve Capacity ***RC***	**31%**	Reserve Capacity ***RC***	**34%**

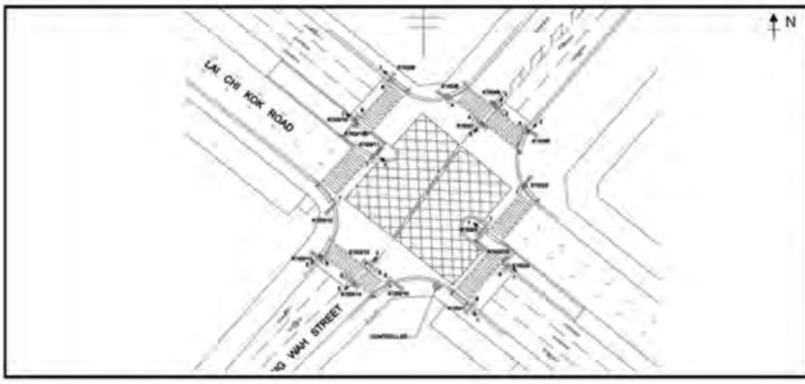
TRAFFIC SIGNAL CALCULATION SHEET

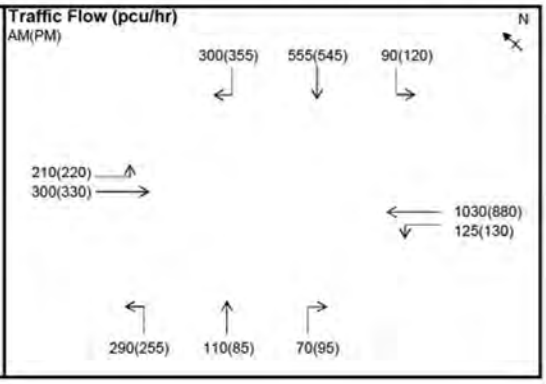
ATKINS

JOB NO. : 5190641

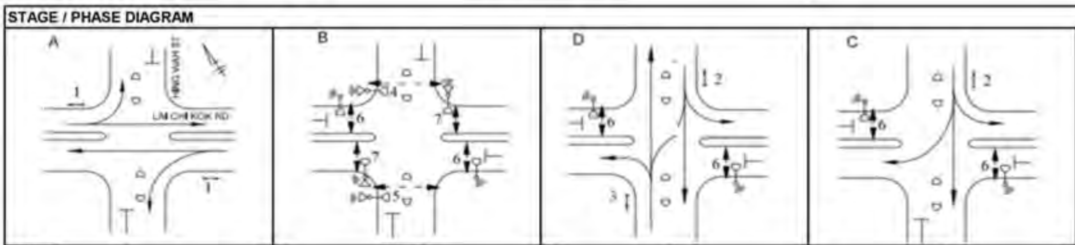
Junction : J11 - Lai Chi Kok Road / Hing Wah Street   Design Year: 2037

Scheme : 2037 Reference (with junction improvement)   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=
1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		210	100%	1690	0.124	220	100%	1690	0.130
1B	A	3.30	N	N			150		2085	0.072	165		2085	0.079
1C	A	3.30	N	N			150		2085	0.072	165		2085	0.079
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		359	35%	1890	0.190	312	42%	1875	0.166
1E	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
1F	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
Hing Wah Street SB														
2A	C,D	3.30	Y	N	15		645	14%	1920	**0.336**	665	18%	1910	**0.348**
8A	D	3.30	N	N	28		300	100%	1975	0.152	355	100%	1975	0.180
Hing Wah Street NB														
3A	C	3.20	Y	N	10		215	100%	1685	0.128	198	100%	1685	0.118
3B	C	3.20	N	N	13		255	29%	2005	0.127	237	24%	2015	0.118
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	**1+7p+2**	**PM Peak**	**1+7p+2**
Sum of Critical *y* ***Y***	**0.526**	Sum of Critical *y* ***Y***	**0.515**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.647	Practical Y ***Ypr***	0.651
Reserve Capacity ***RC***	**23%**	Reserve Capacity ***RC***	**26%**

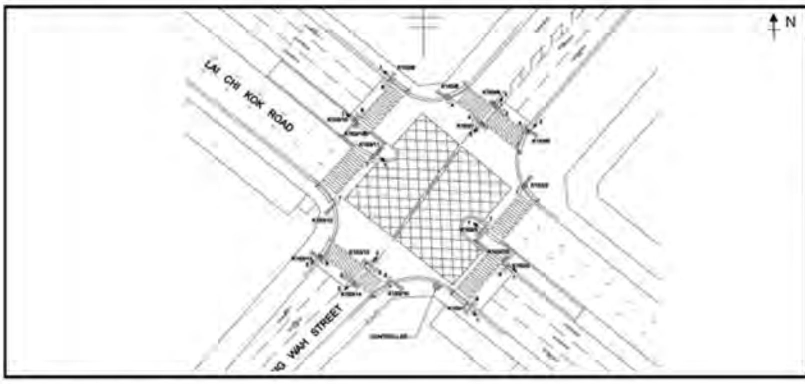
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

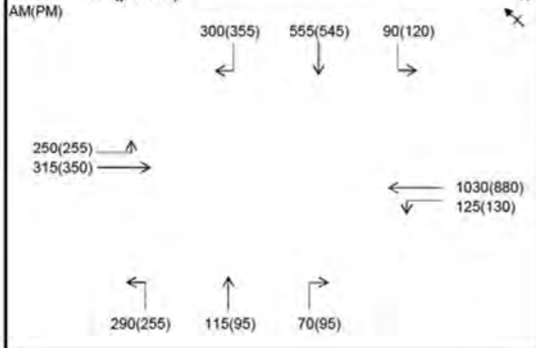
JOB NO. : 5190641

Junction : J11 - Lai Chi Kok Road / Hing Wah Street | Design Year: 2037

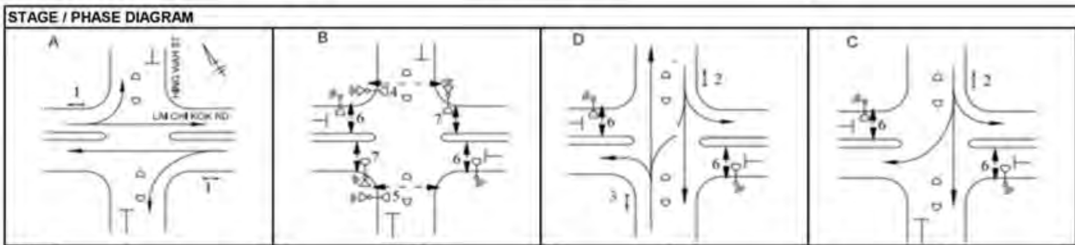
Scheme : 2037 Design (with junction improvement) | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=
1+7p+2	G=	IG=9	G=10	IG=12	G=	IG=	G=	IG=7	G=	IG=

Capacity Calculations

							AM Peak				PM Peak			
Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*	Design Flow *q* (pcu/hr)	Proportion turning (%) *f*	Saturation flow *S* (pcu/hr)	Flow factor *y*
Lai Chi Kok Road EB														
1A	A	3.30	Y	N	10		250	100%	1690	0.148	255	100%	1690	0.151
1B	A	3.30	N	N			158		2085	0.076	175		2085	0.084
1C	A	3.30	N	N			157		2085	0.075	175		2085	0.084
Lai Chi Kok Road WB														
1D	A	3.40	Y	N	15		359	35%	1890	0.190	312	42%	1875	0.166
1E	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
1F	A	3.40	N	N			398		2095	**0.190**	349		2095	**0.167**
Hing Wah Street SB														
2A	C,D	3.30	Y	N	15		645	14%	1920	**0.336**	665	18%	1910	**0.348**
8A	D	3.30	N	N	28		300	100%	1975	0.152	355	100%	1975	0.180
Hing Wah Street NB														
3A	C	3.20	Y	N	10		217	100%	1685	0.129	202	100%	1685	0.120
3B	C	3.20	N	N	13		258	28%	2005	0.129	243	22%	2020	0.120
4p	B		8GM +	7FG =	15	sec								
5p	B		7GM +	7FG =	14	sec								
6p	B,C,D		9GM +	9FG =	18	sec								
7p	B		10GM +	10FG =	20	sec								

Notes:

AM Peak	1+7p+2	PM Peak	1+7p+2
Sum of Critical *y* ***Y***	**0.526**	Sum of Critical *y* ***Y***	**0.515**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.647	Practical *Y* ***Ypr***	0.651
Reserve Capacity ***RC***	**23%**	Reserve Capacity ***RC***	**26%**

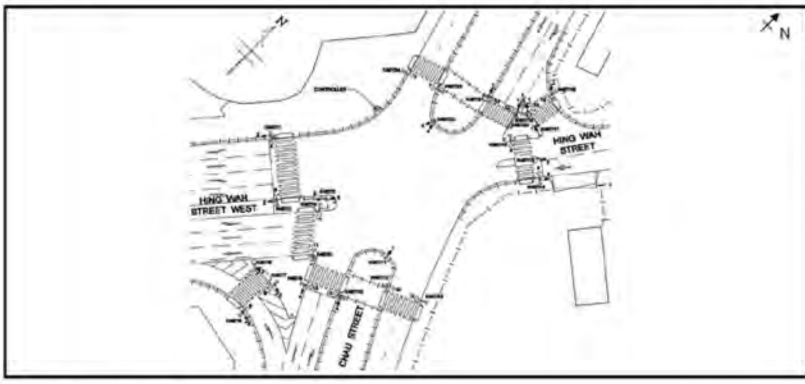
TRAFFIC SIGNAL CALCULATION SHEET

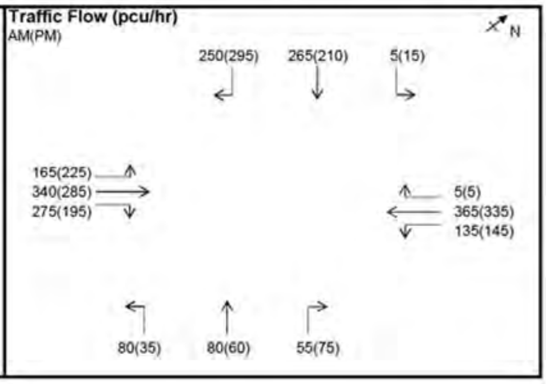
ATKINS

JOB NO. : 5190641

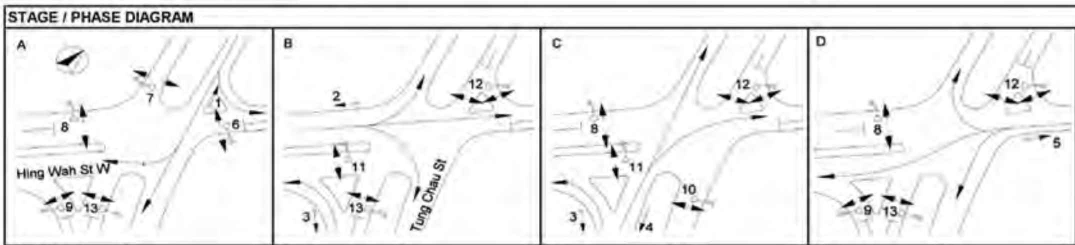
Junction : J12 -Tung Chau Street / Hing Wah Street West — Design Year: 2021

Scheme : Existing — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=
1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		255	2%	1940	0.131	225	7%	1930	0.117
1B	A	3.30	N	N	40		265	94%	2015	**0.132**	295	100%	2010	**0.147**
Hang Wah Street West EB														
2A	B	3.50	Y	N	25		165	100%	1760	0.094	225	100%	1760	0.128
2B	B	3.50	N	N			340		2000	**0.170**	285		2000	**0.143**
2C	B	3.50	N	N	20		138	100%	1860	0.074	98	100%	1860	0.053
2D	B	3.50	N	N	18		137	100%	1840	0.074	97	100%	1840	0.053
Tung Chau Street NB														
3A	B,C	3.60	Y	N	20		80	100%	1835	0.044	35	100%	1835	0.019
4A	C	3.60	N	N			69		2115	0.033	60		2115	0.028
4B	C	3.60	N	N	40		66	83%	2050	0.032	75	100%	2040	0.037
Hang Wah Street WB														
5A	D	3.90	Y	N	20/20		505	27% / 1%	1965	**0.257**	485	30% / 1%	1960	**0.247**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,C,D		5GM +	12FG =	17	sec								
9p	A,D		5GM +	8FG =	13	sec								
10p	C		5GM +	6FG =	11	sec								
11p	B,C		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,D		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+2+10p+5	PM Peak	1+2+10p+5
Sum of Critical *y* ***Y***	**0.559**	Sum of Critical *y* ***Y***	**0.537**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.647	Practical *Y* ***Ypr***	0.651
Reserve Capacity ***RC***	**16%**	Reserve Capacity ***RC***	**21%**

Date : 10/Sep/21 — Junction : J12 -Tung Chau Street / Hing Wah Street West

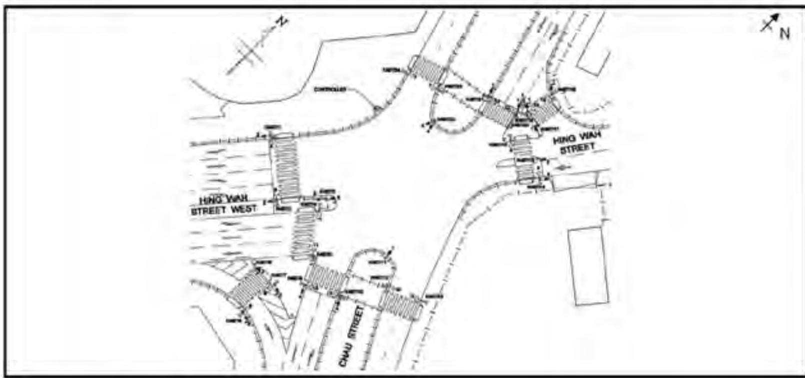
TRAFFIC SIGNAL CALCULATION SHEET

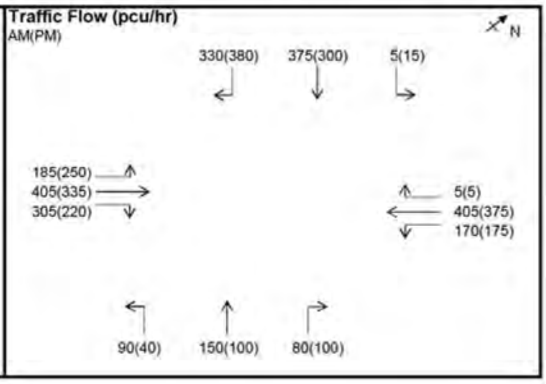
ATKINS

JOB NO. : 5190641

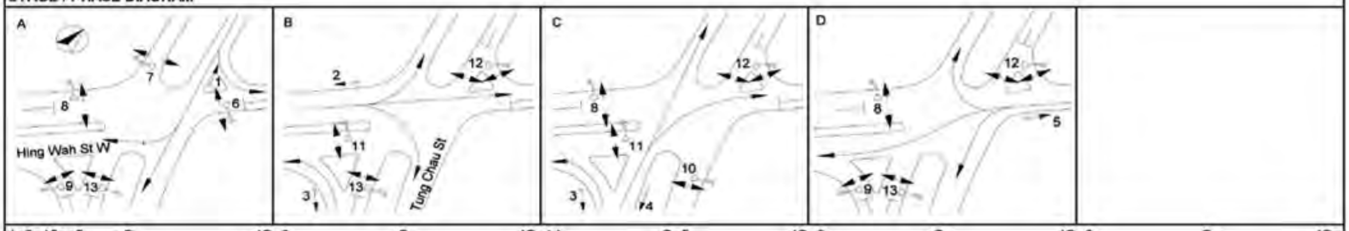
Junction : J12 -Tung Chau Street / Hing Wah Street West   Design Year: 2031

Scheme : 2031 Reference   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=
1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		348	1%	1940	0.179	315	5%	1935	0.163
1B	A	3.30	N	N	40		362	91%	2015	**0.180**	380	100%	2010	**0.189**
Hang Wah Street West EB														
2A	B	3.50	Y	N	25		185	100%	1760	0.105	250	100%	1760	0.142
2B	B	3.50	N	N			405		2000	**0.203**	335		2000	**0.168**
2C	B	3.50	N	N	20		153	100%	1860	0.082	111	100%	1860	0.060
2D	B	3.50	N	N	18		152	100%	1840	0.083	109	100%	1840	0.059
Tung Chau Street NB														
3A	B,C	3.60	Y	N	20		90	100%	1835	0.049	40	100%	1835	0.022
4A	C	3.60	N	N			116		2115	0.055	100		2115	0.047
4B	C	3.60	N	N	40		114	70%	2060	0.055	100	100%	2040	0.049
Hang Wah Street WB														
5A	D	3.90	Y	N	20/20		580	29% / 1%	1960	**0.296**	555	32% / 1%	1955	**0.284**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,C,D		5GM +	12FG =	17	sec								
9p	A,D		5GM +	8FG =	13	sec								
10p	C		5GM +	6FG =	11	sec								
11p	B,C		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,D		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+2+10p+5	PM Peak	1+2+10p+5
Sum of Critical *y* ***Y***	**0.678**	Sum of Critical *y* ***Y***	**0.640**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.647	Practical *Y* ***Ypr***	0.651
Reserve Capacity ***RC***	**-5%**	Reserve Capacity ***RC***	**2%**

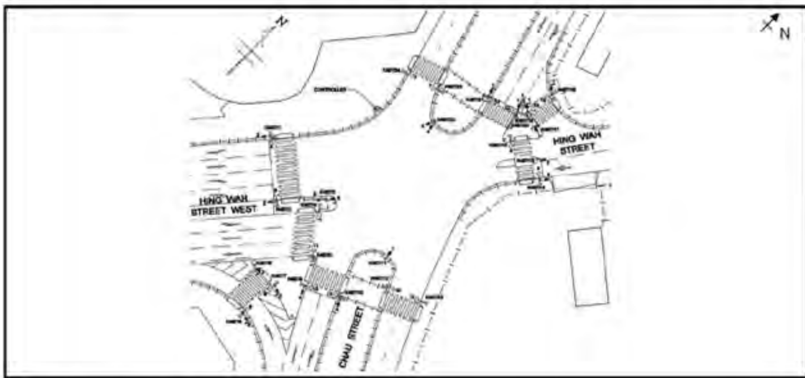
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

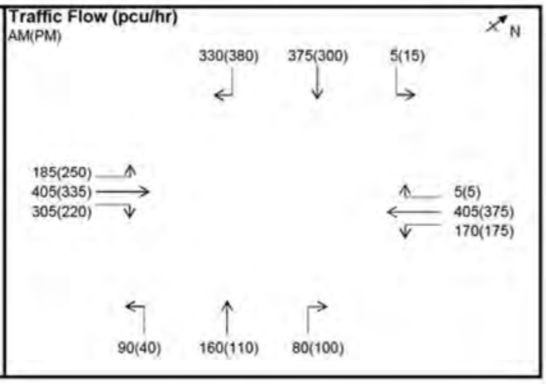
JOB NO. : 5190641

Junction : J12 -Tung Chau Street / Hing Wah Street West | Design Year: 2031

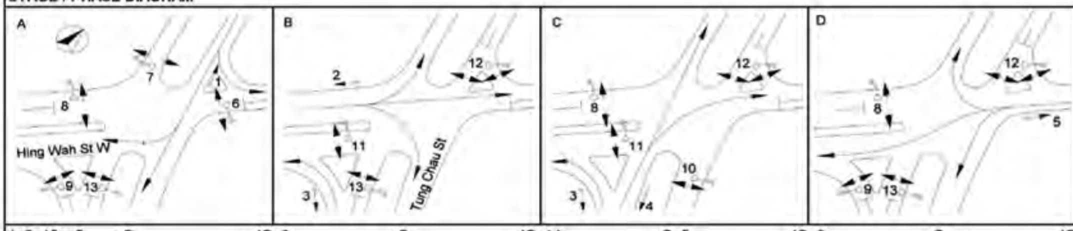
Scheme : 2031 Design | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=
1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		348	1%	1940	0.179	315	5%	1935	0.163
1B	A	3.30	N	N	40		362	91%	2015	**0.180**	380	100%	2010	**0.189**
Hang Wah Street West EB														
2A	B	3.50	Y	N	25		185	100%	1760	0.105	250	100%	1760	0.142
2B	B	3.50	N	N			405		2000	**0.203**	335		2000	**0.168**
2C	B	3.50	N	N	20		153	100%	1860	0.082	111	100%	1860	0.060
2D	B	3.50	N	N	18		152	100%	1840	0.083	109	100%	1840	0.059
Tung Chau Street NB														
3A	B,C	3.60	Y	N	20		90	100%	1835	0.049	40	100%	1835	0.022
4A	C	3.60	N	N			121		2115	0.057	107		2115	0.051
4B	C	3.60	N	N	40		119	67%	2065	0.058	103	97%	2040	0.050
Hang Wah Street WB														
5A	D	3.90	Y	N	20/20		580	29% / 1%	1960	**0.296**	555	32% / 1%	1955	**0.284**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,C,D		5GM +	12FG =	17	sec								
9p	A,D		5GM +	8FG =	13	sec								
10p	C		5GM +	6FG =	11	sec								
11p	B,C		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,D		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+2+10p+5	PM Peak	1+2+10p+5
Sum of Critical *y* ***Y***	**0.678**	Sum of Critical *y* ***Y***	**0.640**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.647	Practical Y ***Ypr***	0.651
Reserve Capacity ***RC***	**-5%**	Reserve Capacity ***RC***	**2%**

Date : 10/Sep/21 Junction : J12 -Tung Chau Street / Hing Wah Street West

TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

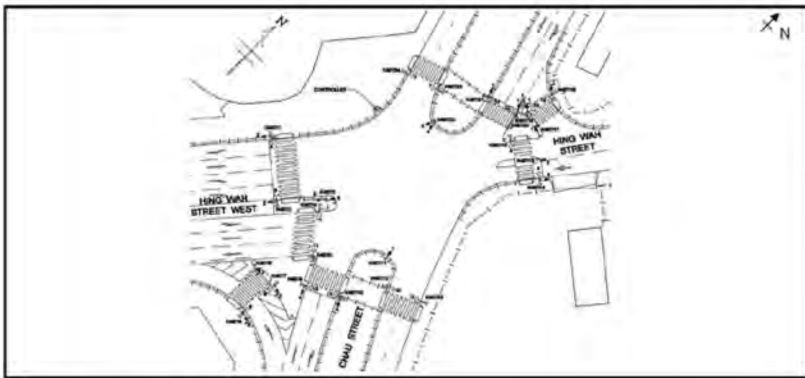
Junction : J12 -Tung Chau Street / Hing Wah Street West

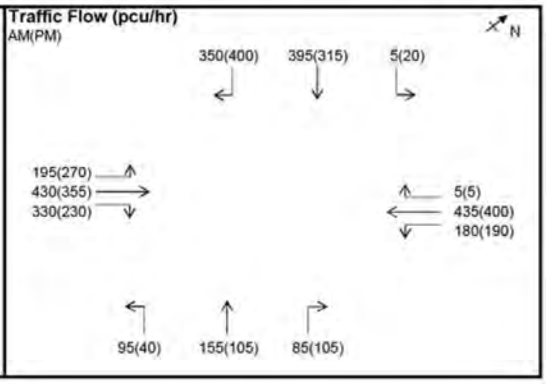
Design Year: 2037

Scheme : 2037 Reference

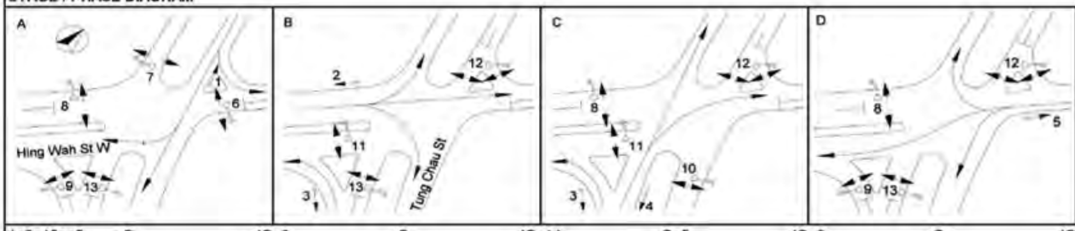
Designed by: KH

Checked by: EC





STAGE / PHASE DIAGRAM



1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=
1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) w	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) r	Gradient in % g	AM Peak Design Flow q (pcu/hr)	AM Peak Proportion turning (%) f	AM Peak Saturation flow S (pcu/hr)	AM Peak Flow factor y	PM Peak Design Flow q (pcu/hr)	PM Peak Proportion turning (%) f	PM Peak Saturation flow S (pcu/hr)	PM Peak Flow factor y
Tung Chau Street SB														
1A	A	3.30	Y	N	15		368	1%	1940	**0.190**	335	6%	1935	0.173
1B	A	3.30	N	N	40		382	92%	2015	0.190	400	100%	2010	**0.199**
Hang Wah Street West EB														
2A	B	3.50	Y	N	25		195	100%	1760	0.111	270	100%	1760	0.153
2B	B	3.50	N	N			430		2000	**0.215**	355		2000	**0.178**
2C	B	3.50	N	N	20		166	100%	1860	0.089	116	100%	1860	0.062
2D	B	3.50	N	N	18		164	100%	1840	0.089	114	100%	1840	0.062
Tung Chau Street NB														
3A	B,C	3.60	Y	N	20		95	100%	1835	0.052	40	100%	1835	0.022
4A	C	3.60	N	N			122		2115	0.058	105		2115	0.050
4B	C	3.60	N	N	40		118	72%	2060	0.057	105	100%	2040	0.051
Hang Wah Street WB														
5A	D	3.90	Y	N	20/20		620	29% / 1%	1960	**0.316**	595	32% / 1%	1955	**0.304**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,C,D		5GM +	12FG =	17	sec								
9p	A,D		5GM +	8FG =	13	sec								
10p	C		5GM +	6FG =	11	sec								
11p	B,C		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,D		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+2+10p+5	PM Peak	1+2+10p+5
Sum of Critical *y* ***Y***	**0.721**	Sum of Critical *y* ***Y***	**0.681**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.647	Practical *Y* ***Ypr***	0.651
Reserve Capacity ***RC***	**-10%**	Reserve Capacity ***RC***	**-4%**

TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

JOB NO. : 5190641

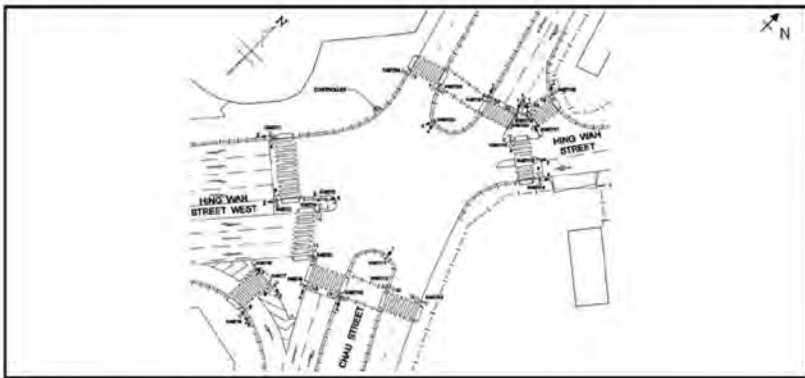
Junction : J12 -Tung Chau Street / Hing Wah Street West

Design Year: 2037

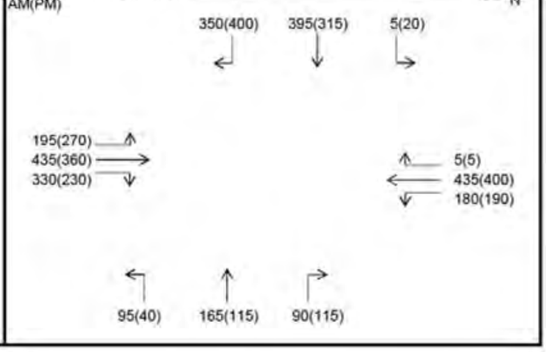
Scheme : 2037 Design

Designed by: KH

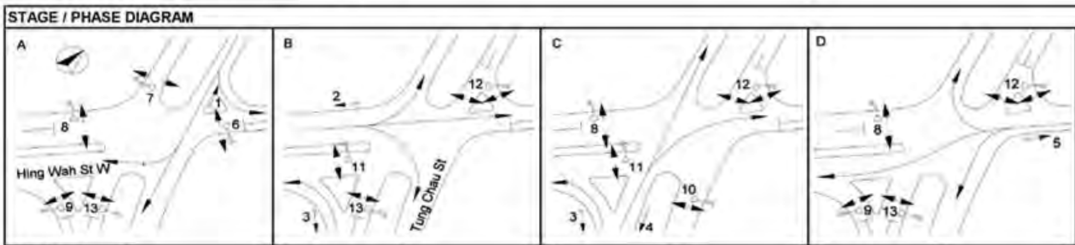
Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=
1+2+10p+5	G=	IG=6	G=	IG=14	G=5	IG=8	G=	IG=6	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		368	1%	1940	**0.190**	335	6%	1935	0.173
1B	A	3.30	N	N	40		382	92%	2015	0.190	400	100%	2010	**0.199**
Hang Wah Street West EB														
2A	B	3.50	Y	N	25		195	100%	1760	0.111	270	100%	1760	0.153
2B	B	3.50	N	N			435		2000	**0.218**	360		2000	**0.180**
2C	B	3.50	N	N	20		166	100%	1860	0.089	116	100%	1860	0.062
2D	B	3.50	N	N	18		164	100%	1840	0.089	114	100%	1840	0.062
Tung Chau Street NB														
3A	B,C	3.60	Y	N	20		95	100%	1835	0.052	40	100%	1835	0.022
4A	C	3.60	N	N			129		2115	0.061	115		2115	0.054
4B	C	3.60	N	N	40		126	71%	2060	0.061	115	100%	2040	0.056
Hang Wah Street WB														
5A	D	3.90	Y	N	20/20		620	29% / 1%	1960	**0.316**	595	32% / 1%	1955	**0.304**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,C,D		5GM +	12FG =	17	sec								
9p	A,D		5GM +	8FG =	13	sec								
10p	C		5GM +	6FG =	11	sec								
11p	B,C		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,D		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+2+10p+5	PM Peak	1+2+10p+5
Sum of Critical *y* ***Y***	**0.724**	Sum of Critical *y* ***Y***	**0.683**
Lost Time ***L*** (sec)	36	Lost Time ***L*** (sec)	36
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.647	Practical *Y* ***Ypr***	0.651
Reserve Capacity ***RC***	**-11%**	Reserve Capacity ***RC***	**-5%**

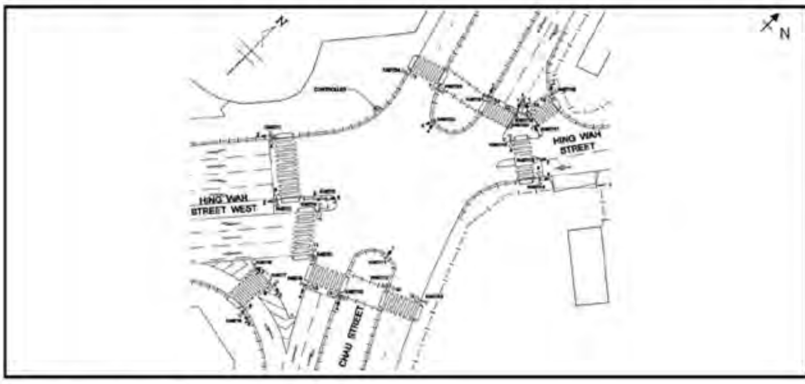
TRAFFIC SIGNAL CALCULATION SHEET

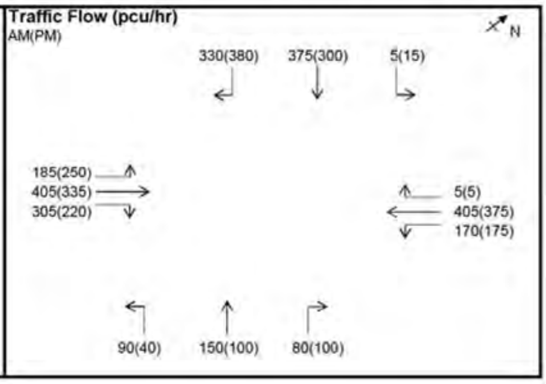
ATKINS

JOB NO. : 5190641

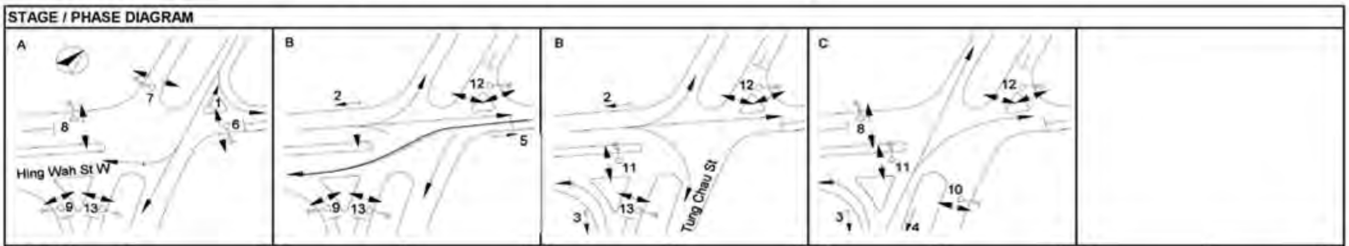
Junction : J12 -Tung Chau Street / Hing Wah Street West Design Year: 2031

Scheme : 2031 Reference (with junction improvement) Designed by: KH Checked by: EC





STAGE / PHASE DIAGRAM



1+5+14+4	G=	IG=6	G=	IG=6	G=	IG=6	G=	IG=14	G=	IG=
1+5+14+4	G=	IG=6	G=	IG=6	G=	IG=6	G=	IG=14	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		348	1%	1940	0.179	315	5%	1935	0.163
1B	A	3.30	N	N	40		362	91%	2015	**0.180**	380	100%	2010	**0.189**
Hang Wah Street West EB														
2A	B,C	3.50	Y	N	25		185	100%	1760	0.105	250	100%	1760	0.142
2B	B,C	3.50	N	N			405		2000	0.203	335		2000	0.168
14A	C	3.50	N	N	20		153	100%	1860	0.082	111	100%	1860	**0.060**
14B	C	3.50	N	N	18		152	100%	1840	**0.083**	109	100%	1840	0.059
Tung Chau Street NB														
3A	C,D	3.60	Y	N	20		90	100%	1835	0.049	40	100%	1835	0.022
4A	D	3.60	N	N			116		2115	0.055	100		2115	0.047
4B	D	3.60	N	N	40		114	70%	2060	**0.055**	100	100%	2040	**0.049**
Hang Wah Street WB														
5A	B	3.90	Y	N	20		575	30%	1960	**0.293**	550	32%	1960	**0.281**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,D		5GM +	12FG =	17	sec								
9p	A,B		5GM +	8FG =	13	sec								
10p	D		5GM +	6FG =	11	sec								
11p	C,D		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,C		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+5+14+4	PM Peak	1+5+14+4
Sum of Critical *y* ***Y***	**0.611**	Sum of Critical *y* ***Y***	**0.578**
Lost Time ***L*** (sec)	28	Lost Time ***L*** (sec)	28
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.703	Practical Y ***Ypr***	0.706
Reserve Capacity ***RC***	**15%**	Reserve Capacity ***RC***	**22%**

Date : 10/Sep/21 Junction : J12 -Tung Chau Street / Hing Wah Street West

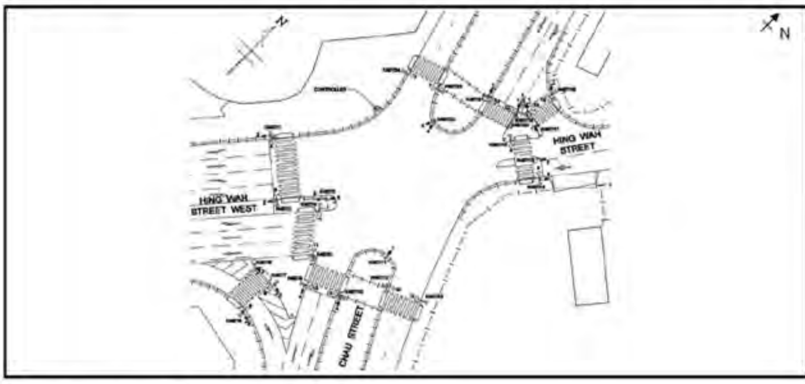
TRAFFIC SIGNAL CALCULATION SHEET

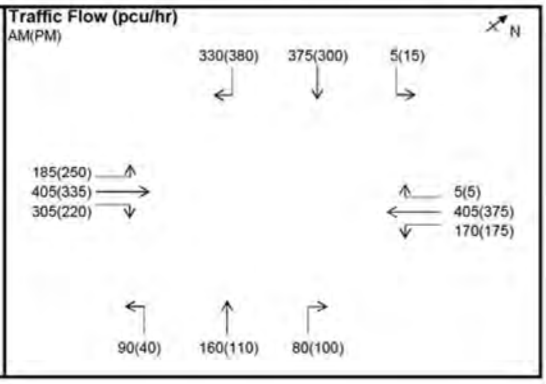
ATKINS

JOB NO. : 5190641

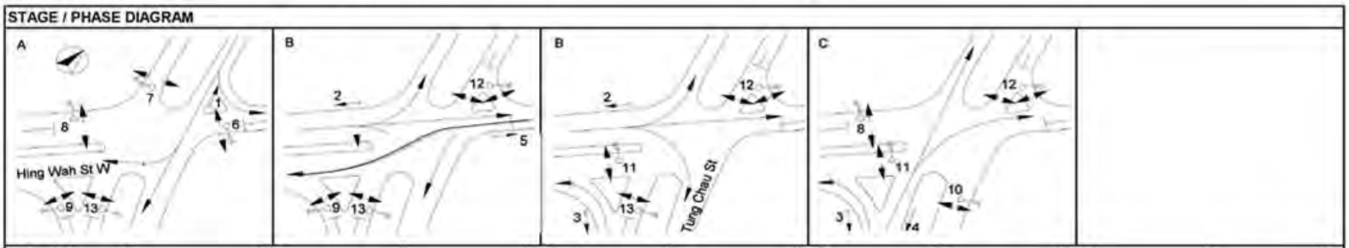
Junction : J12 -Tung Chau Street / Hing Wah Street West — Design Year: 2031

Scheme : 2031 Design (with junction improvement) — Designed by: KH — Checked by: EC





STAGE / PHASE DIAGRAM



1+5+14+4	G=		IG=6	G=		IG=6	G=		IG=6	G=		IG=14	G=	IG=
1+5+14+4	G=		IG=6	G=		IG=6	G=		IG=6	G=		IG=14	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		348	1%	1940	0.179	315	5%	1935	0.163
1B	A	3.30	N	N	40		362	91%	2015	**0.180**	380	100%	2010	**0.189**
Hang Wah Street West EB														
2A	B,C	3.50	Y	N	25		185	100%	1760	0.105	250	100%	1760	0.142
2B	B,C	3.50	N	N			405		2000	0.203	335		2000	0.168
14A	C	3.50	N	N	20		153	100%	1860	0.082	111	100%	1860	**0.060**
14B	C	3.50	N	N	18		152	100%	1840	**0.083**	109	100%	1840	0.059
Tung Chau Street NB														
3A	C,D	3.60	Y	N	20		90	100%	1835	0.049	40	100%	1835	0.022
4A	D	3.60	N	N			121		2115	0.057	107		2115	**0.051**
4B	D	3.60	N	N	40		119	67%	2065	**0.058**	103	97%	2040	0.050
Hang Wah Street WB														
5A	B	3.90	Y	N	20		575	30%	1960	**0.293**	550	32%	1960	**0.281**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,D		5GM +	12FG =	17	sec								
9p	A,B		5GM +	8FG =	13	sec								
10p	D		5GM +	6FG =	11	sec								
11p	C,D		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,C		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+5+14+4	PM Peak	1+5+14+4
Sum of Critical *y* ***Y***	**0.613**	Sum of Critical *y* ***Y***	**0.580**
Lost Time ***L*** (sec)	28	Lost Time ***L*** (sec)	28
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.703	Practical Y ***Ypr***	0.706
Reserve Capacity ***RC***	**15%**	Reserve Capacity ***RC***	**22%**

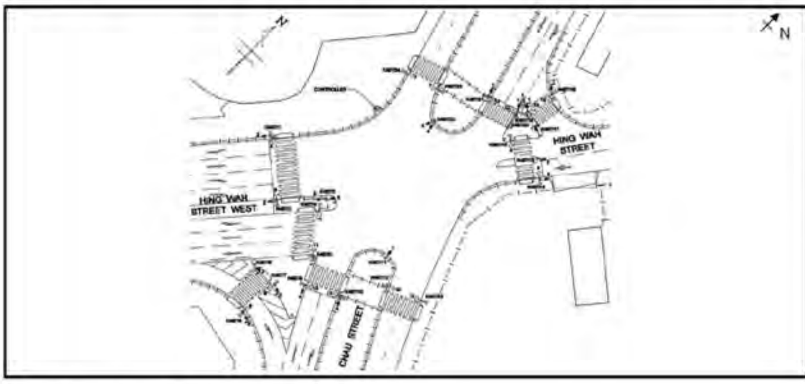
TRAFFIC SIGNAL CALCULATION SHEET

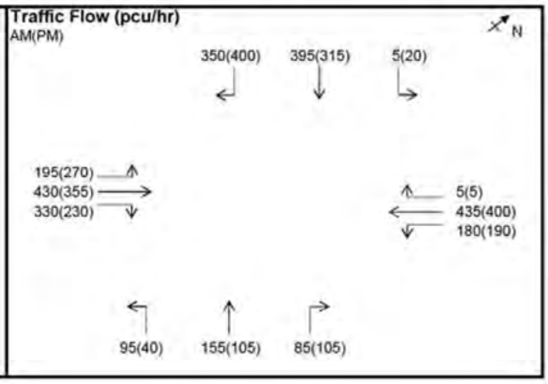
ATKINS

JOB NO. : 5190641

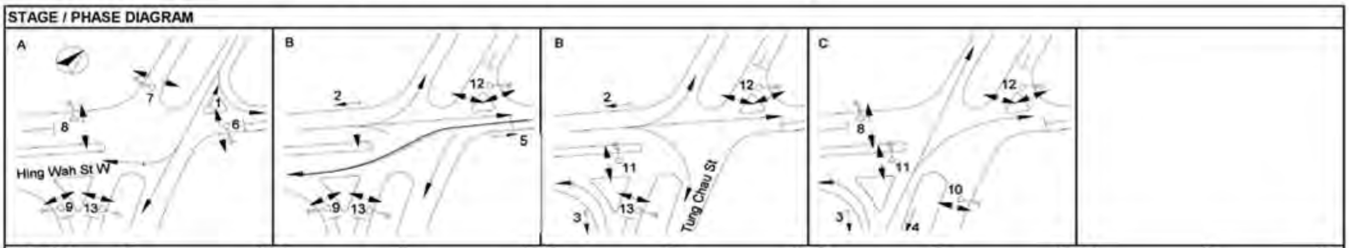
Junction : J12 -Tung Chau Street / Hing Wah Street West   Design Year: 2037

Scheme : 2037 Reference (with junction improvement)   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+5+14+4	G=	IG=6	G=	IG=6	G=	IG=6	G=	IG=14	G=	IG=
1+5+14+4	G=	IG=6	G=	IG=6	G=	IG=6	G=	IG=14	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Proportion turning (%) *f*	AM Peak: Saturation flow *S* (pcu/hr)	AM Peak: Flow factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Proportion turning (%) *f*	PM Peak: Saturation flow *S* (pcu/hr)	PM Peak: Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		368	1%	1940	**0.190**	335	6%	1935	0.173
1B	A	3.30	N	N	40		382	92%	2015	0.190	400	100%	2010	**0.199**
Hang Wah Street West EB														
2A	B,C	3.50	Y	N	25		195	100%	1760	0.111	270	100%	1760	0.153
2B	B,C	3.50	N	N			430		2000	0.215	355		2000	0.178
14A	C	3.50	N	N	20		166	100%	1860	**0.089**	116	100%	1860	**0.062**
14B	C	3.50	N	N	18		164	100%	1840	0.089	114	100%	1840	0.062
Tung Chau Street NB														
3A	C,D	3.60	Y	N	20		95	100%	1835	0.052	40	100%	1835	0.022
4A	D	3.60	N	N			122		2115	**0.058**	105		2115	0.050
4B	D	3.60	N	N	40		118	72%	2060	0.057	105	100%	2040	**0.051**
Hang Wah Street WB														
5A	B	3.90	Y	N	20		615	29%	1960	**0.314**	590	32%	1960	**0.301**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,D		5GM +	12FG =	17	sec								
9p	A,B		5GM +	8FG =	13	sec								
10p	D		5GM +	6FG =	11	sec								
11p	C,D		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,C		5GM +	6FG =	11	sec								

Notes:

AM Peak	1+5+14+4	PM Peak	1+5+14+4
Sum of Critical *y* ***Y***	**0.650**	Sum of Critical *y* ***Y***	**0.614**
Lost Time ***L*** (sec)	28	Lost Time ***L*** (sec)	28
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.703	Practical Y ***Ypr***	0.706
Reserve Capacity ***RC***	**8%**	Reserve Capacity ***RC***	**15%**

Date : 10/Sep/21   Junction : J12 -Tung Chau Street / Hing Wah Street West

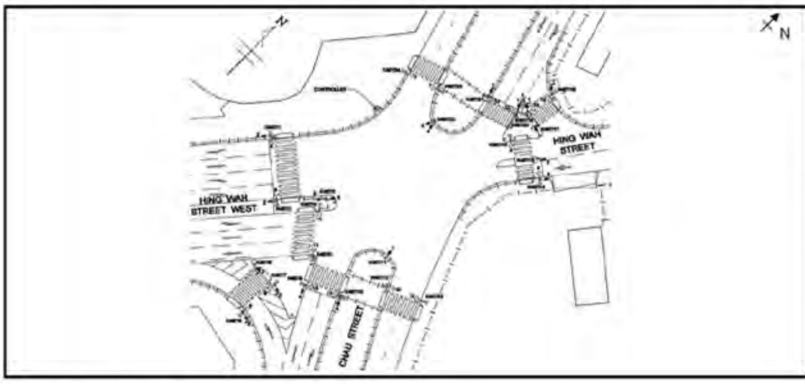
TRAFFIC SIGNAL CALCULATION SHEET

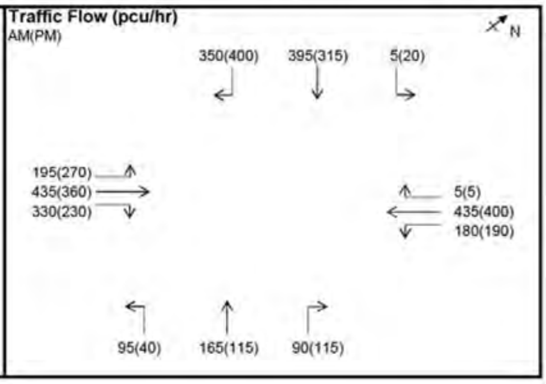
ATKINS

JOB NO. : 5190641

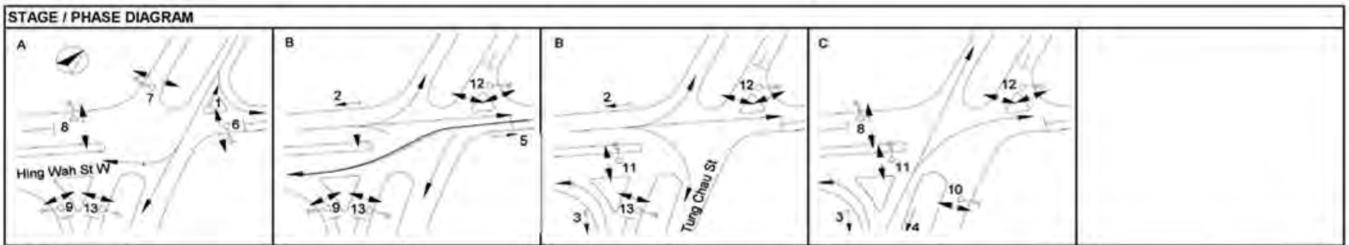
Junction : J12 -Tung Chau Street / Hing Wah Street West   Design Year: 2037

Scheme : 2037 Design (with junction improvement)   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+5+14+4	G=	IG=6	G=	IG=6	G=	IG=6	G=	IG=14	G= IG=
1+5+14+4	G=	IG=6	G=	IG=6	G=	IG=6	G=	IG=14	G= IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Tung Chau Street SB														
1A	A	3.30	Y	N	15		368	1%	1940	**0.190**	335	6%	1935	0.173
1B	A	3.30	N	N	40		382	92%	2015	0.190	400	100%	2010	**0.199**
Hang Wah Street West EB														
2A	B,C	3.50	Y	N	25		195	100%	1760	0.111	270	100%	1760	0.153
2B	B,C	3.50	N	N			435		2000	0.218	360		2000	0.180
14A	C	3.50	N	N	20		166	100%	1860	**0.089**	116	100%	1860	**0.062**
14B	C	3.50	N	N	18		164	100%	1840	0.089	114	100%	1840	0.062
Tung Chau Street NB														
3A	C,D	3.60	Y	N	20		95	100%	1835	0.052	40	100%	1835	0.022
4A	D	3.60	N	N			129		2115	0.061	115		2115	0.054
4B	D	3.60	N	N	40		126	71%	2060	**0.061**	115	100%	2040	**0.056**
Hang Wah Street WB														
5A	B	3.90	Y	N	20		615	29%	1960	**0.314**	590	32%	1960	**0.301**
6p	A		5GM +	6FG =	11	sec								
7p	A		5GM +	7FG =	12	sec								
8p	A,D		5GM +	12FG =	17	sec								
9p	A,B		5GM +	8FG =	13	sec								
10p	D		5GM +	6FG =	11	sec								
11p	C,D		5GM +	9FG =	14	sec								
12p	B,C,D		5GM +	6FG =	11	sec								
13p	A,B,C		5GM +	6FG =	11	sec								

Notes:

AM Peak	**1+5+14+4**	**PM Peak**	**1+5+14+4**
Sum of Critical *y* ***Y***	**0.654**	Sum of Critical *y* ***Y***	**0.619**
Lost Time ***L*** (sec)	28	Lost Time ***L*** (sec)	28
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical Y ***Ypr***	0.703	Practical Y ***Ypr***	0.706
Reserve Capacity ***RC***	**8%**	Reserve Capacity ***RC***	**14%**

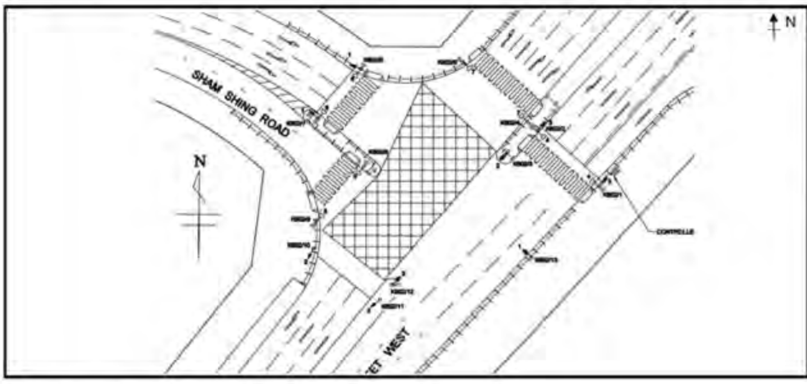
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

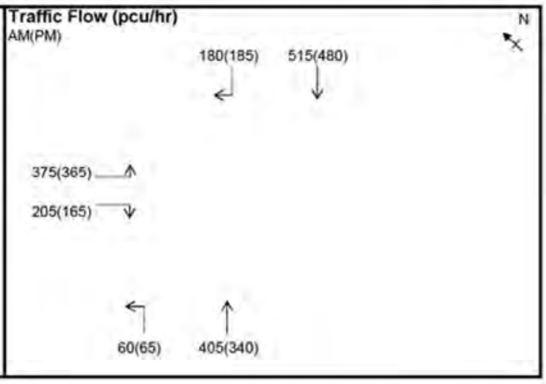
JOB NO. : 5190641

Junction : J13 - Sham Shing Road / Hing Wah Street West | Design Year: 2021

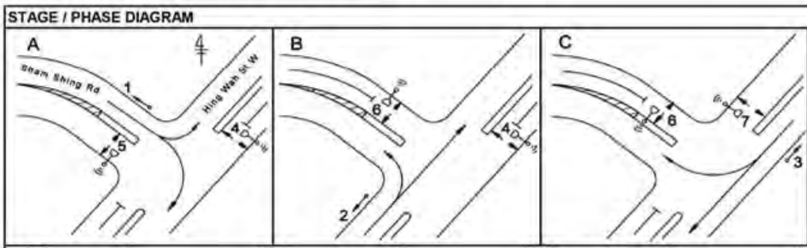
Scheme : Existing | Designed by: KH | Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Sham hing Road EB														
1A	A	3.30	Y	N	23		181	100%	1825	0.099	176	100%	1825	**0.096**
1B	A	3.30	N	N	25		194	100%	1965	0.099	189	100%	1965	0.096
1C	A	3.30	N	N	25		205	100%	1965	**0.104**	165	100%	1965	0.084
Hing Wah Street West NB														
2A	B	3.40	Y	N	20		60	100%	1820	0.033	65	100%	1820	0.036
2B	B	3.40	N	N			203		2095	**0.097**	170		2095	**0.081**
2C	B	3.40	N	N			202		2095	0.096	170		2095	**0.081**
Hing Wah Street West SB														
3A	C	3.30	Y	N			140		1555	0.090	130		1555	0.084
3B	C	3.30	N	N			187		2085	0.090	175		2085	0.084
3C	C	3.30	N	N			188		2085	0.090	175		2085	0.084
3D	C	3.30	N	N	25		180	100%	1965	**0.092**	185	100%	1965	**0.094**
4p	A,B		5GM +	13FG =	18	sec								
5p	A		5GM +	11FG =	16	sec								
6p	B,C		5GM +	11FG =	16	sec								
7p	C		5GM +	14FG =	19	sec								

Notes:

AM Peak	1+2+3	PM Peak	1+2+3
Sum of Critical *y* ***Y***	**0.293**	Sum of Critical *y* ***Y***	**0.272**
Lost Time ***L*** (sec)	12	Lost Time ***L*** (sec)	12
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.816	Practical *Y* ***Ypr***	0.817
Reserve Capacity ***RC***	**179%**	Reserve Capacity ***RC***	**201%**

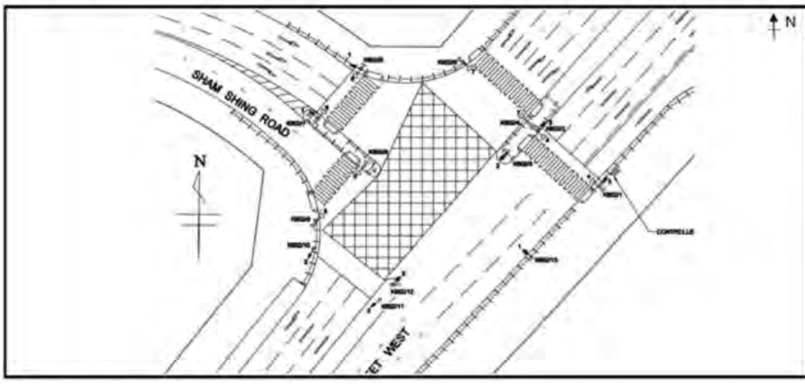
TRAFFIC SIGNAL CALCULATION SHEET

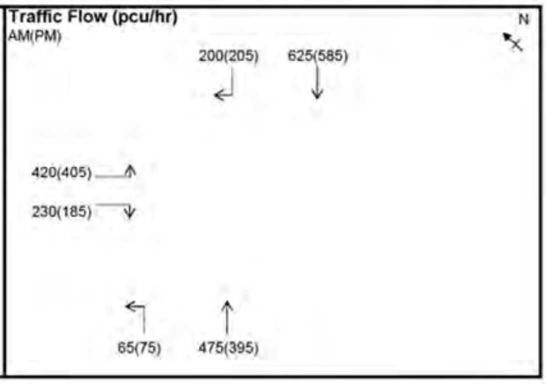
ATKINS

JOB NO. : 5190641

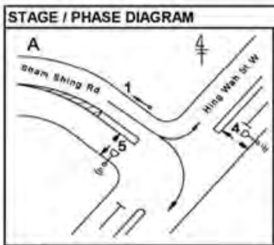
Junction : J13 - Sham Shing Road / Hing Wah Street West | Design Year: 2031

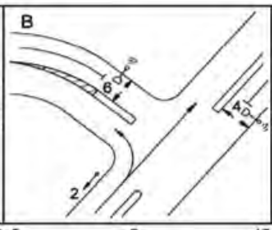
Scheme : 2031 Reference | Designed by: KH | Checked by: EC

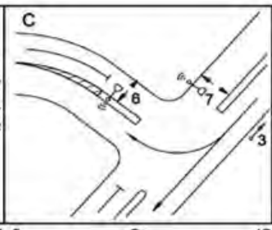




STAGE / PHASE DIAGRAM







1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Sham hing Road EB														
1A	A	3.30	Y	N	23		202	100%	1825	0.111	195	100%	1825	0.107
1B	A	3.30	N	N	25		218	100%	1965	0.111	210	100%	1965	**0.107**
1C	A	3.30	N	N	25		230	100%	1965	**0.117**	185	100%	1965	0.094
Hing Wah Street West NB														
2A	B	3.40	Y	N	20		65	100%	1820	0.036	75	100%	1820	0.041
2B	B	3.40	N	N			238		2095	**0.114**	198		2095	**0.095**
2C	B	3.40	N	N			237		2095	0.113	197		2095	0.094
Hing Wah Street West SB														
3A	C	3.30	Y	N			170		1555	0.109	159		1555	0.102
3B	C	3.30	N	N			227		2085	0.109	213		2085	0.102
3C	C	3.30	N	N			228		2085	**0.109**	213		2085	0.102
3D	C	3.30	N	N	25		200	100%	1965	0.102	205	100%	1965	**0.104**
4p	A,B		5GM +	13FG =	18	sec								
5p	A		5GM +	11FG =	16	sec								
6p	B,C		5GM +	11FG =	16	sec								
7p	C		5GM +	14FG =	19	sec								

Notes:

AM Peak	1+2+3	PM Peak	1+2+3
Sum of Critical *y* ***Y***	**0.340**	Sum of Critical *y* ***Y***	**0.306**
Lost Time ***L*** (sec)	12	Lost Time ***L*** (sec)	12
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.816	Practical *Y* ***Ypr***	0.817
Reserve Capacity ***RC***	**140%**	Reserve Capacity ***RC***	**167%**

Date : 10/Sep/21 Junction : J13 - Sham Shing Road / Hing Wah Street West

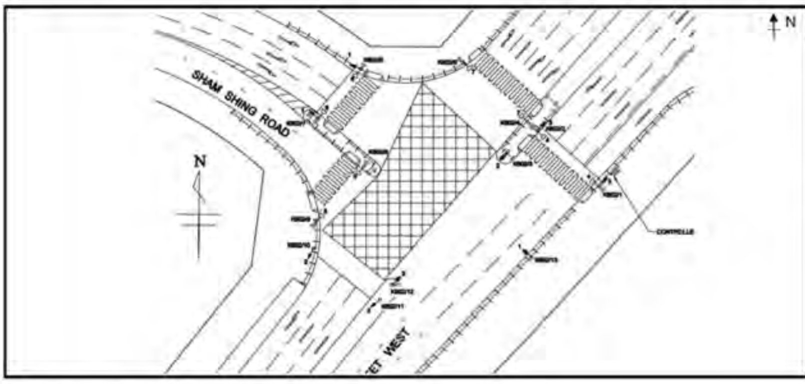
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

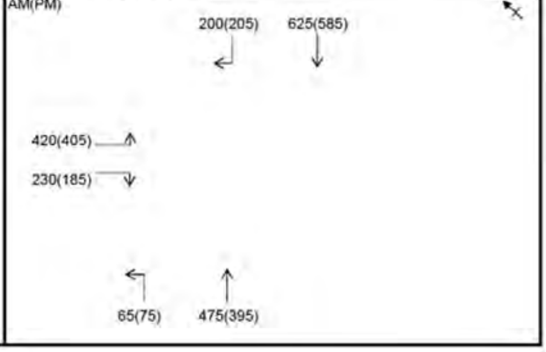
JOB NO. : 5190641

Junction : J13 - Sham Shing Road / Hing Wah Street West — Design Year: 2031

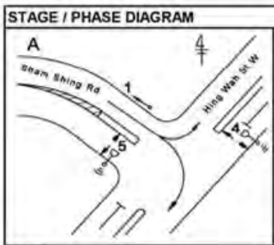
Scheme : 2031 Design — Designed by: KH — Checked by: EC

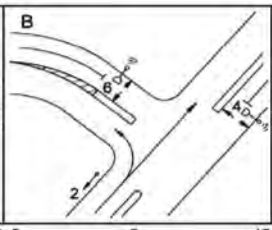


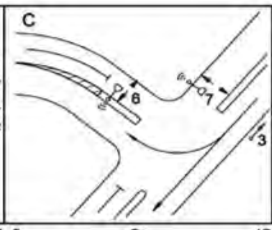
Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM







1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) w	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) r	Gradient in % g	AM Peak Design Flow q (pcu/hr)	AM Peak Proportion turning (%) f	AM Peak Saturation flow S (pcu/hr)	AM Peak Flow factor y	PM Peak Design Flow q (pcu/hr)	PM Peak Proportion turning (%) f	PM Peak Saturation flow S (pcu/hr)	PM Peak Flow factor y
Sham hing Road EB														
1A	A	3.30	Y	N	23		202	100%	1825	0.111	195	100%	1825	0.107
1B	A	3.30	N	N	25		218	100%	1965	0.111	210	100%	1965	**0.107**
1C	A	3.30	N	N	25		230	100%	1965	**0.117**	185	100%	1965	0.094
Hing Wah Street West NB														
2A	B	3.40	Y	N	20		65	100%	1820	0.036	75	100%	1820	0.041
2B	B	3.40	N	N			238		2095	**0.114**	198		2095	**0.095**
2C	B	3.40	N	N			237		2095	0.113	197		2095	0.094
Hing Wah Street West SB														
3A	C	3.30	Y	N			170		1555	0.109	159		1555	0.102
3B	C	3.30	N	N			227		2085	0.109	213		2085	0.102
3C	C	3.30	N	N			228		2085	**0.109**	213		2085	0.102
3D	C	3.30	N	N	25		200	100%	1965	0.102	205	100%	1965	**0.104**
4p	A,B		5GM +	13FG =	18	sec								
5p	A		5GM +	11FG =	16	sec								
6p	B,C		5GM +	11FG =	16	sec								
7p	C		5GM +	14FG =	19	sec								

Notes:

AM Peak	1+2+3	PM Peak	1+2+3
Sum of Critical *y* ***Y***	**0.340**	Sum of Critical *y* ***Y***	**0.306**
Lost Time ***L*** (sec)	12	Lost Time ***L*** (sec)	12
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.816	Practical *Y* ***Ypr***	0.817
Reserve Capacity ***RC***	**140%**	Reserve Capacity ***RC***	**167%**

Date : 10/Sep/21 — Junction : J13 - Sham Shing Road / Hing Wah Street West

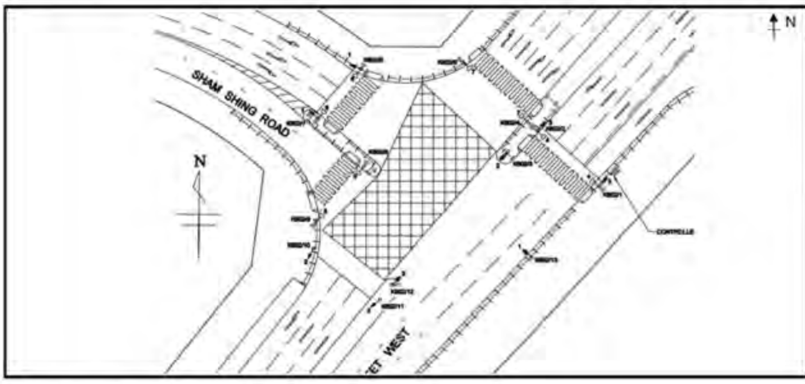
TRAFFIC SIGNAL CALCULATION SHEET

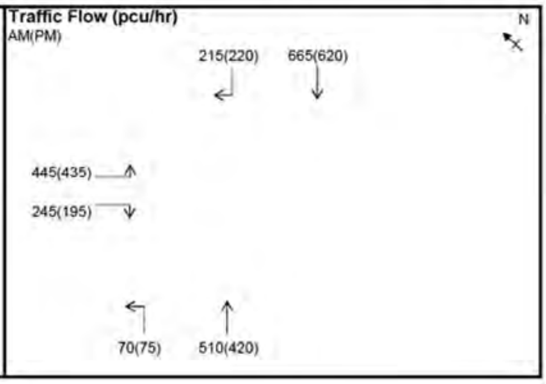
ATKINS

JOB NO. : 5190641

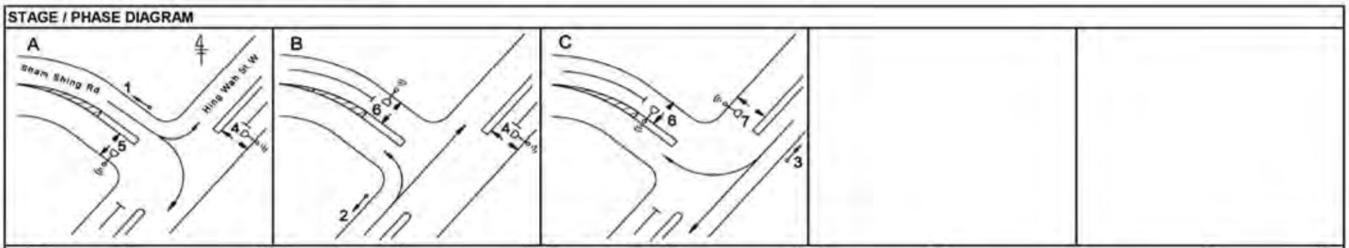
Junction : J13 - Sham Shing Road / Hing Wah Street West   Design Year: 2037

Scheme : 2037 Reference   Designed by: KH   Checked by: EC





STAGE / PHASE DIAGRAM



1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Sham hing Road EB														
1A	A	3.30	Y	N	23		214	100%	1825	0.117	209	100%	1825	0.115
1B	A	3.30	N	N	25		231	100%	1965	0.118	226	100%	1965	**0.115**
1C	A	3.30	N	N	25		245	100%	1965	**0.125**	195	100%	1965	0.099
Hing Wah Street West NB														
2A	B	3.40	Y	N	20		70	100%	1820	0.038	75	100%	1820	0.041
2B	B	3.40	N	N			255		2095	**0.122**	210		2095	**0.100**
2C	B	3.40	N	N			255		2095	**0.122**	210		2095	**0.100**
Hing Wah Street West SB														
3A	C	3.30	Y	N			181		1555	**0.116**	168		1555	0.108
3B	C	3.30	N	N			242		2085	0.116	226		2085	0.108
3C	C	3.30	N	N			242		2085	0.116	226		2085	0.108
3D	C	3.30	N	N	25		215	100%	1965	0.109	220	100%	1965	**0.112**
4p	A,B		5GM +	13FG =	18	sec								
5p	A		5GM +	11FG =	16	sec								
6p	B,C		5GM +	11FG =	16	sec								
7p	C		5GM +	14FG =	19	sec								

Notes:

AM Peak	**1+2+3**	**PM Peak**	**1+2+3**
Sum of Critical *y* ***Y***	**0.363**	Sum of Critical *y* ***Y***	**0.327**
Lost Time ***L*** (sec)	12	Lost Time ***L*** (sec)	12
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.816	Practical *Y* ***Ypr***	0.817
Reserve Capacity ***RC***	**125%**	Reserve Capacity ***RC***	**150%**

Date : 10/Sep/21   Junction : J13 - Sham Shing Road / Hing Wah Street West

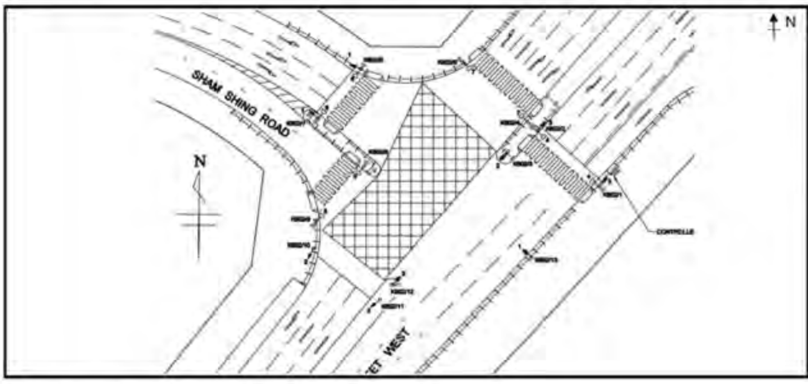
TRAFFIC SIGNAL CALCULATION SHEET

ATKINS

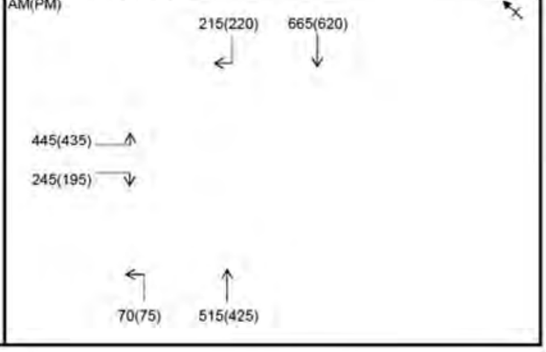
JOB NO. : 5190641

Junction : J13 - Sham Shing Road / Hing Wah Street West   Design Year: 2037

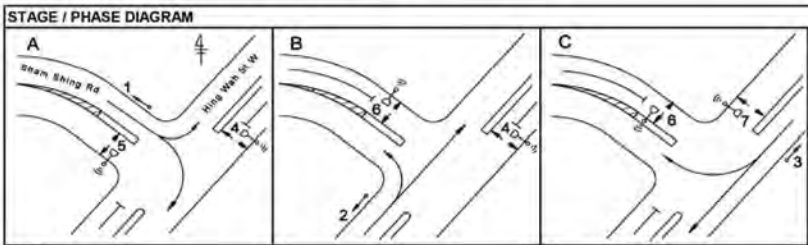
Scheme : 2037 Design   Designed by: KH   Checked by: EC



Traffic Flow (pcu/hr)
AM(PM)



STAGE / PHASE DIAGRAM



1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=
1+2+3	G=	IG=5	G=	IG=5	G=	IG=5	G=	IG=	G=	IG=

Capacity Calculations

Phase	Stage	Lane Width (m) *w*	Nearside lane? (Y/N)	Opposed turn? (Y/N)	Radius for turning (m) *r*	Gradient in % *g*	AM Peak Design Flow *q* (pcu/hr)	AM Peak Proportion turning (%) *f*	AM Peak Saturation flow *S* (pcu/hr)	AM Peak Flow factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Proportion turning (%) *f*	PM Peak Saturation flow *S* (pcu/hr)	PM Peak Flow factor *y*
Sham hing Road EB														
1A	A	3.30	Y	N	23		214	100%	1825	0.117	209	100%	1825	0.115
1B	A	3.30	N	N	25		231	100%	1965	0.118	226	100%	1965	**0.115**
1C	A	3.30	N	N	25		245	100%	1965	**0.125**	195	100%	1965	0.099
Hing Wah Street West NB														
2A	B	3.40	Y	N	20		70	100%	1820	0.038	75	100%	1820	0.041
2B	B	3.40	N	N			258		2095	**0.123**	213		2095	**0.102**
2C	B	3.40	N	N			257		2095	0.123	212		2095	0.101
Hing Wah Street West SB														
3A	C	3.30	Y	N			181		1555	**0.116**	168		1555	0.108
3B	C	3.30	N	N			242		2085	0.116	226		2085	0.108
3C	C	3.30	N	N			242		2085	0.116	226		2085	0.108
3D	C	3.30	N	N	25		215	100%	1965	0.109	220	100%	1965	**0.112**
4p	A,B		5GM +	13FG =	18	sec								
5p	A		5GM +	11FG =	16	sec								
6p	B,C		5GM +	11FG =	16	sec								
7p	C		5GM +	14FG =	19	sec								

Notes:

AM Peak	1+2+3	PM Peak	1+2+3
Sum of Critical *y* ***Y***	**0.364**	Sum of Critical *y* ***Y***	**0.329**
Lost Time ***L*** (sec)	12	Lost Time ***L*** (sec)	12
Cycle Time ***c*** (sec)	128	Cycle Time ***c*** (sec)	130
Practical *Y* ***Ypr***	0.816	Practical *Y* ***Ypr***	0.817
Reserve Capacity ***RC***	**124%**	Reserve Capacity ***RC***	**149%**

Date : 10/Sep/21   Junction : J13 - Sham Shing Road / Hing Wah Street West

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Appendix 6

Environmental Assessment (EA) Report

Urban Renewal Authority
Development Scheme
Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Environmental Assessment Report
(V1.0)

September 2021

Approved By	(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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Prepared by	Colman Wong	Colman	23 September 2021
Checked by	Karina Chan		23 September 2021

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1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority (URA) has proposed a Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO). This Environmental Assessment (EA) is to support the submission of a draft Development Scheme Plan (DSP) with its planning proposal to the Town Planning Board (TPB) for consideration.

1.1.2 The Scheme SSP-018 consists of Sites A and B. Site A is bounded by Hing Wah Street on the south-eastern boundary, Cheung Sha Wan Road on the south-western boundary, Cheung Wah Street on the north-western boundary, and Cheung Sha Wan Catholic Secondary School on the north-eastern boundary. Site B is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the south-eastern boundary. The location of the Scheme is shown in **Figure 1-1**.

1.1.3 The URA proposed to redevelop the Site A for high-density residential development, and the Site B to G/IC complex with a large public open space.

1.1.4 Cinotech Consultants Limited was commissioned by URA to carry out an Environmental Assessment (EA) to assess and envisage any potential environmental impact on the implementation of the proposed development of the Scheme and to recommend necessary pipe upgrading/diversion as necessary.

1.2 Purpose and Scope of Report

1.2.1 This EA is prepared to assess the potential environmental impact/benefit associated with the implementation of the Scheme in supporting the submission of the draft DSP to TPB's consideration. It has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines (HKPSG).

1.2.2 This EA presents the study of the potential environmental impacts of the following aspects:

- Air Quality
- Noise
- Waste Management
- Preliminary Land Contamination

1.2.3 Drainage Impact, Sewerage Impact, Water Supply Impact and Air Ventilation Impact will be assessed in separate reports.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Overview of Existing Developments and Major Roads in the Surroundings

2.1.1 The Scheme is located in a core region of developed area. The immediately north and east of the Sites are mostly residential development. The immediately south of the Sites is a large public open area (Sham Shui Po Sport Ground). In the west of the Sites, there are some industrial developments mixed with commercial and residential developments. The Caritas Medical Centre is around 300m in the north of the Sites.

2.1.2 Both of the Sites are adjoining the primary distributor road Cheung Sha Wan Road. Primary distributor road Lai Chi Kok Road is around 300m & 100m in the south of Site A and Site B, respectively. Urban trunk road West Kowloon Corridor is around 400m & 200m in the south-west of Site A and Site B, respectively.

2.2 Overview of Potential Environmental Impact to the Sites

Potential Air Pollution Sources

2.2.1 The residential developments in the east and north as well as the Sham Shui Po Sport Ground in the south are not considered as air pollution source.

2.2.2 Base on the existing situation, the industrial developments in the west are unlikely to be noticeable air pollution sources as there is no industrial chimney identified. In addition, the industrial developments are closely packed with existing air sensitive receivers (residential and commercial developments) showings their surroundings are suitable for air sensitive uses.

2.2.3 In order to verify the potential air pollution source(s) in Caritas Medical Centre, inquiry through Access to Information had been conducted during April-June in 2021. According to the reply from Caritas Medical Centre, there are 10 chimneys in the hospital, but only 2 are active chimneys. The rest of the chimney are only for standby emergence generator, which are normally not active. Moreover, the 2 active chimneys are only using clean fuel (Town Gas). Therefore, the chimneys in Caritas Medical Centre are not considered as air pollutant sources.

2.2.4 Due to the heavy traffic, the road traffic emissions are the major air pollution source in the surroundings.

Potential Fixed Noise Sources

2.2.5 The residential developments in the east and north are not considered fixed noise source.

2.2.6 For the Sham Shui Po Sport Ground in the south, there are loud speakers identified within the covered stand. Considering the scale of the loud speakers and the traffic noise from the Cheung Sha Wan Road, it is unlikely that those loud speakers will adversely affect the Site A, which is >100m away and separated by Cheung Sha Wan Road. However, for Site B, there are potential impact from the loud speakers due to the proximity.

2.2.7 Some of the industrial developments in the west are having chiller plant and/or water cooling towers at the roof which are considered potential fix noise sources. For Site A, those fix noise sources are more than 200m holistically away from the Site, and mostly blocked by high-rise commercial/residential buildings (e.g. China Shipbuilding Tower, & Charming Garden) thus no adverse impact is anticipated. However, for Site B, those fix noise sources are much closer thus attention may be required.

2.2.8 Due to the heavy traffic, the road traffic noise are the major noise source in the surroundings.

3 THE PROPOSED DEVELOPMENT

3.1.1 The proposed gross site areas of the Site A & Site B are 5,197m^2 and 13,857m^2 respectively, subject to site survey and detailed design. With the net site area of Site A of about 5,197 m^2 (subject to site survey), the proposed total Gross Floor Area ("GFA") of Site A is about 49,372 m^2 (Plot Ratio (PR) = 9.5), of which 38,978 m^2 is for domestic (PR=7.5), 5,197 m^2 for commercial/retail (PR=1.0), and 5,197 m^2 for GIC provision (PR=1) in the Scheme. The net Site area of Site B is about 4,212 m^2 (subject to site survey), the proposed total Gross Floor Area ("GFA") of Site B is about 33,969 m^2 (Plot Ratio (PR) = 8.0) for GIC provision in the Scheme.

3.1.2 Currently, the Site A comprises a single storey Cheung Sha Wan Sports Centre and its associate outdoor garden and playground. The Site B comprises a government land lot (GLA-TNK 1723) which currently is an open area with a few 1-2 storeys temporary structures, Cheung Sha Wan Path Sitting-out Area, and a garden associated with Sham Shui Po Sports Ground. (**Figure 1-1**).

3.1.3 Under the current notional design, the entire Site A is proposed to rezone to "R(A)" and redevelop the area for high-density residential development, with non-domestic uses always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of a building. The proposed development on Site A consists of a 2 floors of basement carpark, a 5 storeys podium (GFA: 5,197m^2 for retails; 5,197m^2 for G/IC) and two 34 storeys residential towers (838 flats, 140mPD). The western part of the Site B is proposed to rezone to G/IC to provide a G/IC complex of 95mPD with GFA of 33,696 m^2 for community and amenity. The rest of the Site B (about 9,645 m^2) is proposed to be public open space. The proposed notional scheme is shown in **Figure 3-1 & 3-2**. The notional design is subject to change at detailed design stage.

4 AIR QUALITY IMPACT ASSESSMENT

4.1 Introduction

4.1.1 The purpose of this chapter is to demonstrate that the proposed development will not impose adverse air quality impact to the surrounding area during the construction phase and the air sensitive receivers (ASRs) of the proposed development will not receive insurmountable air quality impact from the surrounding area during operation phase according to the notional layout plan.

4.1.2 This chapter assessed the potential air quality impact from the following aspects: (i) Construction Phase - the potential air quality impact generated from the construction activities of the proposed development to the surroundings; (ii) Operation Phase - road traffic emission to the proposed developments in the Scheme. It also recommends appropriate mitigation measures to the potential impacts if any.

4.2 Legislation, Standards & Guidelines

4.2.1 The air quality impact assessment criteria were made reference to the Hong Kong Planning Standards and Guidelines (HKPSG) and the Air Pollution Control Ordinance (Cap.311) (APCO).

4.2.2 The Air Pollutant Control Ordinance (APCO) provides the statutory authority for controlling air pollutants from a variety of sources. The Hong Kong Air Quality Objectives (AQO) stipulate the maximum allowable concentrations over specific periods for the criteria pollutants. The concerned air pollutants during construction phase are the Total Suspended Particulates (TSP), Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) arising from the construction work of the Proposed Development. The emission source during the operational phase of the road work would be the vehicular emission on the roads. There are no active industrial chimneys, besides the 2 chimneys in Caritas Medical Centre, which is using clean fuel (Town Gas), identified within the assessment area.

4.2.3 In Hong Kong, Sulphur Dioxide (SO_2) is primarily from the combustion of Sulphur-containing fossil fuels in power stations and marine vessels. A statutory minimum requirement has been enacted since April 2002 to restrict vehicles to use ULSD (Ultra Low Sulphur Diesel) with a sulphur content of only 0.005% and has been further tightened to a sulphur content of only 0.001% from 1 July 2010 onward. Therefore, emission of vehicular SO_2 is not a significant source. For marine vessel, according to Air Pollution Control (Fuel for Vessels) Regulation, starting from 1 January 2019, all marine vessels except for specified vessel types as set out in the Regulation, are required to use compliant fuel (i.e.: liquid fuel with sulphur content not more than 0.5% by weight, liquefied natural gas, or other approved fuel) within Hong Kong waters, irrespective of whether they are sailing or berthing.

4.2.4 It is understood that road transportation is the dominant source of CO emission; nevertheless, the air quality impact due to CO is still relatively minor. Although CO concentrations are not measured at Sham Shui Po Air Quality Station, the ambient air quality predicted for Year 2025 from PATH v2.1 (grid 38,35) shows that the predicted future hourly CO levels would be always lower than 1000 $\mu g/m^3$ which comply with AQOs with large margins (1-hour criteria: 30,000 $\mu g/m^3$; 8-hour criteria: 10,000 $\mu g/m^3$). Hence, the emission of CO from the induced road transportation is not likely to have major impact on air quality, and hence is not considered as a key parameter for this assessment.

4.2.5 Ozone (O_3) is formed from dioxygen by the action of ultraviolet light and also atmospheric electrical discharges. It is not a primary pollutant emitted from vehicular emission thus is not considered as key criteria pollutants for the project.

4.2.6 Leaded petrol has been banned in Hong Kong since 1999. It is not considered concerned pollutants for vehicular emission.

4.2.7 To sum up, the Nitrogen Dioxide (NO_2), Total Suspended Particulates (TSP), Respirable Suspended Particulates (RSP), and Fine Suspended Particulates (FSP) are chosen to be the key criteria pollutants for the assessment of the air quality impact in this project. The relevant AQO are shown in **Table 4-1**.

Table 4-1 Hong Kong AQO for 1-hour, 24-hours Average and Annual Concentration for NO2, RSP, FSP & TSP

Pollutant	Maximum Concentration ($\mu g/m^3$)(1)		
	1-hour(2)	24-hour(3)	Annual
Nitrogen Dioxide (NO_2)	200	N.A.	40
Respirable Suspended Particulates (RSP)(4)	N.A.	100	50
Fine Suspended Particulates (FSP)(4)	N.A.	50	25
Total Suspended Particulates (TSP)(5)	500	N.A.	N.A.

Note:
[1] Measured at 293K (for NO_2, RSP & FSP), 298K (for TSP) and 101.325 kPa;
[2] Not to be exceeded more than 18 times per year;
[3] Not to be exceeded more than 9 times per year for RSP; 35 times for FSP;
[4] Suspended particulates in air with a nominal aerodynamic diameter of 10 μm or smaller for RSP and 2.5 μm or smaller for FSP.
[5] Hong Kong AQO & HKPSG do not specific the criterion for TSP. Reference has been made to Annex 4 of EIAO-TM.

4.3 Background Air Quality

4.3.1 EPD has been closely monitoring the air quality in Hong Kong through their air quality monitoring station (AQMS). The closest AQMS to the scheme is the Sham Shui Po Monitoring Station. The monitoring result of Sham Shui Po Monitoring Station during year 2016-2020 are summarized in **Table 4-2**. The measured NO_2/RSP/FSP concentrations show a decreasing trend from Year 2016 to Year 2020. The most concerning parameter during the past few years is annual averaged NO_2 concentration, which has been exceeding AQO's criterion in 2016-2020.

Table 4-2 Measured Air Quality of Sham Shui Po Monitoring Station (2016-2020)

Pollutant	Averaging Time	AQOs [μg/m³] [i]	Concentration [μg/m³]				
			Year 2016	Year 2017	Year 2018	Year 2010	Year 2020
RSP [PM_{10}]	24-hour (10th Max)	100 (9)	77.2	71.3	60.0	66.3	58.3
	Annual	50	34.5	33.2	32.5	32.8	27.5
FSP [$PM_{2.5}$]	24-hour (36th Max)	50 (35)	38.5	36.7	33.6	28.8	24.9
	Annual	25	23.0	21.4	21.4	18.2	13.9
NO_2	1-hour (19th Max)	200 (18)	161.0	194.0	152.0	176.0	151.0
	Annual	40	<u>57.6</u>	<u>54.4</u>	<u>48.6</u>	<u>47.8</u>	<u>45.4</u>

(i) The numbers in brackets () refer to number of exceedance allowed per year.
(ii) Daily and Annual averaged were calculated from hourly data.

4.3.2 PATH-v2.1 is a macro-scale air quality model developed by EPD to predict future air quality over the whole Pearl River Delta region including Hong Kong. For the purpose of this assessment, the predicted values from PATH-v2.1 are adopted as the background air quality. The PATH grids corresponding to the Scheme is (38,35) as shown in **Figure 4-1**. **Table 4-3** give the predicted ground level (0-17mAG) background air quality for Year 2022 to Year 2025.

Table 4-3 Background Ground Level Air Quality of Grid (38, 35) of PATH-v2.1

Pollutant	Averaging Time	AQOs [μg/m³] [i]	PATH Model Concentration [μg/m³]			
			Year 2022	Year 2023	Year 2024	Year 2025
RSP [PM_{10}]	24-hour (10th Max)	100 (9)	63.4	63.1	62.7	62.4
	Annual	50	27.4	27.4	27.3	27.3
FSP [$PM_{2.5}$]	24-hour (36th Max)	50 (35)	24.3	24.1	23.9	23.7
	Annual	25	15.0	15.0	14.9	14.9
NO_2	1-hour (19th Max)	200 (18)	129.7	127.3	125.3	123.7
	Annual	40	24.5	23.9	23.0	22.8

Note:
(i) The numbers in brackets () refer to number of exceedance allowed per year.
(ii) The 10^{th} highest daily RSP concentrations predicted by PATH-v2.1 are adjusted by adding 11.0μg/m³, according to EPD's Guidelines on Choice of Models and Model Parameters (updated July 2021).
(iii) The annual RSP concentrations predicted by PATH-v2.1 are adjusted by adding 10.3 μg/m³, according to EPD's Guidelines on Choice of Models and Model Parameters (updated July 2021).
(iv) The 36^{th} highest daily FSP concentrations predicted by PATH-v2.1 are adjusted by adding 0.0μg/m³, according to EPD's Guidelines on Choice of Models and Model Parameters (updated July 2021).
(v) The annual FSP concentrations predicted by PATH-v2.1 are adjusted by adding 3.5 μg/m³, according to EPD's Guidelines on Choice of Models and Model Parameters (updated July 2021).

4.3.3 All predicted background pollutant concentrations show a decreasing trend from Year 2022 to Year 2025 as shown in **Table 4-3**, and it is likely to continue to reduce after Year 2025. The background RSP, FSP and hourly NO_2 concentrations are well below the AQO criteria and providing more margin in later years.

4.4 Construction Phase Air Quality Impact Assessment

4.4.1 Major dust emitting construction activities will be the demolition of existing structures, excavation for basement construction, foundation works and construction activities (e.g. the construction of superstructure). Fugitive dust would be generated. The concerned air pollutants during the construction phase are the Total Suspended Particulates (TSP), Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) arising from the construction work of the Project.

4.4.2 Dust control measures under the Air Pollution Control (Construction Dust) Regulation (Cap. 311R) and good site practice shall be implemented to mitigate dust impact arising from demolition work by preventing dust generation and/or by screening, suppressing and removing dust generated:

- Enclose the whole wall of the building to a height of at least 1m higher than the highest level of the structure to be demolished with impervious dust screens or sheeting on façade abutting or fronting upon a street
- Existing structures are proposed to be demolished by non-percussive equipment such as hydraulic crusher to reduce dust emission; no blasting will be involved.
- Water or a dust suppression chemical shall be sprayed immediate prior to, during and immediately after demolition/excavation works
- Cover stockpile or dusty materials with tarpaulin to prevent wind erosion
- Any dusty materials remaining after a stockpile is removed shall be wetted with water and cleared from the surface of roads or streets
- Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the construction site
- Where a vehicle leaving a construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle
- Store cement bags in shelter with 3 sides and the top covered by impervious materials if the stack exceeds 20 bags
- Maintain a reasonable height when dropping excavated materials to limit dust generation
- Limit vehicle speed within site to 10 km/h and confine vehicle movement in haul road
- Minimize exposed earth after completion of work in a certain area by hydroseeding, vegetating or soil compacting
- Cover materials on trucks before leaving the site to prevent dropping or being blown away by wind
- Regular maintenance of plant equipment to prevent black smoke emission
- Throttle down or switch off unused machines or machine in intermittent use
- Plan the site layout so that machineries, dust causing activities and stockpilings are away from receptors as far as possible.
- Site hoarding higher than 2.4m should be implemented where there are receptors at close proximity to the construction site and dusty activities.
- Haul road shall be away from the project boundary as much as possible

4.4.3 No significant dust impact on the surrounding air sensitive receivers (ASRs) is expected with proper implementation of mitigation measures. No quantitative construction dust assessment is considered necessary.

4.4.4 Operation of Powered Mechanical Equipment (PME) during demolition/construction work would emit gaseous air pollutants such as nitrogen dioxide (NO_2) via fuel burning. According to Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, only approved or exempted Non-Road Mobile Machinery (NRMM) with a proper label are allowed to be used in specified activities and locations including construction sites. Supportive information and documents (e.g. third-party emission certificates, model and serial numbers of machines and engines, etc.) for each NRMM would be provided to EPD to prove that the concerned NRMM is in line with the prescribed emission standards. Since the number of PME expected to be used on-site will be limited and much less than vehicles travelled on surrounding roads (e.g. Cheung Sha Wan Road), no significant impact is anticipated.

4.5 Operation Phase Air Quality Impact Assessment

General Flow of the Assessment

4.5.1 Firstly, the assessment year will be determined by comparing the daily vehicular emission of the different years and the year with highest vehicular emission will be adopted as assessment year.

4.5.2 Then, the cumulative pollutant concentration will be computed. Besides the PATH-v2.1 background, the following pollutant sources will be considered:

- Vehicular Emission from open public road sections within 500 m assessment area
- Other major emission sources within 4 km of the scheme area

4.5.3 If any of the representative ASRs exceed the AQO criteria, feasible locations for openable windows and/or fresh air intake will be suggested.

Air Sensitive Receivers

4.5.4 During operation phase, no major emission is anticipated from the residential, G/IC and commercial components of the proposed development. On the other hand, the residential flats, shops and G/IC areas of the Scheme are ASRs which should be assessed.

4.5.5 The residential flats in the Scheme rely on openable windows for ventilation; the shops and G/IC in the podium and in the G/IC Complex would rely on air-conditioning with fresh air intake. Therefore, façades of the Residential Towers, as well as the potential fresh air in-take locations of the podium and the Low Block should be assessed. The locations of the assessment points are illustrated in **Figures 4-2 & 4-3** and listed in **Table 4-4**.

Table 4-4 Summary of the Assessment Points (Air Quality)

<table>
<tr><th>Locations</th><th>ID</th><th>Assessment Height (mAG)</th></tr>
<tr><td rowspan="2">Façade of the Podium Structure of the Site A</td><td>AP-01 to AP-05</td><td>G/F – 01.50
1/F – 06.35</td></tr>
<tr><td>AP-06 to AP-15</td><td>G/F – 01.50
1/F – 06.35
2/F – 10.85
3/F – 14.50
4/F – 18.00
5/F – 21.50</td></tr>
<tr><td>Façade of the Residential Tower A</td><td>TA-01 to TA-13</td><td rowspan="2">Residential 1/F – 29.35
Residential 2/F – 32.50
Residential 3/F – 35.65
Residential 4/F – 38.80
Residential 5/F – 41.95</td></tr>
<tr><td>Façade of the Residential Tower B</td><td>TB-01 to TB-12</td></tr>
<tr><td>Façade of the G/IC Complex of Site B</td><td>BC-01 to BC-10</td><td>G/F – 01.50
1/F – 08.00
2/F – 11.60
3/F – 15.20
4/F – 18.80
5/F – 22.40
6/F – 26.00
7/F – 30.50
8/F – 35.00</td></tr>
</table>

[1] The Ground level of the Scheme is 5.05mPD.
[2] The Assessment Height is 1.5m above slab level.
[3] The notional design including the elevation is subject to change.
[4] The residential towers has it own floor number.

<u>Meteorological Data</u>

For AERMOD, AERMET, & CALINE4

4.5.6 The hourly meteorological data from PATH model and the hourly stability classes calculated by PCRAMMET has be adopted. The PCRAMMET model can estimate the stability class based on the existing meteorological data for CALINE4 (for traffic emission). As CALINE4 imposes the limitation of wind speed on each of the stability class, the adopted stability class has been shifted toward class 3 for classes 1 & 2, and the adopted wind speed has been reduced for other cases, when necessary, for conservative assessment.

4.5.7 The hourly data from PATH Model has been prepared into on-site data as AERMET input. The output meteorological data form AERMET was later be used by AERMOD (for non-road traffic emission). The input mixing height data was restricted to between 121m and 1667m, which were the observed extreme values by the Hong Kong Observatory in year 2010. To avoid the occurrence of calm hours in the model, a minimum wind speed of 1.0m/s was adopted and any wind direction <0.1° was replaced by 360°.

4.5.8 The surface characteristics of the AERMET input were prepared following the recommendations in "AERMOD Implementation Guide" revised in August 2015 by USEPA. The Albedo and Bowen ratio adopted are the average values based on the land use of the 10km × 10km region centred on the study area. The surface roughness lengths were determined based on the land use of 1km upwind in sector widths no smaller than 30 degrees. The surface roughness, Albedo and Bowen of different land use are adopted with referenced to Table 4-2 to Table 4-6 of User's Guide for the AERMOD Meteorological Preprocessor (AERMET).

For Road Traffic Emission factor from EMFAC v4.3

4.5.9 Hong Kong Observatory's hourly temperature and relative humidity at King's Park during year 2020 has be adopted for determining the road traffic emission factor. Meteorological data at King's Park is representative as it is located at core of developed area, similar to the Subject Site.

Assessment Year

4.5.10 The proposed development is planned to be completed by Year 2034, the assessment year for traffic air quality impact shall be predicted based on the worst scenario within 15 years after the completion of the proposed development.

4.5.11 The traffic flow forecast for Years 2034, 2042 & 2049 has been provided by traffic consultant. The predicted traffic flow has been submitted to the Transport Department (TD) for agreement with the methodology. The Endorsement of Traffic Forecast from TD will be enclosed in **Appendix 4-1** when available.

4.5.12 Sensitivity test for traffic emission has been conducted using traffic data of Years 2034, 2042 & 2049. The NOx emission of Year 2049 and the RSP/FSP emission of Year 2034 are found to be highest, thus NOx/NO_2 emission of Year 2049 and RSP/FSP emission of Year 2034 has been adopted. The result of sensitivity test is enclosed in **Appendix 4-2**. The methodology of the sensitivity test is explained in the following paragraphs.

<u>Methodology – Road Traffic Emission Factors & Sensitivity Test</u>

4.5.13 The latest version of EMFAC – HK V4.3 which was issued by EPD in early 2021 has been adopted to compile the traffic emission inventory. "Emfac Mode", which can provide RUN emission per vehicle kilometre travelled (in g/VKT) and START emission per trip (in g/trip) under which different temperature, relative humidity and traffic speed has been selected for the assessment. As a conservative approach, the highest START emission across various soak time will be adopted. The START emission has been converted into emission/VKT using the trip/VKT ratio from EMFAC v4.3[1] of the corresponding year and combine with the RUN emission. Therefore, a set of emission factors (NOx, NO_2, RSP & FSP) for vehicles emission with cold start and another set of emission factors for vehicles emission without cold start has been obtained.

4.5.14 It should be noted that the HKSAR Government are promoting electric vehicle and targeting zero emissions before 2050[2]. In practice, besides the cost-effective reason, the number of electric vehicles is restrained by the technologies such as battery capacity and charging speed. The prevailing of charging facility would also be another factor. There are too many uncertainties about the projected ratio of electric vehicles during assessment year (2034-2049). Therefore, for conservative assessment, the electric vehicle is not considered.

[1] The adopted VKT for the start emission calculation has been corrected by a ~13% factor according to Appendix 3.4-3 of Approved EIA report for Liantang / Heung Yuen Wai Boundary Control Point and Associated Works (AEIAR-161/2011).
[2] Hong Kong Roadmap on Popularisation of Electric Vehicles, https://www.evhomecharging.gov.hk/downloads/ev_booklet_en.pdf

4.5.15 In this assessment, the road has been categorized into 2 road types as summarized in **Table 4-5**. For roads with cold start (Type 1), both RUN emission and START emission will be adopted. For roads without cold start (Type 2), only RUN emission will be adopted. It should be noted that, Franchised Buses (FBSD & FBDD) are not expected to perform cold start on normal public roads. Therefore, the START emission for FBSD & FBDD has not been included in the determination of road traffic emission. Instead, the cold start emissions of the Buses will be handled separately.

4.5.16 There are industrial buildings fall within the 500m assessment area, with loading/unloading/parking areas for heavy vehicle. In addition, there are terminus for public light buses (Cheung Sha Wan Bus Terminus) at around 150m in the west of site B. As the current broad brush approach assumed the start emission from vehicles (except FBSD & FBDD) happened in all the Type 1 road (including the Cheung Sha Wan Road, which is the major road adjoining the Sites A & B), and the highest START emission across various soak time has been adopted (except FBSD & FBDD), the current approach is considered conservative. The list of roads for the air quality impact assessment including the cold start availability has been included in **Appendix 4-1**.

Table 4-5 Road Types within the Study Area

Road Type	Description
Type 1	Roads with cold start
Type 2	Roads without cold start

4.5.17 For mapping the corresponding emission factor to each road section more precisely, the yearly temperature and relative humidity from Hong Kong Observatory has been broken into 4 seasons, namely Q1: Dec-Feb, Q2: Mar-May, Q3: Jun-Aug, & Q4: Sep-Nov. Daily profiles for each season with the lowest hourly temperature and relative humidity in each season (**Table 4-6**) has been adopted to identify the corresponding hourly emission factors for each road section conservatively. Then, the hourly road traffic emission of each road section was calculated by multiplying the vehicle counts, road length and the corresponding emission factor.

4.5.18 Finally, sensitivity testing has been conducted by comparing the daily road traffic emissions under 4 seasons of different scenarios (i.e. traffic flow for years 2034, 2042 and 2049). The year with the highest daily emission has been be adopted as the assessment year for the respective pollutant.

Table 4-6 Diurnal Temperature and Relative Humidity Profile for each Seasons

	Q1		Q2		Q3		Q4	
Hour	Temp (°C)	RH (%)	Temp (°C)	RH (%)	Temp (°C)	RH (%)	Temp (°C)	RH (%)
1	8	27	16	37	24	77	18	40
2	8	28	16	36	24	76	17	47
3	8	29	16	38	23	69	17	45
4	7	32	15	39	24	70	16	43
5	7	26	15	37	24	76	16	38
6	7	25	16	36	23	74	16	37
7	7	24	16	35	23	76	16	35
8	7	24	16	33	23	74	15	37
9	8	21	16	27	24	68	16	39
10	9	19	15	23	24	63	17	37
11	10	15	16	22	25	56	18	36
12	11	13	16	19	26	54	19	39
13	12	16	16	19	25	56	21	40
14	12	17	16	20	25	53	21	41
15	13	18	16	27	26	55	21	44
16	13	17	16	29	25	58	21	41
17	10	20	16	32	25	60	20	42
18	10	21	16	34	25	63	19	40
19	10	21	16	35	25	69	19	38
20	10	22	17	36	25	72	19	34
21	11	22	16	31	25	73	18	37
22	10	20	17	25	24	72	18	34
23	10	25	16	31	24	75	18	36
24	9	24	16	33	24	78	18	39

[1] The hourly temperature and relative humidity at King's Park during year 2020 (rounded-down to the nearest integer) have been adopted.

Methodology – CALINE4

4.5.19 The total hourly road traffic emission of each road section has been divided by the total hourly vehicle count and the road length (in Mile) to obtain the hourly fleets averaged emission factors (emission/Vehicle Mile Travelled, in g/VMT).

4.5.20 The hourly fleets averaged emission factors in each season together with the hourly traffic flow of each link (road section) were then utilized in CALINE4 to simulate the dispersion of the vehicle exhaust pollutants from the surrounding open road network.

4.5.21 The surface roughness adopted in CALINE4 is 370cm according to EPD's recommendation for urban area. The molecular weight for NO_x & NO_2 in CALINE4 is 46.

Cold Start Emission for Franchised Buses (FBSD & FBDD) - AERMOD

4.5.22 According to Calculation of Start Emissions in Air Quality Impact Assessment (EPD, Jan 2021), the start emission of diesel vehicles with SCR should spread over 700m.

4.5.23 The identified buses from the bus terminus (Cheung Sha Wan Bus Terminus) and the adopted Road ID are illustrated in **Figures 4-3a & 4-3b**, respectively. The bus schedule is list in **Appendix 4-4**. Although there is no bus schedule for 2034-2049 available at the moment, considering the current tendency and the policy, the number of diesel-powered buses should not increase, if not reduce. It is because the diesel-powered buses will be gradually replaced by electric-powered buses. Using the existing bus schedule for the cold start emission calculation in the future is considered conservative.

4.5.24 For consistence with other road traffic emission, the assessment years are chosen as Year 2049 for NOx/NO_2 emission and 2034 for RSP/FSP. As a conservative assessment, the start emission of diesel FBDD at the lowest temperature (7 °C) will be adopted. From on-site survey, it is found that soak time of the buses are either <30 minutes or overnight (actual soak time unknown). Therefore, soak time of 30 minutes (7:00 – 1:00) and 720 minutes (5:00 – 7:00) have been adopted. The adopted emission factors for buses are list in **Table 4-7**. The emission elevation and initial vertical mixing height of the buses has been referenced to Appendix 3.6 of Revised Austin Road Flyover EIA Report. The adopted emission rate for each road sections are listed in **Appendix 4-4**.

4.5.25 Dispersion modelling has been be undertaken using USEPA approved AMS/EPA Regulatory Model (AERMOD) to assess the Marine Emission.

Table 4-7 Adopted Emission Factory for Buses' Cold Start Emission

Pollutant	NOx	NO2	RSP	FSP
Year	2049	2049	2034	2034
Temperature (deg C)	7	7	7	7
Vehicle Type	FBDD (DSL)			
Soak Time (min)	Emission per trip (g/trip)			
30	1.1379	0.3300	0.0000	0.0000
720	10.7100	3.1059	0.0000	0.0000

Industrial Chimney within 500m assessment area

4.5.26 As stated in **Sections 2.2.2-2.2.3**, active chimneys are identified in the Caritas Medical Centre. However, those chimneys are either not active (for standby emergence generator) or using clean fuel (Town Gas). Therefore, those chimneys are not included in the quantitative assessment.

4.5.27 Besides the Caritas Medical Centre, no active industrial chimney has been identified within the assessment area.

Major emission sources within 4 km

4.5.28 The nearest major emission sources are: Kwai Chung Crematorium (3983m), & To Kwa Wan Gas Plant (4396m). As both of them are ~4km from the Scheme, and their source strength are relatively small (compare to other major source such as cruise terminal). Therefore, no major emission sources are included in the quantitative assessment.

Cumulative Pollutant Concentration

4.5.29 The cumulative pollutant concentration at each of the assessment point has been calculated by summing the background concentration (from PATH-v2.1)[3], the road traffic emission (from CALINE4), and other emissions (from AERMOD). It should be noted that background

[3] Different background concentration from PATH-2016 has been adopted based on the elevation of the assessment point. i.e. L1: 0 to 17mAG; L2: 17 to 35mAG; L3: 35 to 55mAG.

vehicular, industrial and marine emissions have been included in PATH-v2.1, adding the emissions from CALINE4 and AERMOD will result in conservative results.

4.5.30 The Ozone Limiting Method (OLM) and maximum equilibrium NO_2:NO_x ratio of 0.9 [4] has been adopted for the conversion of NO_x to NO_2 based on the hourly O_3 concentrations predicted by PATH-v2.1 in the corresponding grid.

4.5.31 The NO_2/NO_x conversion has been calculated as follows:

$$[NO_2]_{pred} = Min\{ [NO_2]_{init} + MIN \{[NO_x]_{pred} - [NO_2]_{init}, (46/48) \times [O_3]_{PATH} \}, 0.9 \times [NO_x]_{pred}\}$$

where,

$[NO_2]_{pred}$	is the predicted cumulative NO_2 concentration
$[NO_2]_{init}$	is the sum of initial NO_2 concentration from CALINE4, AERMOD and PATH v2.1
$[NO_x]_{pred}$	is the sum of predicted NO_x concentration from CALINE4, AERMOD and PATH v2.1
$[O_3]_{PATH}$	is the O_3 concentration from PATH v2.1

4.5.32 For all vehicle emissions, the calculated initial NO_2 concentration based on NO_2 emission factor of Emfac v4.3 has been adopted. For all non-vehicular emissions, initial NO_2/NO_x ratios reported in the Heathrow Airport EIA report are adopted, which is 10%.

4.5.33 Due to the nature of OLM, and conservative approach for the traffic emission and PATH-v2.1 background, the cumulative NO_2 concentration at each ASR is considered very conservative.

Results and Discussion

4.5.34 The detailed results are listed in **Appendix 4-5**. The summary of the annual NO_2 concentration is provided in **Appendix 4-6**. The results are also summarized in **Table 4-8** & **Table 4-9**.

4.5.35 The assessment result shows that, apart from Annual Averaged NO_2 concentration at ground of southeastern boundary of Site A (1.5mAG at AP-03, AP-04 & AP-05), other assessment points at Site A and Site B show compliance with AQO's NO_2/RSP/FSP criteria.

4.5.36 Under current notional design, the predicted air quality at all residential flats comply with the AQOs. The fresh air in-take for the podium structures of Site A would be designed to be located at or above 6.35mAG (11.4mPD). The fresh air in-take for the G/IC complex at Site B should not be restrained by air quality. Subject to the CE in C's approval of the draft DSP, URA/ future joint venture partner should explore and implement all practicable design in order to ensure all openable windows for ventilation and fresh air intakes comply with the AQO criteria at the detailed design stage.

4.5.37 It should be noted that the exceedance is partially due to the conservative approach. Considering the Government's measures to promote the use of electric vehicles, it is expected that the future background pollution concentration as well as the road traffic emission should be much lower than that in the current calculation up on complete of the Scheme (Year 2034).

[4] Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO2 NAAQS", U.S. EPA, March 1, 2011

Table 4-8 Summary of the Predicted Pollutant Concentration

	Pollutant Concentration (µg/m³)					
	Daily 10th Maximum RSP	Annual RSP	Daily 36th Maximum FSP	Annual FSP	Hourly 19th Maximum NO2	Annual NO_2
Criteria	**100**	**50**	**50**	**25**	**200**	**40**
Podium T1	62.56 - 63.76	27.20 - 28.13	23.75 - 24.82	23.08 - 43.92	130.94 - 177.14	23.08 - 43.92
Podium T2	62.08 - 62.51	26.97 - 27.17	23.31 - 23.75	19.22 - 22.32	116.64 - 128.52	19.22 - 22.32
Low Block	62.09 - 62.60	26.98 - 27.21	23.31 - 23.82	19.27 - 23.43	116.62 - 128.85	19.27 - 23.43
Tower T1	62.53 - 63.67	27.17 - 27.76	23.77 - 24.79	22.27 - 34.70	124.09 - 155.46	22.27 - 34.70

Table 4-9 Summary of the Predicted Annual Averaged NO_2 Concentration

Location		Annual Averaged NO_2 Concentration (µg/m³) at different Height								
	mAG	**1.5**	**6.35**	**10.85**	**14.5**	**18**	**21.5**			
	mPD	**6.55**	**11.4**	**15.9**	**19.55**	**23.05**	**26.55**			
Site A - Podium	min	34.40	32.91	29.69	27.97	23.80	23.08			
	max	**43.92**	33.92	31.01	29.32	24.86	23.84			
Location		Annual Averaged NO_2 Concentration (µg/m³) at different Height								
	mAG	**29.35**	**32.5**	**35.65**	**38.8**	**41.95**				
	mPD	**34.4**	**37.55**	**40.7**	**43.85**	**47**				
Site A - Podium	min	21.97	21.64	19.69	19.43	19.22				
	max	22.32	21.91	19.91	19.62	19.38				
Site A - Tower A	min	22.09	21.73	19.76	19.50	19.27				
	max	23.43	22.87	20.73	20.31	19.95				
Location		Annual Averaged NO_2 Concentration (µg/m³) at different Height								
	mAG	**1.5**	**8**	**11.6**	**15.2**	**18.8**	**22.4**	**26**	**30.5**	**35**
	mPD	**6.55**	**13.05**	**16.65**	**20.25**	**23.85**	**27.45**	**31.05**	**35.55**	**40.05**
Site A - Podium	min	31.43	30.73	30.04	29.25	25.29	24.50	23.77	22.95	22.27
	max	34.70	32.91	31.55	30.26	25.97	24.96	24.10	23.22	22.49

Note: Criteria = 40 µg/m³

4.6 Conclusion

4.6.1 The air quality impact arising from the proposed development to the surrounding area and air quality impact from the surrounding area to the proposed development has been assessed.

4.6.2 With the implementation of dust suppression measures stipulated under the Air Pollution Control (Construction Dust) Regulation and the adoption of good site practice, no adverse air quality impact associated with the construction works is expected.

4.6.3 Air emission is not anticipated from the proposed development during operation phase. Air quality model based on the current notional design with conservative approach has been conducted. The model results show that the predicted air quality at all proposed residential flats comply with the AQOs. The fresh air intake for the podiums structure Site A would be designed to be located at or above 6.35mAG (11.4mPD). The fresh air in-take for the G/IC complex at Site B should not be restrained by air quality. The air quality upon completion of the Scheme will be similar to, if not better than, the existing situation and no insurmountable air quality impact is anticipated.

5 NOISE IMPACT ASSESSMENT

5.1 Introduction

5.1.1 The purpose of this chapter is to demonstrate the noise sensitive receivers (NSRs) of the proposed development within the Scheme comply with the noise criteria of The Hong Kong Planning Standards and Guidelines (HKPSG).

5.1.2 The potential noise impact from the following aspects have been assessed: (i) Construction noise - the potential noise impact generated from the construction activities of the proposed development to the surroundings; (ii) Traffic noise - the potential noise impact generated from the nearby road networks to the proposed development during operation phase; (iii) Fixed noise - the potential noise impact generated from the surrounding fixed noise sources to the proposed development.

5.1.3 Effective mitigation measures and recommendations are proposed to mitigate the excessive noise level to achieve an acceptable compliance level under the current notional design.

5.2 Standards and Guidelines

Road Traffic Noise

5.2.1 HKPSG provides guidance on acceptable road traffic noise levels at the openable windows of various types of noise sensitive buildings. The relevant criteria are shown in **Table 5-1**.

Table 5-1 HKPSG Road Traffic Noise Planning Criteria

Uses	**Road Traffic Noise L_{10}, (1hr) dB(A)**
Domestic Premises	**70**
Hotel and Hostels	70
Offices	70
Educational institutions	65
Hospital & Clinics	55
Places of public worship and courts of law	65

Note: The above criteria apply to noise sensitive uses which rely on opened window for ventilation.

Fixed Noise Sources

5.2.2 Acceptable Noise Levels (ANL) shown in Table 2 of the Technical Memorandum for the Assessment of Noise from Places Other than Domestic Premises, Public Places or Construction Sites (IND-TM). According to IND-TM, the ANLs for different Area Sensitivity Ratings (ASRs) are given in **Table 5-2**.

Table 5-2 Acceptable Noise Levels for Fixed Noise Impact (ANLs), dB(A), Leq, (30mins)

Time Period	ASR A	ASR B	ASR C
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)			
Night (2300 to 0700 hours)	50	55	60

5.2.3 The Scheme is located in the urban area of Sham Shui Po. According to TD's Annual Traffic Census (ATC2019), the daily traffic of the Cheung Sha Wan Road section (Street No. 3427) is more than 35,000. Therefore, the Scheme and its surroundings are considered directly affected by Influencing Factor (IF); the ASR of the site would be classified "C".

5.2.4 As the site is subject to traffic noise impact from Cheung Sha Wan Road (primary distributor road), it is expected that the prevailing background noise level would be higher than ANL-5dB for both daytime and night-time, thus ANL-5 dB would be adopted as the planned fixed noise sources criterion. The planning criteria would be 65 dB(A) for day and evening time and 55 dB(A) for night time.

5.3 Construction Noise Impact Assessment

5.3.1 The use of powered mechanical equipment (PME) will generate construction noise impact to the nearby NSRs. The major noise emitting activities will be the demolition of existing structures and foundation works of future development.

5.3.2 As the site is situated in a well-developed urban area, the number of PME that it can accommodate is limited, however, the noise from construction activities may still be an impact if the construction works are not planned and arranged properly.

5.3.3 The "Practice Note for Professional *Persons* Environmental Consultative Committee" (ProPECC) "Noise from Construction Activities –Non-statutory Controls" (PN 2/93) suggests assessment criteria relating to construction noise and some practical noise abatement measures to reduce the construction noise.

5.3.4 To minimize noise generation, non-percussive equipment such as hydraulic crusher is proposed for demolishing existing building and structure. Also, adoption of non-percussive piling method for foundation work is also recommended. As these activities would only last for a short period of time, significant noise impact on sensitive receivers is not expected with proper implementation of mitigation measures:

- Adopt good site practice, such as throttle down or switch off equipment unused or intermittently used between works
- Regular maintenance of equipment to prevent noise emission due to impairment
- Position mobile noisy equipment in locations away from nearby NSRs and point the noise sources to directions away from NSRs
- Make good use of other structures for noise screening
- Use of quiet plants and working methods to mitigate at source
- Use of mobile noise barriers/enclosures along the path of noise propagation
- Schedule work to minimize concurrent activity and duration of impact

5.3.5 With the aforementioned noise mitigation measures implemented during the construction phase, no adverse noise impact arising from the construction activities is expected.

5.4 Operation Noise Impact Assessment

Representative Noise Sensitive Receivers during Operation Phase

Road Traffic Noise

5.4.1 All flats of the residential towers were identified as NSRs according to the nature of use. Commercial & retail area, clubhouse and GIC facilities in the podium and the G/IC complex will be provided with air-conditioning system and will not rely on openable windows for ventilation, and thus the noise standard is not applicable. The noise assessment points were located 1.2m above the slab level and 1m away from the façade. All potential windows locations of all residential flats are covered.

5.4.2 There are (Tower A (Low Zone): 22 floors x 13 flats + Tower A (High Zone): 12 floors x 12 flats + Tower B: 34 floors x 12 flats) = 838 residential flats based on the notional layout of typical floor. It should be note that the Tower A consist of high zone and low zone, with identical Flat 01- 08 and different Flat 09 – 13. To avoid confusion, high zone and low zone are using different flat IDs and assessment points IDs.

5.4.3 For assessment purpose, the traffic noise level at all 838 flats have been assessed. The representative assessment points are summarized in **Table 5-3** and their locations are illustrated in **Figures 5-2a, 5-2b & 5-2c**. It should be noted that the notional layout of the Scheme is for assessment purpose only and subjected to change.

Planned Fixed Noise Sources

5.4.4 Large building service equipment of Site A & B are the potential planned fixed noise during operation phase of the Scheme. It should be noted that there are no representative NSR in the north, west and south from Site B has been selected as the NSRs are either very far or the view to Site B are completely blocked. The representative NSRs of the proposed residential developments and in the surrounding have been identified, listed in **Table 5-4** and illustrated in **Figures 5-3**.

Table 5-3 Summary of Representative Noise Sensitive Receivers and Assessment Points for Traffic Noise Impact Assessment

Tower	Number of Flats per floor	NSR ID [1]	Number of Floor	Elevation of the Assessment Point [2][3]
A	13	TAL01-1 to TAL13-3 13 flats and 38 assessment points on each floor	22 floors (1st – 22nd residential floor)	34.10mPD for the 1st residential floor + 3.15m for each floor
A	12	TAH01-1 to TAH12-4 12 flats and 38 assessment points on each floor	12 floors (23rd – 34th residential floor)	103.40mPD for the 23rd residential floor + 3.15m for each floor
B	12	TB-01-1 to TB-12-3 12 flats and 35 assessment points on each floor	34 floors (1st – 34th residential floor)	34.10mPD for the 1st residential floor + 3.15m for each floor

[1] NSR ID is in the form of TTXYY- Z, where "TT" is tower identity = TA or TB, "X" is zone identifier = H (High Zone), L (High Zone) or "-" (N/A, for Tower B), "YY" is flat number = 01 – 13; Z is assessment point number within a flat = 1 – 5.

[2] The elevation of the assessment points for the 1st residential floor = 5.05 mPD (Ground) + 25.35m (Podium & Club House Height) + 2.5m (Transfer Plate) + 1.2m (1.2m above slab level) = 34.10mPD

[3] The notional design including the elevation is subject to change.

Table 5-4 Representative Noise Sensitive Receivers for Fixed Noise Impact Assessment

NSR ID	Description	Horizontal Distance from	
		Podium of Site A	G/IC Complex of Site B
NSR01	Tower B - Flat 01	N/A	204m
NSR02	11A Cheung Wah Street	39m	197m
NSR03	Charming Garden	76m	155m
NSR04	Cheung Sha Wan Catholic Secondary School	16m	244m
NSR05	Un Chau Estate - Un Hong House	44m	272m
NSR06	Hang Chun Court - Chun Yin House	149m	208m

Road Traffic Noise

Assessment Methodology

5.4.5 An in-house noise model (MARC) was used to predict the traffic noise levels arising from the road network. It adopts the methodology provided in the UK Department of Transport's Calculation of Road Traffic Noise (CRTN) 1988, which is stipulated in Chapter 9, Section 4.2.7 of the HKPSG for assessing road traffic noise impact. Road traffic noise levels are presented in terms of noise levels exceeded for 10% of the one-hour period for the hour having the peak traffic flow [L10 (1-hour) dB(A)].

5.4.6 The assessment was based on the projected peak hour flows for the worst year within 15 years after completion of the Project in Year 2034. Based on the traffic forecast provided by the traffic consultant, the AM peak hour flows in Year 2049 will be the maximum projected peak hour traffic flow within 15 years from the completion of the Scheme. The major roads within 300m from the boundary of the Scheme have been included in the assessment and are shown in **Appendix 5-1**.

5.4.7 To minimize the traffic noise impact to the Scheme, the following architectural design consideration has been adopted:

- Both Towers A & B have been setback from the major road traffic from the road traffic noise.

5.4.8 Two scenarios have been considered in the traffic noise impact assessment. The first one is a (A) Base Scenario which only considered architectural design and location of the openable windows; the second scenario is a (B) Mitigated Scenario with Acoustic Windows.

Impact Identification and Assessment

5.4.9 The peak hour traffic flow of individual roads in the assessment year (Year 2049) is listed in **Appendix 5-1**. The traffic forecast has been submitted to the Transport Department for their endorsement. As hourly traffic flow of AM Peak are higher than that of PM Peak, especially for the nearby primary distractor road – Cheung Sha Wan Road, thus the traffic noise for AM peak hours were calculated.

a) Base Scenario: Careful Buildings Disposition & Windows Locations

5.4.10 In the Base Scenario, residential towers have been arranged to have setback from the main roads (i.e. Cheung Sha Wan Road) and in the way that the view angle from the windows to the main road has been minimized by buildings deposition, buildings orientation and windows locations. Without this design, the traffic noise level in the base scenario is expected to be much higher.

5.4.11 The detailed results of Base Scenario are presented in **Appendix 5-2**. This Base Scenario results in about 17% flats complying with the noise criteria of 70 dB(A). The maximum exceedance is 9 dB, i.e. 79 dB(A), at the 1st – 3rd residential floor of Flat TB-01 & TB-12 of Tower B, which having a wide view angle to Cheung Sha Wan Road.

5.4.12 The maximum traffic noise exceedance of each facdes under Base Scenario are illustrated in **Figure 5-4a – 5-4c**.

b) Mitigated Scenario: With Acoustic Windows

5.4.13 Subject to detailed design, mitigation measures are proposed in this mitigated scenario:

- Top-hung Type Acoustic Window (Noise Reduction: -5 dB(A))

  The design of a top-hung window with a horizontal fin on the bottom of the window coupled with Micro-perforated absorbers (MPA) on the inner side of the window and a pelmet in the indoor area behind the top-hung window, can effectively resist noise from entering domestic premises directly and hence minimize the impact caused to the residents. The design is similar to the type adopted in Hong Tsuen Road Residential Development at Sai Kung (Park Mediterranean). The ratio of vertical distance from opening of the top-hung window to the length of the horizontal acoustic fin (aspect ratio) will be less than the aspect ratio (0.55) of the acoustic window in Park Mediterranean.

5.4.14 Top-hung Type Acoustic Window[5] has been proposed in the current assessment as it has been adopted and well proven in private housing for years. Therefore, the calculated traffic noise level is reliable and conservative.

5.4.15 It should be noted that at-receiver mitigation measure with higher acoustic performance exist. However, their noise reduction effect and ventilation performance are highly depended on the detailed design. For example, the Baffle Type Acoustic Windows[6] broadly adopted in public house in recent years can reduce the traffic noise by 4-8 dB depended on the dimensions of the room and windows. With acoustic linings, suitable orientation and nearby acoustic fins, its noise reduction effect could be even higher. The major issue of adopting Baffle Type Acoustic Windows at the current stage is that, with room dimension may be significantly changed in the later stage, it is hard to estimate whether any combination of window pane separation, windows height, window opening and windows overlapping, etc. can provide both sufficient ventilation and acoustic performance. Therefore, adopting Baffle Type Acoustic Windows at the current stage may lead to under-estimate of acoustic performance if we go for conservative, or lead to impossible scenario if the adopted acoustic performance is too optimistic.

5.4.16 Despite the uncertainties, the use of acoustic windows with higher noise reduction effect is encouraged in detailed design stage. As more information is available at that stage for the designer/engineer to choose the most suitable acoustic windows design with consideration of both acoustic and air ventilation performance.

5.4.17 Section drawings of the typical Top-hung Type Acoustic Windows with/without balcony are illustrated in **Figures 5-5a & 5-5b**. Mitigation measures have been proposed to all locations with traffic noise exceedance. The locations of the proposed mitigation measures are illustrated in **Figures 5-6a – 5-6c** and listed in **Appendix 5-3**.

5.4.18 The detailed predicted noise levels with acoustic windows are presented in **Appendix 5-3**. Given specific noise reduction measures at different assessment points, the compliance rate by flat has been increased to ~80%. Only low-mid level residential flats that directly affected by the traffic noise from Cheung Sha Wan Road are expect to experience traffic noise exceedances, while it is expected to completely comply at higher level (23rd residential floor or higher). The maximum exceedance is 4 dB, i.e. 74 dB(A), at the 1st – 3rd residential floor

[5] Sample for Top-hung Type Acoustic Window https://www.epd.gov.hk/epd/Innovative/greeny/eng/content/hong-tsuen-road-residential-development-sai-kung.html?type=ftab_21

[6] Sample for Baffle Type Acoustic Windows https://www.epd.gov.hk/epd/Innovative/greeny/eng/content/king-tai-court.html?type=ftab_20

of Flat TB-01 & TB-12 of Tower B. The exceeded facades under Mitigated Scenario are highlighted in **Figures 5-6a – 5-6c**.

Table 5-5 Summary of Traffic Noise Impact Assessment

	Number of Flat	Base Scenario		Mitigated Scenario	
		Complied Flat	Compliance Rate	Complied Flat	Compliance Rate
Tower A - Low Zone	286	45	15.7%	202	70.6%
Tower A - High Zone	144	24	16.7%	144	100.0%
Tower B	408	70	17.2%	328	80.4%
Total	**838**	**139**	**16.6%**	**674**	**80.4%**

Existing Fixed Noise Sources in the Surroundings

5.4.19 For the fixed noise sources in the surrounding affecting the proposed Scheme, no adverse fixed noise impact is anticipated and no quantitative assessment is necessary due to the following information:

- As stated in the overview of the existing potential fixed noise sources to the Sites (**Section 2.2**), majority of the Site A is not expected to experience adverse impact from existing fixed noise sources. More specifically, Site A is surrounded by residential building in west, north and east directions. In the south of Site A, it is a large open area (Sham Shui Po Sport Ground) and potential fix noise sources in south to south west directions are either weak (the loud speaker within the covered stand of Sport Ground) or very far (in the west of Site B). Some high-level flats may have direct view to the chiller plants on the roof of China Shipbuilding Tower. If necessary, the project proponent will provide noise mitigation measure on sources to mitigation this potential noise impact.
- Although Site B may suffered from potential fixed noise impact, Site B do not rely on openable windows for ventilation thus fix noise criterion is not applicable.

Planned Fixed Noise Sources of the Scheme

5.4.20 The Scheme will provide central air ventilation for commercial & retail area, clubhouse, GIC facilities and basement carpark. The associated HVAC system may cause noise impact to surrounding NSRs. Although the large exhaust fans are usually located indoor enclosed within the air ducts, the fan noise will transmit via the ventilation pipe and emit at the duct exhaust. Therefore, the potential planned fixed noise sources of the Scheme are the large exhaust fans and the outdoor units of air conditioner. Other equipment such as water pumps and lift motors will be located in enclosed rooms thus no adverse noise impact to the surrounding is anticipated.

Site A

5.4.21 For Site A, the non-residential portion will be closed outside operation hours and the associated HVAC system are expected to stop during night time. Besides, the expected ventilation requirement of the basement carpark during night-time is expected to be very low thus the primary exhaust fan is unlikely required. Due to the relatively small size of the served zones, Variable Refrigerant Volume (VRV) system is preferred over chiller plants and/or water-cooling tower as VRV provide flexible cooling capacity with high efficiency over large range of loading. To avoid the noise from fixed plants affecting the residential portions, the large plants and large ventilation exhaust pipes are planned to be located at semi-confined areas such as plant rooms and/or entrance/exit of the carpark, with acoustic louvers if necessary. The ventilation pipes will be equipped with silencer to reduce the in-duct noise level. As there is no direct line of sight between the fixed noise sources of Site A and the residential flats of Site A, no adverse noise impact from the fixed noise sources of Site A to the residential flats of Site A is anticipated. As the fixed noise source of Site A, including the louvers serving the fixed noise sources, may visible from the NSRs in the surrounding, maximum allowable sound power levels will be recommended.

Site B

5.4.22 For Site B, chiller plants and large ventilation exhaust pipes are also planned to be located at semi-confined areas. The ventilation pipes will also be equipped with in-line silencer to reduce the in-duct noise level. As the fixed noise source, or the louvers connected to the fixed noise sources, of Site B may visible from the NSRs in the surrounding, including the NSRS in Site A. Maximum allowable sound power levels will also be recommended.

Maximum Allowable Sound Power Levels (SWL)

5.4.23 Calculations based on the planning criteria and distance to the nearest NSRs are present in **Table** 5-6.

5.4.24 According to the calculation based on the nearest NSR (NSR04 for Site A and NSR03 for Site B), the cumulative SWL of the building service equipment at podium of Site A should not exceed 88 dB(A) during day and evening time, and should not exceed 78 dB(A) during night time. For the G/IC complex in Site B, the limits of the cumulative SWL are 108 dB(A) during day and evening time, and 98 dB(A) during night time.

5.4.25 It should be noted that a 6 dB correction has been adopted accounting for the tonality, intermittency and impulsiveness characteristics for assessment purpose. In case the noise exhibits tonality, intermittency and impulsiveness characteristics during the operation, the maximum allowable SWLs of the fixed plants should be corrected based on the recommendation given in Section 3.3 of the IND-TM.

5.4.26 Although the Scheme is still in early stage thus no detailed design including the location of the noisy plants is available, no adverse fixed noise impact to the NSRs is anticipated if the choice of equipment, installation locations, installation and mitigations are properly designed. To ensure the compliance in the final design, the project proponent (URA) should incorporate the fixed source noise planning criteria, i.e. At NSR noise level of 65 dB(A) for day and evening time and 55 dB(A) for night time in $L_{eq,30min}$, to the tender document of this Scheme.

Table 5-6 Allowable Sound Power Level for the Building Service Equipment of the Proposed Development

Time Period	Maximum Allowable SPL at NSR, dB(A)	Horizontal Distance from the Project Site Boundary to the Nearest NSR, m	Correction, dB(A)			Maximum Allowable Sound Power Level at Source, dB(A) [2]
			Distance	Facade	Tonality/ Intermittency/ Impulsiveness [1]	
Site A (Nearest NSR - NSR04)						
Day and Evening Time (07:00-23:00)	65	16	32	-3	-6	88
Night Time (23:00 – 07:00)	55	16	32	-3	-6	78
Site B (Nearest NSR - NSR03)						
Day and Evening Time (07:00-23:00)	65	155	52	-3	-6	108
Night Time (23:00 – 07:00)	55	155	52	-3	-6	98

[1] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.
[2] The Maximum Allowable Sound Power Level at Source should be corrected by the tonality, intermittency, & impulsiveness correction of the selected equipment, according to Section 3.3 of the IND-TM.

5.5 Conclusion

5.5.1 The overall noise impact during the construction phase is considered insignificant. Mitigation measures shall be implemented in accordance with ProPECC PN 2/93 during construction to minimize construction noise impact on the nearby NSRs.

5.5.2 Traffic noise impact has been taken into consideration when designing the notional layout of the residential development. The view angle from the windows to the road traffic has been minimized by buildings deposition, buildings orientation and windows locations. In the base scenario where tower setback, buildings deposition, buildings orientation and windows locations are considered, only ~17% of flats complies with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic windows are considered, the compliance rate by flat has been dramatically increased to ~80%. Given the notional design is at planning stage and the proposed development is subject to detailed design upon CE in C's approval of the Scheme, the current assessment is based on a notional design and anticipated results. It should also be noted that the traffic noise assessment is based on a typical Top-hung Type Acoustic Window. By using acoustic windows with higher noise reduction performance in the detail design stage, it is feasible to achieve a higher compliance rate.

5.5.3 A preliminary study of fixed noise sources based on the existing situation and the available information for planned developments show that no adverse fixed noise impact to the Scheme is anticipated.

5.1 The existing significant fixed noise sources are only identified in the west of Site B which is far away from the residential portion of the Scheme in Site A, which rely on openable windows for ventilation. The planned fixed noise source from the proposed Scheme should not introduce adverse noise impact to the surroundings with proper design. To ensure the compliance in the final design, the project proponent (URA) should incorporate the fixed source noise planning criteria to the tender document of the Scheme.

6 WASTE MANAGEMENT CONSIDERATION

6.1 Legislations and Requirements

6.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover value from waste. The consideration on waste management for the Project will take into account of the below Ordinances/Guidelines/Practice Notes adopted in Hong Kong.

6.1.2 The following legislations/guidelines related to the handling, treatment and disposal of waste in Hong Kong are listed:

- Waste Disposal Ordinance (Cap. 354) (WDO)
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)
- Land (Miscellaneous Provisions) Ordinance (Cap. 28)
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste
- Air Pollution Control Ordinance (Control of Asbestos (sections 51 to 84))
- ProPECC PN2/97 Handling of Asbestos Containing Materials in Buildings
- ADV-19 – Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – Construction and Demolition Waste
- ADV-21 – Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – Management framework for Disposal of Dredged/Excavated Sediment
- ETWB TCW No. 34/2002 – Management of Dredged/Excavated Sediment
- Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes

6.1.3 Waste collection and disposal is covered by the Waste Disposal Ordinance (Cap. 354) (WDO). This provides a licensing system for the disposal of certain wastes and for the control of certain wastes by regulation. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines.

6.1.4 Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) outlines the requirement for chemical waste handling and disposal.

6.1.5 Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N), construction waste delivered to a landfill for disposal must not contain more than 50% by weight of inert materials. Construction waste delivered to a sorting facility for disposal must contain more than 50% by weight of inert materials, and construction waste delivered to a public fill reception facility for disposal must consist entirely of inert materials.

6.1.6 Land (Miscellaneous Provisions) Ordinance (Cap. 28) provides control over placing and maintaining of C&D materials on unleased land. If the occupier does not hold the relevant license, the Department of Lands will take action accordingly.

6.1.7 Both the Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (ADV-21) and Technical Circular ETWB TCW No.

34/2002 cover the approval of dredging/excavation proposals and marine disposal of dredging/excavated sediment.

6.1.8 Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (ADV-19) provides mitigation measures on waste generation and management during the planning stage of a building development to minimise waste disposals at landfills.

6.2 Waste Management for Construction Phase

Waste Types

6.2.1 The demolition and construction activities to be carried out for the proposed development would generate a variety of waste that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:

- Construction and demolition (C&D) materials, comprising inert and non-inert materials, from the demolition and construction works;
- Potential asbestos containing materials;
- Excavated Sediment;
- Chemical waste from any maintenance of construction plant and equipment; and
- General refuse from the workforce

Inert and non-inert C&D Materials

6.2.2 Inert C&D Material (or public fills) includes construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fills reception facilities. Non-inert C&D Material (or C&D waste) includes metal from the existing structures, wood from formwork, equipment parts, and materials and equipment wrappings, etc. should be re-used or recycled as far as possible.

6.2.3 As the Scheme involves demolition of existing buildings and construction of 2 floors of basement, there will be generation of inert C&D materials during construction. It is estimated that about 60,000 m^3 excavated materials would be generated and about 10,000 m^3 would be suitable for backfilling during site formation stage. It is also estimated that about 3,500 m^3 C&D materials will be generated during the demolition work.

6.2.4 To account the quantity of C&D materials to be generated from construction of the new building, C&D materials generation rate of 0.1 m^3 per m^2 of GFA constructed is adopted in accordance with the "Reduction of Construction Waste Final Report, Hong Kong Polytechnic University (March 1993)". The total GFA of the proposed development from the Scheme will be around 73,000 m^2 (Domestic: 49,372 m^2; Non-domestic (Site A): 10,394 m^2 ; Non-domestic (Site B): 33,969 m^2). The C&D materials generated from superstructure construction is approximately 7,300 m^3. Hence, the total amount of inert C&D materials generated by the Project is projected at 70,800 m^3.

6.2.5 The volume of non-inert C&D material, such as maintenance and packaging waste, generated during site clearance and construction of superstructure works is projected at 1,080m^3, which will be subject to specific construction procedures and site practices. The estimated amount of non-inert C&D material generated would be minimal with careful design, planning, good site management and control of ordering procedures etc.

6.2.6 The estimated quantities of inert and non-inert C&D material generated from the construction of the Scheme are presented in **Table 6-1**.

Table 6-1 Estimated Quantities of C&D materials to be Generated, Reused and Disposed of

Construction Activities	Sum (m^3)	Wastes to be Reused/Recycled/disposed of (m^3)								
		Inert C&D materials			Non-inert C&D materials			Excavated Sediment		
		Reused /Recycled On-Site	Reused /Recycled Off-Site	Disposed Off-Site (a)	Reused /Recycled On-Site	Reused/Recycled Off-Site (b)	Disposed Off-Site	Reused/Recycled On-Site	Reused/Recycled Off-Site	Disposed Off-Site
Excavation	60,000	10,000	0	40,000	0	0	0	0	0	10,000
Site Clearance / Demolition of Existing Buildings	3,500	0	0	3,150	0	35	315	0	0	0
Superstructure Construction	7,300	0	0	6,570	0	73	657	0	0	0
All	70,800	10,000	0	49,720	0	108	972	0	0	10,000
		59,720			**1,080**			**10,000**		

Note
a) The inert C&D materials not reused on-site shall be disposed off-site to the Fill Bank at Tseung Kwan O Area 137
b) Non-inert C&D materials should be reused or recycled as much as possible before disposed off-site, estimated to be 10% of the total generated.

6.2.7 It is estimated that about 14% of inert C&D material to be reused on-site. It is proposed to dispose the rest of inert C&D materials to the Fill Bank at Tseung Kwan O Area 137. The remaining non-recyclable C&D materials are not suitable for public fill and requires disposal to licensed landfill facilities (the closest landfill is the South East New Territories (SENT) Landfill).

Excavated Sediment

6.2.8 In addition, as the land of the Site is within reclamation ground, approximately 10,000m^3 of excavated sediment is estimated to be generated and disposed off-site from the Project. The marine disposal of the sediment should be disposed in accordance to the *ETWB TCW No. 34/2002* and ADV-21. The rationale for sediment removal must be provided to the Secretary of MFC for agreement, as early as possible, the allocation of sediment disposal space at sea will not be considered until the need for removal of the sediment has first been satisfactorily demonstrated.

6.2.9 To minimize waste generation and off-site disposal, Sediment should be reused on-site as far as possible. However, if Sediment cannot be reused on-site or on alternative sites, marine dumping of Sediment is required. For Sediment dumping, the Contractor who will be undertaking the works must make a formal application to DEP for a dumping permit, in accordance to ETWB TC(W) No. 34/2002, and if the permit is granted, it will be the contractor's responsibility to ensure that the permit conditions are met to DEP's satisfaction. All necessary documents (i.e. SSTP, PSQR / SQR) must be submitted to EPD for agreement before the Marine Fill Committee can allocate the Sediment Disposal Site for the marine dumping.

Chemical Waste

6.2.10 Chemical waste, such as cleaning fluids, solvents, spent lubricants and fuel for equipment or waste battery, may be generated. As far as the scale of the works is small, the quantity of chemical waste generated would be minimal. It is expected that the approximate quantity of the lubrication oil is about 100L/month and hence approximately 6 m^3 of chemical waste will be generated during construction period of 60 months (general assumption of construction time for URA redevelopment projects adopted). A licensed collector should be employed to handle and dispose of the chemical waste. Furthermore, the chemical waste should be handled in accordance with the *Waste Disposal (Chemical Waste)(General) Regulation*. The Works Contractor should register as a Chemical Waste Producer under the WDO.

6.2.11 Since the existing structure (Cheung Sha Wan Sports Centre) to be demolished was built in 1970s, asbestos containing materials may be present at the existing structures which would be demolished. Asbestos investigation would be carried out before the commencement of demolition works. Asbestos investigation and asbestos abatement plan will be made in accordance with Air Pollution Control Ordinance, Waste Disposal (Chemical Waste) (General) Regulation and other Codes of Practice listed in Appendix III in ProPECC PN2/97 Handling of Asbestos Containing Materials in Buildings if any asbestos is found in the Site.

6.2.12 In addition, other chemical waste, if any, to be generated during the demolition works will be handled and disposed of in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)*. For asbestos wastes, if any, will be handled and disposed of in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes.

6.2.13 With the implementation of proper chemical waste management measures listed in **Section 6.2.25**, the impact is anticipated to be insignificant.

6.2.14 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

6.2.15 General refuse such as food scraps, waste paper, empty containers, etc., would be generated from construction workforce during construction phase.

6.2.16 The maximum number of construction workers to be employed will be approximately 100 workers per day. The daily arising of general refuse from the construction workforce can be estimated based on a generation rate of 0.65kg per worker per day, the estimated quantity of the general refuse is 65kg (= 100 workers x 0.65kg/worker/day).

6.2.17 Such refuse should be properly managed so intentional or accidental release to the surrounding environment does not occur. If the general refuse is recyclable, such as paper, plastics and aluminum materials, the reuse and recycling of such waste is encouraged. Effective collection of site wastes such as providing enclosed bins or compaction units would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Waste storage areas should be well maintained and cleaned regularly.

6.2.18 With the implementation of good waste management practices as suggested in **Section 6.2.24** at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse generated by construction workers.

Mitigation Measures

6.2.19 Prior to the commencement of the construction works, the contractor will identify the types and amount of waste generated, and handle, store, collect and dispose waste in accordance with Waste Disposal Ordinance (Cap. 354). The associated mitigation measures and good site practice should be implemented as follows:

C&D Materials

6.2.20 In general, minimization/reuse/recycling of C&D materials (i.e. both inert and non-inert C&D materials) should be considered prior to disposal. Waste minimization measures should be adopted during construction phase, measures may include:

- On-site sorting of C&D materials;
- Recycling of construction materials for on-site use;
- Avoidance and minimization to reduce the potential quantity of C&D materials generated;
- Reuse of materials as practical as possible;
- Recovery and Recycling as practical as possible;
- Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.

6.2.21 The Contractor should submit a waste management Plan (the Plan) to the project proponent for agreement, covering the types of waste and their estimated quantities, timing of waste arising; measures for reducing waste generation etc. as recommended in Section 3 of ADV-19. If the project will produce more than 300,000 m^3 of construction and demolition material, advice from the Director of Environmental Protection should be sought prior to the acceptance of the Plan.

6.2.22 The Contractor should adopt good housekeeping practices such as waste segregation prior to disposal. Stockpiling and segregating areas should be provided at site. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.

6.2.23 During inclement weather (e.g. heavy rainstorm), the stockpile should be covered by tarpaulin or other water-resistant fabric. This can prevent dust and waste from being blown away by wind or washed into watercourses/drainage system.

General Refuse

6.2.24 General refuse should be stored in enclosed bins or compaction units separate from C&D materials. 3-color recycle bins for the collection of recyclable municipal waste should also be provided. A reputable waste collector should be employed by the Contractor to remove or recycle general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of "wind-blown" light materials.

Chemical Waste

6.2.25 If chemical waste is produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the *Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)*. Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste collector. The chemical waste management measures should include, but not limited to the following :

- Minimize the production of Chemical Waste
- Registration of Chemical Waste Producers with EPD should be carried out for any person who produces chemical waste
- Give notification of certain Chemical Waste for Disposal to EPD as required in *Section 4 of the Regulation & Section 17 of the Ordinance*
- Carry out Packaging, Labelling and Storage of Chemical Wastes as per *Sections 9 to 19 of the Regulation*
- Collection of Chemical Waste and the "Trip Ticket" System as per *Sections 20 to 29 of the Regulation*
- Precautions Against Dangers from Spillages, Leakages or Accidents involving Chemical Waste as per *Sections 30 to 32 of the Regulation*

6.2.26 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

6.3 Waste Management for Operation Phase

6.3.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic and metal products, and paper. No chemical or hazardous waste is anticipated. Wastes generated will be collected and disposed of on a regular basis. Building management will be arranged by the future owners to manage the development including waste disposal.

6.3.2 As the domestic waste will be collected (at a refuse collection point) and regularly disposed of at landfill or regularly sent to recyclers, waste recycling would be carried out during operation phase. Adverse impacts due to waste management will not be anticipated.

6.4 Conclusion

6.4.1 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, excavated sediment, and general refuse would be generated during the construction phase and domestic waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Scheme would be envisaged.

7 POTENTIAL LAND CONTAMINATION

7.1 Introduction

7.1.1 This chapter identifies and evaluates any potential land contamination impact within the scheme boundary of the proposed development. Preliminary assessment has been conducted with reference to the applicable legislation and guidelines.

7.2 Legislations, Standards & Guidelines

7.2.1 Legislations and guidelines related to land contamination are given below:

- Environmental Impact Assessment Ordinance (Cap. 499);
- Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C);
- Dangerous Goods Ordinance (Cap 295);
- Practice Guide for Investigation and Remediation of Contaminated Land (PG);
- Guidance Note for Contaminated Land Assessment and Remediation; and
- Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management.

Potential Land Contamination Impact

7.2.2 According to Guidance *Note for Contaminated Land Assessment and Remediation* and EIAO-TM Annex 19 and PG, the industrial uses that may result in land contamination include but limited to the following:

- Boat / ship building or repairing works
- Chemical manufacturing / processing plants, dangerous goods stores power plants
- Concrete and asphalt production
- Golf courses
- Motor vehicle /equipment depot, repairing, service centres
- Open area storage
- Petroleum Products and coal industrial operations (including oil depots and gas works)
- Power plants, individual power generation units
- Scrap yards
- Steel mills / metal workshops
- Waste recycling workshops
- Dumping ground

7.3 Assessment Methodology

7.3.1 With reference to the PG, Site Appraisal shall be carried out to assess the land contamination potential via the following methods for the preliminary assessment:

- Review of available historical and recent aerial photos
- Inquiry with the Environmental Protection Department (EPD) and Fire Services Department (FSD) on potential land contamination issues in past years

- Apart from the existing Cheung Sha Wan Path Sitting-out Area, the other areas are still occupied and inaccessible during this assessment period. As land contamination issue arising from the sitting-out areas are not expected, site walkover is not carried out for this assessment. Nevertheless, the Sites shall be re-appraised upon land resumption.

7.4 Site Appraisal

Aerial Photos

7.4.1 Aerial photos between 1945, the first available year, and 2020, the latest available year, were inspected at the Map and Aerial Photograph Library of the Lands Department. Aerial photos overlaid with the boundaries of areas of concern is provided in **Appendix 7-1**. The land use history of the Site are summarised in **Table 7-1** as below:

Table 7-1 Historical Land Use

Site	Photo No./ Reference	Observations	Assumed Land Use
Site A			
1945	681_5-4110	The Site was part of the former Cheung Sha Wan (Bay), adjacent to the reclaimed land of Cheung Sha Wan.	N/A
1963	1963-5948	The reclamation of the land at the Site was completed. Temporary structures assumed to be c structures are recorded in the site.	Open area / Squatting
1967	1967-5500	Temporary structures at the Site have been removed, and barren land are observed.	Open space
1968	1968-1067	Temporary structures are observed and the land is assumed to be used open area storage of construction materials as piping materials are observed.	Storage of construction materials
1975	1975_11994	The building for the existing Cheung Sha Wan Sports Centre was erected.	Recreational facilities (Community)
1984	1984_56990	No significant change for the building. Some shrubs were grown on the site.	
2000	CN28212	No major change in the Site is observed.	
2020	E116762C	No major change in the Site is observed.	
Site B			
1945	681_5-4110	The Site was part of the former Cheung Sha Wan (Bay)	N/A
1967	1967-5500	The land of the Site was reclaimed and vehicles in the Site are observed.	Car park
1968	1968-1066	The Site was generally paved. More vehicles and some open area storage of construction materials are recorded in the site.	Storage of construction materials / Car park
1973	06890	No significant change was recorded.	
1975	11994	The temporary structures and vehicles were removed.	Open space
1986	A06287	Apart from some shrubs that were being grown on the Site, no major change in the Site are observed, while the existing Sham Shui Po Sports Ground near the Site was under construction and the development in the surrounding areas was also in progress.	Open space

Site	Photo No./ Reference	Observations	Assumed Land Use
1987	A14737	In the southwest of the Site, the construction of the existing Cheung Sha Wan Path Sitting-out Area was substantially completed and the area was fully paved apart from the landscaped areas, while the remaining area of the Site remained unchanged. The construction of Sham Shui Po Sports Ground was completed.	Open space
1993	A35272	No significant change was recorded in the Cheung Sha Wan Path Sitting-out Area, while the remaining area of the site was occupied by vehicles.	Open space / Car park
2004	CW60261	The northern boundary of the Cheung Sha Wan Path Sitting-out Area was extended. The remaining area of the Site was fully paved and was occupied by temporary structures, assumed to be site offices, and vehicles.	Open space / Car park / Office
2015	CW114351	More temporary structures and vehicles were also recorded in the site. Open area storage of construction materials are also observed.	Open space / Car park / Office / Storage area
2020	E053114C	More temporary structures and vehicles were recorded in the site.	Open space / Car park / Office / Storage area

7.4.2 The review of historical land use from aerial photos has indicated that the major land use of the Sites during 1945-2020, after the lands were being reclaimed, are open space, storage area of construction materials and recreational facilities for Site A; the open space, car park, and open space for Site B. Although the previous use of open area storage was recorded at the Sites, as only inert construction materials were involved, based on findings from the aerial photos, land contamination issue arising from the land use is not anticipated.

7.5 Inquiry with EPD & FSD

7.5.1 Information was requested from FSD and EPD's Regional Office (West) on the history of operation and land use of the sites. The EPD was consulted with regard to any records of chemical waste producer (CWP). The FSD was consulted with regard to any records of dangerous good producer(s). Both departments were also inquired on any reported accidents or spillage/leakage incidents within the three areas of concern. The correspondences from EPD and FSD are documented in **Appendix 7-2**.

7.5.2 **Table 7-2** below shows the summary of the responses from Government Departments.

Table 7-2 Summary of Response from Government Departments

Government Department	Response
Environmental Protection Department Regional Office (West)	No record of reported accidents of spillage / leakage of chemicals at the concerned sites. For chemical waste producer (CWP), the records were checked on 3rd August 2020 and no record of CWP was found for the Sites.
Fire Services Department	No dangerous goods license or reported accidents of dangerous goods leakage or spillage is recorded.

7.6 Conclusion

The available information from aerial photos, records from authorities suggest that the no potentially contaminating activities were recorded for the Sites. Although the previous use of open area storage was recorded at the Sites, as only inert construction materials were involved, based on findings from the aerial photos, land contamination issue arising from the land use is not anticipated. Apart from the existing Cheung Sha Wan Path Sitting-out Area, the other areas are still occupied and inaccessible during this assessment period. As land contamination issue arising from the sitting-out areas are not expected, site walkover is not carried out for this assessment. Nevertheless, the Sites shall be re-appraised upon land resumption. Detailed Land Contamination Assessment and Remediation (if needed) should be completed with reference to the prevailing guidelines on land contamination assessment prior to the development of the proposed development site.

8 CONCLUSION

8.1.1 An Environmental Assessment has been carried out to evaluate the potential environmental benefits and impacts likely to arise from the proposed Scheme. The key environmental issues associated with the Scheme are construction dust impact, construction noise impact and waste management during the construction phase and potential air quality and noise impact during the operational phase.

8.1.2 With the implementation of dust suppression measures stipulated under the Air Pollution Control (Construction Dust) Regulation and the adoption of good site practice, no adverse air quality impact associated with the construction works is expected.

8.1.3 Air emission is not anticipated from the proposed development during operation phase. Air quality model based on the current notional design with conservative approach has been conducted. The model results show that the predicted air quality at all proposed residential flats comply with the AQOs. The fresh air intake for the podiums structure Site A would be designed to be located at or above 6.35mAG (11.4mPD). The fresh air in-take for the G/IC complex at Site B should not be restrained by air quality. The air quality upon completion of the Scheme will be similar to, if not better than, the existing situation and no insurmountable air quality impact is anticipated.

8.1.4 Construction noise impact is considered insignificant with proper implementation of the recommended mitigation measures.

8.1.5 Traffic noise impact has been taken into consideration when designing the notional layout of the residential development. The view angle from the windows to the road traffic has been minimised by buildings deposition, buildings orientation and windows locations. In the base scenario where tower setback, buildings deposition, buildings orientation and windows locations are considered, only ~17% of flats complies with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic windows are considered, the compliance rate by flat has been increased to ~80%.

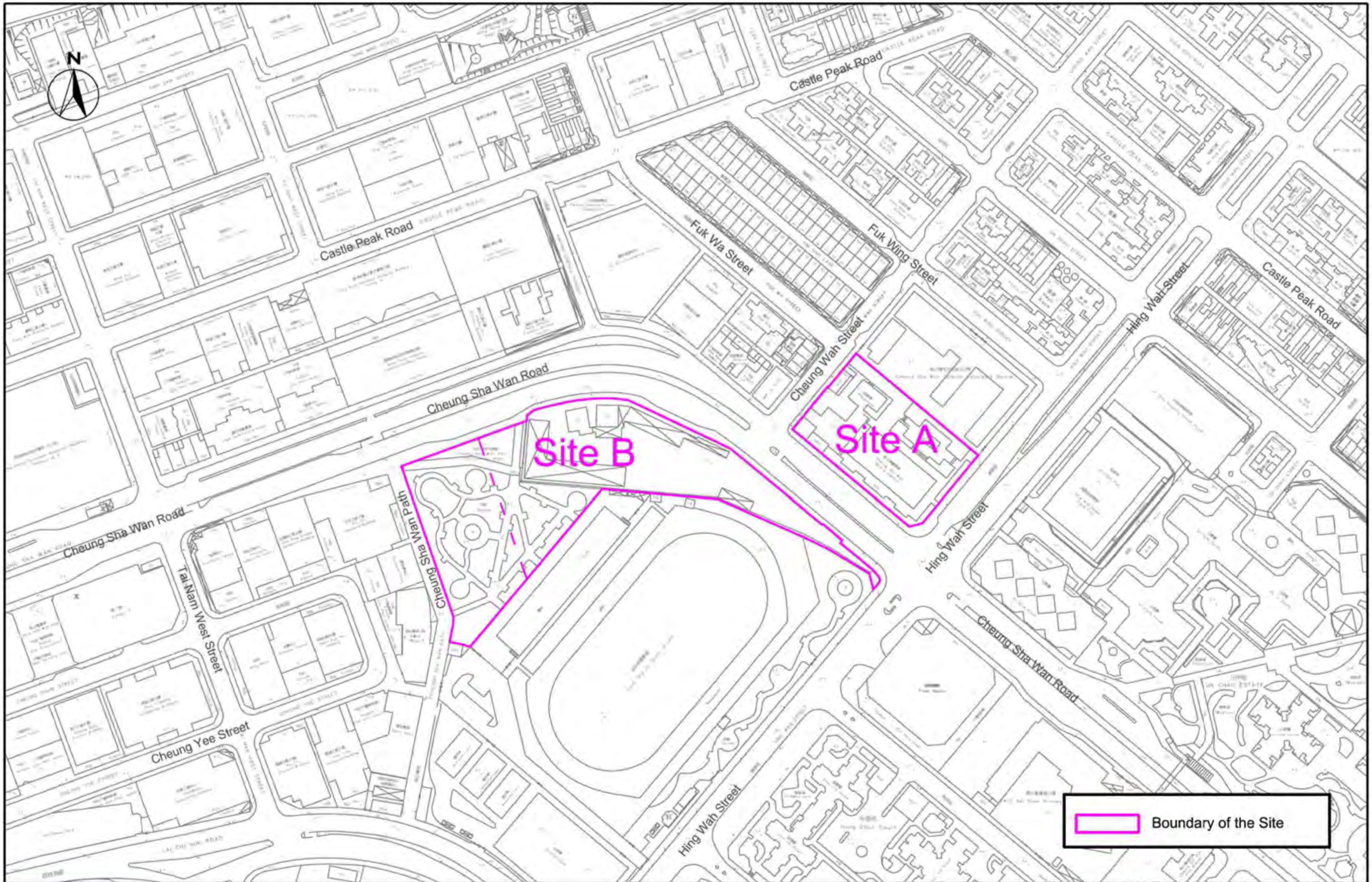
8.1.6 A preliminary study of fixed noise sources based on the existing situation and the available information for planned developments show that no adverse fixed noise impact to the Scheme is anticipated. The existing significant fixed noise sources are only identified in the west of Site B which is far away from the residential portion of the Scheme in Site A, which rely on openable windows for ventilation. The planned fixed noise source from the proposed Scheme should not introduce adverse noise impact to the surroundings with proper design. To ensure the compliance in the final design, the project proponent (URA) should incorporate the fixed source noise planning criteria to the tender document of the Scheme.

8.1.7 If the draft DSP is approved by CE in C, a detailed design of the proposed development will be carried out and if the block layout is changed and subject to requirement by relevant government departments, a revised noise impact assessment would be carried out to demonstrate the noise compliance.

8.1.8 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, excavated sediment, and general refuse would be generated during the construction phase and domestic waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Scheme would be envisaged.

8.1.9 The available information from aerial photos, records from authorities suggest that the no potentially contaminating activities were recorded for the Sites. Although the previous use of open area storage was recorded at the Sites, as only inert construction materials were involved, based on findings from the aerial photos, land contamination issue arising from the land use is not anticipated. Apart from the existing Cheung Sha Wan Path Sitting-out Area, the other areas are still occupied and inaccessible during this assessment period. As land contamination issue arising from the sitting-out areas are not expected, site walkover is not carried out for this assessment. Nevertheless, the Sites shall be re-appraised upon land resumption. Detailed Land Contamination Assessment and Remediation (if needed) should be completed with reference to the prevailing guidelines on land contamination assessment prior to the development of the proposed development site.

FIGURES



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE	1:2000 @ A3	DATE	July 2021
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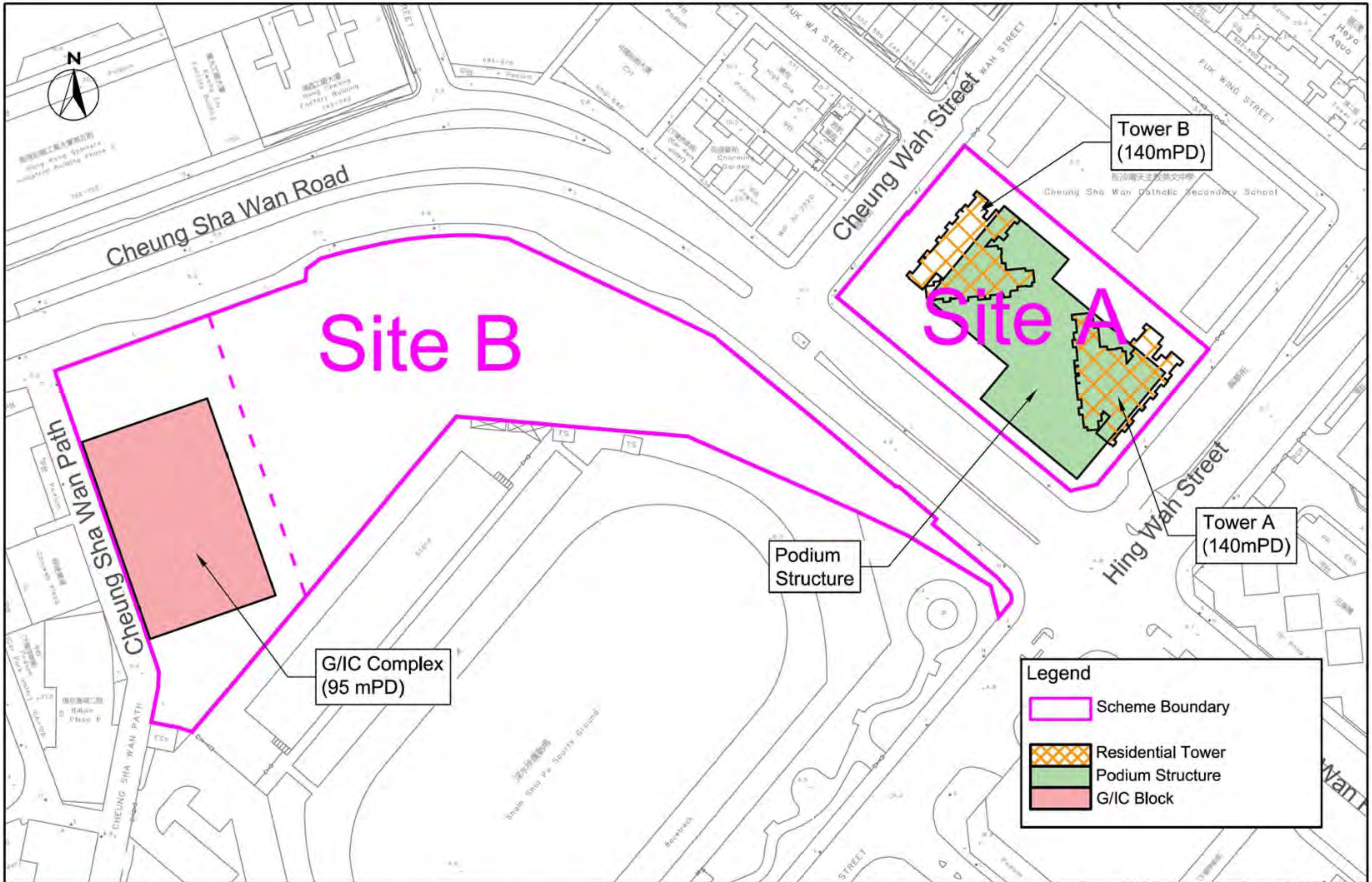
	Location Plan of the Scheme	JOB No.	IA19021-SSPAA1	DRAWING No. Fig.1-1	REV -



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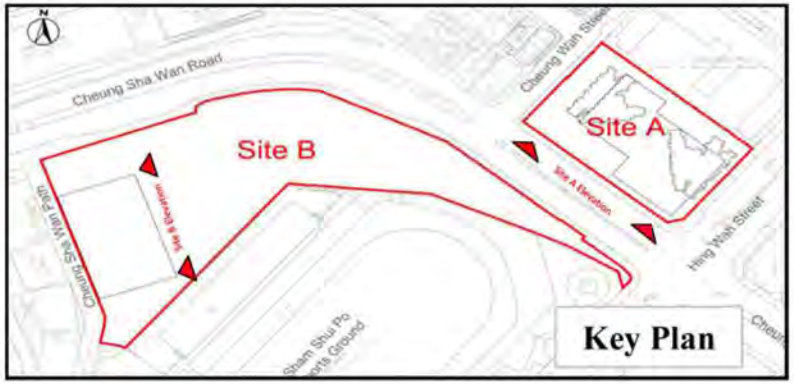

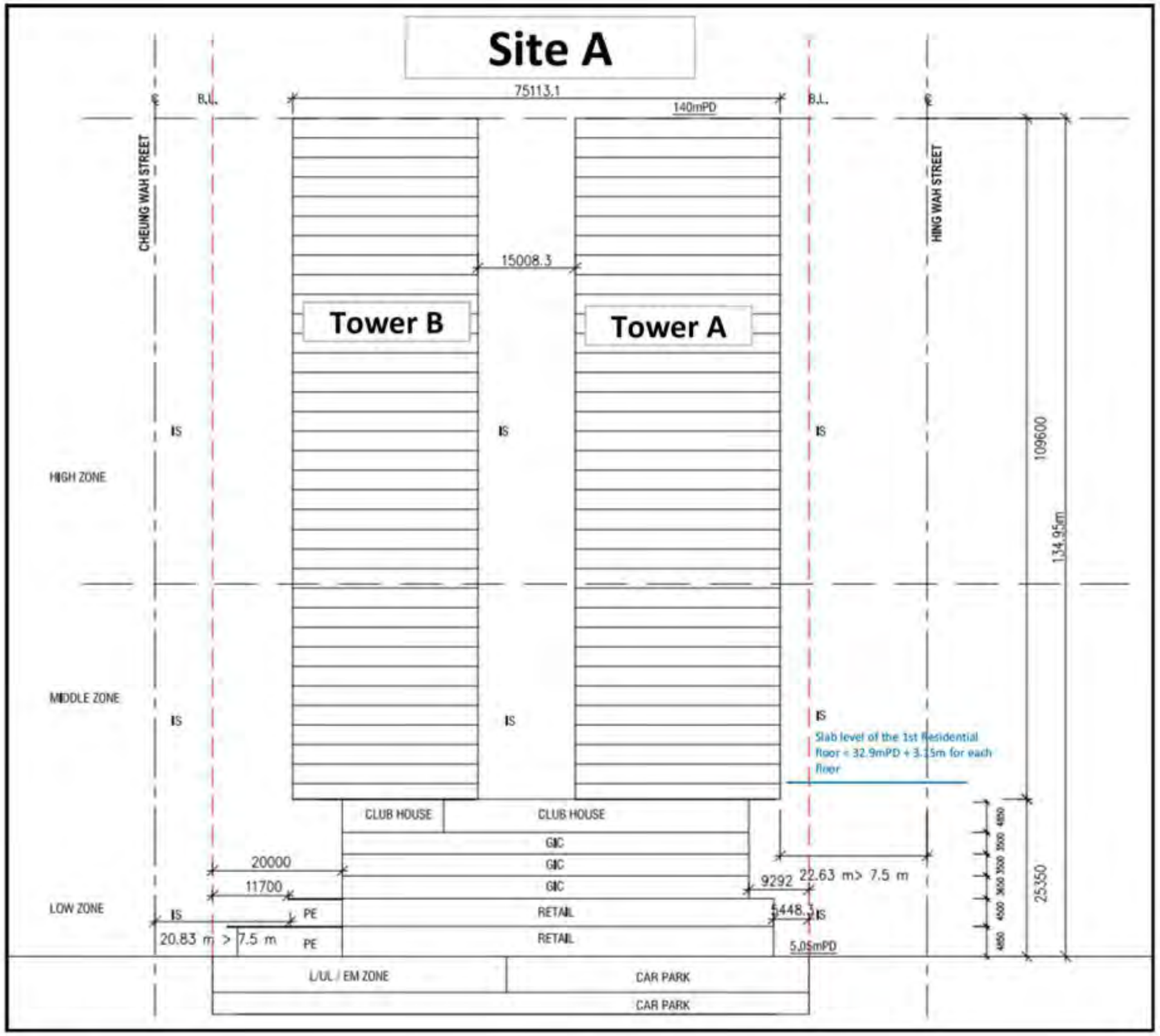

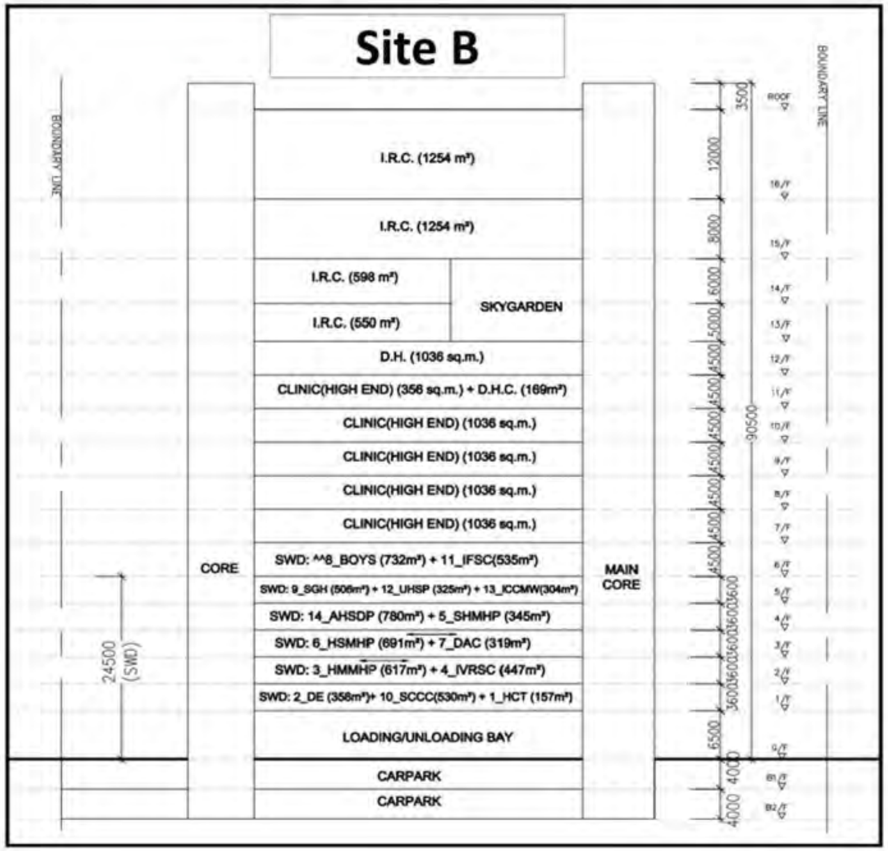

Remark:
Notional Design subject to change at detailed design stage

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Urban Renewal Authority Development Scheme Cheung Wah Street/ Cheung Sha Wan (SSP-018)

Notional Section Plan of the Proposed Scheme

SCALE	N.T.S.	DATE	Jun-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021-SSPAA1	FIGURE NO. 3-2	REV. -

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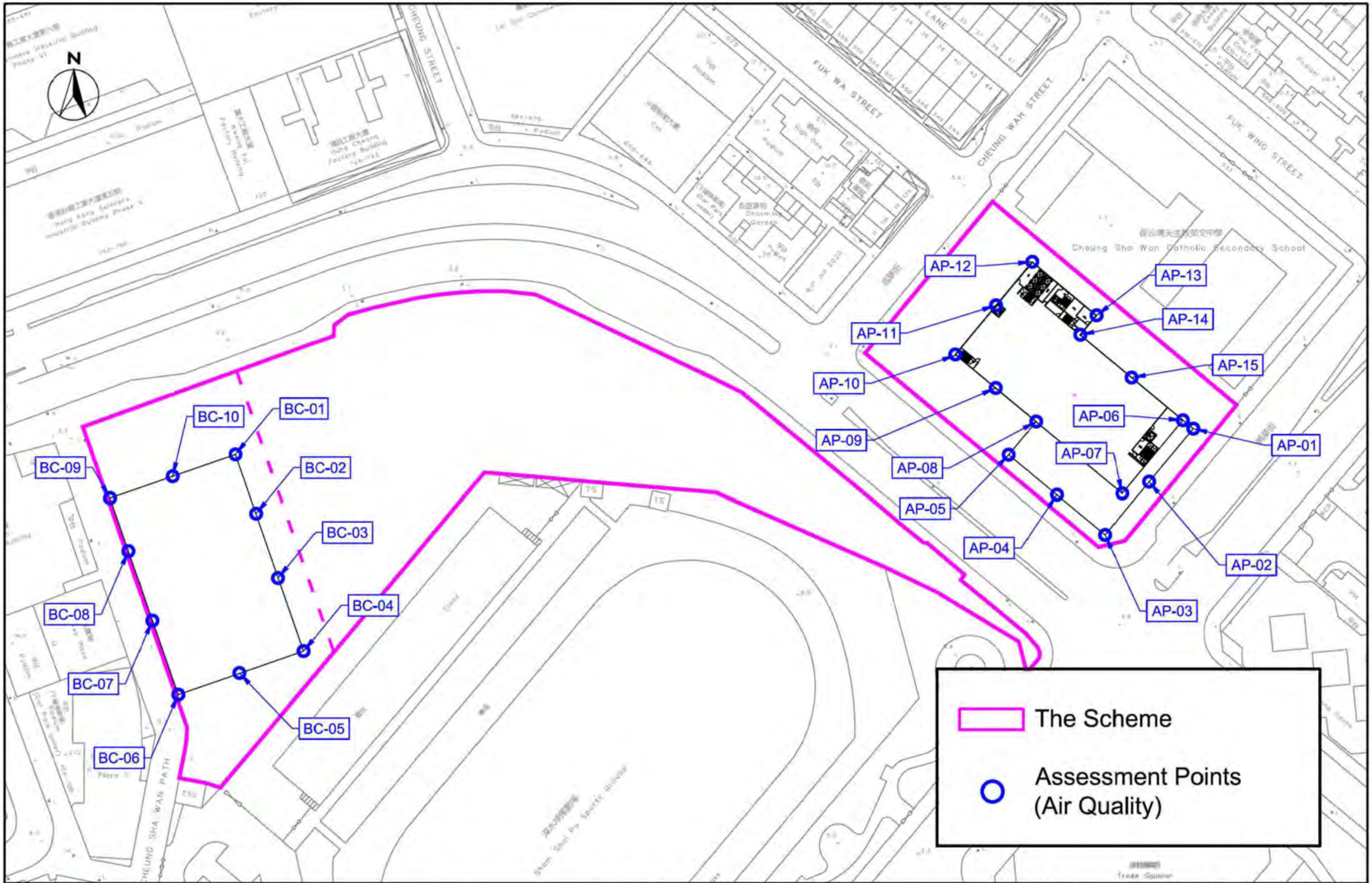
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Assessment Boundary (Air Quality)

SCALE	1:5000 @ A3	DATE	Jul 2021	
CHECK	KC	DRAWN	CC	
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.4-1	REV -



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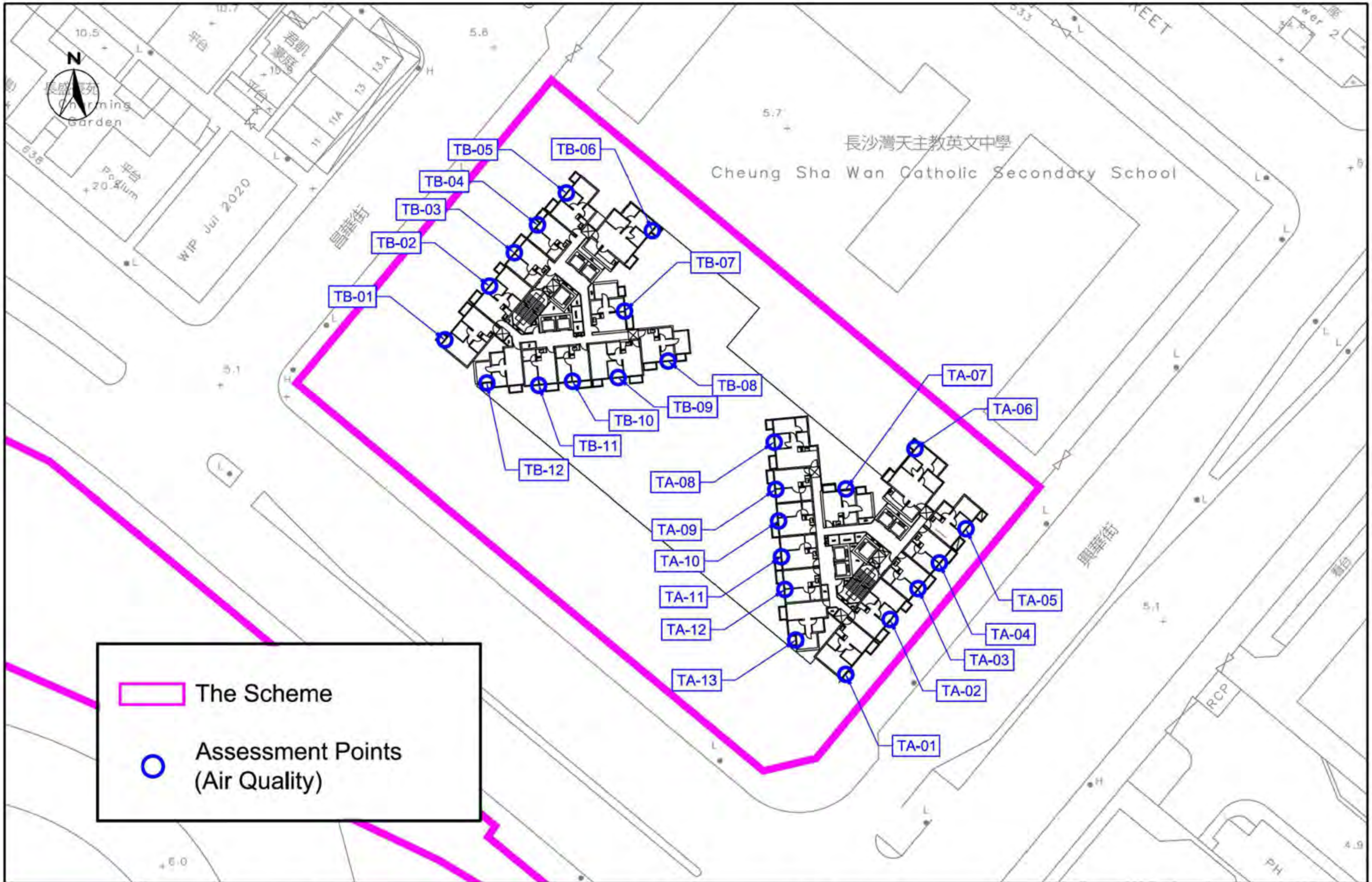
	Assessment Points - Podium Structures & G/IC Complex (Air Quality)	CHECK	KC	DRAWN	CC
		JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.4-2a
				REV	-



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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Assessment Points - Residential Towers (Air Quality)

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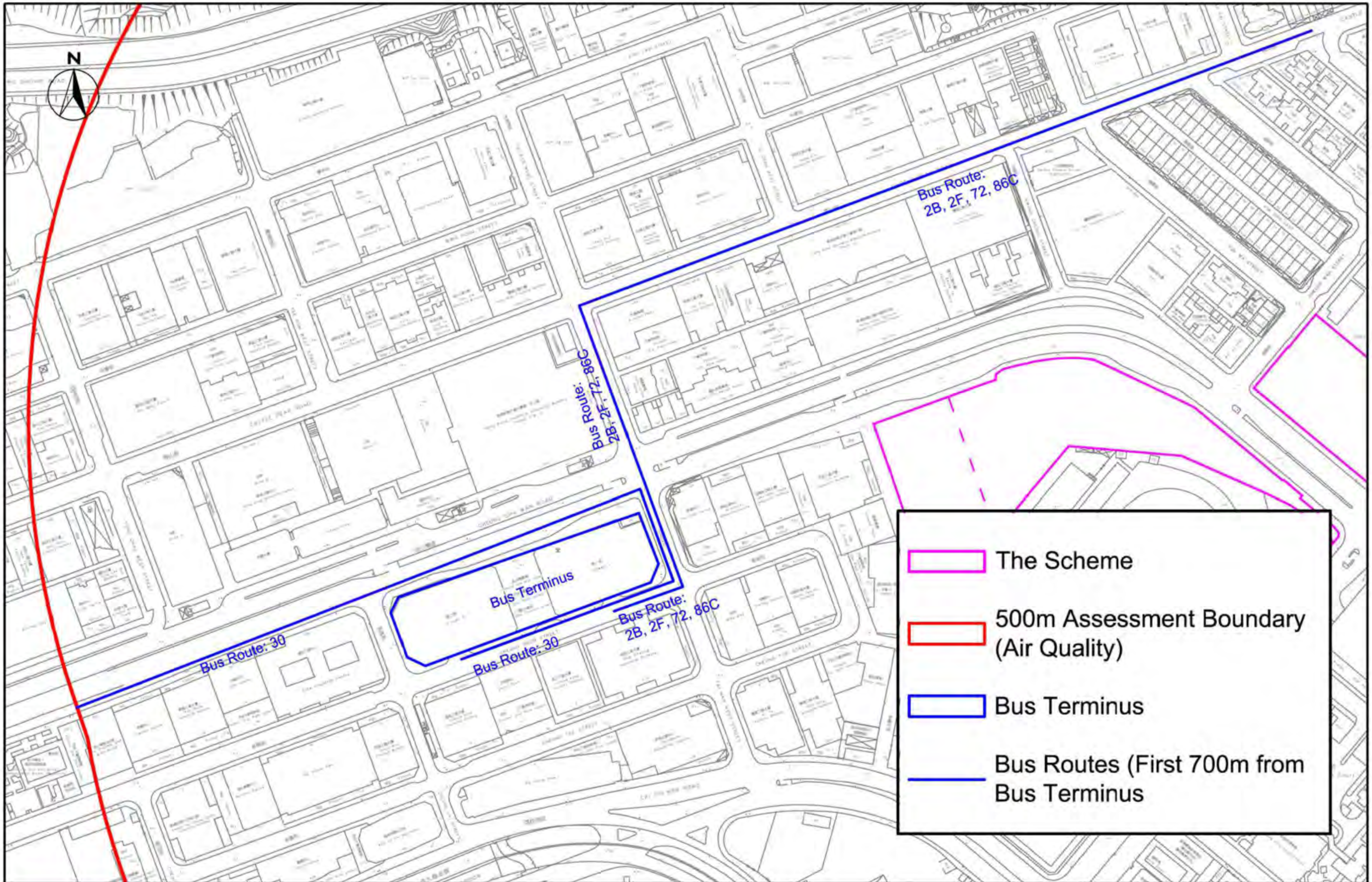
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.4-2b
		REV	-



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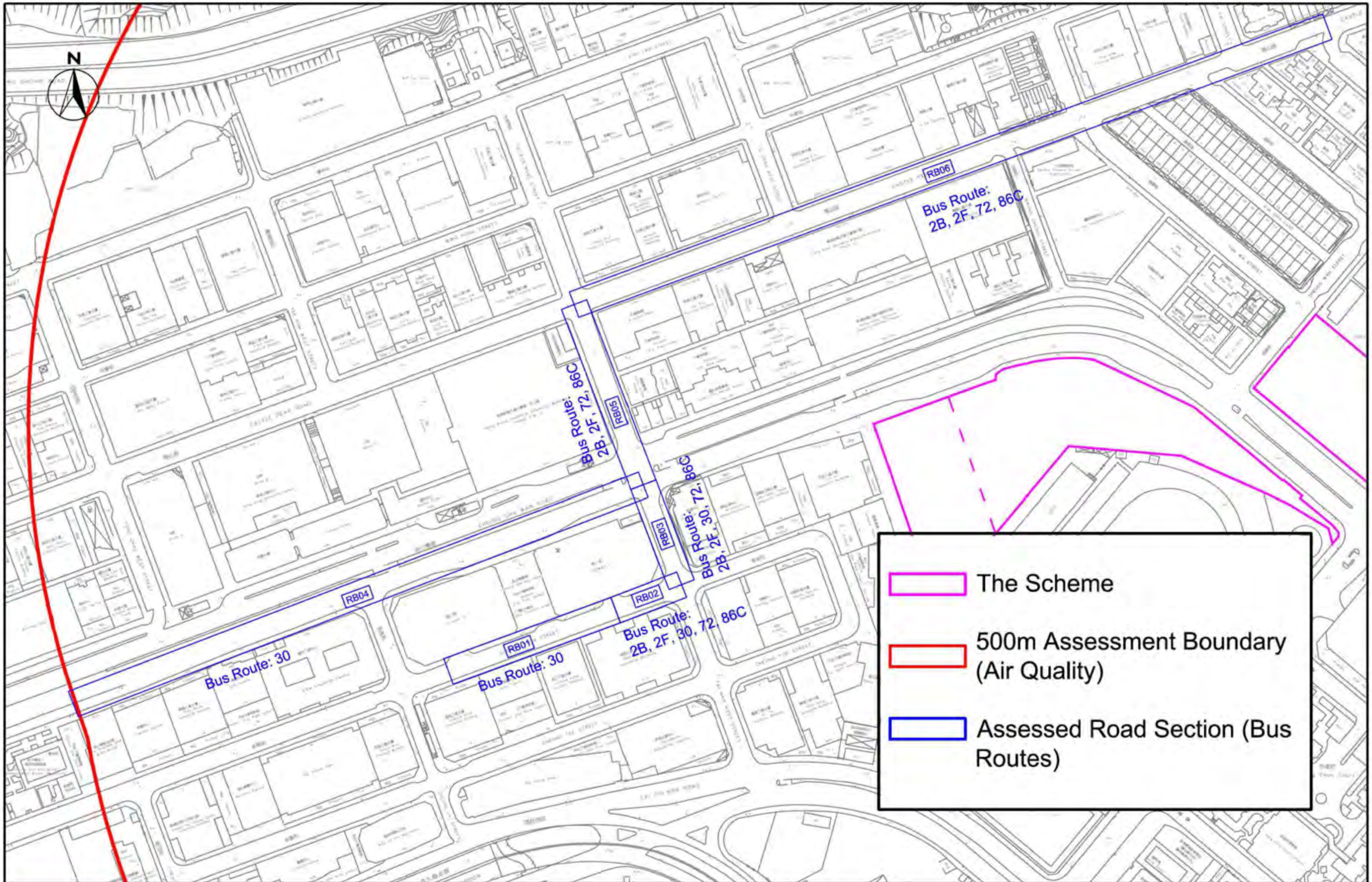
	Identified Bus Routes from Cheung Sha Wan Bus Terminus	CHECK	KC	DRAWN	CC
		JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.4-3a
				REV	-



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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Road ID for Strat Emission of Buses

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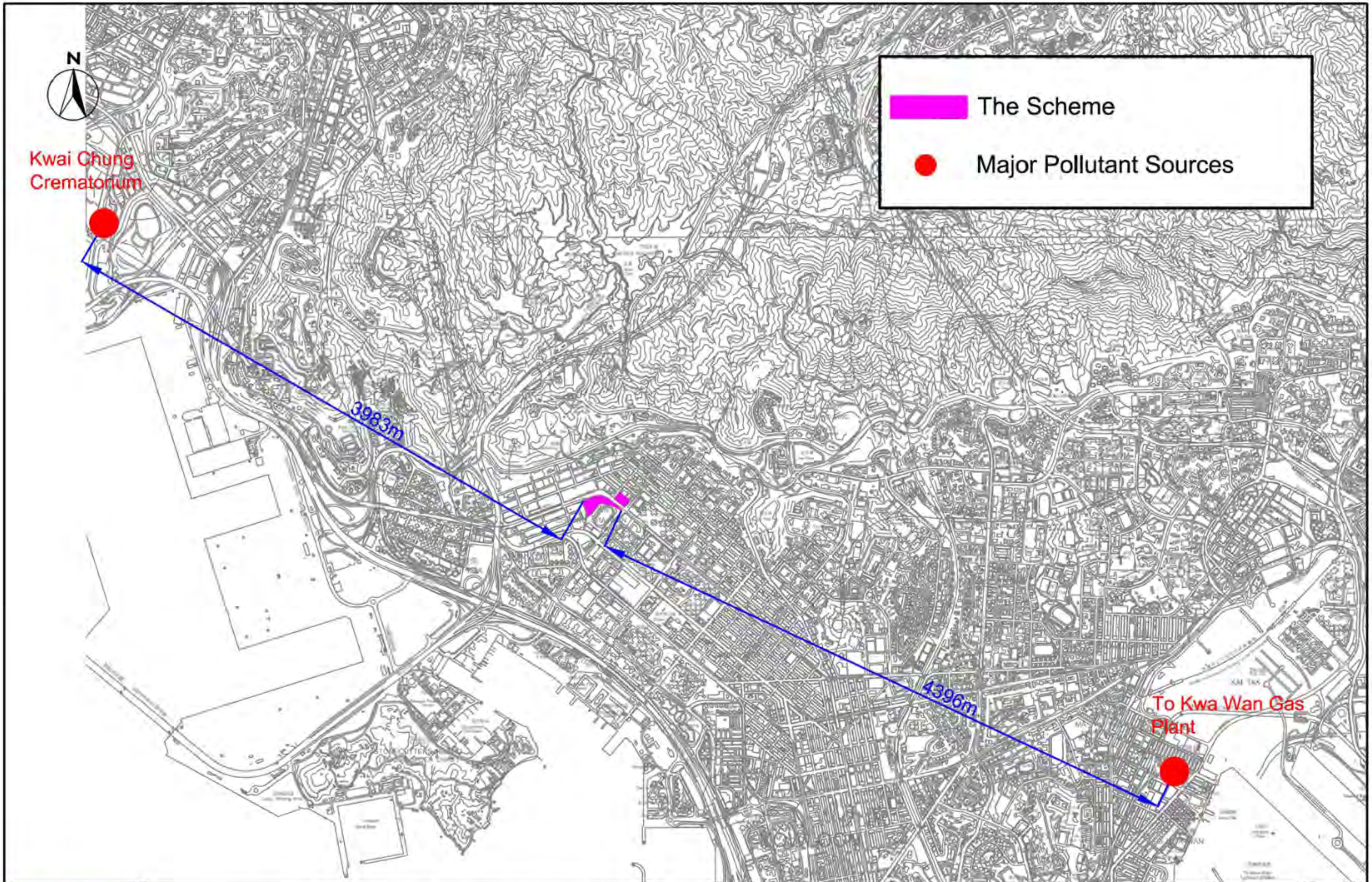
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.4-3b
		REV	-



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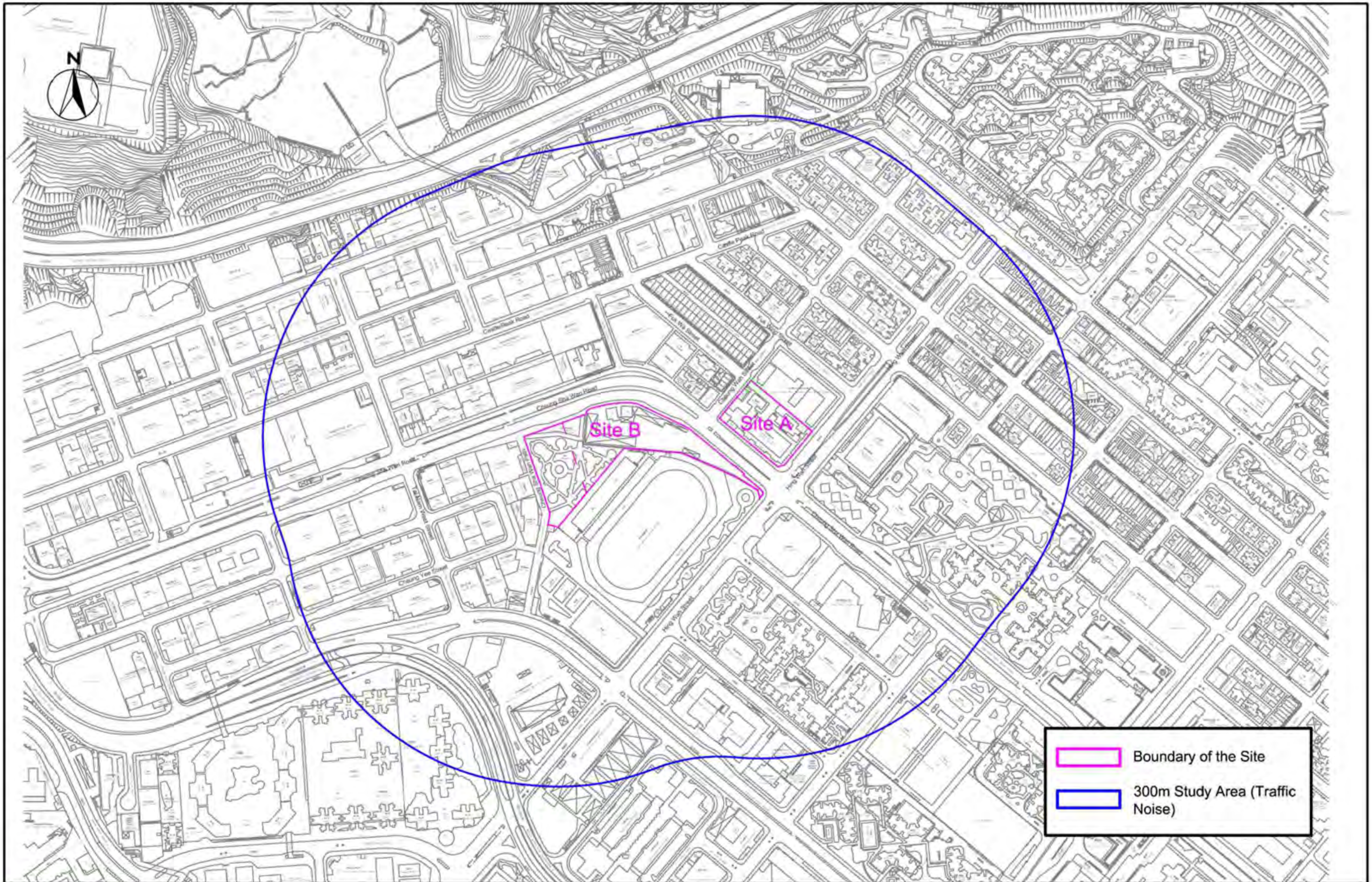
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Major Air Pollutant Sources within 4km

SCALE	1:5000 @ A3	DATE	Jul 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.4-4
		REV	-



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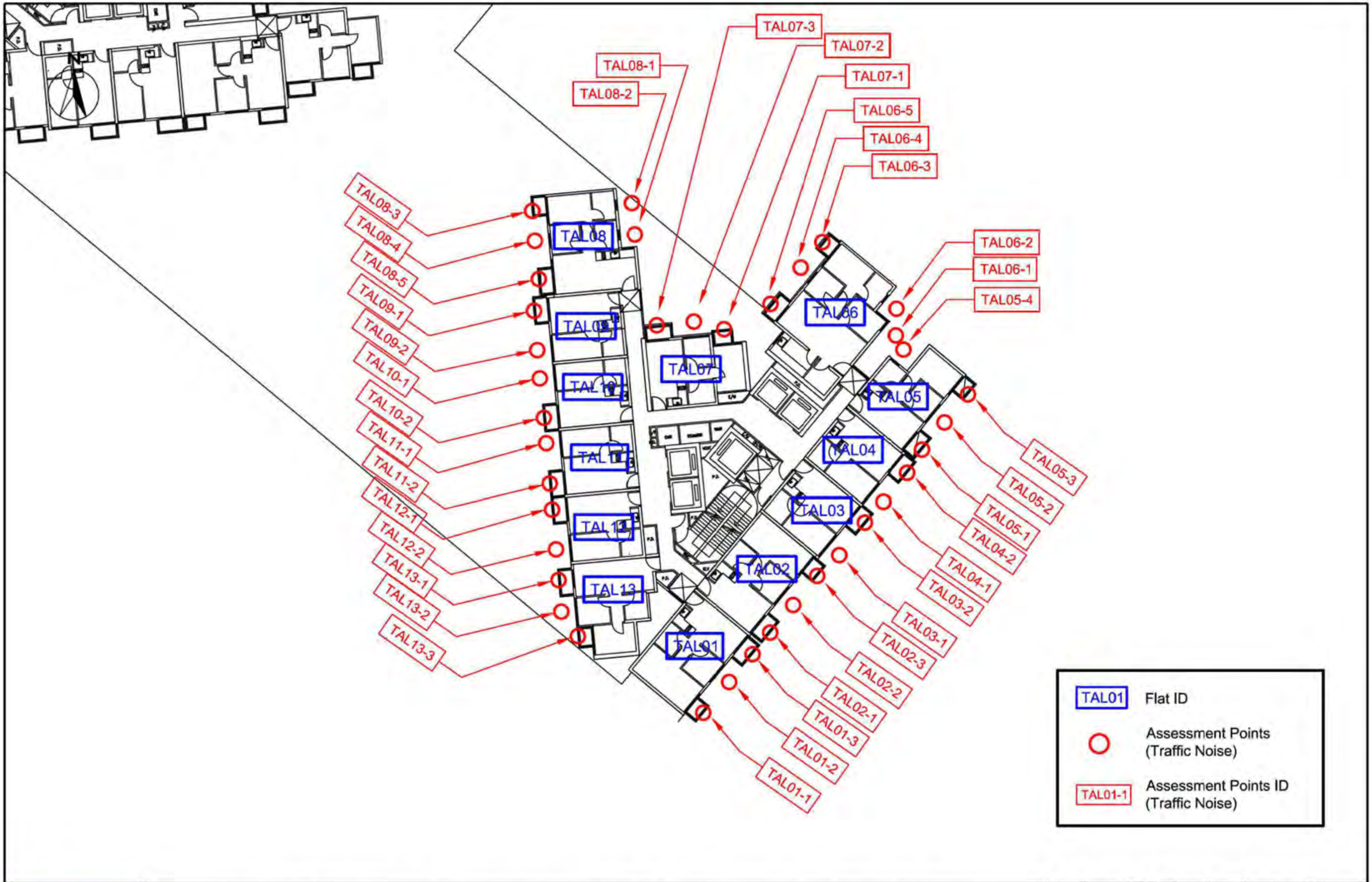
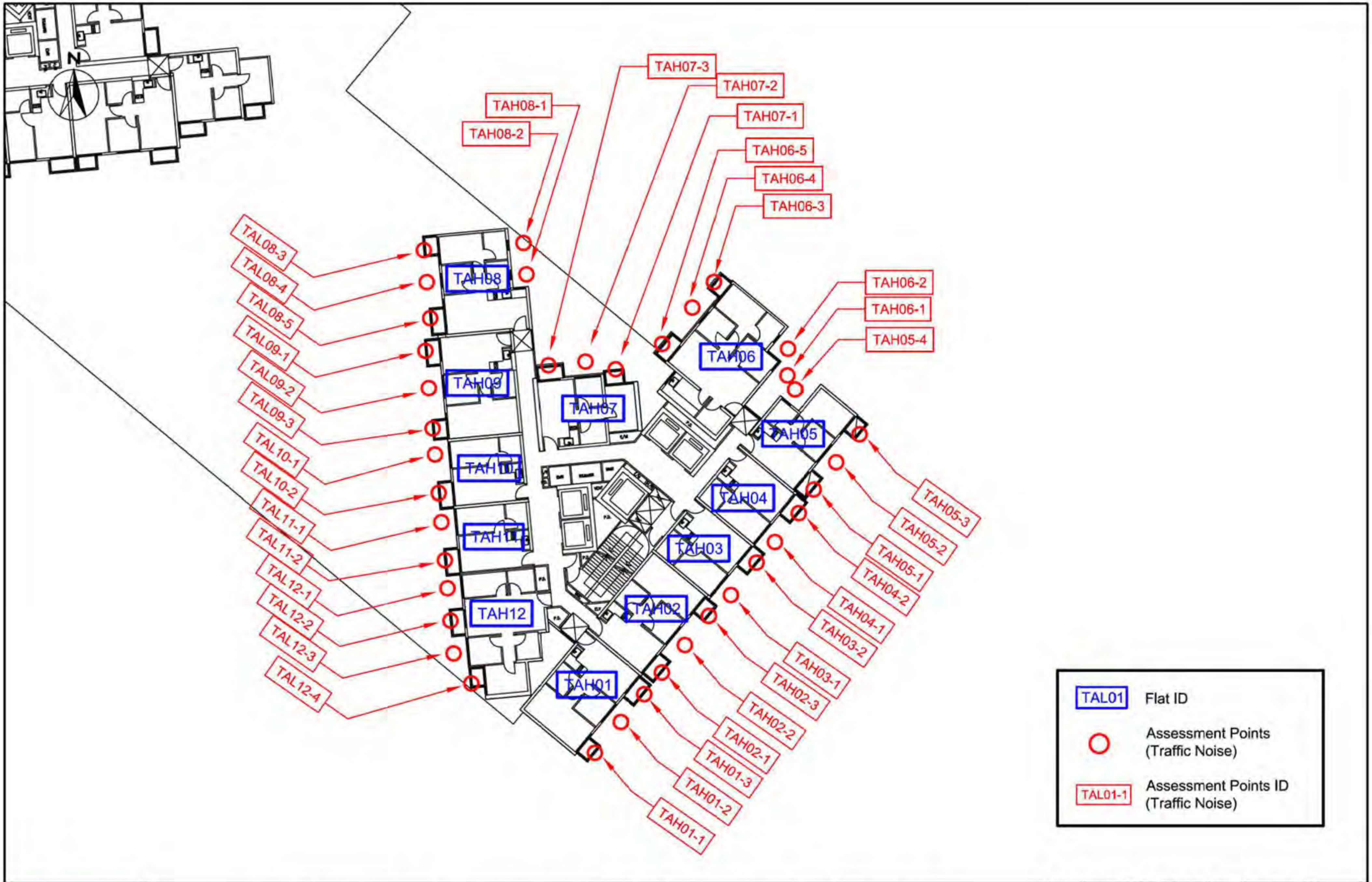
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Assessment Boundary (Traffic Noise)

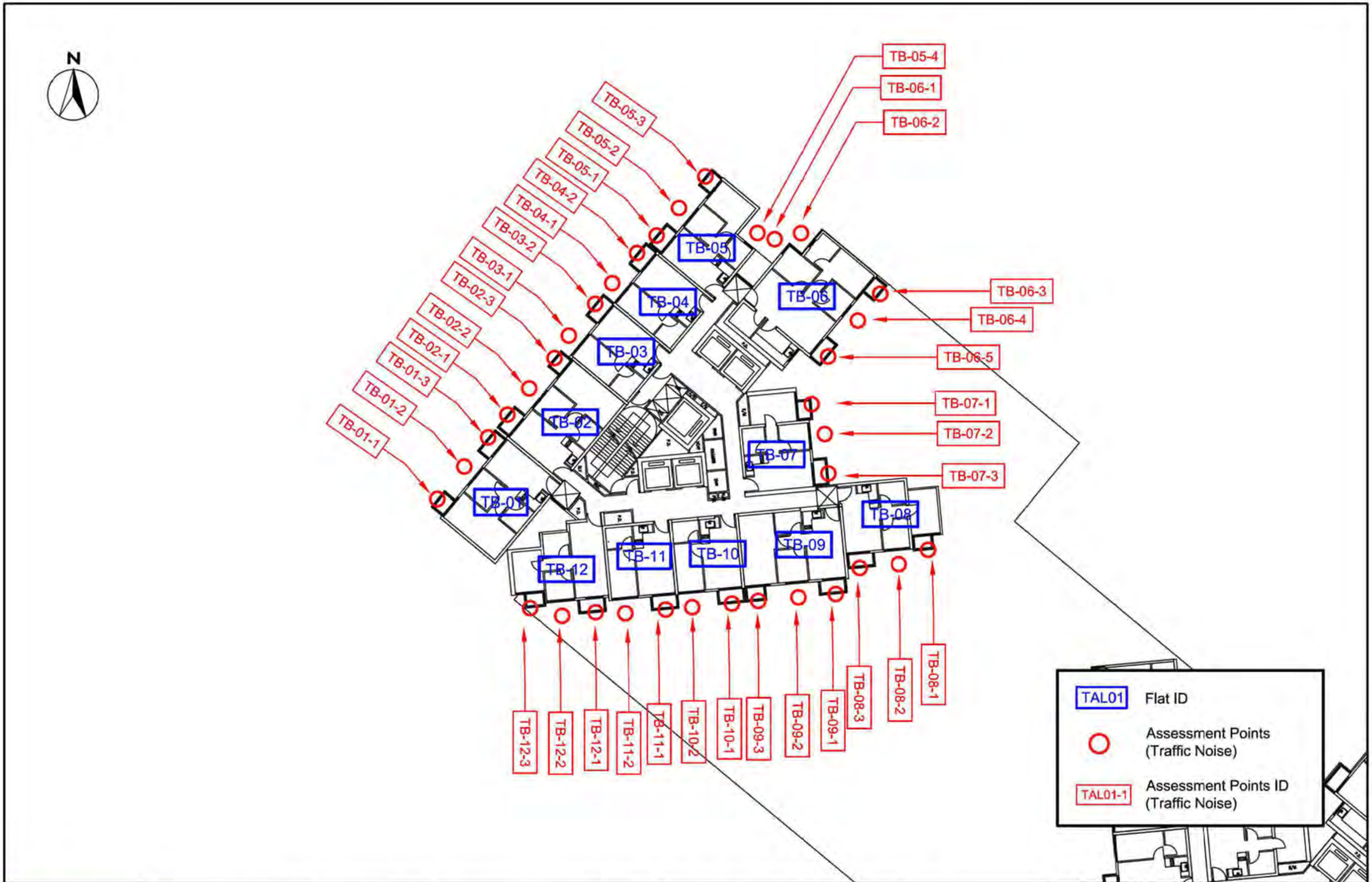
SCALE	1:4000 @ A3	DATE	July 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.5-1
REV	-		



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE	1:250 @ A3	DATE	June 2021
	Representative Assessment Point - Tower A Low Zone (Traffic Noise)	CHECK	KC	DRAWN	CC
		JOB No.	IA19021-SSPAA1	DRAWING No. Fig.5-2a	REV -



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE 1:250 @ A3	CHECK KC	DATE June 2021	DRAWN CC
	Representative Assessment Point - Tower A High Zone (Traffic Noise)	JOB No. IA19021-SSPAA1		DRAWING No. Fig.5-2b	REV -



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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Representative Assessment Point - Tower B (Traffic Noise)

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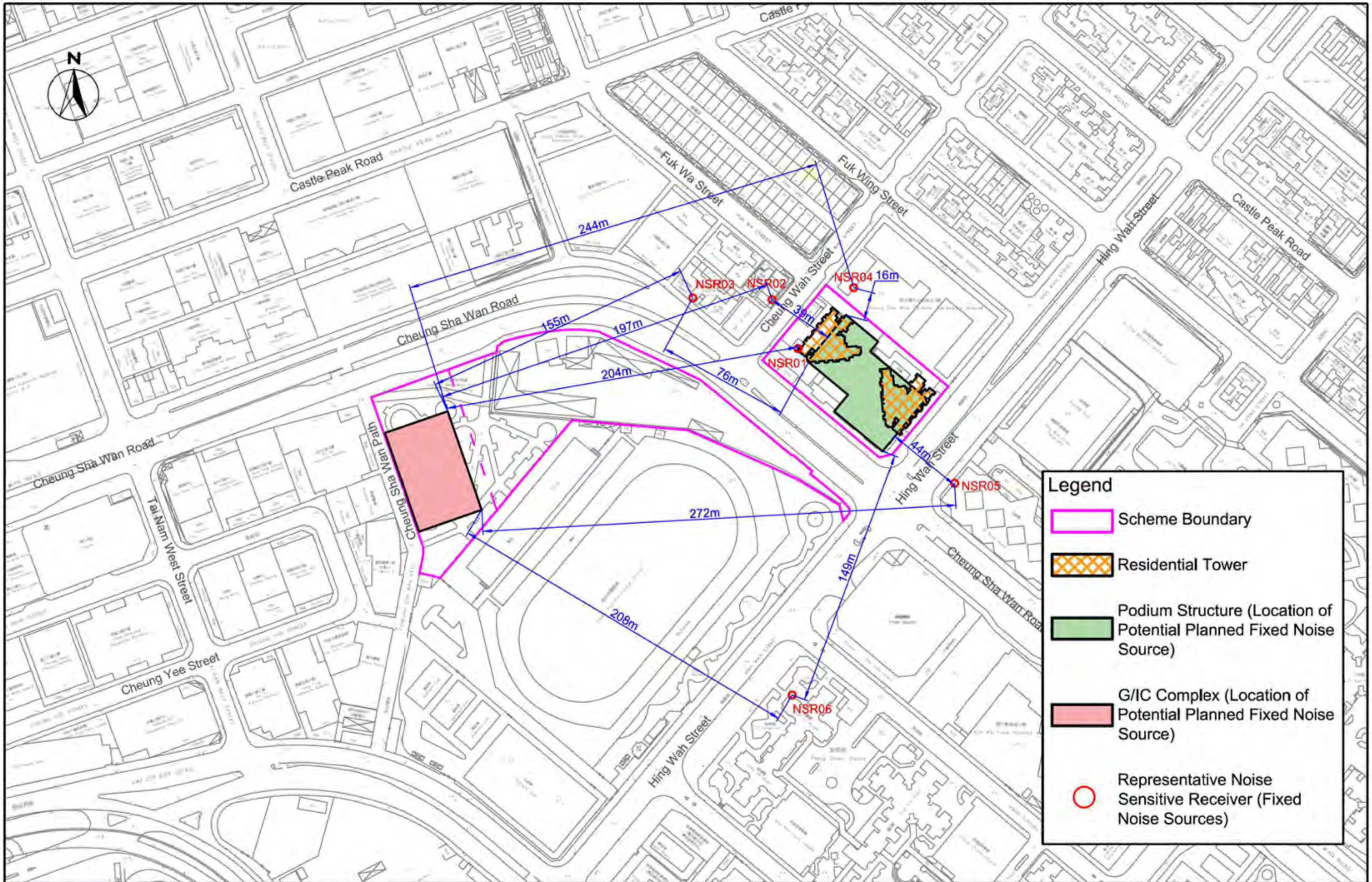
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.5-2c
REV	-		



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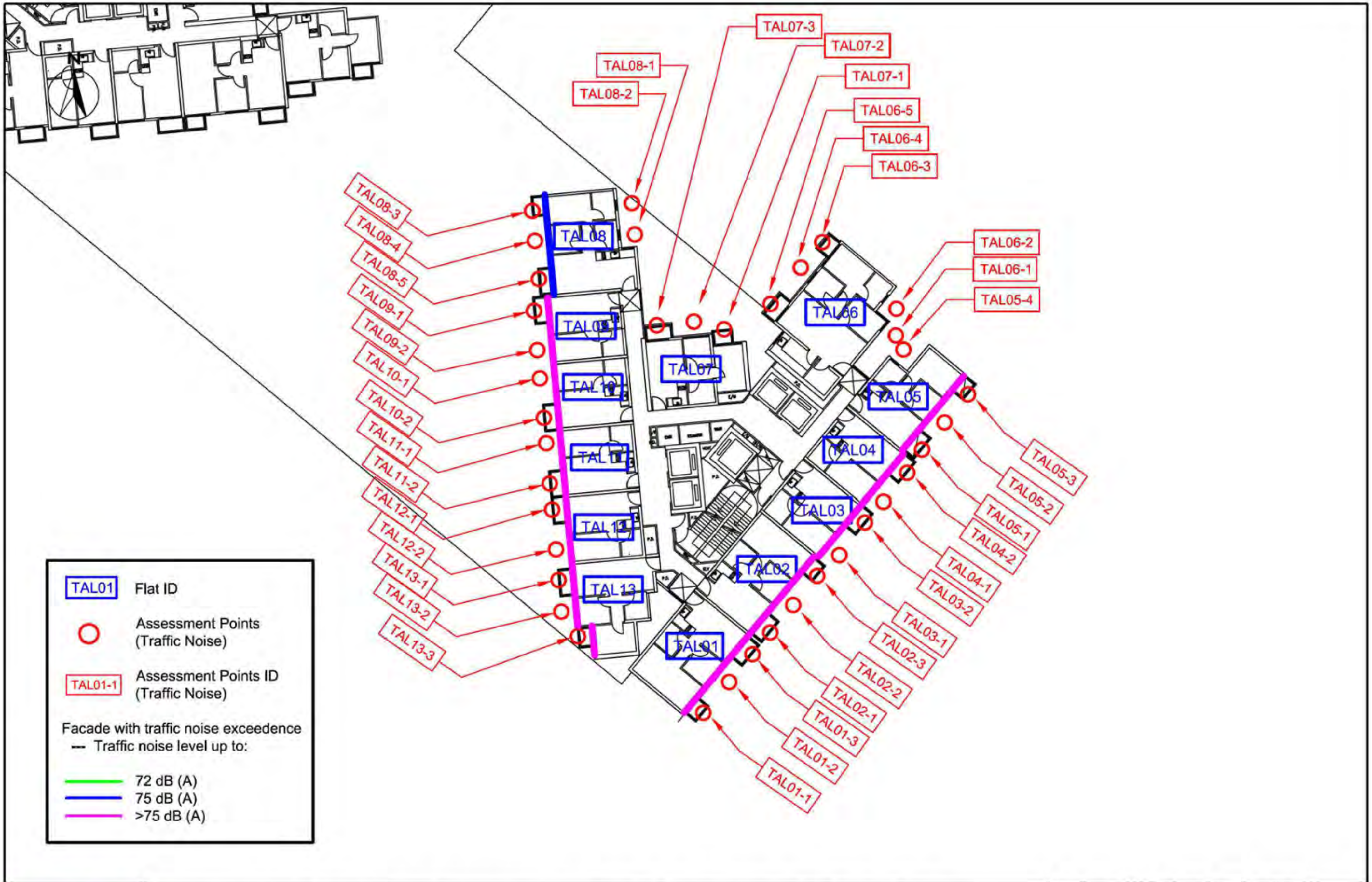
		CHECK KC		DRAWN CC	
	Representative Assessment Point (Planned Fixed Noise Source)	JOB No. IA19021-SSPAA1		DRAWING No. Fig.5-3	REV -



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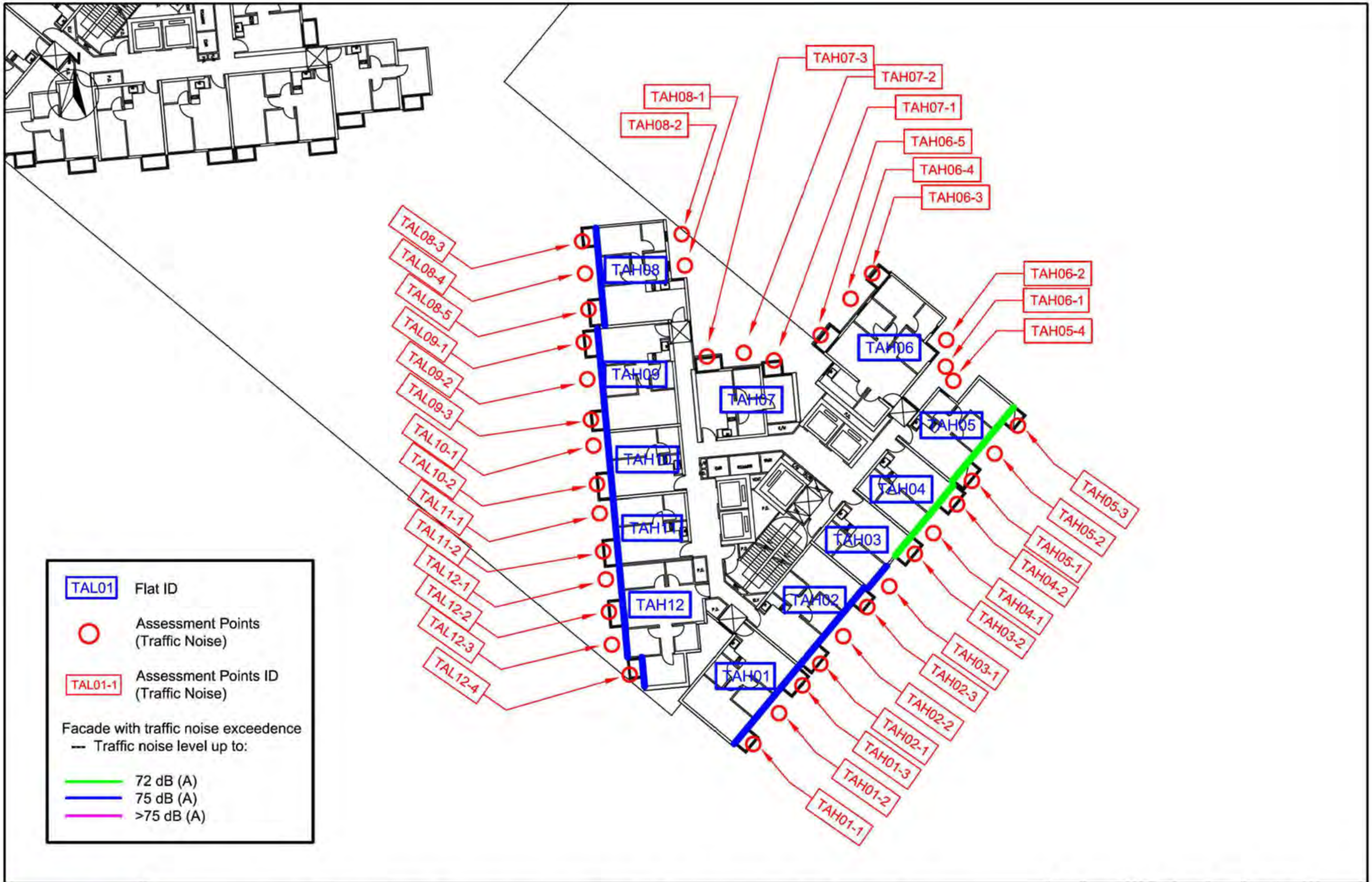
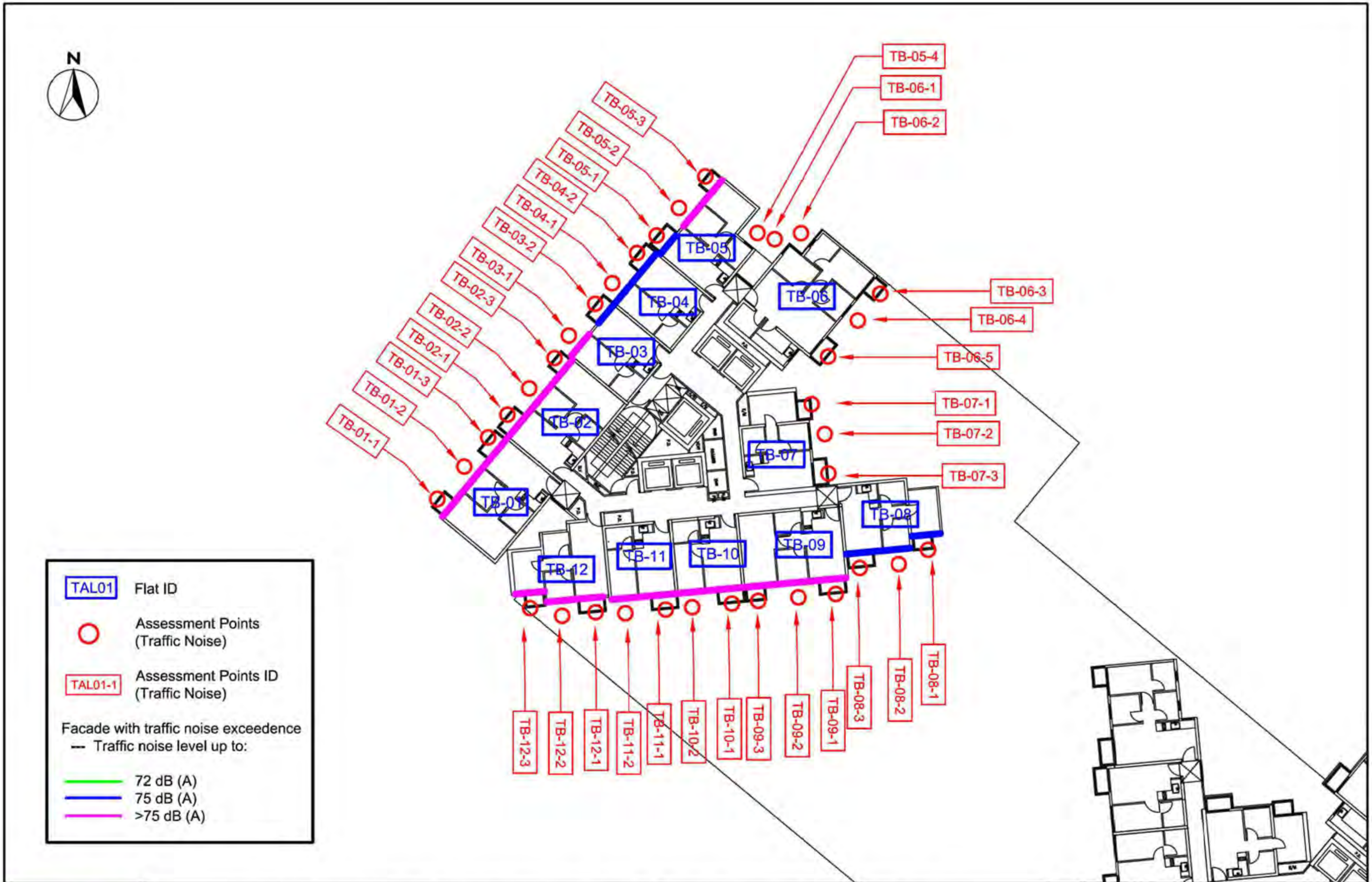
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Noise Exceedance in Base Scenario - Tower A Low Zone (Traffic Noise)

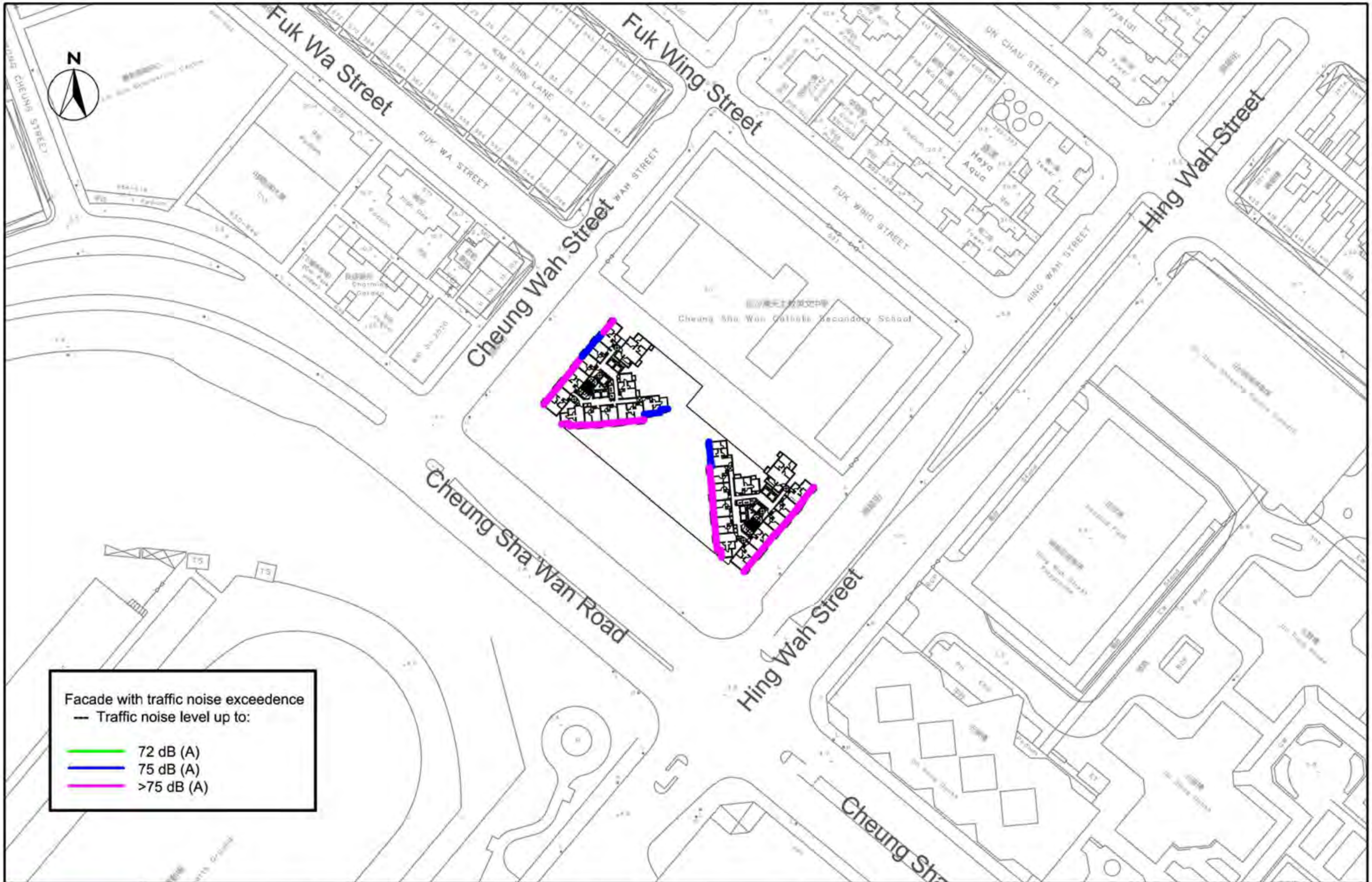
SCALE	1:250 @ A3	DATE	June 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.5-4a
		REV	-



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE	1:250 @ A3	DATE	June 2021
		CHECK	KC	DRAWN	CC
	Noise Exceedance in Base Scenario - Tower A High Zone (Traffic Noise)	JOB No.	IA19021-SSPAA1	DRAWING No. Fig.5-4b	REV -



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE	1:250 @ A3	DATE	June 2021
		CHECK	KC	DRAWN	CC
	Noise Exceedance in Base Scenario - Tower B (Traffic Noise)	JOB No.	IA19021-SSPAA1	DRAWING No. Fig.5-4c	REV -



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE	1:1000 @ A3	DATE	June 2021	
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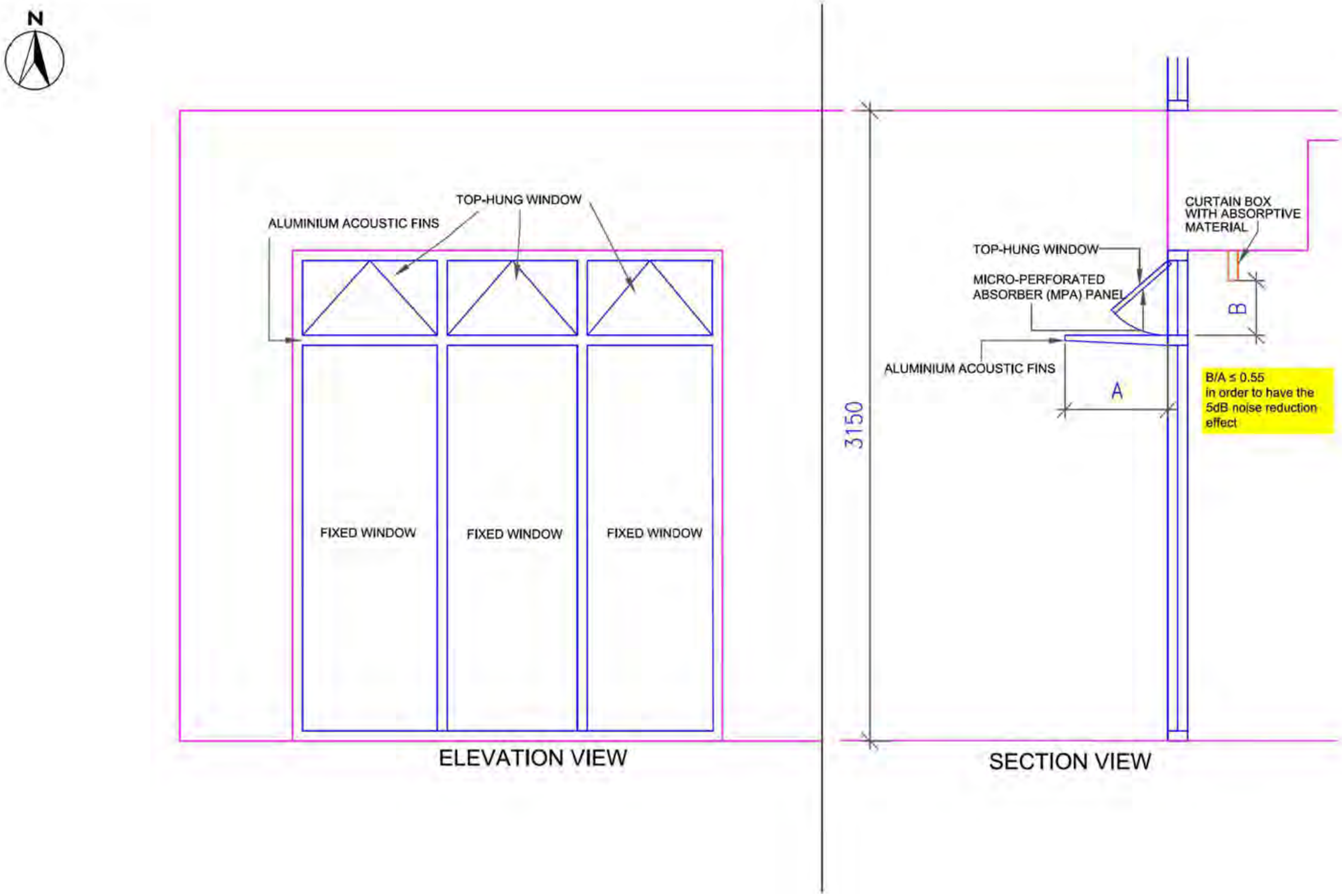
	Noise Exceedance in Base Scenario - Overview	JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.5-4d	REV -



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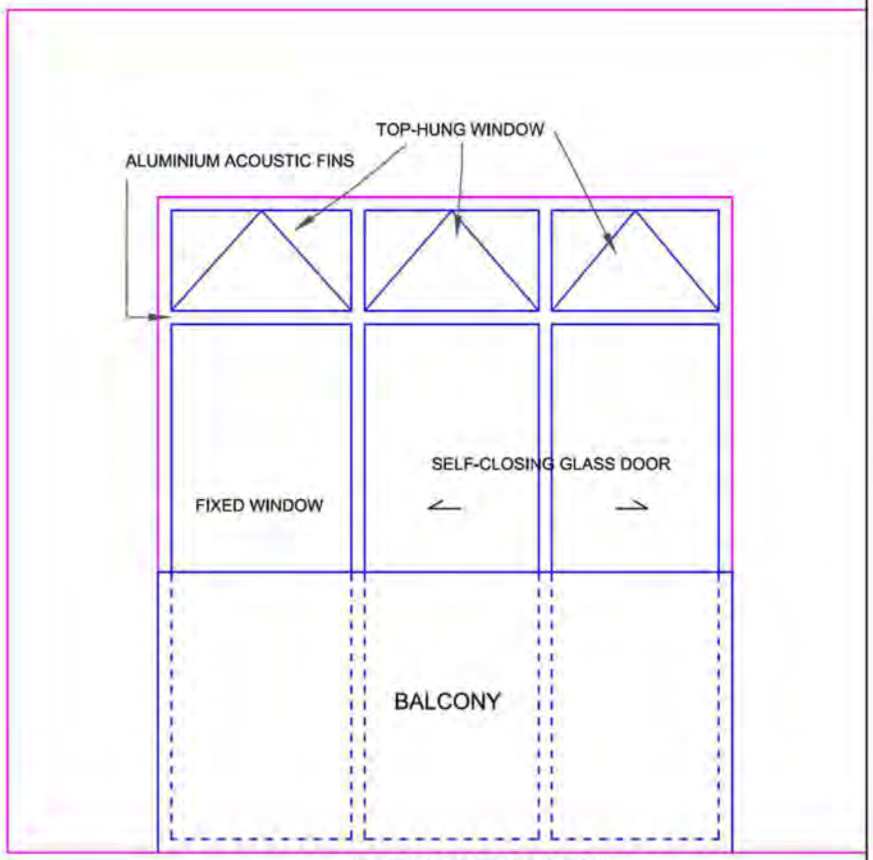
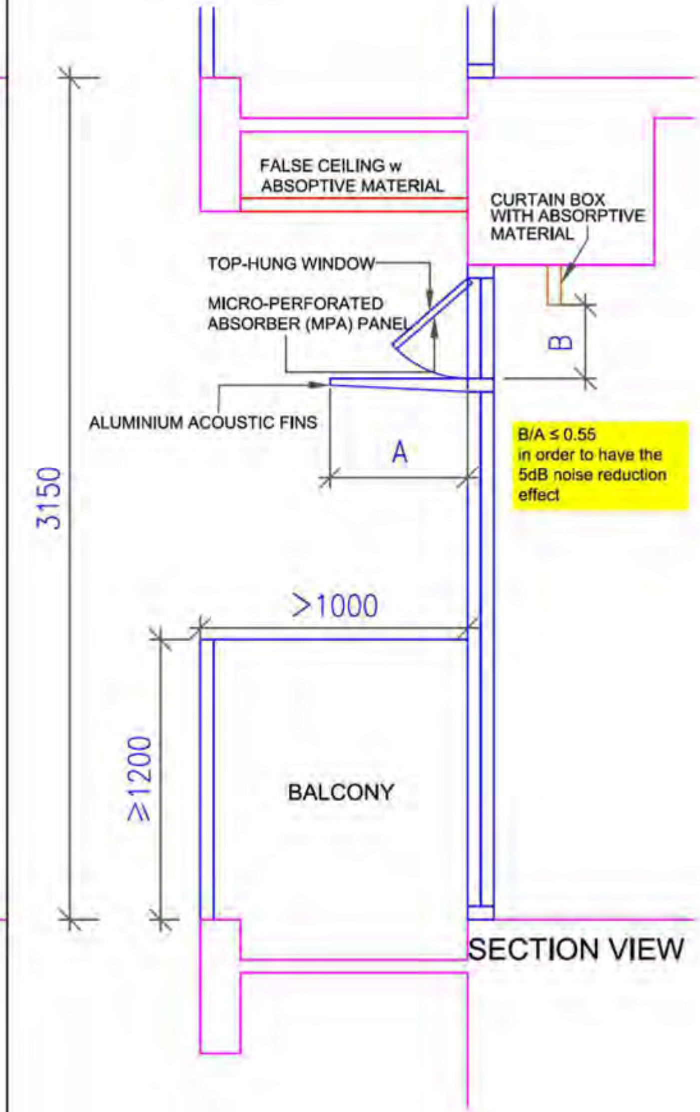
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Typical Section for Acoustic Window (Top-hung type)

SCALE	1:20 @ A3	DATE	July 2021
CHECK	KC	DRAWN	CC
JOB No.	IA 19021-KCAA101	DRAWING No.	5-5a
		REV	-

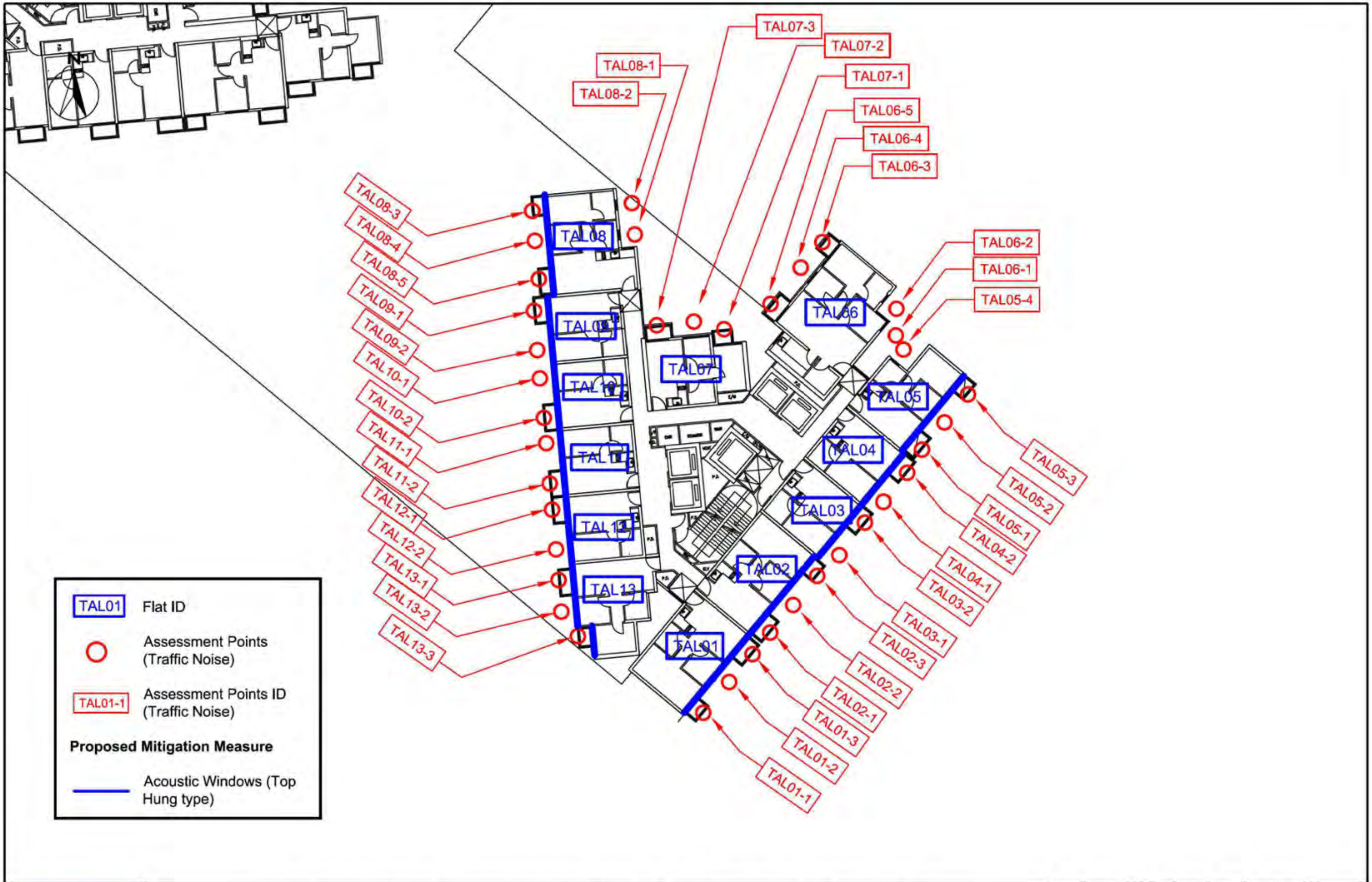


ELEVATION VIEW

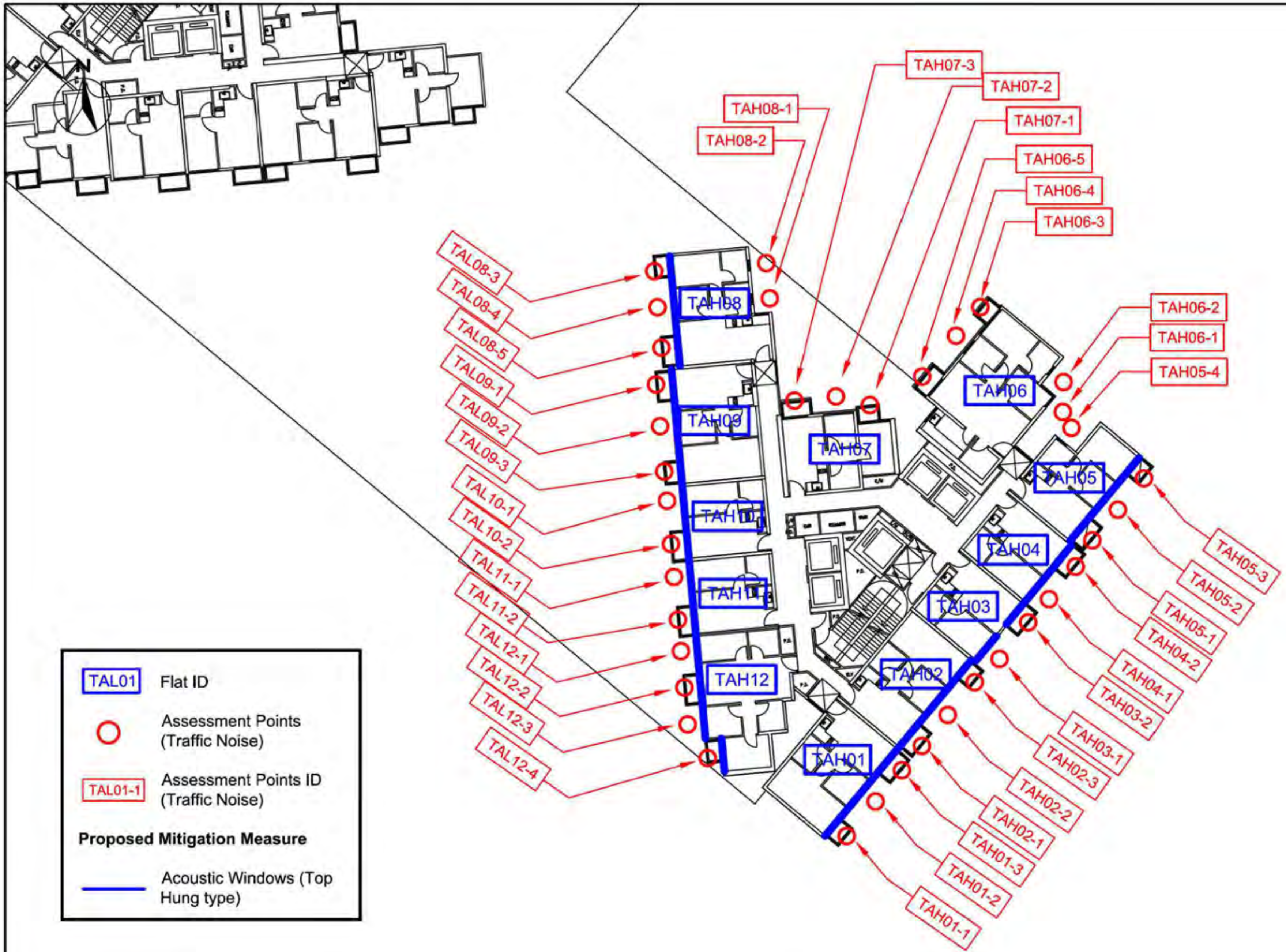


SECTION VIEW

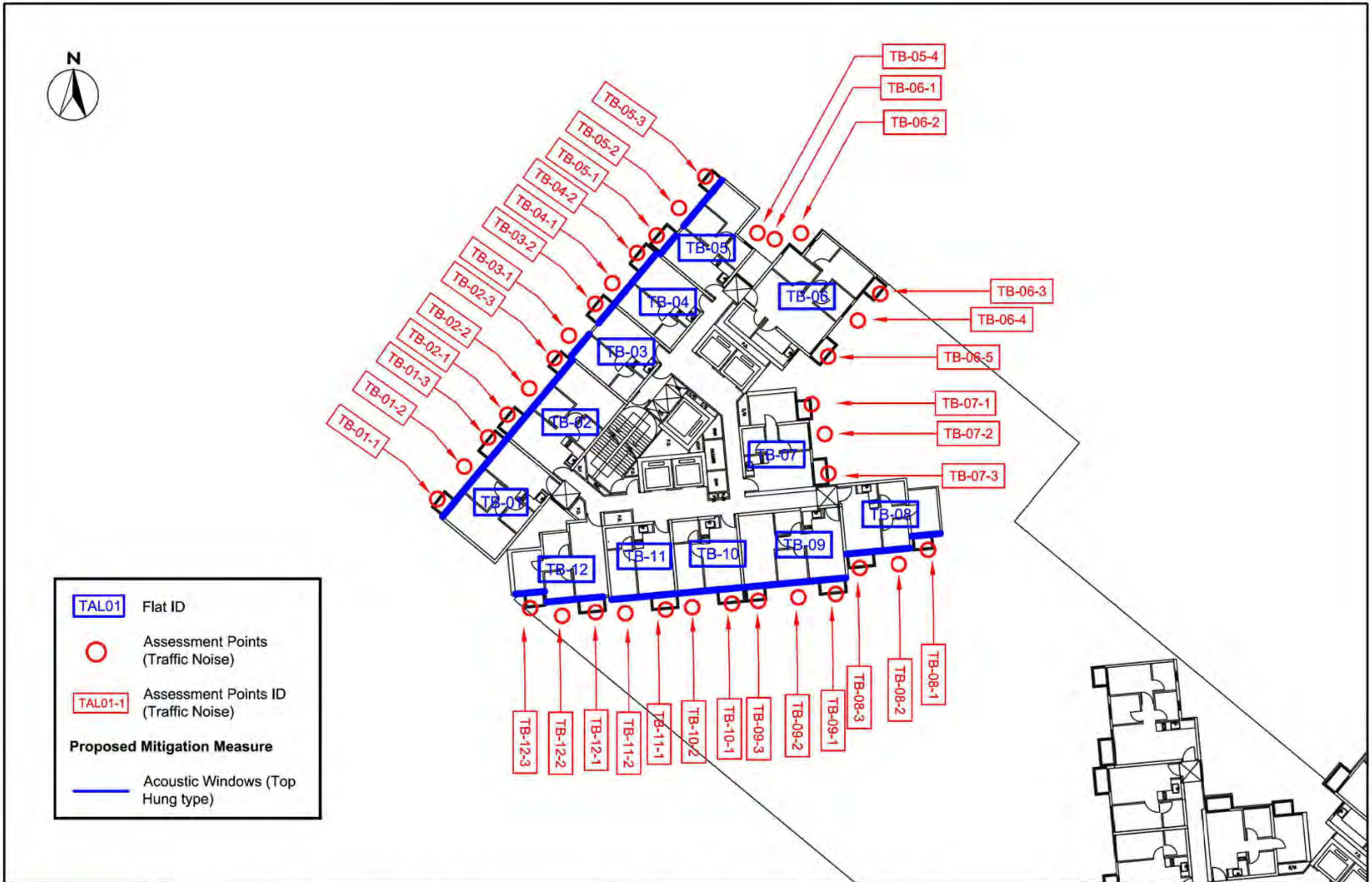
CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018) Typical Section for Acoustic Window with Balcony	SCALE	1:20 @ A3	DATE	July 2021	
		CHECK	KC	DRAWN	CC	
		JOB No.	IA 19021-KCAA101	DRAWING No.	5-5b	REV -



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE 1:250 @ A3	DATE June 2021		
	Proposed Mitigation Measures - Tower A Low Zone (Traffic Noise)	CHECK KC	DRAWN CC		
		JOB No. IA19021-SSPAA1	DRAWING No. Fig.5-6a	REV -	



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE 1:250 @ A3		DATE June 2021	
	Noise Proposed Mitigation Measures - Tower A High Zone (Traffic Noise)	CHECK KC		DRAWN CC	
		JOB No. IA19021-SSPAA1		DRAWING No. Fig.5-6b	REV -



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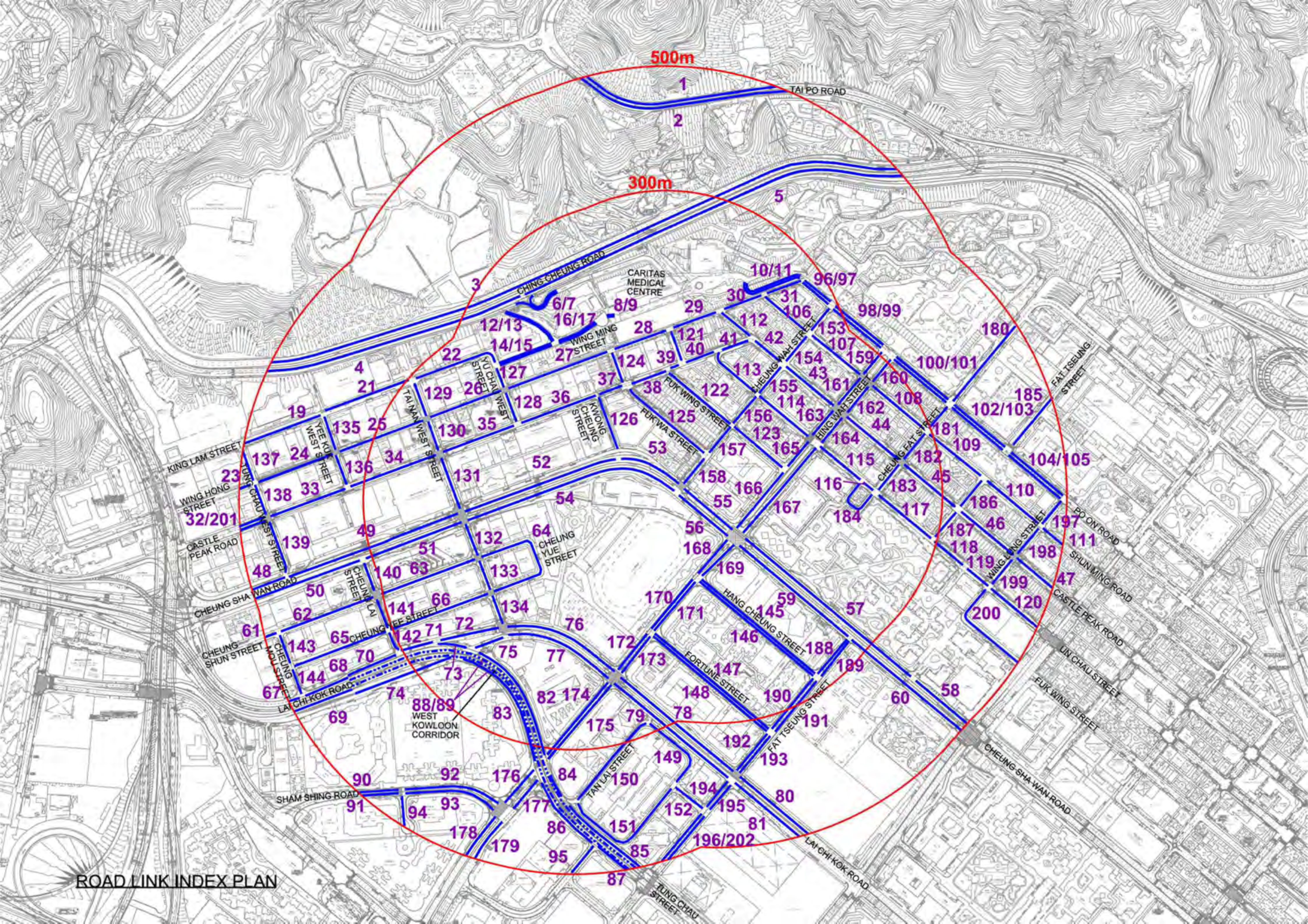
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Proposed Mitigation Measures - Tower B (Traffic Noise)

SCALE	1:250 @ A3	DATE	June 2021		
CHECK	KC	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.5-6c	REV	-

APPENDIX 4-1

List of Road Sections and Endorsement from Transport Department



ROAD LINK INDEX PLAN

Road Section List

* Road sections with cold start are indicated as 1
Road sections without cold start are indicated as 0

Road ID	Road Name	Travel Direction	Road Length (m)	At grade / Flyover	Speed Limit (km/hr)	Cold Start*
1	Tai Po Road	EB	320	At grade	50	1
2	Tai Po Road	WB	350	At grade	50	0
3	Ching Cheung Road	EB	1070	At grade	70	0
4	Ching Cheung Road	WB	425	At grade	70	0
5	Ching Cheung Road	WB	650	At grade	70	0
6	Access Road of Caritas Medical Centre	EB	70	At grade	50	0
7	Access Road of Caritas Medical Centre	WB	80	At grade	50	0
8	Access Road of Caritas Medical Centre	EB	15	At grade	20	0
9	Access Road of Caritas Medical Centre	WB	15	At grade	20	0
10	Access Road of Caritas Medical Centre	EB	100	At grade	50	0
11	Access Road of Caritas Medical Centre	WB	105	At grade	50	0
12	Access Road to St. Raphael's Catholic Cemetery	NB	90	At grade	50	1
13	Access Road to St. Raphael's Catholic Cemetery	SB	95	At grade	50	1
14	Wing Ming Street	EB	90	At grade	50	1
15	Wing Ming Street	WB	90	At grade	50	1
16	Wing Ming Street	EB	70	At grade	50	1
17	Wing Ming Street	WB	70	At grade	50	1
18	King Lam Street	EB	130	At grade	50	1
19	King Lam Street	WB	130	At grade	50	1
20	King Lam Street	EB	150	At grade	50	1
21	King Lam Street	WB	150	At grade	50	1
22	King Lam Street	EB	150	At grade	50	1
23	Wing Hong Street	WB	45	At grade	50	1
24	Wing Hong Street	WB	45	At grade	50	1
25	Wing Hong Street	WB	150	At grade	50	1
26	Wing Hong Street	WB	125	At grade	50	1
27	Wing Hong Street	WB	170	At grade	50	1
28	Wing Hong Street	WB	95	At grade	50	1
29	Wing Hong Street	WB	80	At grade	50	1
30	Wing Hong Street	WB	70	At grade	50	1
31	Wing Hong Street	WB	65	At grade	50	1
32	Castle Peak Road	2-way	50	At grade	50	1
33	Castle Peak Road	EB	135	At grade	50	1
34	Castle Peak Road	EB	150	At grade	50	1
35	Castle Peak Road	EB	130	At grade	50	1
36	Castle Peak Road	EB	135	At grade	50	1
37	Castle Peak Road	EB	45	At grade	50	1
38	Castle Peak Road	EB	65	At grade	50	1
39	Castle Peak Road	EB	20	At grade	50	1
40	Castle Peak Road	EB	55	At grade	50	1
41	Castle Peak Road	EB	50	At grade	50	1
42	Castle Peak Road	EB	60	At grade	50	1
43	Castle Peak Road	EB	105	At grade	50	1
44	Castle Peak Road	EB	115	At grade	50	1
45	Castle Peak Road	EB	115	At grade	50	1
46	Castle Peak Road	EB	115	At grade	50	1
47	Castle Peak Road	EB	80	At grade	50	1
48	Cheung Sha Wan Road	EB	60	At grade	50	1
49	Cheung Sha Wan Road	WB	300	At grade	50	1
50	Cheung Sha Wan Road	WB	185	At grade	50	1
51	Cheung Sha Wan Road	WB	170	At grade	50	1
52	Cheung Sha Wan Road	WB	265	At grade	50	1
53	Cheung Sha Wan Road	WB	110	At grade	50	1
54	Cheung Sha Wan Road	WB	360	At grade	50	1
55	Cheung Sha Wan Road	WB	120	At grade	50	1
56	Cheung Sha Wan Road	WB	120	At grade	50	1
57	Cheung Sha Wan Road	WB	365	At grade	50	1

Road Section List

* Road sections with cold start are indicated as 1
Road sections without cold start are indicated as 0

Road ID	Road Name	Travel Direction	Road Length (m)	At grade / Flyover	Speed Limit (km/hr)	Cold Start*
58	Cheung Sha Wan Road	WB	110	At grade	50	1
59	Cheung Sha Wan Road	WB	240	At grade	50	1
60	Cheung Sha Wan Road	WB	230	At grade	50	1
61	Cheung Shun Street	2-way	25	At grade	50	1
62	Cheung Shun Street	EB	165	At grade	50	1
63	Cheung Shun Street	EB	175	At grade	50	1
64	Cheung Yue Street	EB	225	At grade	50	1
65	Cheung Yee Street	WB	165	At grade	50	1
66	Cheung Yee Street	WB	175	At grade	50	1
67	Lai Chi Kok Road	EB	25	At grade	70	1
68	Lai Chi Kok Road	EB	80	At grade	70	1
69	Lai Chi Kok Road	WB	100	At grade	70	1
70	Lai Chi Kok Road	EB	90	At grade	50	1
71	Lai Chi Kok Road	EB	60	At grade	50	1
72	Lai Chi Kok Road	EB	110	At grade	50	1
73	Lai Chi Kok Road	EB	55	At grade	50	1
74	Lai Chi Kok Road	WB	185	At grade	50	1
75	Lai Chi Kok Road	WB	70	At grade	50	1
76	Lai Chi Kok Road	EB	205	At grade	50	1
77	Lai Chi Kok Road	WB	190	At grade	50	1
78	Lai Chi Kok Road	EB	250	At grade	50	1
79	Lai Chi Kok Road	WB	250	At grade	50	1
80	Lai Chi Kok Road	EB	150	At grade	50	1
81	Lai Chi Kok Road	WB	140	At grade	50	1
82	Tung Chau Street	EB	225	At grade	50	1
83	Tung Chau Street	WB	230	At grade	50	0
84	Tung Chau Street	EB	65	At grade	50	1
85	Tung Chau Street	EB	150	At grade	50	1
86	Tung Chau Street	WB	145	At grade	50	1
87	Tung Chau Street	WB	65	At grade	50	1
88	West Kowloon Corridor	EB	655	Flyover	70	0
89	West Kowloon Corridor	WB	640	Flyover	70	0
90	Sham Shing Road	EB	70	At grade	50	1
91	Sham Shing Road	WB	65	At grade	50	1
92	Sham Shing Road	EB	175	At grade	50	1
93	Sham Shing Road	WB	175	At grade	50	1
94	Access Road connecting Sham Shing Road	2-way	55	At grade	50	0
95	Lai Hong Street	2-way	60	At grade	50	1
96	Po On Road	NB	60	At grade	50	1
97	Po On Road	SB	60	At grade	50	1
98	Po On Road	NB	120	At grade	50	1
99	Po On Road	SB	120	At grade	50	1
100	Po On Road	NB	125	At grade	50	1
101	Po On Road	SB	125	At grade	50	1
102	Po On Road	NB	115	At grade	50	1
103	Po On Road	SB	115	At grade	50	1
104	Po On Road	NB	115	At grade	50	1
105	Po On Road	SB	115	At grade	50	1
106	Shun Ming Road	NB	95	At grade	50	1
107	Shun Ming Road	NB	120	At grade	50	1
108	Shun Ming Road	NB	125	At grade	50	1
109	Shun Ming Road	NB	115	At grade	50	1
110	Shun Ming Road	NB	120	At grade	50	1
111	Shun Ming Road	NB	45	At grade	50	1
112	Kwong Shing Street	NB	65	At grade	50	1
113	Un Chau Street	NB	100	At grade	50	1
114	Un Chau Street	NB	115	At grade	50	1

Road Section List

* Road sections with cold start are indicated as 1
Road sections without cold start are indicated as 0

Road ID	Road Name	Travel Direction	Road Length (m)	At grade / Flyover	Speed Limit (km/hr)	Cold Start*
115	Un Chau Street	NB	95	At grade	50	1
116	Un Chau Street	NB	25	At grade	50	1
117	Un Chau Street	NB	120	At grade	50	1
118	Un Chau Street	NB	65	At grade	50	1
119	Un Chau Street	NB	50	At grade	50	1
120	Un Chau Street	NB	105	At grade	50	1
121	Tsap Fai Street	NB	60	At grade	50	1
122	Fuk Wing Street	SB	135	At grade	50	1
123	Fuk Wing Street	SB	110	At grade	50	1
124	Fuk Wa Street	NB	60	At grade	50	1
125	Fuk Wa Street	NB	170	At grade	50	1
126	Kwong Cheung Street	SB	95	At grade	50	1
127	Yu Chau West Street	SB	40	At grade	50	1
128	Yu Chau West Street	SB	60	At grade	50	1
129	Tai Nan West Street	NB	65	At grade	50	1
130	Tai Nan West Street	NB	60	At grade	50	1
131	Tai Nan West Street	NB	105	At grade	50	1
132	Tai Nan West Street	NB	70	At grade	50	0
133	Tai Nan West Street	NB	60	At grade	50	1
134	Tai Nan West Street	NB	60	At grade	50	1
135	Yee Kuk West Street	SB	65	At grade	50	1
136	Yee Kuk West Street	SB	60	At grade	50	1
137	Tung Chau West Street	NB	65	At grade	50	1
138	Tung Chau West Street	NB	60	At grade	50	1
139	Tung Chau West Street	NB	105	At grade	50	1
140	Cheung Lai Street	NB	65	At grade	50	1
141	Cheung Lai Street	NB	60	At grade	50	1
142	Cheung Lai Street	NB	40	At grade	50	0
143	Cheung Mou Street	NB	60	At grade	50	1
144	Cheung Mou Street	NB	50	At grade	50	1
145	Hang Cheung Street	NB	245	At grade	50	1
146	Hang Cheung Street	SB	245	At grade	50	1
147	Fortune Street	NB	250	At grade	50	1
148	Fortune Street	SB	250	At grade	50	1
149	Tan Lai Street	SB	145	At grade	50	1
150	Tan Lai Street	NB	165	At grade	50	1
151	Tan Lai Street	WB	220	At grade	50	1
152	Yee Kuk Street	2-way	65	At grade	50	1
153	Cheung Wah Street	NB	55	At grade	50	1
154	Cheung Wah Street	NB	65	At grade	50	1
155	Cheung Wah Street	SB	65	At grade	50	1
156	Cheung Wah Street	SB	65	At grade	50	1
157	Cheung Wah Street	SB	65	At grade	50	1
158	Cheung Wah Street	SB	70	At grade	50	1
159	Hing Wah Street	NB	55	At grade	50	1
160	Hing Wah Street	SB	55	At grade	50	1
161	Hing Wah Street	NB	65	At grade	50	1
162	Hing Wah Street	SB	65	At grade	50	1
163	Hing Wah Street	NB	65	At grade	50	1
164	Hing Wah Street	SB	65	At grade	50	1
165	Hing Wah Street	NB	65	At grade	50	1
166	Hing Wah Street	NB	135	At grade	50	1
167	Hing Wah Street	SB	200	At grade	50	1
168	Hing Wah Street	NB	90	At grade	50	1
169	Hing Wah Street	SB	90	At grade	50	0
170	Hing Wah Street	NB	115	At grade	50	0
171	Hing Wah Street	SB	115	At grade	50	0

Road Section List

* Road sections with cold start are indicated as 1
Road sections without cold start are indicated as 0

Road ID	Road Name	Travel Direction	Road Length (m)	At grade / Flyover	Speed Limit (km/hr)	Cold Start*
172	Hing Wah Street	NB	95	At grade	50	1
173	Hing Wah Street	SB	95	At grade	50	1
174	Hing Wah Street	NB	180	At grade	50	1
175	Hing Wah Street	SB	180	At grade	50	1
176	Hing Wah Street	NB	100	At grade	50	1
177	Hing Wah Street	SB	90	At grade	50	1
178	Hing Wah Street	NB	90	At grade	50	1
179	Hing Wah Street	SB	90	At grade	50	1
180	Cheung Fat Street	2-way	165	At grade	50	1
181	Cheung Fat Street	NB	60	At grade	50	1
182	Cheung Fat Street	NB	65	At grade	50	1
183	Cheung Fat Street	SB	65	At grade	50	1
184	Un Chau Street	NB	100	At grade	50	1
185	Fat Tseung Street	2-way	110	At grade	50	1
186	Fat Tseung Street	SB	65	At grade	50	1
187	Fat Tseung Street	NB	65	At grade	50	1
188	Fat Tseung Street	NB	80	At grade	50	0
189	Fat Tseung Street	SB	80	At grade	50	1
190	Fat Tseung Street	NB	115	At grade	50	1
191	Fat Tseung Street	SB	115	At grade	50	1
192	Fat Tseung Street	NB	85	At grade	50	1
193	Fat Tseung Street	SB	85	At grade	50	0
194	Fat Tseung Street	NB	65	At grade	50	1
195	Fat Tseung Street	SB	65	At grade	50	1
196	Fat Tseung Street	2-way	105	At grade	50	1
197	Wing Lung Street	NB	55	At grade	50	1
198	Wing Lung Street	NB	65	At grade	50	1
199	Wing Lung Street	SB	65	At grade	50	1
200	Wing Lung Street	SB	175	At grade	50	1

APPENDIX 4-2

Sensitivity Test for Traffic Emission

Result of Sensitively Test (Traffic Emission)

Scenario	Year 2034	Year 2042	Year 2049
Quarter		**NOx Emission (kg/day)**	
Q1 (Dec - Feb)	124.01	123.59	131.46
Q2 (Mar - May)	117.89	117.13	124.67
Q3 (Jun - Aug)	100.39	99.59	106.03
Q4 (Sep - Nov)	113.42	112.57	119.84
Average	**113.93**	**113.22**	**120.50**
Quarter		**RSP Emission (kg/day)**	
Q1 (Dec - Feb)	3.68	3.12	3.31
Q2 (Mar - May)	3.68	3.12	3.31
Q3 (Jun - Aug)	3.68	3.12	3.31
Q4 (Sep - Nov)	3.68	3.12	3.31
Average	**3.68**	**3.12**	**3.31**
Quarter		**FSP Emission (kg/day)**	
Q1 (Dec - Feb)	3.38	2.88	3.06
Q2 (Mar - May)	3.38	2.88	3.06
Q3 (Jun - Aug)	3.38	2.88	3.06
Q4 (Sep - Nov)	3.38	2.88	3.06
Average	**3.38**	**2.88**	**3.06**

Note:
[1] Cold Start of FBSD & FBDD not included

APPENDIX 4-3

Caline4 Input

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R001	833125.78	822224.11	833177.37	822330.25	20	0	1
R002	833177.37	822330.25	833231.06	822345.76	20	0	1
R003	833231.06	822345.76	833434.80	822400.45	20	0	1
R003	833434.80	822400.45	833969.40	822643.09	20	0	1
R003	833969.46	822643.00	833995.46	822646.78	20	0	1
R004	833118.29	822308.10	833185.93	822315.62	19	0	1
R004	833185.93	822315.62	833425.15	822386.41	19	0	1
R004	833425.15	822386.41	833518.28	822421.58	19	0	1
R005	833518.28	822421.58	833673.75	822496.58	16	0	1
R005	833673.75	822496.58	833933.67	822514.65	19	0	1
R005	833933.67	822514.65	833973.71	822526.09	19	0	1
R005	833973.71	822526.09	834046.15	822526.54	19	0	1
R006+R007	833527.00	822410.51	833627.55	822455.21	14	0	1
R006+R007	833627.55	822455.21	833732.07	822494.47	14	0	1
R006+R007	833732.07	822494.47	833782.11	822441.65	14	0	1
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1
R008+R009	833861.17	822398.31	833863.59	822307.15	13	0	1
R008+R009	833863.59	822307.15	833841.85	822468.34	13	0	1
R010+R011	833978.15	822463.30	833898.64	822432.88	12	0	1
R010+R011	833898.64	822432.88	833883.54	822462.40	12	0	1
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1
R012+R013	833387.26	822507.47	833423.59	822558.02	10	0	1
R012+R013	833423.89	822558.02	833418.08	822482.07	10	0	1
R012+R013	833418.08	822482.07	833447.62	822425.39	10	0	1
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1
R012+R013	833544.64	822390.48	833587.88	822364.80	10	0	1
R014+R016	833488.77	822318.11	833587.88	822364.80	14	0	1
R016+R017	833587.86	822354.80	833623.17	822374.91	15	0	1
R016+R017	833623.17	822374.91	833661.17	822388.31	15	0	1
R019	833092.67	822162.93	833209.07	822239.78	16	0	1
R021	833209.07	822239.78	833355.00	822293.72	16	0	1
R022	833355.00	822293.72	833480.61	822340.13	16	0	1
R022	833480.61	822340.13	833489.65	822316.75	16	0	1
R023	833073.42	822119.68	833100.53	822129.44	14	0	1
R024	833100.53	822129.44	833232.06	822178.07	14	0	1
R025	833232.06	822178.07	833377.80	822232.03	14	0	1
R026	833377.80	822232.03	833503.34	822278.92	14	0	1
R027	833503.51	822278.46	833673.82	822341.72	13	0	1
R028	833673.82	822341.72	833768.11	822378.93	13	0	1
R029	833768.03	822376.10	833846.78	822405.79	13	0	1
R030	833846.78	822405.79	833917.83	822431.11	14	0	1
R031	833917.83	822431.11	833980.58	822454.28	14	0	1
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1
R033	833121.79	822072.07	833253.39	822120.94	16	0	1
R034	833253.39	822120.94	833396.77	822175.17	16	0	1
R035	833396.77	822175.17	833524.35	822221.21	18	0	1
R036	833524.35	822221.21	833653.40	822269.00	18	0	1
R037	833653.40	822269.00	833694.86	822284.07	18	0	1
R038	833694.68	822284.56	833763.79	822309.61	18	0	1
R039	833761.88	822311.12	833798.40	822320.76	14	0	1
R040	833785.11	822318.98	833833.16	822335.17	18	0	1
R041	833833.16	822335.17	833902.96	822360.57	16	0	1
R042	833902.96	822360.57	833980.46	822320.45	16	0	1
R043	833980.46	822320.46	834034.90	822250.62	18	0	1
R044	834034.90	822250.62	834140.62	822162.67	18	0	1
R045	834140.62	822162.67	834231.72	822086.45	19	0	1
R046	834231.72	822086.85	834323.21	822011.22	18	0	1
R047	834322.77	822010.68	834384.01	821969.66	18	0	1
R048	833097.20	821955.43	833156.66	821977.98	17	0	1
R049	833156.66	821977.98	833434.10	822080.76	16	0	1
R050	833161.47	821942.33	833274.46	822007.07	21	0	1
R051	833274.06	822006.60	833438.70	822067.61	16	0	1
R052	833434.10	822080.21	833888.33	822174.73	16	0	1
R053	833786.66	822123.44	833736.66	822163.25	16	0	1
R053	833736.66	822163.25	833688.33	822174.73	16	0	1
R054	833438.83	822067.29	833586.71	822122.03	16	0	1
R054	833586.71	822122.03	833649.55	822144.40	16	0	1
R054	833649.56	822144.40	833683.68	822152.80	16	0	1
R054	833683.68	822152.80	833713.86	822149.82	16	0	1
R054	833713.88	822149.82	833757.83	822128.55	16	0	1
R054	833757.83	822128.50	833778.49	822113.30	16	0	1
R055	833786.63	822123.04	833872.14	822061.39	18	0	1
R056	833778.48	822113.30	833867.20	822039.12	18	0	1
R057	833873.20	822082.60	834159.21	821814.78	18	0	1
R058	834155.21	821814.78	834250.10	821738.42	16	0	1
R059	833867.29	822039.22	834058.34	821880.22	17	0	1
R060	834058.34	821880.22	834241.81	821727.45	18	0	1
R061	833115.37	821880.29	833139.76	821889.31	18	0	1
R062	833139.75	821889.31	833296.78	821947.78	16	0	1
R063	833296.86	821947.56	833460.51	822007.97	16	0	1
R064	833460.68	822008.03	833543.73	822038.72	15	0	1
R064	833543.73	822028.73	833563.70	821983.31	15	0	1
R064	833480.98	821952.82	833563.70	821983.21	15	0	1
R065	833160.17	821834.07	833316.68	821891.67	16	0	1
R066	833315.68	821891.68	833401.00	821962.76	16	0	1
R067	833154.01	821775.07	833178.47	821783.88	19	0	1
R068	833178.74	821783.16	833253.68	821913.88	18	0	1
R069	833168.60	821757.87	833260.16	821796.91	29	0	1
R070	833249.92	821820.73	833329.89	821853.87	13	0	1

Vehicle count for each road

Road Pair	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R001	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R002	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R004	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R004	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R004	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R005	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R006+R007	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R008+R009	32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
R008+R009	32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
R010+R011	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R010+R011	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R010+R011	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R012+R013	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R014+R016	64	23	14	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	41
R016+R017	63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
R016+R017	63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
R019	50	22	14	10	11	16	50	100	150	200	150	150	100	100	100	100	50	50	50	50	50	50	23	18
R021	50	50	18	12	14	20	50	100	200	250	200	200	200	150	200	150	100	150	150	100	100	50	50	50
R022	50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	200	150	200	250	200	150	100	100	100
R022	50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	200	150	200	250	200	150	100	100	100
R023	50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	100
R024	50	19	11	7	10	13	50	50	150	150	150	150	200	200	250	250	200	300	350	300	200	150	150	100
R025	50	50	16	11	13	18	50	100	200	200	200	200	250	250	300	350	300	400	450	350	250	200	200	150
R026	50	25	15	11	13	18	50	100	200	200	200	200	200	250	250	250	200	300	300	250	200	150	150	100
R027	100	50	50	20	22	50	100	150	350	350	350	300	350	350	400	350	300	400	450	350	250	200	200	150
R028	50	20	13	9	10	15	50	50	150	150	150	150	150	200	200	200	200	250	300	250	150	150	100	100
R029	24	13	8	5	6	9	25	50	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R030	50	50	20	14	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
R031	14	8	5	4	4	5	14	50	50	100	50	50	100	100	100	100	100	100	150	100	100	50	50	50
R032+R201	105	54	54	54	54	54	108	268	400	400	321	318	368	367	417	416	467	517	565	412	308	257	206	154
R033	150	100	100	100	100	100	200	450	700	650	600	600	650	650	750	800	850	1000	1050	800	550	450	450	300
R034	150	100	100	100	100	100	200	450	750	700	600	600	650	650	750	800	850	1050	1050	800	550	500	450	300
R035	250	200	200	150	150	200	350	800	1250	1150	1000	900	950	950	1000	1000	1000	1150	1100	850	600	550	450	350
R036	300	250	200	200	200	250	400	950	1450	1350	1150	1100	1150	1100	1200	1250	1300	1500	1450	1150	800	650	600	450
R037	250	200	150	150	150	200	300	750	1150	1100	950	850	900	900	950	950	950	1100	1050	800	550	500	450	300
R038	250	200	150	150	150	200	300	750	1150	1100	950	900	900	900	950	1000	1000	1150	1100	850	600	500	450	350
R039	200	150	100	100	100	150	250	550	850	850	700	650	700	650	700	700	700	850	800	600	450	350	350	250
R040	150	150	100	100	100	150	200	500	750	750	600	550	600	550	600	600	600	650	650	500	350	300	250	200
R041	200	150	150	150	150	150	250	600	900	850	750	650	700	650	700	700	700	800	750	600	400	350	300	200
R042	250	200	150	150	150	200	300	700	1100	1050	900	850	900	900	950	1000	1000	1200	1200	900	650	550	500	350
R043	150	100	100	100	100	100	150	400	650	600	550	500	550	550	600	600	650	750	750	550	400	350	300	200
R044	150	150	100	100	100	150	200	500	800	750	650	600	650	550	700	700	750	850	850	650	450	400	350	250
R045	100	100	50	50	50	100	150	350	550	550	450	450	450	450	500	550	550	650	650	500	350	300	300	200
R046	200	150	100	100	100	150	200	550	800	750	650	600	650	650	700	700	750	850	850	650	450	400	350	250
R047	150	100	100	100	100	100	200	450	700	700	600	550	600	600	650	650	700	800	800	600	450	350	350	250
R048	600	450	400	400	350	450	750	1750	2700	2550	2150	1950	2000	1900	1950	1950	1950	2200	2050	1600	1100	950	850	600
R049	500	400	350	350	350	400	650	1500	2350	2200	1850	1650	1650	1550	1600	1550	1500	1650	1550	1200	800	700	550	450
R050	600	450	400	400	400	450	750	1750	2650	2550	2200	2050	2150	2100	2250	2350	2400	2800	2750	2100	1450	1250	1150	800
R051	500	400	350	300	300	350	600	1450	2250	2100	1800	1650	1750	1700	1800	1850	1850	2150	2100	1600	1150	950	850	600
R052	300	250	200	200	200	250	400	950	1500	1400	1250	1150	1200	1150	1250	1300	1300	1550	1500	1150	800	700	600	450
R053	350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
R053	350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
R054	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R055	450	350	300	300	300	350	550	1350	2100	1950	1700	1550	1650	1550	1650	1700	1750	2000	1950	1500	1050	900	800	550
R056	250	200	150	150	150	200	300	700	1050	1000	900	800	850	850	900	950	950	1150	1100	850	600	500	450	350
R057	300	250	200	200	200	250	400	950	1450	1400	1150	1050	1100	1050	1100	1100	1100	1250	1200	900	650	550	500	350
R058	300	200	200	200	200	200	350	850	1350	1250	1050	950	1000	950	1000	950	950	1100	1050	800	550	450	400	300
R059	200	150	100	100	100	150	250	550	850	800	700	650	700	700	800	850	900	1050	1050	800	550	500	450	300
R060	150	150	100	100	100	150	200	550	800	800	700	650	700	700	750	800	850	1000	1000	750	500	450	400	300
R061	50	22	14	9	10	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
R062	50	50	22	16	17	50	50	150	250	300	250	250	250	250	300	300	200	300	300	250	150	150	150	100
R063	50	18	11	8	9	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
R064	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R064	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R064	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R065	50	24	15	11	12	18	50	100	200	200	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R066	50	30	18	12	15	22	50	100	200	250	200	200	250	250	300	250	200	300	350	250	200	150	150	100
R067	1100	1050	900	850	850	1000	1600	3850	4750	4750	4750	4400	4600	4400	4700	4750	4750	4750	4750	4150	2900	2450	2250	1550
R068	1200	950	800	800	750	900	1500	3550	4750	4750	4400	4050	4250	4100	4350	4450	4550	4750	4750	3900	2700	2300	2100	1500
R069	800	650	550	550	550	600	1000	2450	3750	3550	3100	2900	3100	3050	3350	3450	3600	4250	4250	3250	2250	1950	1750	1250
R070	350	250	250	250	200	250	450	1050	1550	1500	1300	1200	1250	1200	1250	1300	1300	1500	1450	1100	750	650	600	400

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	16	0	1	400	300	250	250	250	300	500	1150	1750	1650	1450	1300	1400	1350	1400	1450	1500	1700	1650	1300	900	750	700	500
R072	833397.24	821875.22	833504.75	821897.07	20	0	1	150	150	100	100	100	150	200	500	800	750	650	600	650	650	700	700	750	900	900	700	450	400	350	250
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	200	150	150	150	150	150	250	650	950	950	800	700	750	700	750	750	750	800	800	600	400	350	300	250
R074	833281.64	821790.34	833451.50	821880.84	20	0	1	200	150	150	150	150	150	250	600	900	900	750	700	750	700	750	800	800	950	900	700	500	400	400	250
R075	833449.46	821861.06	833506.97	821863.26	16	0	1	150	100	100	100	100	100	150	400	650	600	500	450	500	450	500	500	500	550	550	400	300	250	250	150
R076	833501.46	821897.80	833548.00	821899.77	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R076	833548.06	821899.77	833603.43	821880.89	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R076	833603.43	821880.99	833684.92	821822.32	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R077	833506.67	821884.14	833553.67	821884.36	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R077	833553.67	821884.36	833600.48	821871.28	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R078	833682.39	821822.35	833675.32	821660.75	16	0	1	150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	550	500	400	300	250	200	150
R079	833673.29	821811.42	833667.51	821651.46	16	0	1	200	150	150	150	150	150	300	650	1000	950	800	750	800	750	800	800	800	900	900	700	500	400	350	250
R080	833675.67	821661.10	833666.54	821567.94	16	0	1	100	100	100	100	100	100	150	400	550	550	500	450	500	450	500	550	550	650	650	500	350	300	250	200
R081	833667.01	821650.08	833683.08	821582.08	20	0	1	250	200	150	150	150	200	300	700	1100	1050	900	850	900	850	950	950	1000	1150	1150	850	600	500	450	350
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R083	833436.83	821858.11	833498.18	821813.12	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R083	833498.18	821813.12	833524.36	821772.29	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R083	833524.36	821772.29	833588.81	821652.62	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
R084	833582.69	821644.68	833607.71	821603.87	13	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
R085	833605.34	821605.64	833640.24	821578.62	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R085	833640.24	821578.62	833681.67	821545.20	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R086	833550.79	821649.69	833603.88	821583.59	17	0	1	100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
R087	833648.49	821542.42	833666.49	821508.30	12	0	1	100	100	100	50	50	100	150	350	500	500	450	400	400	400	400	400	400	400	400	300	200	200	150	100
R088	833254.24	821811.68	833368.50	821866.64	17	4	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833368.50	821866.64	833418.50	821865.01	17	7	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833487.63	821841.09	833523.63	821786.07	17	10	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833523.63	821786.07	833574.80	821607.75	17	9	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833574.80	821607.75	833680.16	821605.62	17	7	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833680.16	821605.62	833712.08	821511.11	17	6	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R089	833256.66	821801.44	833370.08	821846.67	16	6	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833370.08	821846.67	833427.36	821862.03	16	7	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833427.36	821862.03	833480.60	821829.28	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833480.60	821829.28	833522.46	821786.30	16	10	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833543.19	821725.47	833562.07	821663.37	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833562.07	821663.37	833598.99	821594.44	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833598.99	821594.44	833686.93	821508.87	16	6	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R090+R091	833269.76	821629.66	833317.84	821634.13	17	0	1	250	250	200	200	200	250	350	850	1350	1300	1050	950	1000	950	1000	1000	1000	1150	1050	800	550	500	400	300
R092+R093	833337.92	821632.93	833449.86	821640.31	20	0	1	250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	600	900	850	700	450	400	350	250
R092+R093	833449.86	821640.31	833513.09	821599.24	20	0	1	250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	800	900	850	700	450	400	350	250
R094	833337.84	821634.13	833341.53	821576.41	16	0	1	50	50	50	50	50	50	50	150	250	250	200	200	200	150	200	300	200	200	200	150	100	100	100	50
R095	833609.59	821591.72	833648.49	821548.43	17	0	1	100	100	50	50	50	100	150	350	500	500	400	400	400	350	400	400	350	400	400	300	200	200	150	100
R096+R097	833960.08	822454.38	834028.77	822414.27	18	0	1	28	16	8	6	7	11	29	62	150	150	124	123	123	122	150	123	68	122	150	69	63	62	61	58
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	60	55	21	14	17	25	61	121	250	300	250	250	250	250	250	250	200	250	250	200	150	150	150	70
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1	100	100	43	31	33	73	100	250	500	550	500	450	450	450	450	450	350	450	450	350	250	200	200	150
R102+R103	834216.31	822256.35	834309.65	822180.68	16	0	1	72	31	19	14	16	23	74	100	250	250	250	250	250	250	300	300	200	300	300	250	200	150	100	100
R104+R105	834309.65	822180.68	834407.46	822098.58	18	0	1	40	23	13	10	11	16	43	100	200	200	150	150	150	150	250	200	150	200	300	200	150	150	150	100
R106	833817.83	822431.11	833991.76	822308.39	18	0	1	50	50	21	15	16	24	50	100	250	250	250	200	250	200	250	250	200	250	250	200	150	100	100	100
R107	833991.55	822379.04	834090.39	822287.53	16	0	1	50	50	17	12	14	20	50	100	200	200	200	150	150	150	150	100	100	100	100	50	50	50	50	50
R108	834090.84	822288.08	834181.68	822212.22	18	0	1	50	50	18	13	16	22	50	100	200	250	200	200	200	200	200	150	150	150	150	100	100	50	50	50
R109	834181.88	822212.33	834273.00	822136.48	17	0	1	50	50	17	12	15	21	50	100	200	250	200	150	150	150	150	150	100	100	100	100	50	50	50	50
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
R111	834363.46	822059.80	834400.74	822028.83	16	0	1	50	50	20	15	16	24	50	100	250	250	250	200	200	150	200	150	100	150	150	100	50	50	50	50
R112	833848.76	822405.79	833902.56	822360.57	19	0	1	50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	150
R113	833833.16	822338.17	833909.68	822271.35	16	0	1	50	17	10	7	8	12	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R114	833909.65	822271.36	833994.47	822201.23	18	0	1	200	100	50	50	50	50	200	400	750	800	750	650	650	650	700	650	500	600	650	500	350	300	250	200
R115	833994.06	822200.75	834077.01	822122.08	16	0	1	150	100	50	50	50	50	150	350	700	750	650	600	600	600	650	650	500	650	650	500	350	300	250	200
R116	834076.80	822131.94	834097.30	822115.02	16	0	1	150	100	50	50	50	50	200	350	700	750	650	650	650	600	700	650	500	650	650	500	350	300	250	200
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	150	100	50	50	50	50	150	300	650	700	600	600	600	550	600	600	450	600	600	500	350	300	250	200
R118	834190.55	822037.73	834243.25	821993.98	19	0	1	150	100	50	50	50	50	150	350	650	700	650	600	650	600	700	700	550	700	750	600	400	350	300	250
R119	834242.94	821993.80	834282.10	821961.45	16	0	1	200	100	50	50	50	100	200	400	750	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
R120	834281.93	821961.17	834386.17	821896.80	16	0	1	200	100	50	50	50	100	200	400	850	900	800	750	750	750	850	800	600	800	850	650	450	400	350	250
R121	833768.03	822378.10	833799.11	822310.08	18	0	1	20	11	7	5	6	8	21	50	100	100	100	100	100	100	100	100	100	150	150	150	100	100	50	50
R122	833781.86	822311.12	833868.76	822222.16	18	0	1	100	50	50	24	50	50	100	200	350	400	350	350	350	350	400	400	300	450	450	400	250	200	200	150
R123	833868.78	822222.16	833964.75	822160.50	18	0	1	50	50	19	13	15	22	50	100	250	250	200	200	200	200	250	250	200	250	300	250	150	150	100	100
R124	833673.82	822341.72	833686.88	822294.07	18	0	1	50	50	17	12	14	21	50	100	200	250	200	200	150	150	150	150	100	150	350	100	100	50	50	50
R125	833694.86	822284.07	833827.77	822172.99	18	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	150	200	200	150	200	200	150	100	100	100	50
R126	833653.40	822269.00	833688.33	822174.73	13	0	1	50	50	19	13	15	22	50	100	200	250	250	250	250	250	300	300	350	350	400	300	200	200	150	150
R127	833409.66	822316.79	833503.61	822278.46	16	0	1	50	20	12	9	10	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
R128	833503.61	822278.46	833504.35	822221.21	16	0	1	50	50	16	11	12	19	50	100	200	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
R129	833377.80	822332.03	833308.00	822293.72	16	0	1	100	100	100	100	100	100	150	350	550	500	450	400	400	400	450	450	450	500	500	350	250	200	200	150
R130	833377.80	822232.03	833398.77	822176.17	18	0	1	150	100	100	100	100	100	200	450	700	700	600	550	550	550	550	600	600	700	650	500	350	300	250	200
R131	833398.42	822175.04	833454.10	822088.76	16	0	1	250	200	200	150	150	200	300	750	1200	1150	900	800	800	750	750	750	750	800	700	550	400	300	300	200
R132	833433.92	822086.70	833460.51	822007.97	18	0	1	200	150	100	100	100	150	200	500	750	700	650	600	650	600	700	700	750	850	850	650	500	400	350	250
R133	833460.45	822007.68	833481.00	821952.76	16	0	1	150	100	50	50	50	50	150	300	650	700	650	600	600	600	700	650	500	700	750	600	400	350	300	250
R134	833481.00	821952.76	833508.57	821883.08	16	0	1	200	100	50	50	50	100	200	350	700	800	700	700	700	700	850	800	650	900	950	750	550	450	400	300
R135	833209.07	822239.78	833212.08	822178.07	16	0	1	7	5	3	3	2	3	6	12	22	50	23	23	50	50	50	50	23	50	50	50	21	17	16	12
R136	833212.03	822178.06	833253.39	822120.94	18	0	1	3	3	1	1	1	2	5	11	21	24	21	21	23	23	50	50	21	50	50	50	18	15	14	11
R137	833080.91	822182.03	833100.53	822129.44	18	0	1	6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
R139	833121.68	822072.03	833168.56	821977.98	16	0	1	100	50	50	21	23	50	100	150	350	400	350	350	350	400	450	450	350	500	550	450	300	250	250	200
R140	833274.40	822007.07	833298.88	821947.58	17	0	1	100	50	50	22	50	50	100	200	400	400	400	400	400	450	500	500	400	600	650	500	350	300	250	200

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833256.35	821947.25	833315.56	821891.87	13	0	1
R142	833329.89	821853.87	833315.88	821891.84	13	0	1
R143	833139.75	821889.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821783.15	13	0	1
R145+R146	833812.48	821976.55	834604.98	821616.03	17	0	1
R147+R148	833735.44	821889.38	833931.13	821727.74	16	0	1
R148	833728.61	821749.82	833807.73	821694.38	14	0	1
R149	833774.08	821643.52	833807.73	821694.38	13	0	1
R150	833736.67	821756.23	833607.71	821603.87	11	0	1
R151	833613.61	821610.98	833693.50	821643.70	13	0	1
R151	833692.00	821643.70	833776.28	821642.63	14	0	1
R152	833774.08	821643.52	833828.17	821600.88	20	0	1
R153	833991.31	822389.76	834028.77	822434.27	18	0	1
R154	833960.46	822320.45	833992.00	822389.67	18	0	1
R155	833909.46	822271.35	833960.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.38	18	0	1
R157	833866.58	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.81	822299.62	834113.80	822384.34	18	0	1
R160	834090.39	822287.53	834127.63	822332.11	15	0	1
R161	834034.90	822250.52	834075.81	822299.62	15	0	1
R162	834049.42	822236.26	834090.39	822287.53	15	0	1
R163	833993.86	822201.68	834034.00	822250.02	18	0	1
R164	834007.86	822194.33	834049.42	822236.28	15	0	1
R165	833963.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.39	833984.75	822190.50	18	0	1
R167	833885.47	822042.45	834007.88	822180.33	18	0	1
R168+R169	833815.72	821975.47	833876.35	822050.03	21	0	1
R170+R171	833736.44	821888.35	833812.49	821978.50	18	0	1
R172+R173	833884.92	821822.32	833719.28	821687.65	20	0	1
R174+R175	833561.78	821677.56	833863.38	821823.55	16	0	1
R176	833496.77	821508.45	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.66	821688.47	20	0	1
R178	833440.44	821529.99	833488.60	821908.61	16	0	1
R179	833481.86	821526.31	833511.33	821600.38	17	0	1
R180	834218.31	822298.35	834325.98	822385.39	18	0	1
R181	834181.98	822212.72	834218.31	822298.38	18	0	1
R182	834140.62	822162.67	834181.76	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.08	834051.51	822100.84	13	0	1
R184	834051.51	822100.84	834071.90	822094.58	13	0	1
R184	834071.90	822086.18	834007.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.88	822287.44	18	0	1
R186	834231.54	822088.63	834273.34	822138.83	18	0	1
R187	834190.59	822037.73	834231.76	822088.45	18	0	1
R188+R189	834004.88	821815.03	834065.24	821880.22	16	0	1
R190+R191	833931.13	821727.74	834004.08	821816.03	19	0	1
R192+R193	833878.32	821660.78	833930.85	821727.88	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.48	20	0	1
R196+R202	833781.01	821523.38	833826.17	821600.58	20	0	1
R197	834364.38	822060.84	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.84	18	0	1
R199	834281.93	821951.17	834322.00	822010.48	18	0	1
R200	834239.17	821914.13	834280.08	821983.18	14	0	1
R300	834239.17	821914.13	834327.89	821840.33	18	0	1

Vehicle count for each road																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
50	13	9	6	7	10	50	50	100	100	100	150	150	150	200	200	150	250	300	250	150	150	100	100
50	19	12	8	10	14	50	50	150	150	150	150	150	150	200	200	150	200	200	150	100	100	100	50
100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
100	50	50	25	50	50	100	200	400	450	400	350	350	350	450	350	250	350	350	250	200	150	150	100
21	12	7	4	5	8	22	60	72	73	70	69	119	118	120	119	115	169	220	166	111	109	58	57
29	16	10	7	7	12	31	63	150	150	150	150	150	100	150	100	100	100	150	100	100	100	100	71
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	50	50	50	24	17	14	13	10
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	150	150	150	100	100	100
100	100	50	50	50	50	100	200	250	250	200	200	250	250	250	250	300	300	300	250	200	200	150	150
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	200	150	150	100	100	100
450	350	300	250	200	250	400	800	800	800	800	800	800	800	750	700	700	700	650	550	450	400	400	300
500	400	350	300	250	250	450	1050	1300	1100	1050	950	950	1000	950	900	950	900	900	750	650	550	500	400
450	350	300	250	200	250	400	900	1100	950	900	850	850	900	850	800	850	850	850	700	600	500	500	400
23	19	15	14	10	12	22	50	50	50	50	50	50	50	50	50	50	100	50	50	50	50	50	50
100	50	50	50	50	50	100	200	250	200	200	150	150	150	150	150	150	150	150	100	100	100	100	50
150	100	100	100	50	50	150	300	350	300	300	300	300	300	300	300	350	350	350	300	250	200	200	150
200	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	350	300	250	250	200	150
200	150	150	100	100	100	200	400	500	450	450	450	450	500	500	500	550	600	600	500	400	350	350	250
150	100	100	100	50	100	150	300	400	350	300	300	300	350	300	300	350	350	350	300	250	200	200	150
150	100	100	100	50	100	150	300	400	350	300	300	300	350	350	350	350	400	350	300	250	250	200	150
300	250	200	150	150	150	250	600	750	650	600	600	600	650	650	650	700	700	700	550	500	450	400	300
250	200	150	150	100	100	200	450	600	500	500	450	500	550	500	500	550	550	550	450	400	350	350	250
400	350	300	200	200	200	350	850	1050	950	900	900	900	1050	1050	1050	1150	1250	1150	950	850	750	700	550
350	300	250	200	150	200	350	750	950	900	800	800	900	950	900	1000	1050	1150	1100	900	800	700	650	450
450	350	250	250	200	250	400	850	1100	1000	950	900	950	1050	1050	1050	1100	1200	1100	950	800	700	700	550
450	350	300	250	200	250	450	900	1150	1000	950	950	950	1050	1000	1000	1050	1100	1100	900	750	650	650	500
300	250	200	150	150	150	300	650	800	700	650	600	600	600	600	550	600	600	550	450	400	350	350	250
250	200	150	150	100	100	200	500	600	550	500	500	500	550	550	550	600	650	600	500	450	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	600	600	600	550	600	600	550	450	400	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	650	700	700	700	750	800	800	650	550	500	450	350
150	150	100	100	100	100	150	350	450	350	350	300	350	350	350	300	350	350	350	300	250	200	200	150
12	9	8	7	5	6	11	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	20
50	24	19	17	13	14	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
24	20	16	13	11	12	22	50	50	50	50	50	50	50	50	50	50	50	50	50	24	21	20	16
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
100	50	50	50	50	50	100	150	200	200	200	200	200	200	200	200	200	250	200	200	150	150	150	100
19	16	12	11	8	11	17	50	50	50	50	50	50	50	50	50	50	50	50	50	22	19	18	14
100	50	50	50	50	50	100	150	200	200	150	150	150	150	150	150	150	150	150	100	100	100	100	50
64	62	59	58	57	58	63	150	200	200	150	150	200	200	200	200	200	200	200	200	150	150	150	119
71	68	64	62	29	33	40	150	150	150	150	150	200	200	200	200	250	250	250	200	200	150	150	119
36	29	25	22	17	19	32	100	100	100	75	73	73	73	70	70	68	65	65	64	64	61	61	26
60	59	57	55	55	55	59	173	200	173	171	119	117	117	116	114	114	112	112	110	58	57	57	55
100	100	44	38	31	35	100	150	200	150	100	100	100	100	100	100	100	100	100	100	100	100	100	71
8	7	5	4	4	4	7	17	21	17	14	12	11	11	9	7	7	4	4	4	3	3	3	1
16	13	11	9	7	8	14	50	50	50	50	50	50	50	22	19	18	15	15	13	11	10	9	6
20	17	14	11	8	10	19	50	50	50	50	50	50	50	50	50	23	20	19	17	13	11	11	9
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833960.46	822543.00	833985.46	822546.78	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R008+R009	833681.17	822398.31	833663.59	822397.15	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833544.64	822390.48	833587.56	822384.60	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R014+R016	833485.77	822318.11	833587.56	822384.60	14	0	1	0.0159	0.0160	0.0161	0.0159	0.0157	0.0160	0.0159	0.0202	0.0184	0.0161	0.0154	0.0158	0.0144	0.0166	0.0159	0.0163	0.0162	0.0172	0.0185	0.0160	0.0148	0.0126	0.0134	0.0163
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	0.0234	0.0210	0.0234	0.0260	0.0250	0.0223	0.0232	0.0252	0.0231	0.0234	0.0237	0.0239	0.0229	0.0245	0.0239	0.0242	0.0229	0.0243	0.0264	0.0239	0.0236	0.0230	0.0238	0.0268
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0222	0.0231	0.0219	0.0241	0.0234	0.0212	0.0218	0.0257	0.0232	0.0239	0.0237	0.0237	0.0233	0.0244	0.0238	0.0239	0.0224	0.0235	0.0255	0.0226	0.0226	0.0221	0.0230	0.0239
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0228	0.0191	0.0195	0.0179	0.0203	0.0195	0.0224	0.0250	0.0237	0.0241	0.0237	0.0239	0.0237	0.0243	0.0247	0.0248	0.0236	0.0249	0.0269	0.0238	0.0227	0.0238	0.0230	0.0239
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0232	0.0191	0.0199	0.0177	0.0180	0.0196	0.0230	0.0254	0.0236	0.0240	0.0236	0.0238	0.0237	0.0243	0.0244	0.0245	0.0227	0.0242	0.0268	0.0240	0.0227	0.0230	0.0229	0.0236
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0235	0.0214	0.0234	0.0257	0.0248	0.0225	0.0233	0.0250	0.0236	0.0239	0.0240	0.0242	0.0243	0.0249	0.0244	0.0250	0.0234	0.0247	0.0274	0.0242	0.0232	0.0233	0.0229	0.0238
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0204	0.0202	0.0205	0.0213	0.0210	0.0207	0.0203	0.0268	0.0260	0.0238	0.0224	0.0224	0.0204	0.0236	0.0216	0.0224	0.0229	0.0229	0.0233	0.0218	0.0215	0.0190	0.0188	0.0214
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	0.0223	0.0229	0.0222	0.0235	0.0231	0.0216	0.0231	0.0252	0.0248	0.0252	0.0250	0.0245	0.0246	0.0254	0.0249	0.0250	0.0234	0.0247	0.0271	0.0242	0.0231	0.0235	0.0229	0.0240
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	0.0220	0.0212	0.0240	0.0272	0.0260	0.0228	0.0216	0.0258	0.0236	0.0239	0.0239	0.0238	0.0239	0.0242	0.0239	0.0242	0.0230	0.0245	0.0263	0.0240	0.0224	0.0231	0.0225	0.0234
R029	833768.03	822376.15	833846.76	822405.79	13	0	1	0.0186	0.0185	0.0196	0.0165	0.0163	0.0191	0.0184	0.0267	0.0252	0.0229	0.0216	0.0219	0.0199	0.0240	0.0220	0.0232	0.0250	0.0239	0.0246	0.0235	0.0246	0.0220	0.0218	0.0237
R030	833846.76	822405.79	833917.83	822431.11	14	0	1	0.0182	0.0180	0.0177	0.0182	0.0178	0.0184	0.0182	0.0246	0.0237	0.0208	0.0194	0.0204	0.0207	0.0214	0.0213	0.0215	0.0219	0.0220	0.0241	0.0207	0.0203	0.0184	0.0181	0.0202
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	0.0182	0.0196	0.0165	0.0169	0.0169	0.0165	0.0182	0.0285	0.0270	0.0245	0.0230	0.0227	0.0204	0.0243	0.0218	0.0227	0.0241	0.0228	0.0240	0.0223	0.0231	0.0208	0.0205	0.0231
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	0.0310	0.0284	0.0169	0.0169	0.0170	0.0171	0.0170	0.0231	0.0213	0.0213	0.0209	0.0212	0.0214	0.0221	0.0217	0.0219	0.0208	0.0215	0.0234	0.0213	0.0204	0.0210	0.0206	0.0218
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	0.0205	0.0203	0.0203	0.0205	0.0205	0.0205	0.0203	0.0232	0.0215	0.0217	0.0216	0.0218	0.0213	0.0222	0.0218	0.0219	0.0210	0.0219	0.0239	0.0212	0.0204	0.0206	0.0206	0.0214
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0167	0.0167	0.0171	0.0178	0.0178	0.0182	0.0173	0.0214	0.0202	0.0190	0.0192	0.0198	0.0199	0.0202	0.0202	0.0207	0.0199	0.0209	0.0227	0.0199	0.0186	0.0193	0.0190	0.0201
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0243	0.0236	0.0232	0.0226	0.0227	0.0226	0.0230	0.0269	0.0255	0.0257	0.0253	0.0257	0.0264	0.0265	0.0264	0.0261	0.0238	0.0245	0.0270	0.0254	0.0245	0.0267	0.0258	0.0256
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0205	0.0204	0.0204	0.0206	0.0206	0.0206	0.0204	0.0238	0.0223	0.0224	0.0224	0.0221	0.0221	0.0226	0.0226	0.0227	0.0214	0.0228	0.0243	0.0220	0.0206	0.0213	0.0212	0.0215
R037	833653.40	822269.00	833694.88	822284.07	19	0	1	0.0238	0.0236	0.0239	0.0237	0.0238	0.0239	0.0238	0.0263	0.0250	0.0262	0.0260	0.0256	0.0252	0.0253	0.0246	0.0244	0.0224	0.0230	0.0249	0.0222	0.0217	0.0228	0.0221	0.0227
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0244	0.0243	0.0243	0.0241	0.0242	0.0243	0.0242	0.0268	0.0254	0.0268	0.0264	0.0260	0.0254	0.0254	0.0246	0.0242	0.0222	0.0231	0.0245	0.0223	0.0210	0.0217	0.0214	0.0221
R039	833761.98	822311.12	833788.45	822320.76	14	0	1	0.0308	0.0256	0.0267	0.0274	0.0276	0.0277	0.0265	0.0324	0.0308	0.0346	0.0350	0.0330	0.0338	0.0314	0.0316	0.0305	0.0269	0.0275	0.0295	0.0268	0.0257	0.0279	0.0277	0.0273
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	0.0291	0.0296	0.0298	0.0301	0.0303	0.0301	0.0298	0.0315	0.0299	0.0336	0.0334	0.0321	0.0325	0.0303	0.0300	0.0291	0.0255	0.0261	0.0280	0.0255	0.0235	0.0267	0.0264	0.0262
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	0.0307	0.0273	0.0278	0.0285	0.0281	0.0285	0.0279	0.0324	0.0308	0.0345	0.0349	0.0330	0.0336	0.0313	0.0315	0.0305	0.0269	0.0275	0.0295	0.0267	0.0258	0.0279	0.0278	0.0274
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	0.0306	0.0278	0.0285	0.0288	0.0289	0.0289	0.0283	0.0324	0.0308	0.0340	0.0344	0.0331	0.0332	0.0314	0.0311	0.0301	0.0264	0.0275	0.0296	0.0268	0.0257	0.0280	0.0278	0.0274
R043	833950.46	822320.48	834034.90	822250.52	18	0	1	0.0339	0.0339	0.0335	0.0341	0.0336	0.0338	0.0335	0.0343	0.0328	0.0377	0.0383	0.0367	0.0373	0.0349	0.0347	0.0335	0.0292	0.0298	0.0321	0.0299	0.0285	0.0325	0.0320	0.0307
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0294	0.0295	0.0301	0.0299	0.0302	0.0300	0.0299	0.0317	0.0295	0.0331	0.0334	0.0322	0.0325	0.0305	0.0301	0.0292	0.0256	0.0268	0.0288	0.0258	0.0240	0.0269	0.0265	0.0265
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	0.0302	0.0197	0.0195	0.0214	0.0219	0.0222	0.0305	0.0315	0.0299	0.0337	0.0333	0.0321	0.0322	0.0306	0.0308	0.0299	0.0264	0.0270	0.0291	0.0268	0.0253	0.0279	0.0277	0.0275
R046	834231.72	822086.65	834323.21	822011.22	18	0	1	0.0302	0.0265	0.0273	0.0276	0.0278	0.0278	0.0302	0.0320	0.0299	0.0335	0.0337	0.0325	0.0327	0.0310	0.0307	0.0297	0.0262	0.0273	0.0293	0.0265	0.0251	0.0276	0.0273	0.0271
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	0.0305	0.0261	0.0265	0.0276	0.0271	0.0279	0.0304	0.0315	0.0300	0.0335	0.0339	0.0327	0.0328	0.0312	0.0307	0.0298	0.0264	0.0269	0.0290	0.0266	0.0252	0.0279	0.0277	0.0272
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	0.0240	0.0228	0.0229	0.0231	0.0231	0.0231	0.0241	0.0264	0.0256	0.0281	0.0276	0.0266	0.0267	0.0259	0.0256	0.0251	0.0224	0.0234	0.0252	0.0225	0.0217	0.0240	0.0237	0.0232
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0240	0.0241	0.0240	0.0240	0.0241	0.0241	0.0240	0.0261	0.0253	0.0273	0.0272	0.0262	0.0263	0.0252	0.0249	0.0244	0.0218	0.0228	0.0246	0.0222	0.0216	0.0239	0.0237	0.0232
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	0.0236	0.0236	0.0235	0.0235	0.0235	0.0235	0.0235	0.0257	0.0249	0.0274	0.0268	0.0259	0.0263	0.0256	0.0253	0.0252	0.0226	0.0239	0.0260	0.0229	0.0212	0.0229	0.0228	0.0227
R051	833274.06	822006.60	833438.70	822067.62	16	0	1	0.0256	0.0257	0.0258	0.0257	0.0257	0.0257	0.0257	0.0273	0.0262	0.0293	0.0291	0.0285	0.0289	0.0278	0.0278	0.0276	0.0245	0.0256	0.0281	0.0249	0.0238	0.0270	0.0267	0.0258
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0305	0.0276	0.0276	0.0278	0.0277	0.0277	0.0296	0.0300	0.0289	0.0323	0.0327	0.0314	0.0318	0.0296	0.0294	0.0284	0.0247	0.0254	0.0280	0.0256	0.0252	0.0284	0.0286	0.0276
R053	833786.86	822123.44	833736.66	822163.25	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R053	833736.06	822163.26	833688.33	822174.73	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833649.56	822144.40	833683.68	822152.80	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R055	833786.53	822123.04	833872.14	822061.39	16	0	1	0.0259	0.0259	0.0259	0.0261	0.0260	0.0259	0.0261	0.0273	0.0257	0.0286	0.0285	0.0276	0.0276	0.0264	0.0260	0.0252	0.0222	0.0230	0.0250	0.0226	0.0220	0.0246	0.0241	0.0235
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0330	0.0327	0.0332	0.0329	0.0333	0.0333	0.0332	0.0333	0.0313	0.0366	0.0380	0.0386	0.0380	0.0351	0.0356	0.0344	0.0295	0.0303	0.0333	0.0311	0.0306	0.0366	0.0358	0.0328
R057	833873.30	822052.66	834159.21	821814.78	16	0	1	0.0272	0.0240	0.0246	0.0251	0.0250	0.0251	0.0271	0.0286	0.0272	0.0299	0.0303	0.0290	0.0295	0.0276	0.0280	0.0273	0.0238	0.0245	0.0267	0.0245	0.0229	0.0256	0.0257	0.0255
R058	834159.21	821814.78	834256.10	821738.42	16	0	1	0.0307	0.0264	0.0271	0.0280	0.0279	0.0281	0.0307	0.0314	0.0293	0.0338	0.0343	0.0326	0.0329	0.0303	0.0309	0.0286	0.0247	0.0250	0.0269	0.0248	0.0243	0.0277	0.0271	0.0260
R059	833867.29	822039.23	834058.34	821880.22	17	0	1	0.0307	0.0309	0.0306	0.0305	0.0309	0.0308	0.0307	0.0316	0.0300	0.0337	0.0350	0.0334	0.0343	0.0315	0.0322	0.0311	0.0267	0.0274	0.0298	0.0276	0.0261	0.0301	0.0300	0.0289
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0291	0.0298	0.0304	0.0302	0.0305	0.0306	0.0301	0.0306	0.0283	0.0330	0.0346	0.0337	0.0356	0.0322	0.0330	0.0321	0.0273	0.0286	0.0314	0.0287	0.0273	0.0341	0.0331	0.0301
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	0.0240	0.0218	0.0218	0.0218	0.0222	0.0219	0.0237	0.0234	0.0230	0.0229	0.0231	0.0233	0.0232	0.0227	0.0233	0.0227	0.0228	0.0228	0.0232	0.0230	0.0232	0.0237	0.0216	0.0221
R062	833139.76	821889.31	833296.76	821947.78	16	0	1	0.0185	0.0188	0.0186	0.0190	0.0188	0.0184	0.0188	0.0222	0.0209	0.0199	0.0198	0.0201	0.0203	0.0199	0.0204	0.0206	0.0201	0.0202	0.0216	0.0184	0.0181	0.0182	0.0172	0.0196
R063	833296.66	821947.50	833460.51	822007.97	16	0	1	0.0223	0.0182	0.0188	0.0170	0.0196	0.0185	0.0221	0.0250	0.0229	0.0233	0.0234	0.0234	0.0230	0.0235	0.0235	0.0235	0.0222	0.0232	0.0252	0.0226	0.0220	0.0225	0.0221	0.0238
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R065	833160.17	821834.07	833315.06	821891.67	16	0	1	0.0191	0.0191	0.0197	0.0200	0.0201	0.0193	0.0204	0.0233	0.0213	0.0213	0.0216	0.0215	0.0218	0.0213	0.0209	0.0212	0.0203	0.0201	0.0212	0.0182	0.0180	0.0177	0.0178	0.0191
R066	833315.06	821891.68	833481.00	821952.76	16	0	1	0.0202	0.0194	0.0190	0.0196	0.0196	0.0190	0.0201	0.0227	0.0212	0.0211	0.0212	0.0218	0.0215	0.0220	0.0221	0.0220	0.0206	0.0221	0.0236	0.0210	0.0196	0.0204	0.0204	0.0217
R067	833104.01	821775.07	833178.47	821783.88	19	0	1	0.0150	0.0150	0.0149	0.0149	0.0149	0.0150	0.0150	0.0185	0.0179	0.0183	0.0178	0.0171	0.0169	0.0173	0.0172	0.0175	0.0165	0.0171	0.0187	0.0156	0.0140	0.0140	0.0141	0.0147
R068	833178.74	821783.15	833253.68	821813.88	18	0	1	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0182	0.0179	0.0183	0.0169	0.0165	0.0162	0.0168	0.0166	0.0168	0.0159	0.0171	0.0187	0.0152	0.0140	0.0141	0.0141	0.0147
R069	833166.60	821757.87	833250.16	821795.91	29	0	1	0.0129	0.0128	0.0129	0.0129	0.0129	0.0129	0.0129	0.0160	0.0145	0.0137	0.0128	0.0130	0.0122	0.0134	0.0130	0.0133	0.0130	0.0143	0.0157	0.0128	0.0120	0.0114	0.0116	0.0128
R070	833249.90	821820.73	833326.89	821883.87	13	0	1	0.0180	0.0180	0.0180	0.0181	0.0178	0.0179	0.0179	0.0206	0.0192	0.0196	0.0186	0.0188	0.0182	0.0190	0.0183	0.0183	0.0173	0.0184	0.0196	0.0173	0.0168	0.0171	0.0169	0.0176

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R071	833327.91	821859.29	833397.24	821875.22	18	0	1
R072	833397.24	821875.22	833501.75	821897.07	20	0	1
R073	833451.50	821860.54	833397.24	821875.22	17	0	1
R074	833261.64	821790.34	833451.50	821860.54	20	0	1
R075	833449.48	821961.09	833506.97	821883.06	16	0	1
R076	833501.48	821897.80	833548.66	821899.77	16	0	1
R076	833548.66	821899.77	833603.43	821886.99	16	0	1
R076	833603.43	821886.99	833684.92	821822.32	16	0	1
R077	833506.57	821884.14	833553.57	821884.36	17	0	1
R077	833553.57	821884.36	833600.48	821871.28	17	0	1
R077	833600.48	821871.28	833673.84	821812.09	17	0	1
R078	833682.38	821822.38	833873.32	821660.75	18	0	1
R079	833673.29	821811.43	833867.51	821651.48	16	0	1
R080	833875.67	821661.18	833999.54	821587.94	16	0	1
R081	833867.01	821659.86	833983.09	821582.98	20	0	1
R082	833458.18	821864.41	833510.75	821821.12	14	0	1
R082	833510.75	821821.12	833536.39	821785.93	14	0	1
R082	833536.39	821785.93	833570.13	821687.58	14	0	1
R083	833436.83	821855.11	833496.18	821813.12	14	0	1
R083	833496.18	821813.12	833524.36	821772.29	14	0	1
R083	833524.36	821772.29	833589.81	821682.62	14	0	1
R084	833587.54	821687.02	833582.59	821644.65	13	0	1
R084	833582.09	821644.65	833607.71	821603.87	13	0	1
R085	833609.34	821609.84	833640.24	821575.52	14	0	1
R085	833640.24	821575.52	833681.67	821545.20	14	0	1
R085	833681.67	821545.20	833720.52	821512.85	14	0	1
R086	833550.70	821649.89	833603.88	821583.58	17	0	1
R086	833603.88	821583.58	833646.83	821546.45	17	0	1
R087	833648.49	821548.43	833686.49	821508.30	13	0	1
R088	833254.24	821811.88	833365.50	821856.64	17	4	4
R088	833365.50	821856.64	833416.50	821866.51	17	7	4
R088	833416.50	821866.51	833487.63	821841.09	17	9	4
R088	833487.63	821841.09	833533.63	821786.07	17	10	4
R088	833533.63	821786.07	833574.80	821657.75	17	9	4
R088	833574.80	821657.75	833600.16	821606.82	17	7	4
R088	833600.16	821605.82	833712.08	821511.11	17	6	4
R089	833256.85	821801.44	833370.08	821846.87	16	4	4
R089	833370.08	821846.87	833427.36	821852.03	16	7	4
R089	833427.36	821852.03	833480.60	821829.25	16	9	4
R089	833480.60	821829.25	833522.46	821786.30	16	10	4
R089	833522.46	821786.30	833543.19	821725.47	16	9	4
R089	833543.19	821725.47	833562.07	821653.37	16	8	4
R089	833562.07	821653.37	833598.99	821594.44	16	8	4
R089	833598.99	821594.44	833699.93	821508.87	16	6	4
R090+R091	833289.78	821629.64	833337.84	821634.13	17	0	1
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1
R094	833337.84	821634.13	833341.51	821570.41	16	0	1
R095	833609.59	821601.72	833648.49	821548.43	17	0	1
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1
R100+R101	834127.62	822332.11	834218.31	822256.35	18	0	1
R102+R103	834218.31	822256.35	834309.95	822180.58	18	0	1
R104+R105	834309.95	822180.58	834407.48	822098.55	18	0	1
R106	833917.83	822431.11	833991.76	822368.39	18	0	1
R107	833991.05	822370.04	834090.39	822287.53	18	0	1
R108	834090.84	822288.08	834181.98	822212.22	16	0	1
R109	834181.96	822212.22	834273.05	822136.48	17	0	1
R110	834273.34	822136.83	834364.56	822060.94	17	0	1
R111	834363.46	822059.86	834400.74	822029.83	18	0	1
R112	833848.76	822405.79	833962.96	822300.57	19	0	1
R113	833833.16	822335.17	833909.65	822271.35	18	0	1
R114	833909.65	822271.35	833994.47	822201.23	16	0	1
R115	833994.06	822200.75	834077.01	822132.06	18	0	1
R116	834076.90	822131.94	834097.30	822115.02	18	0	1
R117	834097.30	822115.02	834190.59	822037.73	16	0	1
R118	834190.59	822037.73	834242.25	821993.88	19	0	1
R119	834242.94	821993.85	834282.16	821961.45	19	0	1
R120	834281.93	821961.17	834359.17	821896.80	16	0	1
R121	833768.03	822376.15	833799.11	822318.88	18	0	1
R122	833761.98	822311.12	833868.78	822222.16	18	0	1
R123	833868.78	822222.16	833954.75	822150.60	18	0	1
R124	833873.82	822341.72	833894.86	822284.07	18	0	1
R125	833894.86	822284.07	833827.77	822172.95	18	0	1
R126	833653.40	822269.00	833688.33	822174.73	13	0	1
R127	833489.65	822316.75	833503.51	822278.46	18	0	1
R128	833503.51	822278.46	833524.35	822221.21	18	0	1
R129	833377.80	822232.03	833356.00	822293.72	18	0	1
R130	833377.80	822232.03	833398.77	822175.17	18	0	1
R131	833398.42	822175.04	833434.10	822080.76	18	0	1
R132	833433.92	822080.70	833460.51	822007.97	16	0	1
R133	833460.46	822007.95	833481.00	821952.76	16	0	1
R134	833481.00	821952.76	833506.87	821883.06	16	0	1
R135	833209.07	822239.78	833232.06	822178.07	18	0	1
R136	833232.03	822178.06	833263.39	822120.94	18	0	1
R137	833080.91	822182.63	833100.53	822129.44	18	0	1
R138	833100.53	822129.44	833121.78	822072.07	18	0	1
R139	833121.68	822072.03	833116.56	821977.96	18	0	1
R140	833274.46	822007.07	833256.86	821947.56	17	0	1

RSP (g/VMT)

Road Pair	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	0.0179	0.0178	0.0178	0.0179	0.0177	0.0177	0.0178	0.0203	0.0186	0.0190	0.0183	0.0183	0.0179	0.0185	0.0181	0.0181	0.0171	0.0180	0.0196	0.0172	0.0168	0.0171	0.0170	0.0178
R072	0.0191	0.0189	0.0192	0.0187	0.0188	0.0191	0.0190	0.0215	0.0194	0.0199	0.0197	0.0195	0.0190	0.0194	0.0189	0.0190	0.0176	0.0182	0.0199	0.0178	0.0169	0.0173	0.0174	0.0185
R073	0.0165	0.0165	0.0163	0.0163	0.0163	0.0166	0.0164	0.0190	0.0171	0.0167	0.0163	0.0166	0.0160	0.0171	0.0166	0.0169	0.0163	0.0169	0.0183	0.0165	0.0159	0.0157	0.0157	0.0169
R074	0.0172	0.0174	0.0173	0.0174	0.0169	0.0170	0.0173	0.0197	0.0178	0.0176	0.0172	0.0173	0.0166	0.0175	0.0169	0.0170	0.0161	0.0167	0.0182	0.0162	0.0156	0.0155	0.0155	0.0165
R075	0.0169	0.0169	0.0173	0.0166	0.0167	0.0170	0.0171	0.0198	0.0177	0.0175	0.0170	0.0171	0.0163	0.0173	0.0165	0.0167	0.0158	0.0165	0.0179	0.0158	0.0152	0.0146	0.0151	0.0161
R076	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R076	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R076	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R077	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R077	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R077	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R078	0.0213	0.0217	0.0215	0.0218	0.0212	0.0214	0.0214	0.0235	0.0216	0.0228	0.0226	0.0220	0.0213	0.0212	0.0205	0.0201	0.0184	0.0186	0.0202	0.0182	0.0178	0.0184	0.0181	0.0190
R079	0.0156	0.0155	0.0157	0.0157	0.0153	0.0156	0.0156	0.0183	0.0165	0.0158	0.0152	0.0155	0.0145	0.0159	0.0153	0.0155	0.0150	0.0156	0.0169	0.0151	0.0147	0.0142	0.0141	0.0153
R080	0.0179	0.0180	0.0178	0.0179	0.0179	0.0182	0.0181	0.0204	0.0183	0.0186	0.0182	0.0183	0.0177	0.0185	0.0176	0.0179	0.0168	0.0172	0.0188	0.0167	0.0165	0.0171	0.0168	0.0176
R081	0.0158	0.0158	0.0160	0.0160	0.0156	0.0158	0.0158	0.0184	0.0166	0.0160	0.0154	0.0157	0.0149	0.0162	0.0155	0.0157	0.0153	0.0158	0.0171	0.0153	0.0150	0.0145	0.0144	0.0156
R082	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R082	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R082	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R083	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R083	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R083	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R084	0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
R084	0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
R085	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R085	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R085	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R086	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
R086	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
R087	0.0215	0.0215	0.0215	0.0215	0.0215	0.0214	0.0214	0.0221	0.0219	0.0219	0.0218	0.0219	0.0216	0.0222	0.0220	0.0220	0.0219	0.0219	0.0223	0.0215	0.0216	0.0217	0.0216	0.0214
R088	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R090+R091	0.0193	0.0192	0.0188	0.0188	0.0189	0.0194	0.0195	0.0235	0.0225	0.0214	0.0206	0.0209	0.0203	0.0216	0.0214	0.0220	0.0210	0.0222	0.0239	0.0209	0.0197	0.0187	0.0193	0.0213
R092+R093	0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
R092+R093	0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
R094	0.0109	0.0110	0.0109	0.0109	0.0111	0.0111	0.0110	0.0118	0.0110	0.0113	0.0104	0.0105	0.0096	0.0102	0.0091	0.0092	0.0090	0.0093	0.0088	0.0080	0.0082	0.0074	0.0070	0.0084
R095	0.0252	0.0246	0.0247	0.0247	0.0249	0.0247	0.0249	0.0260	0.0254	0.0256	0.0257	0.0255	0.0253	0.0253	0.0251	0.0251	0.0248	0.0248	0.0253	0.0242	0.0242	0.0244	0.0245	0.0243
R096+R097	0.0231	0.0282	0.0160	0.0163	0.0161	0.0171	0.0228	0.0258	0.0260	0.0267	0.0244	0.0246	0.0241	0.0258	0.0261	0.0250	0.0243	0.0241	0.0280	0.0243	0.0234	0.0241	0.0251	0.0235
R098+R099	0.0307	0.0316	0.0303	0.0301	0.0334	0.0319	0.0324	0.0337	0.0325	0.0373	0.0364	0.0349	0.0350	0.0339	0.0332	0.0323	0.0276	0.0293	0.0319	0.0280	0.0258	0.0282	0.0286	0.0278
R100+R101	0.0277	0.0273	0.0276	0.0289	0.0281	0.0304	0.0278	0.0313	0.0292	0.0327	0.0314	0.0317	0.0315	0.0311	0.0306	0.0301	0.0266	0.0279	0.0302	0.0273	0.0262	0.0273	0.0269	0.0285
R102+R103	0.0292	0.0308	0.0262	0.0297	0.0278	0.0286	0.0297	0.0292	0.0284	0.0304	0.0313	0.0305	0.0306	0.0297	0.0278	0.0279	0.0251	0.0252	0.0275	0.0241	0.0243	0.0249	0.0259	0.0261
R104+R105	0.0260	0.0284	0.0234	0.0260	0.0250	0.0228	0.0276	0.0295	0.0275	0.0291	0.0271	0.0266	0.0265	0.0262	0.0271	0.0256	0.0239	0.0246	0.0271	0.0238	0.0238	0.0255	0.0255	0.0269
R106	0.0212	0.0194	0.0210	0.0228	0.0223	0.0205	0.0209	0.0236	0.0228	0.0224	0.0221	0.0220	0.0222	0.0233	0.0235	0.0239	0.0225	0.0242	0.0262	0.0230	0.0219	0.0225	0.0224	0.0232
R107	0.0204	0.0201	0.0219	0.0241	0.0234	0.0212	0.0202	0.0243	0.0219	0.0216	0.0215	0.0217	0.0212	0.0228	0.0228	0.0231	0.0221	0.0229	0.0254	0.0223	0.0223	0.0221	0.0230	0.0229
R108	0.0202	0.0197	0.0217	0.0238	0.0226	0.0208	0.0199	0.0231	0.0215	0.0211	0.0210	0.0215	0.0209	0.0222	0.0224	0.0225	0.0222	0.0229	0.0248	0.0226	0.0214	0.0219	0.0227	0.0239
R109	0.0201	0.0197	0.0217	0.0239	0.0227	0.0208	0.0198	0.0232	0.0215	0.0212	0.0210	0.0218	0.0213	0.0228	0.0220	0.0230	0.0220	0.0227	0.0250	0.0223	0.0211	0.0230	0.0215	0.0244
R110	0.0206	0.0213	0.0203	0.0218	0.0214	0.0199	0.0204	0.0236	0.0216	0.0211	0.0211	0.0214	0.0209	0.0224	0.0221	0.0225	0.0218	0.0229	0.0246	0.0222	0.0218	0.0223	0.0214	0.0225
R111	0.0212	0.0192	0.0210	0.0226	0.0221	0.0202	0.0209	0.0234	0.0217	0.0213	0.0214	0.0215	0.0211	0.0225	0.0223	0.0226	0.0218	0.0224	0.0246	0.0220	0.0212	0.0214	0.0221	0.0230
R112	0.0351	0.0348	0.0326	0.0377	0.0354	0.0354	0.0337	0.0354	0.0335	0.0381	0.0384	0.0369	0.0368	0.0351	0.0355	0.0342	0.0293	0.0309	0.0336	0.0304	0.0286	0.0320	0.0315	0.0309
R113	0.0180	0.0200	0.0151	0.0148	0.0155	0.0220	0.0204	0.0223	0.0206	0.0199	0.0198	0.0203	0.0197	0.0208	0.0207	0.0213	0.0205	0.0215	0.0233	0.0206	0.0195	0.0214	0.0199	0.0225
R114	0.0206	0.0203	0.0197	0.0207	0.0203	0.0204	0.0204	0.0232	0.0223	0.0224	0.0220	0.0223	0.0219	0.0230	0.0228	0.0231	0.0221	0.0226	0.0247	0.0222	0.0210	0.0212	0.0212	0.0220
R115	0.0257	0.0262	0.0259	0.0255	0.0262	0.0259	0.0257	0.0275	0.0261	0.0280	0.0282	0.0278	0.0279	0.0274	0.0272	0.0269	0.0244	0.0252	0.0272	0.0251	0.0240	0.0259	0.0255	0.0257
R116	0.0197	0.0193	0.0195	0.0207	0.0203	0.0203	0.0199	0.0224	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0215	0.0218	0.0212	0.0219	0.0235	0.0214	0.0203	0.0207	0.0208	0.0217
R117	0.0200	0.0197	0.0198	0.0190	0.0206	0.0195	0.0198	0.0223	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0214	0.0217	0.0208	0.0219	0.0235	0.0214	0.0203	0.0207	0.0207	0.0218
R118	0.0199	0.0196	0.0198	0.0189	0.0205	0.0194	0.0197	0.0221	0.0209	0.0206	0.0205	0.0209	0.0206	0.0216	0.0215	0.0218	0.0214	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
R119	0.0197	0.0197	0.0191	0.0202	0.0198	0.0199	0.0195	0.0222	0.0208	0.0208	0.0204	0.0208	0.0206	0.0216	0.0214	0.0218	0.0213	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
R120	0.0196	0.0197	0.0202	0.0201	0.0197	0.0198	0.0198	0.0223	0.0214	0.0211	0.0207	0.0210	0.0206	0.0217	0.0218	0.0218	0.0213	0.0218	0.0238	0.0214	0.0202	0.0207	0.0208	0.0217
R121	0.0178	0.0178	0.0172	0.0181	0.0176	0.0179	0.0177	0.0211	0.0185	0.0178	0.0168	0.0176	0.0163	0.0198	0.0181	0.0184	0.0184	0.0199	0.0217	0.0195	0.0196	0.0199	0.0192	0.0200
R122	0.0195	0.0204	0.0215	0.0227	0.0216	0.0202	0.0188	0.0219	0.0201	0.0197	0.0187	0.0192	0.0178	0.0199	0.0185	0.0190	0.0184	0.0198	0.0210	0.0185	0.0182	0.0158	0.0160	0.0182
R123	0.0162	0.0161	0.0162	0.0162	0.0160	0.0160	0.0161	0.0200	0.0190	0.0167	0.0155	0.0160	0.0146	0.0168	0.0164	0.0170	0.0166	0.0180	0.0194	0.0169	0.0154	0.0134	0.0135	0.0164
R124	0.0191	0.0192	0.0192	0.0190	0.0188	0.0191	0.0191	0.0216	0.0201	0.0202	0.0190	0.0196	0.0186	0.0211	0.0200	0.0203	0.0202	0.0208	0.0222	0.0201	0.0212	0.0216	0.0211	0.0199
R125	0.0184	0.0184	0.0184	0.0182	0.0183	0.0183	0.0184	0.0215	0.0192	0.0190	0.0177	0.0182	0.0167	0.0183	0.0178	0.0182	0.0176	0.0185	0.0197	0.0172	0.0164	0.0151	0.0142	0.0169
R126	0.0224	0.0234	0.0220	0.0240	0.0233	0.0214	0.0221	0.0249	0.0234	0.0236	0.0236	0.0236	0.0234	0.0243	0.0237	0.0241	0.0228	0.0242	0.0262	0.0230	0.0225	0.0235	0.0224	0.0236
R127	0.0184	0.0184	0.0181	0.0183	0.0184	0.0184	0.0183	0.0215	0.0199	0.0187	0.0179	0.0185	0.0172	0.0192	0.0182	0.0186	0.0188	0.0193	0.0211	0.0184	0.0184	0.0169	0.0166	0.0184
R128	0.0176	0.0176	0.0174	0.0175	0.0174	0.0178	0.0176	0.0208	0.0188	0.0176	0.0169	0.0175	0.0163	0.0184	0.0174	0.0179	0.0181	0.0190	0.0204	0.0178	0.0177	0.0166	0.0165	0.0182
R129	0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0196	0.0178	0.0164	0.0154	0.0159	0.0147	0.0168	0.0159	0.0163	0.0163	0.0173	0.0187	0.0162	0.0158	0.0147	0.0145	0.0162
R130	0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0195	0.0177	0.0163	0.0152	0.0158	0.0145	0.0166	0.0157	0.0162	0.0161	0.0171	0.0183	0.0161	0.0160	0.0145	0.0144	0.0161
R131	0.0163	0.0164	0.0163	0.0164	0.0164	0.0164	0.0163	0.0203	0.0190	0.0178	0.0159	0.0163	0.0154	0.0173	0.0160	0.0169	0.0172	0.0173	0.0186	0.0160	0.0159	0.0144	0.0140	0.0166
R132	0.0156	0.0161	0.0163	0.0163	0.0159	0.0149	0.0137	0.0141	0.0146	0.0160	0.0148	0.0143	0.0147	0.0138	0.0132	0.0129	0.0120	0.0126	0.0130	0.0115	0.0121	0.0115	0.0108	0.0112
R133	0.0201	0.0215	0.0231	0.0242	0.0232	0.0212	0.0191	0.0222	0.0214	0.0224	0.0207	0.0208	0.0200	0.0204	0.0199	0.0191	0.0181	0.0193	0.0211	0.0180	0.0174	0.0154	0.0153	0.0174
R134	0.0185	0.0196	0.0207	0.0221	0.0211	0.0193	0.0176	0.0208	0.0200	0.0193	0.0184	0.0187	0.0179	0.0191	0.0187	0.0189	0.0178	0.0193	0.0210	0.0185	0.0162	0.0160	0.0162	0.0178
R135	0.0261	0.0301	0.0376	0.0376	0.0360	0.0278	0.0221	0.0240	0.0197	0.0188	0.0195	0.0195	0.0183	0.0205	0.0194	0.0199	0.0195	0.0193	0.0204	0.0189	0.0223	0.0196	0.0197	0.0205
R136	0.0165	0.0176	0.0150	0.0150	0.0150	0.0150	0.0165	0.0207	0.0183	0.0171	0.0159	0.0165	0.0153	0.0176	0.0164	0.0169	0.0169	0.0179	0.0194	0.0170	0.0167	0.0150	0.0154	0.0171
R137	0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
R138	0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
R139	0.0153	0.0154	0.0154	0.0154	0.0152	0.0154	0.0153	0.0190	0.0168	0.0153	0.0145	0.0151	0.0138	0.0160	0.0152	0.0157	0.0157	0.0164	0.0179	0.0156	0.0156	0.0145	0.0145	0.0158
R140	0.0212	0.0217	0.0212	0.0223	0.0217	0.0208	0.0210	0.0242	0.0217	0.0220	0.0211	0.0208	0.0194	0.0205	0.0192	0.0192	0.0177	0.0185	0.0202	0.0175	0.0167	0.0151	0.0156	0.0178

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.35	821947.25	833315.58	821981.67	13	0	1	0.0210	0.0190	0.0176	0.0176	0.0172	0.0173	0.0209	0.0240	0.0214	0.0224	0.0214	0.0205	0.0197	0.0208	0.0190	0.0187	0.0173	0.0162	0.0196	0.0173	0.0164	0.0151	0.0147	0.0175
R142	833329.88	821853.87	833318.98	821891.84	13	0	1	0.0138	0.0120	0.0125	0.0104	0.0113	0.0128	0.0159	0.0154	0.0144	0.0163	0.0163	0.0165	0.0175	0.0171	0.0173	0.0177	0.0168	0.0176	0.0181	0.0174	0.0177	0.0208	0.0196	0.0163
R143	833139.75	821869.31	833110.17	821834.07	13	0	1	0.0210	0.0215	0.0210	0.0220	0.0216	0.0206	0.0216	0.0237	0.0221	0.0231	0.0216	0.0215	0.0202	0.0210	0.0199	0.0197	0.0186	0.0192	0.0203	0.0183	0.0172	0.0160	0.0157	0.0182
R144	833160.17	821834.07	833118.74	821783.15	13	0	1	0.0211	0.0216	0.0210	0.0222	0.0217	0.0207	0.0209	0.0239	0.0220	0.0222	0.0214	0.0210	0.0196	0.0208	0.0193	0.0193	0.0181	0.0188	0.0200	0.0180	0.0172	0.0161	0.0156	0.0182
R145+R146	833812.49	821975.50	834004.09	821916.03	17	0	1	0.0176	0.0176	0.0183	0.0169	0.0165	0.0179	0.0174	0.0210	0.0184	0.0177	0.0164	0.0169	0.0153	0.0173	0.0161	0.0165	0.0161	0.0173	0.0186	0.0161	0.0144	0.0121	0.0128	0.0161
R147+R148	833738.44	821888.38	833931.13	821727.74	16	0	1	0.0171	0.0169	0.0173	0.0172	0.0172	0.0176	0.0173	0.0208	0.0184	0.0173	0.0161	0.0165	0.0150	0.0170	0.0159	0.0163	0.0159	0.0169	0.0182	0.0157	0.0139	0.0114	0.0124	0.0160
R149	833728.01	821749.32	833807.73	821684.26	14	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R149	833774.08	821643.52	833807.73	821684.36	13	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R150	833736.67	821759.22	833807.71	821603.87	11	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R151	833613.61	821610.08	833683.50	821543.73	13	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
R151	833693.80	821543.70	833775.28	821642.53	14	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
R152	833774.08	821643.52	833828.17	821600.58	20	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0152	0.0176	0.0164	0.0170	0.0171	0.0178	0.0194	0.0169	0.0169	0.0155	0.0158	0.0173
R153	833991.31	822369.76	834028.77	822414.27	15	0	1	0.0186	0.0179	0.0181	0.0184	0.0188	0.0185	0.0188	0.0220	0.0202	0.0187	0.0175	0.0180	0.0161	0.0179	0.0171	0.0176	0.0168	0.0177	0.0191	0.0168	0.0158	0.0142	0.0146	0.0164
R154	833950.46	822320.46	833992.00	822369.67	16	0	1	0.0186	0.0179	0.0162	0.0184	0.0188	0.0185	0.0188	0.0220	0.0202	0.0190	0.0174	0.0178	0.0167	0.0185	0.0172	0.0176	0.0170	0.0179	0.0193	0.0165	0.0156	0.0138	0.0142	0.0164
R155	833909.65	822271.36	833950.46	822320.45	18	0	1	0.0187	0.0179	0.0182	0.0185	0.0188	0.0186	0.0189	0.0224	0.0208	0.0192	0.0179	0.0184	0.0164	0.0183	0.0174	0.0179	0.0171	0.0180	0.0194	0.0170	0.0162	0.0142	0.0145	0.0164
R156	833868.78	822222.16	833909.65	822271.36	18	0	1	0.0223	0.0211	0.0212	0.0207	0.0200	0.0207	0.0217	0.0278	0.0259	0.0251	0.0238	0.0240	0.0225	0.0241	0.0224	0.0224	0.0219	0.0227	0.0233	0.0205	0.0190	0.0169	0.0172	0.0192
R157	833868.56	822222.34	833827.77	822172.95	18	0	1	0.0204	0.0204	0.0198	0.0200	0.0198	0.0200	0.0205	0.0254	0.0238	0.0227	0.0216	0.0214	0.0199	0.0222	0.0204	0.0207	0.0203	0.0210	0.0223	0.0195	0.0184	0.0169	0.0165	0.0191
R158	833827.77	822172.96	833778.49	822113.30	18	0	1	0.0200	0.0200	0.0199	0.0201	0.0199	0.0201	0.0201	0.0233	0.0216	0.0207	0.0196	0.0199	0.0186	0.0201	0.0189	0.0191	0.0187	0.0192	0.0205	0.0184	0.0174	0.0162	0.0163	0.0184
R159	834075.61	822299.62	834112.90	822344.34	15	0	1	0.0190	0.0197	0.0208	0.0213	0.0151	0.0155	0.0192	0.0220	0.0192	0.0190	0.0186	0.0189	0.0179	0.0203	0.0197	0.0196	0.0183	0.0198	0.0208	0.0190	0.0178	0.0182	0.0183	0.0206
R160	834090.29	822287.53	834127.62	822332.11	15	0	1	0.0194	0.0201	0.0200	0.0191	0.0198	0.0193	0.0198	0.0230	0.0206	0.0206	0.0201	0.0196	0.0188	0.0199	0.0188	0.0186	0.0177	0.0186	0.0198	0.0180	0.0171	0.0172	0.0173	0.0182
R161	834036.90	822250.52	834075.91	822299.62	15	0	1	0.0184	0.0183	0.0182	0.0187	0.0180	0.0189	0.0187	0.0221	0.0203	0.0195	0.0193	0.0193	0.0187	0.0200	0.0193	0.0195	0.0189	0.0198	0.0217	0.0188	0.0186	0.0184	0.0184	0.0193
R162	834049.42	822238.28	834090.29	822287.53	15	0	1	0.0193	0.0195	0.0192	0.0198	0.0197	0.0192	0.0192	0.0224	0.0205	0.0206	0.0195	0.0194	0.0184	0.0200	0.0185	0.0187	0.0179	0.0184	0.0196	0.0173	0.0169	0.0169	0.0163	0.0162
R163	833993.96	822201.68	834034.90	822250.62	15	0	1	0.0198	0.0198	0.0197	0.0198	0.0198	0.0200	0.0199	0.0233	0.0212	0.0214	0.0207	0.0205	0.0196	0.0206	0.0195	0.0198	0.0185	0.0189	0.0206	0.0182	0.0176	0.0172	0.0171	0.0186
R164	834007.86	822189.33	834049.42	822235.28	15	0	1	0.0184	0.0184	0.0182	0.0187	0.0181	0.0189	0.0181	0.0215	0.0196	0.0189	0.0179	0.0183	0.0173	0.0186	0.0175	0.0178	0.0170	0.0177	0.0194	0.0172	0.0167	0.0161	0.0162	0.0178
R165	833953.31	822151.70	833994.47	822201.23	16	0	1	0.0209	0.0212	0.0207	0.0215	0.0213	0.0207	0.0208	0.0239	0.0221	0.0223	0.0216	0.0217	0.0208	0.0215	0.0208	0.0208	0.0196	0.0202	0.0218	0.0195	0.0187	0.0186	0.0187	0.0197
R166	833872.14	822051.38	833964.75	822160.59	19	0	1	0.0176	0.0174	0.0175	0.0176	0.0177	0.0176	0.0174	0.0211	0.0199	0.0180	0.0175	0.0176	0.0164	0.0177	0.0171	0.0175	0.0172	0.0178	0.0188	0.0168	0.0150	0.0129	0.0136	0.0164
R167	833885.47	822042.46	834007.88	822189.33	19	0	1	0.0270	0.0272	0.0273	0.0273	0.0273	0.0272	0.0270	0.0292	0.0276	0.0301	0.0298	0.0286	0.0289	0.0282	0.0276	0.0268	0.0242	0.0248	0.0269	0.0241	0.0237	0.0256	0.0253	0.0246
R168+R169	833813.72	821975.47	833876.38	822050.03	21	0	1	0.0108	0.0112	0.0113	0.0107	0.0110	0.0108	0.0110	0.0127	0.0123	0.0118	0.0115	0.0135	0.0111	0.0114	0.0112	0.0115	0.0111	0.0119	0.0118	0.0107	0.0104	0.0095	0.0095	0.0109
R170+R171	833738.44	821888.35	833812.49	821976.50	18	0	1	0.0125	0.0125	0.0124	0.0129	0.0125	0.0126	0.0128	0.0133	0.0128	0.0139	0.0133	0.0135	0.0136	0.0137	0.0131	0.0131	0.0123	0.0128	0.0132	0.0122	0.0126	0.0136	0.0129	0.0122
R172+R173	833884.02	821822.33	833739.28	821887.65	20	0	1	0.0186	0.0185	0.0186	0.0187	0.0184	0.0185	0.0187	0.0221	0.0199	0.0197	0.0190	0.0193	0.0184	0.0198	0.0190	0.0193	0.0186	0.0195	0.0211	0.0186	0.0178	0.0173	0.0174	0.0187
R174+R175	833581.78	821677.96	833683.38	821823.66	18	0	1	0.0200	0.0200	0.0198	0.0202	0.0192	0.0201	0.0201	0.0236	0.0221	0.0216	0.0211	0.0212	0.0205	0.0219	0.0210	0.0212	0.0202	0.0212	0.0228	0.0201	0.0193	0.0190	0.0190	0.0201
R176	833496.77	821608.49	833565.47	821680.73	20	0	1	0.0204	0.0202	0.0202	0.0200	0.0204	0.0203	0.0203	0.0233	0.0215	0.0216	0.0211	0.0209	0.0202	0.0210	0.0206	0.0206	0.0196	0.0204	0.0219	0.0200	0.0194	0.0195	0.0196	0.0204
R177	833513.08	821599.24	833673.68	821668.47	20	0	1	0.0189	0.0188	0.0188	0.0186	0.0190	0.0187	0.0187	0.0216	0.0194	0.0194	0.0190	0.0193	0.0186	0.0197	0.0192	0.0194	0.0185	0.0197	0.0209	0.0187	0.0179	0.0179	0.0178	0.0191
R178	833440.44	821529.90	833499.00	821609.61	15	0	1	0.0219	0.0216	0.0217	0.0217	0.0216	0.0215	0.0220	0.0242	0.0228	0.0234	0.0224	0.0221	0.0215	0.0220	0.0212	0.0211	0.0200	0.0205	0.0219	0.0202	0.0200	0.0203	0.0202	0.0208
R179	833451.64	821526.21	833511.32	821600.28	17	0	1	0.0216	0.0216	0.0216	0.0214	0.0217	0.0217	0.0215	0.0239	0.0221	0.0229	0.0226	0.0227	0.0229	0.0237	0.0233	0.0234	0.0218	0.0227	0.0246	0.0223	0.0214	0.0226	0.0224	0.0229
R180	834218.31	822256.35	834326.06	822385.33	15	0	1	0.0208	0.0210	0.0212	0.0210	0.0206	0.0212	0.0213	0.0245	0.0228	0.0221	0.0217	0.0219	0.0209	0.0223	0.0216	0.0216	0.0205	0.0214	0.0234	0.0207	0.0205	0.0199	0.0199	0.0212
R181	834191.98	822212.22	834218.31	822256.35	16	0	1	0.0169	0.0167	0.0169	0.0172	0.0165	0.0163	0.0171	0.0236	0.0209	0.0205	0.0202	0.0204	0.0191	0.0230	0.0222	0.0221	0.0204	0.0211	0.0230	0.0213	0.0215	0.0195	0.0193	0.0216
R182	834140.62	822162.67	834181.78	822212.39	16	0	1	0.0198	0.0204	0.0214	0.0221	0.0168	0.0166	0.0203	0.0231	0.0204	0.0202	0.0200	0.0205	0.0195	0.0208	0.0199	0.0204	0.0193	0.0199	0.0217	0.0197	0.0201	0.0181	0.0180	0.0204
R183	834099.34	822113.33	834140.62	822162.67	16	0	1	0.0208	0.0216	0.0228	0.0240	0.0171	0.0169	0.0214	0.0239	0.0210	0.0214	0.0212	0.0219	0.0211	0.0223	0.0192	0.0197	0.0189	0.0199	0.0217	0.0198	0.0199	0.0204	0.0207	0.0228
R184	834077.01	822132.08	834051.51	822100.94	13	0	1	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R184	834051.51	822100.94	834071.90	822084.18	13	0	1	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R184	834071.90	822084.18	834097.30	822118.02	14	0	1	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R185	834309.95	822180.58	834382.68	822267.44	19	0	1	0.0202	0.0209	0.0203	0.0209	0.0216	0.0211	0.0206	0.0238	0.0216	0.0215	0.0212	0.0210	0.0205	0.0219	0.0212	0.0213	0.0203	0.0218	0.0230	0.0204	0.0200	0.0200	0.0200	0.0216
R186	834231.54	822086.63	834273.34	822136.83	16	0	1	0.0220	0.0228	0.0248	0.0257	0.0169	0.0257	0.0223	0.0247	0.0216	0.0224	0.0225	0.0231	0.0227	0.0229	0.0196	0.0200	0.0190	0.0200	0.0219	0.0199	0.0200	0.0204	0.0209	0.0234
R187	834190.09	822037.73	834231.76	822086.45	16	0	1	0.0215	0.0210	0.0217	0.0222	0.0207	0.0205	0.0219	0.0246	0.0225	0.0223	0.0224	0.0229	0.0222	0.0232	0.0228	0.0232	0.0222	0.0231	0.0247	0.0222	0.0216	0.0224	0.0211	0.0231
R188+R189	834004.08	821816.03	834088.34	821988.22	16	0	1	0.0181	0.0191	0.0203	0.0189	0.0195	0.0190	0.0186	0.0208	0.0195	0.0202	0.0186	0.0189	0.0185	0.0200	0.0192	0.0191	0.0183	0.0189	0.0205	0.0186	0.0184	0.0173	0.0170	0.0199
R190+R191	833931.13	821727.74	834004.08	821816.03	16	0	1	0.0212	0.0220	0.0209	0.0217	0.0201	0.0197	0.0217	0.0242	0.0216	0.0219	0.0208	0.0217	0.0204	0.0218	0.0208	0.0209	0.0198	0.0208	0.0227	0.0202	0.0199	0.0188	0.0188	0.0204
R192+R193	833875.22	821660.76	833960.85	821727.98	20	0	1	0.0187	0.0196	0.0204	0.0211	0.0206	0.0202	0.0170	0.0192	0.0172	0.0167	0.0159	0.0164	0.0153	0.0171	0.0159	0.0170	0.0163	0.0156	0.0154	0.0156	0.0204	0.0177	0.0159	0.0177
R194+R195	833825.79	821600.86	833867.51	821651.49	22	0	1	0.0217	0.0221	0.0226	0.0232	0.0237	0.0232	0.0219	0.0248	0.0231	0.0235	0.0235	0.0232	0.0218	0.0228	0.0225	0.0223	0.0222	0.0229	0.0236	0.0227	0.0221	0.0222	0.0213	0.0236
R196+R202	833761.01	821523.38	833828.17	821600.66	20	0	1	0.0210	0.0210	0.0205	0.0204	0.0205	0.0204	0.0210	0.0224	0.0223	0.0207	0.0202	0.0206	0.0197	0.0210	0.0202	0.0208	0.0206	0.0209	0.0216	0.0204	0.0201	0.0193	0.0192	0.0226
R197	834364.36	822060.94	834400.15	822104.71	17	0	1	0.0169	0.0172	0.0165	0.0169	0.0169	0.0169	0.0172	0.0252	0.0221	0.0233	0.0244	0.0166	0.0154	0.0177	0.0161	0.0170	0.0169	0.0176	0.0190	0.0166	0.0174	0.0163	0.0160	0.0150
R198	834322.77	822010.68	834364.36	822060.94	16	0	1	0.0169	0.0168	0.0171	0.0167	0.0172	0.0169	0.0166	0.0229	0.0202	0.0200	0.0200	0.0205	0.0199	0.0215	0.0211	0.0219	0.0209	0.0226	0.0245	0.0232	0.0232	0.0260	0.0274	0.0163
R199	834281.93	821961.17	834322.00	822010.48	15	0	1	0.0224	0.0232	0.0245	0.0265	0.0180	0.0265	0.0228	0.0248	0.0236	0.0232	0.0204	0.0210	0.0205	0.0217	0.0178	0.0183	0.0184	0.0192	0.0198	0.0187	0.0181	0.0175	0.0175	0.0190
R200	834339.17	821814.13	834280.06	821963.18	14	0	1	0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185
R200	834239.17	821814.13	834327.09	821848.33	18	0	1	0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833960.46	822543.00	833985.46	822546.78	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R008+R009	833661.17	822398.31	833863.59	822387.15	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833544.64	822390.48	833587.56	822384.60	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R014+R015	833485.77	822318.11	833587.56	822384.60	14	0	1	0.0147	0.0147	0.0148	0.0146	0.0144	0.0147	0.0146	0.0184	0.0169	0.0148	0.0142	0.0146	0.0133	0.0153	0.0146	0.0150	0.0149	0.0158	0.0170	0.0148	0.0137	0.0116	0.0123	0.0150
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	0.0216	0.0193	0.0215	0.0239	0.0230	0.0205	0.0214	0.0230	0.0212	0.0215	0.0218	0.0220	0.0211	0.0226	0.0220	0.0223	0.0211	0.0224	0.0242	0.0220	0.0218	0.0212	0.0219	0.0246
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0205	0.0213	0.0202	0.0222	0.0215	0.0195	0.0201	0.0235	0.0211	0.0220	0.0218	0.0218	0.0214	0.0225	0.0219	0.0220	0.0206	0.0216	0.0234	0.0208	0.0208	0.0204	0.0211	0.0220
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R022	833480.61	822340.13	833469.65	822316.75	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0209	0.0175	0.0180	0.0165	0.0186	0.0180	0.0206	0.0229	0.0218	0.0222	0.0218	0.0220	0.0218	0.0224	0.0227	0.0227	0.0217	0.0229	0.0247	0.0219	0.0210	0.0219	0.0212	0.0219
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0213	0.0176	0.0183	0.0163	0.0166	0.0181	0.0211	0.0233	0.0217	0.0221	0.0217	0.0220	0.0218	0.0224	0.0224	0.0225	0.0209	0.0223	0.0247	0.0220	0.0210	0.0212	0.0211	0.0217
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0216	0.0197	0.0215	0.0236	0.0228	0.0207	0.0214	0.0229	0.0218	0.0220	0.0222	0.0223	0.0224	0.0229	0.0224	0.0230	0.0215	0.0227	0.0252	0.0223	0.0214	0.0215	0.0211	0.0219
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0187	0.0186	0.0189	0.0196	0.0193	0.0190	0.0186	0.0246	0.0239	0.0219	0.0207	0.0206	0.0188	0.0217	0.0199	0.0206	0.0211	0.0210	0.0214	0.0200	0.0198	0.0176	0.0173	0.0196
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	0.0205	0.0210	0.0204	0.0216	0.0213	0.0199	0.0212	0.0231	0.0228	0.0232	0.0230	0.0225	0.0226	0.0233	0.0229	0.0229	0.0215	0.0227	0.0249	0.0222	0.0213	0.0217	0.0211	0.0221
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	0.0202	0.0195	0.0221	0.0250	0.0239	0.0210	0.0199	0.0236	0.0217	0.0221	0.0220	0.0219	0.0220	0.0223	0.0220	0.0223	0.0212	0.0225	0.0242	0.0221	0.0207	0.0214	0.0207	0.0216
R029	833768.03	822376.15	833846.76	822405.79	13	0	1	0.0171	0.0170	0.0181	0.0152	0.0150	0.0176	0.0170	0.0245	0.0232	0.0210	0.0199	0.0202	0.0183	0.0221	0.0202	0.0213	0.0230	0.0220	0.0226	0.0216	0.0226	0.0203	0.0200	0.0218
R030	833846.76	822405.79	833917.83	822431.11	14	0	1	0.0168	0.0166	0.0162	0.0168	0.0164	0.0170	0.0167	0.0225	0.0217	0.0191	0.0178	0.0187	0.0190	0.0196	0.0196	0.0197	0.0201	0.0202	0.0222	0.0190	0.0187	0.0170	0.0167	0.0186
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	0.0168	0.0181	0.0152	0.0156	0.0156	0.0152	0.0168	0.0261	0.0248	0.0225	0.0212	0.0209	0.0188	0.0223	0.0200	0.0209	0.0221	0.0210	0.0221	0.0205	0.0213	0.0192	0.0189	0.0213
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	0.0285	0.0262	0.0155	0.0156	0.0156	0.0157	0.0156	0.0212	0.0196	0.0195	0.0193	0.0195	0.0196	0.0203	0.0200	0.0201	0.0191	0.0198	0.0215	0.0195	0.0188	0.0193	0.0190	0.0200
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	0.0188	0.0187	0.0187	0.0189	0.0189	0.0189	0.0187	0.0212	0.0197	0.0199	0.0198	0.0200	0.0196	0.0204	0.0201	0.0201	0.0193	0.0201	0.0220	0.0195	0.0188	0.0190	0.0190	0.0197
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0154	0.0154	0.0158	0.0164	0.0164	0.0168	0.0159	0.0195	0.0186	0.0174	0.0176	0.0182	0.0183	0.0186	0.0186	0.0190	0.0183	0.0192	0.0209	0.0182	0.0171	0.0178	0.0175	0.0185
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0224	0.0217	0.0214	0.0208	0.0209	0.0209	0.0212	0.0246	0.0234	0.0236	0.0233	0.0237	0.0243	0.0244	0.0243	0.0240	0.0219	0.0225	0.0249	0.0234	0.0226	0.0246	0.0238	0.0236
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0189	0.0188	0.0188	0.0189	0.0190	0.0190	0.0188	0.0218	0.0206	0.0206	0.0206	0.0203	0.0204	0.0208	0.0208	0.0209	0.0197	0.0210	0.0223	0.0203	0.0190	0.0196	0.0195	0.0198
R037	833653.40	822269.00	833694.88	822284.07	19	0	1	0.0219	0.0218	0.0220	0.0218	0.0219	0.0220	0.0219	0.0240	0.0230	0.0241	0.0240	0.0236	0.0232	0.0233	0.0226	0.0224	0.0206	0.0212	0.0229	0.0204	0.0200	0.0210	0.0204	0.0209
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0224	0.0224	0.0224	0.0222	0.0223	0.0224	0.0223	0.0245	0.0233	0.0246	0.0243	0.0239	0.0234	0.0234	0.0226	0.0223	0.0204	0.0213	0.0225	0.0205	0.0194	0.0200	0.0197	0.0203
R039	833761.98	822311.12	833758.45	822320.76	14	0	1	0.0283	0.0236	0.0246	0.0253	0.0254	0.0255	0.0244	0.0297	0.0284	0.0319	0.0322	0.0304	0.0311	0.0288	0.0291	0.0281	0.0248	0.0253	0.0272	0.0246	0.0236	0.0258	0.0255	0.0252
R040	833785.11	822318.98	833833.16	822335.17	18	0	1	0.0268	0.0272	0.0275	0.0278	0.0279	0.0278	0.0274	0.0289	0.0275	0.0309	0.0307	0.0295	0.0299	0.0279	0.0276	0.0268	0.0235	0.0240	0.0257	0.0234	0.0217	0.0246	0.0243	0.0241
R041	833833.16	822335.17	833902.96	822360.57	18	0	1	0.0283	0.0252	0.0256	0.0263	0.0259	0.0263	0.0257	0.0297	0.0283	0.0318	0.0322	0.0303	0.0310	0.0288	0.0289	0.0280	0.0247	0.0253	0.0272	0.0245	0.0237	0.0257	0.0256	0.0252
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	0.0282	0.0256	0.0262	0.0265	0.0266	0.0266	0.0261	0.0297	0.0284	0.0313	0.0316	0.0304	0.0306	0.0289	0.0286	0.0276	0.0243	0.0253	0.0272	0.0246	0.0237	0.0258	0.0256	0.0253
R043	833950.46	822320.48	834034.90	822250.52	18	0	1	0.0312	0.0312	0.0308	0.0314	0.0309	0.0311	0.0309	0.0315	0.0301	0.0346	0.0352	0.0338	0.0343	0.0321	0.0319	0.0307	0.0269	0.0274	0.0295	0.0275	0.0263	0.0300	0.0295	0.0283
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0271	0.0271	0.0277	0.0275	0.0278	0.0277	0.0275	0.0290	0.0271	0.0304	0.0308	0.0296	0.0299	0.0280	0.0277	0.0268	0.0235	0.0246	0.0265	0.0237	0.0222	0.0248	0.0244	0.0244
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	0.0278	0.0181	0.0180	0.0197	0.0201	0.0205	0.0280	0.0289	0.0275	0.0310	0.0306	0.0296	0.0297	0.0282	0.0283	0.0274	0.0243	0.0248	0.0267	0.0246	0.0233	0.0257	0.0255	0.0253
R046	834231.72	822086.85	834323.21	822011.22	18	0	1	0.0278	0.0244	0.0251	0.0254	0.0256	0.0256	0.0278	0.0293	0.0275	0.0308	0.0310	0.0299	0.0300	0.0285	0.0282	0.0273	0.0241	0.0251	0.0269	0.0244	0.0231	0.0254	0.0252	0.0250
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	0.0281	0.0240	0.0244	0.0254	0.0250	0.0257	0.0280	0.0289	0.0275	0.0308	0.0312	0.0301	0.0301	0.0287	0.0282	0.0274	0.0242	0.0247	0.0266	0.0245	0.0232	0.0257	0.0255	0.0251
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	0.0220	0.0209	0.0210	0.0212	0.0212	0.0212	0.0221	0.0242	0.0236	0.0258	0.0254	0.0244	0.0245	0.0238	0.0236	0.0230	0.0206	0.0215	0.0231	0.0207	0.0199	0.0221	0.0217	0.0213
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0221	0.0221	0.0221	0.0220	0.0221	0.0221	0.0220	0.0238	0.0232	0.0251	0.0250	0.0241	0.0242	0.0232	0.0229	0.0224	0.0200	0.0209	0.0225	0.0204	0.0199	0.0220	0.0217	0.0213
R050	833101.67	821942.33	833274.46	822007.07	21	0	1	0.0216	0.0216	0.0216	0.0215	0.0215	0.0216	0.0216	0.0236	0.0229	0.0252	0.0247	0.0238	0.0242	0.0236	0.0233	0.0232	0.0208	0.0220	0.0239	0.0210	0.0195	0.0210	0.0209	0.0208
R051	833274.06	822006.80	833438.70	822067.62	16	0	1	0.0235	0.0236	0.0236	0.0236	0.0236	0.0236	0.0236	0.0250	0.0241	0.0269	0.0267	0.0262	0.0266	0.0256	0.0256	0.0254	0.0225	0.0235	0.0258	0.0229	0.0219	0.0249	0.0245	0.0237
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0280	0.0254	0.0254	0.0255	0.0255	0.0254	0.0272	0.0275	0.0265	0.0297	0.0300	0.0288	0.0292	0.0272	0.0270	0.0261	0.0227	0.0233	0.0257	0.0235	0.0231	0.0261	0.0262	0.0254
R053	833786.86	822123.44	833736.66	822163.25	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R063	833736.06	822163.26	833688.33	822174.73	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R055	833796.53	822123.04	833872.14	822061.39	16	0	1	0.0238	0.0238	0.0238	0.0239	0.0239	0.0238	0.0239	0.0250	0.0236	0.0263	0.0262	0.0253	0.0254	0.0242	0.0239	0.0231	0.0204	0.0211	0.0229	0.0208	0.0203	0.0226	0.0221	0.0216
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0303	0.0300	0.0305	0.0302	0.0306	0.0305	0.0305	0.0305	0.0288	0.0336	0.0349	0.0336	0.0349	0.0322	0.0327	0.0316	0.0271	0.0278	0.0305	0.0286	0.0281	0.0337	0.0329	0.0301
R057	833873.30	822052.66	834159.21	821814.78	16	0	1	0.0249	0.0221	0.0226	0.0230	0.0229	0.0230	0.0249	0.0262	0.0250	0.0275	0.0278	0.0267	0.0271	0.0254	0.0257	0.0251	0.0219	0.0225	0.0244	0.0225	0.0211	0.0236	0.0236	0.0234
R058	834159.21	821814.78	834256.10	821738.42	16	0	1	0.0282	0.0243	0.0249	0.0257	0.0256	0.0258	0.0282	0.0287	0.0269	0.0311	0.0315	0.0299	0.0302	0.0279	0.0275	0.0263	0.0226	0.0229	0.0247	0.0228	0.0223	0.0255	0.0249	0.0238
R059	833867.29	822039.23	834058.34	821880.22	17	0	1	0.0282	0.0284	0.0281	0.0280	0.0284	0.0283	0.0282	0.0289	0.0276	0.0310	0.0322	0.0307	0.0315	0.0290	0.0296	0.0286	0.0246	0.0252	0.0274	0.0253	0.0240	0.0277	0.0276	0.0266
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0267	0.0274	0.0279	0.0278	0.0280	0.0281	0.0277	0.0280	0.0260	0.0304	0.0318	0.0310	0.0327	0.0296	0.0303	0.0295	0.0251	0.0262	0.0288	0.0263	0.0251	0.0314	0.0304	0.0277
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	0.0220	0.0200	0.0200	0.0201	0.0203	0.0201	0.0218	0.0214	0.0211	0.0211	0.0212	0.0214	0.0213	0.0209	0.0214	0.0209	0.0209	0.0210	0.0213	0.0211	0.0213	0.0217	0.0199	0.0203
R062	833139.76	821889.31	833296.76	821947.76	16	0	1	0.0170	0.0172	0.0171	0.0175	0.0173	0.0169	0.0173	0.0203	0.0192	0.0184	0.0182	0.0185	0.0187	0.0183	0.0188	0.0190	0.0185	0.0187	0.0199	0.0169	0.0167	0.0168	0.0159	0.0180
R063	833296.66	821947.56	833460.51	822007.97	16	0	1	0.0205	0.0167	0.0173	0.0157	0.0181	0.0170	0.0203	0.0228	0.0211	0.0215	0.0216	0.0215	0.0212	0.0217	0.0216	0.0216	0.0204	0.0213	0.0231	0.0208	0.0203	0.0207	0.0204	0.0219
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R065	833160.17	821834.07	833315.66	821891.67	16	0	1	0.0176	0.0175	0.0182	0.0184	0.0185	0.0178	0.0187	0.0213	0.0196	0.0196	0.0199	0.0197	0.0201	0.0196	0.0192	0.0194	0.0187	0.0185	0.0195	0.0167	0.0166	0.0164	0.0163	0.0176
R066	833315.06	821891.68	833481.00	821952.76	16	0	1	0.0186	0.0178	0.0174	0.0180	0.0180	0.0174	0.0185	0.0208	0.0195	0.0194	0.0195	0.0201	0.0198	0.0203	0.0203	0.0202	0.0189	0.0204	0.0217	0.0193	0.0181	0.0188	0.0187	0.0199
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0138	0.0168	0.0164	0.0168	0.0163	0.0156	0.0155	0.0158	0.0159	0.0160	0.0151	0.0157	0.0171	0.0143	0.0129	0.0129	0.0130	0.0135
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0166	0.0164	0.0168	0.0155	0.0151	0.0149	0.0154	0.0152	0.0154	0.0146	0.0157	0.0171	0.0140	0.0128	0.0130	0.0129	0.0135
R069	833166.60	821757.87	833250.16	821796.91	29	0	1	0.0118	0.0118	0.0118	0.0117	0.0117	0.0117	0.0119	0.0146	0.0134	0.0125	0.0117	0.0119	0.0112	0.0123	0.0120	0.0123	0.0119	0.0132	0.0144	0.0117	0.0111	0.0105	0.0106	0.0117
R070	833249.90	821820.73	833326.89	821883.87	13	0	1	0.0165	0.0165	0.0165	0.0166	0.0164	0.0164	0.0164	0.0188	0.0177	0.0180	0.0171	0.0173	0.0167	0.0174	0.0168	0.0168	0.0159	0.0169	0.0180	0.0159	0.0154	0.0157	0.0155	0.0161

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R071	833327.91	821859.29	833397.24	821875.22	18	0	1
R072	833397.24	821875.22	833501.75	821897.07	20	0	1
R073	833451.80	821860.54	833397.24	821875.22	17	0	1
R074	833281.64	821790.34	833451.80	821860.84	20	0	1
R075	833449.48	821861.09	833506.97	821883.08	16	0	1
R076	833501.46	821897.80	833548.66	821899.77	16	0	1
R076	833548.66	821899.77	833603.43	821886.99	16	0	1
R076	833603.43	821886.99	833684.92	821822.32	16	0	1
R077	833506.57	821884.14	833553.57	821884.36	17	0	1
R077	833553.57	821884.36	833600.48	821871.28	17	0	1
R077	833600.48	821871.28	833673.84	821812.09	17	0	1
R078	833682.38	821822.35	833875.32	821880.75	16	0	1
R079	833673.29	821811.43	833867.51	821851.46	16	0	1
R080	833875.67	821861.18	833969.54	821587.94	16	0	1
R081	833867.01	821850.88	833983.08	821582.98	20	0	1
R082	833458.18	821864.41	833510.75	821821.12	14	0	1
R082	833510.75	821821.12	833536.39	821785.93	14	0	1
R082	833536.29	821785.93	833570.13	821687.58	14	0	1
R083	833436.83	821855.11	833496.18	821813.12	14	0	1
R083	833496.18	821813.12	833524.36	821772.29	14	0	1
R083	833524.36	821772.29	833559.81	821652.62	14	0	1
R084	833567.54	821687.02	833582.69	821644.65	13	0	1
R084	833582.69	821644.68	833607.71	821603.87	13	0	1
R085	833609.34	821605.84	833640.24	821575.52	14	0	1
R085	833640.24	821575.52	833681.67	821545.20	14	0	1
R085	833681.67	821545.20	833720.52	821512.85	14	0	1
R086	833550.70	821649.89	833603.88	821583.58	17	0	1
R086	833603.88	821583.58	833646.83	821546.45	17	0	1
R087	833648.49	821548.42	833695.49	821508.30	13	0	1
R088	833254.24	821811.68	833365.50	821856.64	17	4	4
R088	833365.50	821856.64	833416.50	821865.51	17	7	4
R088	833416.50	821865.51	833487.63	821841.09	17	9	4
R088	833487.63	821841.09	833533.63	821786.07	17	10	4
R088	833533.63	821786.07	833574.80	821657.75	17	9	4
R088	833574.80	821657.75	833600.16	821605.82	17	7	4
R088	833600.16	821605.82	833712.08	821511.11	17	6	4
R089	833256.86	821891.44	833370.08	821846.87	16	6	4
R089	833370.08	821846.87	833427.36	821852.03	16	7	4
R089	833427.36	821852.03	833480.60	821829.25	16	9	4
R089	833480.60	821829.25	833522.46	821786.30	16	10	4
R089	833522.46	821786.30	833543.19	821725.47	16	9	4
R089	833543.19	821725.47	833582.07	821653.37	16	8	4
R089	833582.07	821653.37	833598.99	821594.44	16	8	4
R089	833598.99	821594.44	833699.93	821508.87	16	6	4
R090+R091	833259.78	821829.64	833337.84	821634.13	17	0	1
R092+R093	833337.92	821632.03	833449.56	821640.31	20	0	1
R092+R093	833449.06	821640.31	833513.09	821599.24	20	0	1
R094	833337.84	821634.13	833341.51	821576.41	16	0	1
R095	833609.59	821591.72	833648.49	821548.43	17	0	1
R096+R097	833960.88	822454.38	834028.77	822414.27	18	0	1
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1
R102+R103	834216.31	822256.36	834309.95	822180.58	18	0	1
R104+R106	834309.96	822180.68	834407.46	822098.55	18	0	1
R106	833917.83	822431.11	833991.76	822369.39	18	0	1
R107	833991.55	822370.04	834090.39	822287.53	18	0	1
R108	834090.84	822288.08	834181.98	822212.22	18	0	1
R109	834181.88	822212.22	834273.05	822136.48	17	0	1
R110	834273.34	822136.83	834364.38	822060.84	17	0	1
R111	834363.46	822059.86	834400.74	822028.83	18	0	1
R112	833848.76	822405.79	833902.96	822360.57	19	0	1
R113	833833.16	822335.17	833909.65	822271.35	18	0	1
R114	833909.65	822271.35	833994.47	822201.23	18	0	1
R115	833994.06	822200.75	834077.01	822132.08	16	0	1
R116	834076.90	822131.94	834097.30	822115.02	18	0	1
R117	834097.30	822115.02	834190.59	822037.73	18	0	1
R118	834190.59	822037.73	834243.25	821993.98	19	0	1
R119	834242.94	821993.86	834282.16	821961.43	19	0	1
R120	834281.93	821961.17	834309.17	821886.80	18	0	1
R121	833768.03	822376.18	833799.11	822310.98	18	0	1
R122	833761.98	822311.12	833868.78	822222.16	18	0	1
R123	833868.78	822222.16	833964.75	822150.69	16	0	1
R124	833673.82	822341.72	833694.88	822284.07	18	0	1
R125	833694.86	822284.07	833827.77	822172.99	19	0	1
R126	833653.40	822269.00	833669.33	822174.73	13	0	1
R127	833409.65	822315.75	833503.51	822278.46	16	0	1
R128	833503.61	822278.46	833524.36	822221.21	16	0	1
R129	833377.80	822332.03	833305.00	822293.72	18	0	1
R130	833377.80	822232.03	833398.77	822175.17	18	0	1
R131	833398.42	822175.04	833434.10	822080.76	16	0	1
R132	833433.92	822080.70	833460.51	822007.07	18	0	1
R133	833460.45	822007.06	833481.00	821952.76	19	0	1
R134	833481.00	821952.76	833506.97	821883.06	16	0	1
R135	833209.07	822239.78	833232.06	822178.07	16	0	1
R136	833232.03	822178.06	833253.39	822120.94	18	0	1
R137	833080.91	822182.03	833100.63	822129.44	18	0	1
R138	833100.53	822129.44	833121.79	822072.07	18	0	1
R139	833121.68	822072.03	833166.56	821977.95	18	0	1
R140	833274.40	822007.07	833296.88	821947.56	17	0	1

FSP (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
0.0164	0.0163	0.0164	0.0164	0.0162	0.0163	0.0163	0.0185	0.0171	0.0174	0.0168	0.0168	0.0165	0.0170	0.0166	0.0166	0.0157	0.0165	0.0180	0.0157	0.0154	0.0158	0.0156	0.0163
0.0175	0.0173	0.0176	0.0171	0.0173	0.0175	0.0174	0.0196	0.0178	0.0182	0.0181	0.0179	0.0174	0.0178	0.0174	0.0174	0.0161	0.0167	0.0182	0.0163	0.0156	0.0159	0.0159	0.0169
0.0151	0.0151	0.0149	0.0149	0.0150	0.0152	0.0150	0.0173	0.0156	0.0153	0.0149	0.0152	0.0147	0.0157	0.0152	0.0155	0.0150	0.0155	0.0167	0.0151	0.0146	0.0144	0.0144	0.0155
0.0158	0.0159	0.0159	0.0159	0.0155	0.0156	0.0158	0.0179	0.0163	0.0162	0.0158	0.0159	0.0153	0.0161	0.0155	0.0156	0.0148	0.0153	0.0166	0.0148	0.0144	0.0143	0.0142	0.0151
0.0155	0.0155	0.0158	0.0152	0.0153	0.0156	0.0157	0.0180	0.0162	0.0160	0.0156	0.0156	0.0150	0.0158	0.0152	0.0153	0.0145	0.0151	0.0164	0.0145	0.0140	0.0135	0.0139	0.0148
0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
0.0196	0.0199	0.0198	0.0200	0.0194	0.0197	0.0197	0.0215	0.0198	0.0209	0.0207	0.0202	0.0196	0.0194	0.0188	0.0184	0.0168	0.0171	0.0185	0.0167	0.0164	0.0169	0.0166	0.0174
0.0143	0.0142	0.0144	0.0144	0.0140	0.0143	0.0143	0.0167	0.0151	0.0145	0.0139	0.0142	0.0133	0.0146	0.0140	0.0142	0.0138	0.0143	0.0155	0.0138	0.0135	0.0130	0.0129	0.0140
0.0164	0.0165	0.0163	0.0164	0.0164	0.0167	0.0166	0.0186	0.0167	0.0170	0.0167	0.0168	0.0162	0.0169	0.0162	0.0164	0.0154	0.0157	0.0172	0.0153	0.0151	0.0157	0.0154	0.0161
0.0145	0.0144	0.0146	0.0147	0.0143	0.0145	0.0145	0.0168	0.0152	0.0147	0.0142	0.0144	0.0137	0.0148	0.0142	0.0144	0.0140	0.0145	0.0157	0.0140	0.0138	0.0133	0.0132	0.0143
0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
0.0197	0.0197	0.0198	0.0197	0.0197	0.0197	0.0197	0.0203	0.0201	0.0201	0.0199	0.0201	0.0198	0.0204	0.0201	0.0202	0.0201	0.0201	0.0204	0.0198	0.0198	0.0199	0.0199	0.0196
0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
0.0178	0.0177	0.0173	0.0173	0.0174	0.0178	0.0179	0.0214	0.0207	0.0197	0.0190	0.0192	0.0187	0.0198	0.0196	0.0202	0.0193	0.0204	0.0220	0.0193	0.0183	0.0173	0.0178	0.0196
0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
0.0101	0.0101	0.0101	0.0101	0.0102	0.0102	0.0101	0.0109	0.0101	0.0104	0.0096	0.0097	0.0089	0.0095	0.0084	0.0085	0.0083	0.0086	0.0082	0.0074	0.0076	0.0068	0.0065	0.0078
0.0231	0.0226	0.0227	0.0227	0.0228	0.0227	0.0228	0.0239	0.0234	0.0236	0.0236	0.0234	0.0233	0.0233	0.0231	0.0231	0.0228	0.0228	0.0233	0.0223	0.0222	0.0224	0.0225	0.0224
0.0213	0.0260	0.0147	0.0150	0.0148	0.0157	0.0210	0.0236	0.0240	0.0246	0.0225	0.0227	0.0222	0.0238	0.0240	0.0230	0.0223	0.0222	0.0258	0.0224	0.0216	0.0222	0.0231	0.0217
0.0282	0.0291	0.0279	0.0277	0.0308	0.0294	0.0298	0.0309	0.0299	0.0342	0.0335	0.0321	0.0322	0.0312	0.0306	0.0297	0.0253	0.0270	0.0293	0.0257	0.0238	0.0260	0.0263	0.0255
0.0255	0.0251	0.0254	0.0266	0.0258	0.0279	0.0256	0.0287	0.0269	0.0301	0.0290	0.0292	0.0290	0.0286	0.0281	0.0277	0.0245	0.0257	0.0277	0.0252	0.0241	0.0252	0.0248	0.0263
0.0269	0.0284	0.0241	0.0273	0.0256	0.0263	0.0273	0.0268	0.0261	0.0280	0.0288	0.0281	0.0282	0.0273	0.0256	0.0257	0.0231	0.0232	0.0253	0.0222	0.0224	0.0229	0.0238	0.0240
0.0239	0.0261	0.0216	0.0239	0.0230	0.0210	0.0254	0.0271	0.0252	0.0268	0.0249	0.0244	0.0244	0.0241	0.0249	0.0235	0.0220	0.0226	0.0249	0.0219	0.0220	0.0235	0.0234	0.0248
0.0195	0.0179	0.0193	0.0210	0.0205	0.0189	0.0192	0.0215	0.0209	0.0206	0.0203	0.0203	0.0204	0.0215	0.0215	0.0219	0.0208	0.0223	0.0240	0.0213	0.0202	0.0207	0.0206	0.0214
0.0188	0.0185	0.0201	0.0222	0.0215	0.0195	0.0186	0.0222	0.0201	0.0199	0.0198	0.0199	0.0196	0.0210	0.0210	0.0212	0.0203	0.0211	0.0234	0.0206	0.0205	0.0204	0.0211	0.0210
0.0185	0.0181	0.0200	0.0219	0.0208	0.0192	0.0183	0.0211	0.0198	0.0194	0.0193	0.0198	0.0193	0.0205	0.0206	0.0207	0.0204	0.0211	0.0228	0.0208	0.0198	0.0201	0.0209	0.0220
0.0185	0.0181	0.0200	0.0220	0.0209	0.0192	0.0183	0.0212	0.0198	0.0195	0.0194	0.0200	0.0197	0.0210	0.0203	0.0211	0.0203	0.0209	0.0230	0.0205	0.0194	0.0212	0.0198	0.0224
0.0189	0.0196	0.0187	0.0200	0.0197	0.0183	0.0187	0.0216	0.0198	0.0194	0.0195	0.0197	0.0192	0.0206	0.0203	0.0207	0.0201	0.0210	0.0226	0.0205	0.0201	0.0206	0.0197	0.0207
0.0195	0.0177	0.0193	0.0208	0.0203	0.0186	0.0192	0.0214	0.0199	0.0196	0.0197	0.0198	0.0194	0.0207	0.0205	0.0208	0.0201	0.0206	0.0226	0.0203	0.0195	0.0197	0.0203	0.0212
0.0323	0.0320	0.0300	0.0346	0.0326	0.0326	0.0310	0.0325	0.0308	0.0351	0.0354	0.0340	0.0339	0.0323	0.0327	0.0314	0.0270	0.0285	0.0309	0.0279	0.0264	0.0295	0.0290	0.0285
0.0166	0.0184	0.0140	0.0136	0.0142	0.0203	0.0188	0.0204	0.0189	0.0183	0.0182	0.0187	0.0182	0.0192	0.0191	0.0196	0.0189	0.0198	0.0214	0.0190	0.0180	0.0197	0.0183	0.0208
0.0189	0.0187	0.0181	0.0190	0.0187	0.0187	0.0187	0.0212	0.0205	0.0206	0.0203	0.0205	0.0202	0.0212	0.0210	0.0212	0.0203	0.0208	0.0227	0.0204	0.0193	0.0195	0.0195	0.0202
0.0237	0.0241	0.0239	0.0235	0.0241	0.0239	0.0237	0.0253	0.0240	0.0258	0.0259	0.0256	0.0256	0.0252	0.0250	0.0247	0.0224	0.0231	0.0249	0.0231	0.0221	0.0238	0.0235	0.0236
0.0181	0.0178	0.0180	0.0191	0.0187	0.0187	0.0183	0.0205	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0197	0.0200	0.0195	0.0201	0.0215	0.0197	0.0187	0.0191	0.0191	0.0200
0.0184	0.0181	0.0183	0.0175	0.0190	0.0179	0.0182	0.0204	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0196	0.0200	0.0192	0.0201	0.0215	0.0197	0.0188	0.0191	0.0190	0.0201
0.0183	0.0181	0.0182	0.0174	0.0189	0.0179	0.0182	0.0202	0.0192	0.0189	0.0188	0.0192	0.0190	0.0198	0.0197	0.0200	0.0196	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
0.0181	0.0182	0.0176	0.0186	0.0183	0.0183	0.0179	0.0203	0.0191	0.0191	0.0188	0.0191	0.0189	0.0198	0.0197	0.0200	0.0195	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
0.0180	0.0181	0.0186	0.0185	0.0181	0.0182	0.0182	0.0204	0.0196	0.0194	0.0190	0.0193	0.0189	0.0199	0.0201	0.0200	0.0195	0.0200	0.0219	0.0196	0.0187	0.0190	0.0192	0.0200
0.0164	0.0164	0.0158	0.0166	0.0161	0.0164	0.0162	0.0193	0.0170	0.0164	0.0154	0.0162	0.0150	0.0182	0.0167	0.0169	0.0169	0.0184	0.0200	0.0180	0.0181	0.0183	0.0176	0.0184
0.0179	0.0187	0.0197	0.0209	0.0199	0.0186	0.0172	0.0201	0.0185	0.0181	0.0172	0.0177	0.0164	0.0183	0.0170	0.0174	0.0169	0.0182	0.0193	0.0170	0.0168	0.0146	0.0148	0.0168
0.0149	0.0148	0.0149	0.0149	0.0147	0.0148	0.0148	0.0183	0.0174	0.0153	0.0144	0.0147	0.0135	0.0155	0.0151	0.0156	0.0154	0.0165	0.0178	0.0155	0.0143	0.0124	0.0124	0.0150
0.0176	0.0177	0.0177	0.0175	0.0173	0.0176	0.0176	0.0198	0.0185	0.0185	0.0175	0.0181	0.0172	0.0194	0.0184	0.0187	0.0186	0.0192	0.0205	0.0185	0.0195	0.0199	0.0194	0.0182
0.0169	0.0169	0.0169	0.0167	0.0169	0.0168	0.0169	0.0197	0.0178	0.0175	0.0163	0.0168	0.0154	0.0168	0.0165	0.0168	0.0162	0.0171	0.0181	0.0159	0.0151	0.0139	0.0130	0.0155
0.0206	0.0215	0.0202	0.0221	0.0215	0.0197	0.0203	0.0228	0.0216	0.0217	0.0218	0.0218	0.0216	0.0224	0.0219	0.0222	0.0210	0.0222	0.0240	0.0213	0.0208	0.0216	0.0206	0.0218
0.0169	0.0169	0.0167	0.0168	0.0169	0.0169	0.0168	0.0196	0.0183	0.0172	0.0166	0.0170	0.0159	0.0177	0.0168	0.0171	0.0174	0.0178	0.0194	0.0170	0.0170	0.0156	0.0153	0.0169
0.0162	0.0162	0.0160	0.0161	0.0160	0.0163	0.0162	0.0190	0.0173	0.0162	0.0156	0.0161	0.0150	0.0169	0.0160	0.0164	0.0166	0.0175	0.0188	0.0164	0.0163	0.0153	0.0152	0.0167
0.0146	0.0146	0.0145	0.0146	0.0145	0.0145	0.0146	0.0179	0.0164	0.0151	0.0141	0.0146	0.0135	0.0154	0.0146	0.0150	0.0149	0.0159	0.0172	0.0149	0.0146	0.0136	0.0134	0.0150
0.0145	0.0144	0.0144	0.0144	0.0144	0.0145	0.0145	0.0178	0.0163	0.0150	0.0139	0.0145	0.0134	0.0153	0.0144	0.0148	0.0148	0.0158	0.0168	0.0148	0.0148	0.0134	0.0132	0.0148
0.0150	0.0151	0.0151	0.0151	0.0151	0.0151	0.0150	0.0185	0.0174	0.0164	0.0146	0.0150	0.0142	0.0159	0.0146	0.0155	0.0158	0.0159	0.0170	0.0148	0.0147	0.0133	0.0129	0.0153
0.0144	0.0148	0.0151	0.0151	0.0147	0.0137	0.0126	0.0130	0.0134	0.0147	0.0137	0.0132	0.0136	0.0127	0.0121	0.0118	0.0111	0.0116	0.0120	0.0106	0.0112	0.0106	0.0100	0.0104
0.0185	0.0198	0.0213	0.0223	0.0214	0.0195	0.0176	0.0203	0.0196	0.0206	0.0190	0.0191	0.0184	0.0188	0.0183	0.0175	0.0166	0.0178	0.0195	0.0165	0.0161	0.0142	0.0141	0.0160
0.0171	0.0180	0.0191	0.0203	0.0194	0.0178	0.0162	0.0190	0.0184	0.0177	0.0170	0.0172	0.0165	0.0176	0.0172	0.0174	0.0164	0.0177	0.0193	0.0170	0.0149	0.0147	0.0149	0.0164
0.0240	0.0277	0.0346	0.0346	0.0331	0.0256	0.0203	0.0220	0.0181	0.0173	0.0180	0.0180	0.0169	0.0188	0.0179	0.0183	0.0179	0.0178	0.0187	0.0174	0.0206	0.0180	0.0181	0.0189
0.0152	0.0161	0.0138	0.0138	0.0138	0.0138	0.0152	0.0189	0.0168	0.0157	0.0147	0.0152	0.0141	0.0162	0.0151	0.0155	0.0155	0.0164	0.0178	0.0156	0.0154	0.0139	0.0141	0.0157
0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
0.0141	0.0142	0.0142	0.0142	0.0141	0.0142	0.0141	0.0173	0.0155	0.0141	0.0134	0.0139	0.0128	0.0148	0.0140	0.0145	0.0145	0.0151	0.0165	0.0144	0.0144	0.0134	0.0134	0.0146
0.0195	0.0200	0.0195	0.0205	0.0199	0.0191	0.0193	0.0222	0.0199	0.0202	0.0194	0.0191	0.0179	0.0188	0.0177	0.0176	0.0163	0.0170	0.0186	0.0161	0.0155	0.0140	0.0143	0.0164

Caline 4 input for 2034 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.35	821947.28	833315.56	821891.67	13	0	1	0.0193	0.0175	0.0161	0.0161	0.0158	0.0159	0.0192	0.0220	0.0197	0.0206	0.0197	0.0189	0.0181	0.0191	0.0175	0.0172	0.0159	0.0168	0.0180	0.0160	0.0151	0.0139	0.0135	0.0161
R142	833329.89	821853.87	833315.98	821891.84	13	0	1	0.0127	0.0110	0.0115	0.0097	0.0104	0.0118	0.0146	0.0141	0.0131	0.0149	0.0150	0.0152	0.0161	0.0158	0.0160	0.0163	0.0155	0.0162	0.0167	0.0160	0.0163	0.0192	0.0181	0.0168
R143	833139.75	821889.31	833160.17	821834.07	13	0	1	0.0193	0.0198	0.0193	0.0202	0.0198	0.0190	0.0199	0.0217	0.0203	0.0212	0.0199	0.0199	0.0187	0.0194	0.0183	0.0181	0.0171	0.0177	0.0187	0.0169	0.0158	0.0148	0.0145	0.0167
R144	833160.17	821834.07	833178.74	821793.15	13	0	1	0.0194	0.0198	0.0193	0.0204	0.0199	0.0190	0.0192	0.0219	0.0203	0.0205	0.0198	0.0193	0.0181	0.0191	0.0177	0.0178	0.0166	0.0173	0.0184	0.0166	0.0158	0.0148	0.0143	0.0167
R145+R146	833812.49	821978.50	834004.99	821818.03	17	0	1	0.0161	0.0161	0.0168	0.0156	0.0152	0.0164	0.0160	0.0192	0.0169	0.0162	0.0151	0.0155	0.0141	0.0159	0.0148	0.0152	0.0148	0.0160	0.0171	0.0149	0.0133	0.0111	0.0117	0.0148
R147+R148	833738.44	821888.35	833931.13	821727.74	15	0	1	0.0157	0.0156	0.0159	0.0158	0.0158	0.0161	0.0159	0.0190	0.0169	0.0159	0.0149	0.0152	0.0138	0.0156	0.0146	0.0150	0.0147	0.0155	0.0167	0.0144	0.0129	0.0105	0.0114	0.0147
R149	833728.61	821749.55	833807.73	821684.35	14	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R149	833774.08	821643.82	833807.73	821684.35	13	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R150	833736.07	821758.23	833807.71	821603.87	11	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R151	833813.01	821610.06	833885.50	821543.70	13	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
R161	833693.50	821643.70	833776.28	821542.53	14	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
R152	833774.09	821643.52	833826.17	821600.59	20	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0140	0.0162	0.0151	0.0156	0.0157	0.0164	0.0178	0.0156	0.0156	0.0143	0.0145	0.0159
R153	833991.31	822369.79	834018.77	822414.27	19	0	1	0.0171	0.0164	0.0167	0.0170	0.0173	0.0170	0.0173	0.0201	0.0186	0.0172	0.0162	0.0166	0.0149	0.0165	0.0158	0.0162	0.0155	0.0163	0.0176	0.0154	0.0146	0.0131	0.0194	0.0151
R154	833952.46	822320.45	833962.00	822369.67	16	0	1	0.0171	0.0165	0.0167	0.0170	0.0173	0.0171	0.0173	0.0201	0.0186	0.0176	0.0160	0.0164	0.0155	0.0171	0.0158	0.0162	0.0156	0.0165	0.0177	0.0152	0.0144	0.0128	0.0131	0.0151
R155	833909.66	822271.38	833950.46	822320.45	16	0	1	0.0172	0.0165	0.0168	0.0170	0.0173	0.0171	0.0174	0.0206	0.0191	0.0177	0.0166	0.0170	0.0152	0.0169	0.0161	0.0163	0.0158	0.0166	0.0179	0.0157	0.0150	0.0131	0.0134	0.0151
R156	833868.78	822222.16	833909.65	822271.38	16	0	1	0.0205	0.0194	0.0195	0.0190	0.0185	0.0190	0.0200	0.0255	0.0238	0.0231	0.0219	0.0221	0.0207	0.0222	0.0206	0.0206	0.0202	0.0209	0.0215	0.0189	0.0175	0.0156	0.0158	0.0176
R157	833868.06	822222.34	833827.77	822172.95	16	0	1	0.0187	0.0187	0.0183	0.0184	0.0182	0.0184	0.0188	0.0233	0.0220	0.0209	0.0199	0.0197	0.0183	0.0204	0.0188	0.0190	0.0187	0.0193	0.0205	0.0179	0.0169	0.0156	0.0151	0.0175
R158	833827.77	822172.06	833776.40	822113.30	16	0	1	0.0184	0.0183	0.0183	0.0185	0.0183	0.0185	0.0185	0.0214	0.0198	0.0191	0.0181	0.0184	0.0172	0.0185	0.0175	0.0176	0.0172	0.0177	0.0189	0.0170	0.0161	0.0149	0.0150	0.0169
R159	834075.91	822299.62	834112.50	822346.34	16	0	1	0.0175	0.0181	0.0192	0.0196	0.0140	0.0142	0.0177	0.0201	0.0176	0.0175	0.0172	0.0175	0.0165	0.0187	0.0181	0.0181	0.0169	0.0183	0.0191	0.0176	0.0165	0.0168	0.0169	0.0190
R160	834090.38	822287.53	834127.62	822332.11	15	0	1	0.0179	0.0186	0.0184	0.0176	0.0182	0.0178	0.0182	0.0210	0.0189	0.0190	0.0184	0.0181	0.0173	0.0183	0.0174	0.0171	0.0163	0.0171	0.0182	0.0166	0.0158	0.0159	0.0159	0.0168
R161	834034.90	822250.52	834075.91	822299.62	15	0	1	0.0170	0.0169	0.0168	0.0172	0.0166	0.0174	0.0173	0.0202	0.0187	0.0179	0.0177	0.0178	0.0172	0.0184	0.0177	0.0179	0.0174	0.0182	0.0200	0.0173	0.0171	0.0169	0.0169	0.0178
R162	834049.42	822238.28	834090.39	822287.83	15	0	1	0.0178	0.0180	0.0177	0.0182	0.0180	0.0177	0.0177	0.0205	0.0188	0.0189	0.0180	0.0179	0.0169	0.0183	0.0171	0.0172	0.0165	0.0169	0.0180	0.0159	0.0156	0.0156	0.0150	0.0168
R163	833993.06	822201.60	834034.90	822250.52	16	0	1	0.0183	0.0183	0.0182	0.0183	0.0182	0.0185	0.0183	0.0212	0.0194	0.0196	0.0191	0.0188	0.0180	0.0189	0.0179	0.0181	0.0169	0.0174	0.0189	0.0167	0.0162	0.0159	0.0157	0.0171
R164	834007.80	822188.33	834049.42	822238.28	15	0	1	0.0170	0.0169	0.0168	0.0172	0.0166	0.0174	0.0167	0.0196	0.0180	0.0174	0.0165	0.0169	0.0159	0.0171	0.0161	0.0164	0.0157	0.0164	0.0179	0.0159	0.0155	0.0149	0.0149	0.0164
R165	833953.31	822151.70	833994.47	822201.23	16	0	1	0.0193	0.0195	0.0191	0.0198	0.0196	0.0191	0.0192	0.0219	0.0203	0.0205	0.0200	0.0198	0.0191	0.0197	0.0191	0.0191	0.0180	0.0186	0.0200	0.0179	0.0173	0.0171	0.0172	0.0181
R166	833872.14	822051.38	833964.75	822150.50	16	0	1	0.0162	0.0160	0.0161	0.0162	0.0163	0.0162	0.0160	0.0193	0.0181	0.0165	0.0161	0.0162	0.0151	0.0163	0.0157	0.0161	0.0158	0.0164	0.0173	0.0155	0.0138	0.0118	0.0125	0.0151
R167	833885.47	822042.45	834007.88	822188.33	16	0	1	0.0249	0.0251	0.0252	0.0251	0.0251	0.0253	0.0249	0.0267	0.0254	0.0277	0.0274	0.0263	0.0266	0.0259	0.0254	0.0246	0.0222	0.0228	0.0248	0.0221	0.0218	0.0236	0.0233	0.0226
R168+R169	833813.72	821975.47	833873.36	822050.03	21	0	1	0.0100	0.0104	0.0105	0.0100	0.0102	0.0100	0.0102	0.0117	0.0114	0.0109	0.0106	0.0106	0.0102	0.0105	0.0104	0.0106	0.0102	0.0110	0.0109	0.0098	0.0096	0.0088	0.0087	0.0101
R170+R171	833738.44	821888.35	833812.49	821978.50	16	0	1	0.0116	0.0116	0.0115	0.0120	0.0116	0.0117	0.0118	0.0123	0.0112	0.0128	0.0123	0.0124	0.0125	0.0126	0.0120	0.0121	0.0114	0.0118	0.0122	0.0112	0.0116	0.0125	0.0119	0.0113
R172+R173	833694.93	821822.32	833739.28	821887.65	20	0	1	0.0171	0.0171	0.0171	0.0172	0.0170	0.0170	0.0172	0.0202	0.0182	0.0181	0.0175	0.0177	0.0170	0.0182	0.0175	0.0177	0.0171	0.0179	0.0194	0.0171	0.0163	0.0159	0.0159	0.0172
R174+R175	833561.79	821677.50	833693.38	821823.55	16	0	1	0.0184	0.0183	0.0181	0.0186	0.0177	0.0185	0.0184	0.0216	0.0204	0.0199	0.0194	0.0195	0.0189	0.0201	0.0193	0.0195	0.0186	0.0195	0.0209	0.0185	0.0178	0.0175	0.0175	0.0184
R176	833488.77	821608.40	833500.47	821680.73	20	0	1	0.0188	0.0186	0.0186	0.0185	0.0188	0.0187	0.0187	0.0213	0.0197	0.0198	0.0194	0.0193	0.0186	0.0194	0.0190	0.0190	0.0181	0.0188	0.0201	0.0184	0.0179	0.0179	0.0180	0.0188
R177	833513.09	821599.24	833573.68	821688.47	20	0	1	0.0174	0.0173	0.0174	0.0171	0.0175	0.0172	0.0173	0.0197	0.0179	0.0178	0.0175	0.0178	0.0171	0.0182	0.0177	0.0178	0.0171	0.0181	0.0192	0.0172	0.0166	0.0165	0.0164	0.0176
R178	833440.44	821529.90	833468.50	821608.61	16	0	1	0.0202	0.0199	0.0200	0.0200	0.0199	0.0198	0.0202	0.0221	0.0210	0.0215	0.0207	0.0203	0.0198	0.0202	0.0195	0.0194	0.0184	0.0189	0.0201	0.0186	0.0184	0.0187	0.0186	0.0191
R179	833451.64	821526.21	833511.32	821600.38	17	0	1	0.0199	0.0199	0.0199	0.0197	0.0200	0.0199	0.0198	0.0219	0.0203	0.0211	0.0208	0.0209	0.0210	0.0217	0.0214	0.0215	0.0206	0.0208	0.0226	0.0205	0.0197	0.0208	0.0207	0.0211
R180	834218.31	822236.38	834325.00	822385.39	19	0	1	0.0192	0.0193	0.0195	0.0193	0.0190	0.0195	0.0195	0.0225	0.0209	0.0204	0.0200	0.0202	0.0193	0.0205	0.0199	0.0199	0.0190	0.0198	0.0216	0.0191	0.0190	0.0184	0.0183	0.0195
R181	834181.98	822212.22	834219.31	822258.35	18	0	1	0.0156	0.0154	0.0156	0.0158	0.0152	0.0150	0.0157	0.0216	0.0191	0.0189	0.0186	0.0188	0.0176	0.0211	0.0204	0.0263	0.0188	0.0194	0.0212	0.0196	0.0198	0.0180	0.0177	0.0199
R182	834140.62	822162.67	834181.78	822212.39	16	0	1	0.0182	0.0187	0.0197	0.0204	0.0154	0.0153	0.0187	0.0211	0.0188	0.0186	0.0184	0.0188	0.0179	0.0192	0.0183	0.0187	0.0178	0.0183	0.0199	0.0182	0.0185	0.0167	0.0166	0.0187
R183	834099.34	822113.33	834140.62	822162.67	16	0	1	0.0192	0.0199	0.0210	0.0221	0.0157	0.0156	0.0197	0.0219	0.0193	0.0197	0.0195	0.0202	0.0194	0.0206	0.0177	0.0181	0.0174	0.0183	0.0199	0.0182	0.0184	0.0188	0.0190	0.0210
R184	834077.01	822132.08	834001.51	822100.94	13	0	1	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R184	834051.51	822100.94	834071.90	822084.18	13	0	1	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R184	834071.90	822084.18	834067.30	822115.02	14	0	1	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R186	834309.08	822189.58	834382.69	822267.44	19	0	1	0.0186	0.0192	0.0187	0.0192	0.0199	0.0194	0.0189	0.0218	0.0199	0.0198	0.0196	0.0194	0.0189	0.0202	0.0195	0.0196	0.0187	0.0201	0.0212	0.0188	0.0185	0.0185	0.0184	0.0199
R186	834231.54	822088.63	834273.34	822138.83	18	0	1	0.0202	0.0210	0.0228	0.0236	0.0156	0.0236	0.0206	0.0226	0.0199	0.0206	0.0207	0.0213	0.0204	0.0211	0.0180	0.0184	0.0175	0.0185	0.0201	0.0183	0.0184	0.0188	0.0192	0.0215
R187	834195.59	822037.73	834231.78	822088.45	19	0	1	0.0198	0.0193	0.0199	0.0204	0.0190	0.0188	0.0202	0.0226	0.0207	0.0206	0.0206	0.0211	0.0205	0.0214	0.0211	0.0213	0.0204	0.0213	0.0228	0.0204	0.0199	0.0206	0.0194	0.0212
R188+R189	834104.98	821816.03	834068.34	821898.22	19	0	1	0.0167	0.0176	0.0187	0.0174	0.0180	0.0175	0.0171	0.0191	0.0179	0.0186	0.0171	0.0174	0.0171	0.0184	0.0177	0.0176	0.0169	0.0174	0.0189	0.0171	0.0169	0.0160	0.0157	0.0183
R190+R191	833931.13	821727.74	834004.99	821816.03	16	0	1	0.0195	0.0202	0.0192	0.0200	0.0185	0.0181	0.0199	0.0221	0.0199	0.0202	0.0192	0.0200	0.0188	0.0201	0.0192	0.0192	0.0183	0.0192	0.0209	0.0186	0.0183	0.0173	0.0173	0.0187
R192+R193	833873.32	821600.79	833930.85	821727.86	20	0	1	0.0173	0.0180	0.0188	0.0194	0.0190	0.0186	0.0157	0.0176	0.0159	0.0154	0.0147	0.0151	0.0141	0.0157	0.0147	0.0157	0.0150	0.0144	0.0142	0.0144	0.0188	0.0163	0.0146	0.0163
R194+R195	833825.79	821600.86	833887.51	821881.46	20	0	1	0.0199	0.0203	0.0208	0.0213	0.0218	0.0213	0.0201	0.0227	0.0212	0.0216	0.0216	0.0213	0.0201	0.0209	0.0207	0.0205	0.0204	0.0210	0.0217	0.0209	0.0203	0.0204	0.0205	0.0216
R196+R202	833751.01	821623.38	833826.17	821600.56	20	0	1	0.0193	0.0194	0.0188	0.0187	0.0188	0.0187	0.0193	0.0205	0.0205	0.0190	0.0186	0.0189	0.0181	0.0193	0.0186	0.0191	0.0190	0.0192	0.0198	0.0187	0.0185	0.0178	0.0177	0.0208
R197	834364.56	822060.88	834402.15	822104.71	17	0	1	0.0156	0.0158	0.0152	0.0156	0.0156	0.0156	0.0158	0.0238	0.0203	0.0215	0.0224	0.0153	0.0142	0.0163	0.0149	0.0156	0.0155	0.0162	0.0175	0.0153	0.0160	0.0151	0.0147	0.0138
R198	834322.77	822010.88	834363.30	822060.88	18	0	1	0.0156	0.0154	0.0157	0.0154	0.0158	0.0156	0.0153	0.0209	0.0186	0.0184	0.0184	0.0189	0.0183	0.0198	0.0194	0.0201	0.0193	0.0208	0.0226	0.0213	0.0214	0.0240	0.0252	0.0150
R199	834281.93	821961.17	834323.00	822010.48	16	0	1	0.0206	0.0214	0.0225	0.0244	0.0166	0.0244	0.0210	0.0227	0.0217	0.0214	0.0188	0.0193	0.0189	0.0200	0.0164	0.0169	0.0170	0.0177	0.0183	0.0172	0.0167	0.0162	0.0162	0.0175
R200	834239.17	821914.13	834290.08	821962.18	16	0	1	0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170
R200	834239.17	821914.13	834377.00	821846.33	16	0	1	0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822224.11	833177.37	822230.25	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	833177.37	822230.25	833231.06	822345.76	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	833231.06	822345.76	833434.80	822400.45	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	833434.80	822400.45	833980.46	822643.00	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	833980.46	822643.00	833995.46	822646.78	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R004	833118.29	822308.10	833185.93	822315.62	19	0	1	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R004	833425.15	822386.41	833518.29	822421.58	19	0	1	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R005	833518.28	822421.58	833673.75	822495.58	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	833673.75	822495.58	833933.67	822514.65	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	833933.67	822514.65	833973.71	822526.09	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	833973.71	822526.09	834046.15	822526.54	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R006+R007	833527.00	822419.51	833627.55	822455.21	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	833782.11	822441.60	833840.51	822456.02	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R008+R009	833861.17	822398.31	833893.59	822397.15	13	0	1	32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
R008+R009	833893.59	822397.15	833841.85	822468.34	13	0	1	32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
R010+R011	833978.15	822463.30	833898.64	822432.88	12	0	1	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R010+R011	833898.64	822432.88	833883.54	822462.45	12	0	1	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R010+R011	833883.54	822482.40	833840.51	822456.02	12	0	1	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R012+R013	833387.36	822587.47	833423.59	822558.02	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833423.59	822558.02	833418.09	822482.07	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833418.09	822482.07	833447.62	822425.39	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833544.64	822390.48	833587.88	822364.60	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R014+R015	833488.77	822316.11	833587.88	822364.60	14	0	1	64	23	14	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	41
R016+R017	833587.86	822354.60	833633.17	822374.91	15	0	1	63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
R016+R017	833633.17	822374.91	833861.17	822398.31	15	0	1	63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
R019	833092.67	822192.93	833209.07	822239.78	16	0	1	50	22	14	10	11	16	50	100	150	200	150	150	100	100	100	100	50	50	50	50	50	50	23	18
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	50	50	18	12	14	20	50	100	200	250	200	200	200	150	200	150	100	150	150	100	100	50	50	50
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	300	150	200	250	200	150	100	100	100
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	200	150	200	250	200	150	100	100	100
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	100
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	50	19	11	7	10	13	50	50	150	150	150	150	200	200	250	250	200	300	350	300	200	150	150	100
R025	833232.06	822178.07	833377.60	822232.03	14	0	1	50	50	16	11	13	18	50	100	200	200	200	200	250	250	300	350	300	400	450	350	250	200	200	150
R026	833377.60	822232.03	833503.34	822278.92	14	0	1	50	25	15	11	13	18	50	100	200	200	200	200	200	250	250	250	200	300	300	250	200	150	150	100
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	100	50	50	20	22	50	100	150	350	350	350	300	350	350	400	350	300	400	450	350	250	200	200	150
R028	833673.82	822341.72	833768.11	822378.93	13	0	1	50	20	13	9	10	15	50	50	150	150	150	150	150	200	200	200	200	250	300	250	150	150	100	100
R029	833768.03	822378.18	833846.76	822405.79	13	0	1	24	13	8	5	6	9	25	50	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R030	833846.78	822405.79	833917.83	822431.11	14	0	1	50	50	20	14	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
R031	833917.83	822431.11	833980.58	822454.38	14	0	1	14	8	5	4	4	5	14	50	50	100	50	50	100	100	100	100	100	100	150	100	100	50	50	50
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1	105	54	54	54	54	54	108	268	400	400	321	318	368	367	417	416	467	517	565	412	308	257	206	154
R033	833121.79	822072.07	833253.39	822120.94	16	0	1	150	100	100	100	100	100	200	450	700	650	600	600	650	650	750	800	850	1000	1050	800	550	450	450	300
R034	833253.39	822120.94	833398.77	822175.17	16	0	1	150	100	100	100	100	100	200	450	750	700	600	600	650	650	750	800	850	1050	1050	800	550	500	450	300
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	250	200	200	150	150	200	350	800	1250	1150	1000	900	950	950	1000	1000	1000	1150	1100	850	600	550	450	350
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	300	250	200	200	200	250	400	950	1450	1350	1150	1100	1150	1100	1200	1250	1300	1500	1450	1150	800	650	600	450
R037	833653.40	822269.00	833694.86	822284.07	16	0	1	250	200	150	150	150	200	300	750	1150	1100	950	850	900	900	950	950	950	1100	1050	800	550	500	450	300
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	250	200	150	150	150	200	300	750	1150	1100	950	900	900	900	950	1000	1000	1150	1100	850	600	500	450	350
R039	833761.88	822311.12	833799.40	822320.78	14	0	1	200	150	100	100	100	150	250	550	850	850	700	650	700	650	700	700	700	850	800	600	450	350	350	250
R040	833785.11	822318.98	833833.16	822335.17	18	0	1	150	150	100	100	100	150	200	500	750	750	600	550	600	550	600	600	600	650	650	500	350	300	250	200
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	200	150	150	150	150	150	250	600	900	850	750	650	700	650	700	700	700	800	750	600	400	350	300	200
R042	833902.96	822360.57	833960.46	822320.45	16	0	1	250	200	150	150	150	200	300	700	1100	1050	900	850	900	900	950	1000	1000	1200	1200	900	650	550	500	350
R043	833960.46	822330.46	834034.90	822250.62	18	0	1	150	100	100	100	100	100	150	400	650	600	550	500	550	550	600	600	650	750	750	550	400	350	300	200
R044	834034.90	822250.62	834140.62	822162.07	18	0	1	150	150	100	100	100	150	200	500	800	750	650	600	650	650	700	700	750	850	850	650	450	400	350	250
R045	834140.62	822162.07	834231.72	822086.45	19	0	1	100	100	50	50	50	100	150	350	550	550	450	450	450	450	500	550	550	650	650	500	350	300	300	200
R046	834231.72	822086.85	834322.21	822011.22	18	0	1	200	150	100	100	100	150	200	550	800	750	650	600	650	650	700	700	750	850	850	650	450	400	350	250
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	150	100	100	100	100	100	200	450	700	700	600	550	600	600	650	650	700	800	800	600	450	350	350	250
R048	833097.20	821955.42	833155.58	821977.86	17	0	1	600	450	400	400	350	450	750	1750	2700	2550	2150	1950	2000	1900	1950	1950	1950	2200	2050	1600	1100	950	850	600
R049	833155.56	821977.98	833434.10	822086.78	16	0	1	500	400	350	350	350	400	650	1500	2350	2200	1850	1650	1650	1550	1600	1550	1500	1650	1550	1200	800	700	550	450
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	600	450	400	400	400	450	750	1750	2650	2550	2200	2050	2150	2100	2250	2350	2400	2800	2750	2100	1450	1250	1150	800
R051	833274.06	822006.00	833438.70	822007.63	16	0	1	500	400	350	300	300	350	600	1450	2250	2100	1800	1650	1750	1700	1800	1850	1850	2150	2100	1600	1150	950	850	600
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	300	250	200	200	200	250	400	950	1500	1400	1250	1150	1200	1150	1250	1300	1300	1550	1500	1150	800	700	600	450
R053	833796.66	822123.44	833756.68	822163.26	16	0	1	350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
R053	833736.68	822163.26	833688.33	822174.73	16	0	1	350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
R054	833438.83	822007.29	833586.71	822122.03	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833586.71	822122.03	833640.55	822144.40	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833640.56	822144.40	833683.68	822152.80	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833683.68	822152.80	833713.86	822149.82	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833713.88	822149.82	833757.83	822128.55	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833757.83	822128.58	833775.49	822113.30	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R055	833796.63	822123.04	833872.14	822061.39	16	0	1	450	350	300	300	300	350	550	1350	2100	1950	1700	1550	1650	1550	1650	1700	1750	2000	1950	1500	1050	900	800	550
R056	833775.48	822113.30	833867.20	822039.12	16	0	1	250	200	150	150	150	200	300	700	1050	1000	900	800	850	850	900	950	950	1150	1100	850	600	500	450	350
R057	833873.20	822062.60	834159.21	821814.78	16	0	1	300	250	200	200	200	250	400	950	1450	1400	1150	1050	1100	1050	1100	1100	1100	1250	1200	900	650	550	500	350
R058	834159.21	821814.78	834250.10	821738.42	16	0	1	300	200	200	200	200	200	350	850	1350	1250	1050	950	1000	950	1000	950	950	1100	1050	800	550	450	400	300
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	200	150	100	100	100	150	250	550	850	800	700	650	700	700	800	850	900	1050	1050	800	550	500	450	300
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	150	150	100	100	100	150	200	550	800	800	700	650	700	700	750	800	850	1000	1000	750	500	450	400	300
R061	833115.37	821880.29	833139.75	821889.31	16	0	1	50	22	14	9	10	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
R062	833139.75	821889.31	833296.78	821947.78	16	0	1	50	50	22	16	17	50	50	150	250	300	250	250	250	250	300	300	200	300	300	250	150	150	150	100
R063	833296.86	821947.58	833460.51	822007.57	16	0	1	50	18	11	8	9	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
R064	833460.68	822008.03	833543.73	822038.72	15	0	1	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R064	833543.73	822028.73	833593.70	821983.31	15	0	1	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R064	833480.98	821952.82	833563.70	821983.21	15	0	1	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R065	833160.17	821834.07	833316.58	821891.67	16	0	1	50	24	15	11	12	18	50	100	200	200	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R066	833315.60	821891.68	833461.00	821962.76	16	0	1	50	50	18	12	15	22	50	100	200	250	200	200	250	250	300	250	200	300	350	250	200	150	150	100
R067	833154.01	821775.07	833178.47	821783.88	19	0	1	1100	1050	900	850	850	1000	1600	3850	4750	4750	4750	4400	4600	4400	4700	4750	4750	4750	4750	4150	2900	2450	2250	1550
R068	833178.74	821783.16	833253.68	821913.88	18	0	1	1200	950	800	800	750	900	1500	3550	4750	4750	4400	4050	4250	4100	4350	4450	4550	4750	4750	3900	2700	2300	2100	1500
R069	833166.60	821757.87	833260.16	821756.91	29	0	1	800	650	550	550	550	600	1000	2450	3750	3550	3100	2900	3100	3050	3350	3450	3600	4250	4250	3250	2250	1950	1750	1250
R070	833249.92	821820.73	833329.89	821853.87	13	0	1	350	250	250	250	200	250	450	1050	1550	1500	1300	1200	1250	1200	1250	1300	1300	1500	1450	1100	750	650	600	400

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R071	833327.91	821859.20	833397.24	821875.22	16	0	1
R072	833397.24	821875.22	833501.75	821887.07	20	0	1
R073	833451.80	821880.54	833397.24	821875.22	17	0	1
R074	833281.64	821790.34	833451.50	821880.84	20	0	1
R075	833449.48	821861.00	833506.97	821883.06	16	0	1
R076	833501.46	821897.80	833548.80	821889.77	16	0	1
R076	833548.86	821889.77	833603.43	821880.89	16	0	1
R075	833603.43	821880.89	833684.92	821822.32	16	0	1
R077	833506.57	821884.14	833553.57	821884.36	17	0	1
R077	833553.57	821884.36	833600.48	821871.28	17	0	1
R077	833600.48	821871.28	833673.84	821812.09	17	0	1
R078	833682.38	821822.35	833875.32	821880.75	16	0	1
R079	833873.29	821811.42	833867.51	821851.46	16	0	1
R080	833875.67	821861.18	833898.54	821587.94	16	0	1
R081	833867.01	821850.88	833983.08	821582.08	20	0	1
R082	833458.18	821864.41	833510.75	821821.12	14	0	1
R082	833510.75	821821.12	833536.39	821785.93	14	0	1
R082	833536.39	821785.93	833570.13	821687.58	14	0	1
R083	833436.83	821859.11	833498.18	821813.12	14	0	1
R083	833498.18	821813.12	833524.36	821772.29	14	0	1
R083	833524.36	821772.29	833589.81	821652.62	14	0	1
R084	833567.54	821887.02	833582.60	821644.65	13	0	1
R084	833583.89	821644.68	833607.71	821603.87	13	0	1
R085	833605.34	821605.84	833640.24	821575.52	14	0	1
R085	833640.24	821575.52	833681.67	821545.20	14	0	1
R085	833681.67	821545.20	833720.52	821512.85	14	0	1
R086	833550.70	821649.69	833603.88	821583.59	17	0	1
R086	833603.88	821583.58	833644.83	821546.45	17	0	1
R087	833648.49	821548.42	833866.49	821508.30	12	0	1
R088	833254.24	821811.68	833308.50	821858.64	17	4	4
R088	833308.50	821858.64	833418.50	821865.81	17	7	4
R088	833416.50	821865.51	833487.63	821841.39	17	9	4
R088	833487.63	821841.08	833503.63	821786.07	17	10	4
R088	833503.63	821786.07	833574.80	821607.75	17	9	4
R088	833574.80	821607.75	833600.16	821605.62	17	7	4
R088	833600.16	821605.82	833712.08	821511.51	17	6	4
R089	833256.66	821891.44	833370.08	821846.87	16	6	4
R089	833370.06	821846.87	833427.36	821882.03	16	7	4
R089	833427.36	821882.03	833480.60	821826.28	16	9	4
R089	833480.60	821829.20	833522.46	821786.30	16	10	4
R089	833522.46	821786.30	833543.19	821725.47	16	9	4
R089	833543.19	821720.47	833562.07	821653.37	16	8	4
R089	833562.07	821653.37	833598.99	821594.44	16	8	4
R089	833598.98	821594.44	833608.93	821508.87	16	6	4
R090+R091	833269.78	821829.64	833317.84	821634.13	17	0	1
R092+R093	833337.92	821632.92	833449.86	821640.31	20	0	1
R092+R093	833449.86	821640.31	833913.09	821899.24	20	0	1
R094	833337.84	821634.13	833341.51	821576.41	16	0	1
R095	833609.59	821591.72	833648.49	821548.43	17	0	1
R096+R097	833960.08	822454.38	834028.77	822414.27	18	0	1
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1
R102+R103	834216.31	822256.35	834309.95	822180.58	16	0	1
R104+R105	834309.95	822180.68	834407.46	822098.58	18	0	1
R106	833817.83	822431.11	833901.76	822368.39	18	0	1
R107	833901.55	822370.04	834000.39	822287.53	16	0	1
R108	834090.84	822288.08	834181.88	822212.22	18	0	1
R109	834181.88	822212.22	834273.00	822136.48	17	0	1
R110	834273.34	822136.83	834364.38	822060.84	17	0	1
R111	834363.46	822059.80	834400.74	822028.83	18	0	1
R112	833848.76	822405.79	833902.98	822360.57	19	0	1
R113	833833.16	822338.17	833909.88	822371.35	16	0	1
R114	833905.65	822271.38	833994.47	822201.23	16	0	1
R115	833994.06	822200.75	834077.01	822122.08	16	0	1
R116	834076.92	822131.94	834097.30	822115.02	16	0	1
R117	834097.30	822115.02	834190.59	822037.73	18	0	1
R118	834190.59	822037.73	834243.25	821993.98	19	0	1
R119	834242.94	821993.80	834282.10	821961.45	16	0	1
R120	834281.93	821961.17	834300.17	821896.80	16	0	1
R121	833768.03	822376.10	833799.11	822318.08	18	0	1
R122	833781.86	822311.12	833868.78	822222.16	18	0	1
R123	833868.78	822222.16	833964.75	822150.50	18	0	1
R124	833673.82	822341.72	833684.88	822284.07	18	0	1
R125	833694.85	822284.07	833827.77	822172.95	18	0	1
R126	833653.40	822269.00	833688.33	822174.73	13	0	1
R127	833489.66	822316.78	833503.61	822278.46	16	0	1
R128	833503.61	822278.46	833504.35	822321.21	16	0	1
R129	833377.80	822232.03	833308.00	822293.72	18	0	1
R130	833377.80	822232.03	833398.77	822175.17	18	0	1
R131	833398.42	822175.04	833454.10	822080.76	16	0	1
R132	833433.92	822080.70	833469.51	822007.97	16	0	1
R133	833469.45	822007.68	833481.00	821982.76	16	0	1
R134	833481.00	821982.76	833508.97	821883.08	16	0	1
R135	833209.07	822239.78	833232.08	822178.07	16	0	1
R136	833232.03	822178.08	833253.39	822120.94	18	0	1
R137	833080.91	822182.03	833100.53	822129.44	18	0	1
R138	833100.53	822129.44	833121.79	822072.07	18	0	1
R139	833121.68	822072.03	833168.56	821977.96	18	0	1
R140	833274.48	822007.07	833298.88	821947.58	17	0	1

Vehicle count for each road																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
400	300	250	250	250	300	500	1150	1750	1650	1450	1300	1400	1350	1400	1450	1500	1700	1650	1300	900	750	700	500
150	150	100	100	100	150	200	500	800	750	650	600	650	650	700	700	750	900	900	700	450	400	350	250
200	150	150	150	150	150	250	650	950	950	800	700	750	700	750	750	750	800	800	600	400	350	300	250
200	150	150	150	150	150	250	600	900	900	750	700	750	700	750	800	800	950	900	700	500	400	400	250
150	100	100	100	100	100	150	400	650	600	500	450	500	450	500	500	500	550	550	400	300	250	250	150
150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	550	500	400	300	250	200	150
200	150	150	150	150	150	300	650	1000	950	800	750	800	750	800	800	800	900	900	700	500	400	350	250
100	100	100	100	100	100	150	400	550	550	500	450	500	450	500	550	550	650	650	500	350	300	250	200
250	200	150	150	150	200	300	700	1100	1050	900	850	900	850	950	950	1000	1150	1150	850	600	500	450	350
200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
100	100	100	50	50	100	150	350	500	500	450	400	400	400	400	400	400	400	400	300	200	200	150	100
1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
250	250	200	200	200	250	350	850	1350	1300	1050	950	1000	950	1000	1000	1000	1150	1050	800	550	500	400	300
250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	800	900	850	700	450	400	350	250
250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	800	900	850	700	450	400	350	250
50	50	50	50	50	50	50	150	250	250	200	200	200	150	200	200	200	200	200	150	100	100	100	50
100	100	50	50	50	100	150	350	500	500	400	400	400	350	400	400	350	400	400	300	200	200	150	100
28	16	8	6	7	11	29	62	150	150	124	123	123	122	150	123	68	122	150	69	63	62	61	58
60	55	21	14	17	25	61	121	250	300	250	250	250	250	250	250	200	250	250	200	150	150	150	70
100	100	43	31	33	73	100	250	500	550	500	450	450	450	450	450	350	450	450	350	250	200	200	150
72	31	19	14	16	23	74	100	250	250	250	250	250	250	300	300	200	300	300	250	200	150	100	100
40	23	13	10	11	16	43	100	200	200	150	150	150	150	250	200	150	200	300	200	150	150	150	100
50	50	21	15	16	24	50	100	250	250	250	200	250	200	250	250	200	250	250	200	150	100	100	100
50	50	17	12	14	20	50	100	200	200	200	150	150	150	150	100	100	100	100	50	50	50	50	50
50	50	18	13	16	22	50	100	200	250	200	200	200	200	200	150	150	150	150	150	100	100	50	50
50	50	17	12	15	21	50	100	200	250	200	150	150	150	150	150	100	100	100	100	50	50	50	50
50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
50	50	20	15	16	24	50	100	250	250	250	200	200	150	200	150	100	150	150	100	50	50	50	50
50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	150
50	17	10	7	8	12	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
200	100	50	50	50	50	200	400	750	800	750	650	650	650	700	650	500	600	650	500	350	300	250	200
150	100	50	50	50	50	150	350	700	750	650	600	600	600	650	650	500	650	650	500	350	300	250	200
150	100	50	50	50	50	200	350	700	750	650	650	650	600	700	650	500	650	650	500	350	300	250	200
150	100	50	50	50	50	150	300	650	700	600	600	600	550	600	600	450	600	600	500	350	300	250	200
150	100	50	50	50	50	150	350	650	700	650	600	650	600	700	700	550	700	750	600	400	350	300	250
200	100	50	50	50	100	200	400	750	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
200	100	50	50	50	100	200	400	850	900	800	750	750	750	850	800	600	800	850	650	450	400	350	250
20	11	7	5	6	8	21	50	100	100	100	100	100	100	100	100	100	150	150	150	100	100	50	50
100	50	50	24	50	50	100	200	350	400	350	350	350	350	400	400	300	450	450	400	250	200	200	150
50	50	19	13	15	22	50	100	250	250	200	200	200	200	250	250	200	250	300	250	150	150	100	100
50	50	17	12	14	21	50	100	200	250	200	200	150	150	150	150	100	150	150	100	100	50	50	50
50	50	17	12	14	20	50	100	200	200	200	200	200	150	200	200	150	200	200	150	100	100	100	50
50	50	19	13	15	22	50	100	200	250	250	250	250	250	300	300	350	350	400	300	200	200	150	150
50	20	12	9	10	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
50	50	16	11	12	19	50	100	200	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
100	100	100	100	100	100	150	350	550	500	450	400	400	400	450	450	450	500	500	350	250	200	200	150
150	100	100	100	100	100	200	450	700	700	600	550	550	550	550	600	600	700	650	500	350	300	250	200
250	200	200	150	150	200	300	750	1200	1150	900	800	800	750	750	750	750	800	700	550	400	300	300	200
200	150	100	100	100	150	200	500	750	700	650	600	650	600	700	700	750	850	850	650	500	400	350	250
150	100	50	50	50	50	150	300	650	700	650	600	600	600	700	650	500	700	750	600	400	350	300	250
200	100	50	50	50	100	200	350	700	800	700	700	700	700	850	800	650	900	950	750	550	450	400	300
7	5	3	3	2	3	6	12	22	50	23	23	50	50	50	50	23	50	50	50	21	17	16	12
5	3	1	1	1	2	5	11	21	24	21	21	23	23	50	50	21	50	50	50	18	15	14	11
6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
100	50	50	21	23	50	100	150	350	400	350	350	350	400	450	450	350	500	550	450	300	250	250	200
100	50	50	22	50	50	100	200	400	400	400	400	400	450	500	500	400	600	650	500	350	300	250	200

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R141	833295.35	821947.25	833315.56	821891.87	13	0	1
R142	833329.89	821853.87	833315.88	821891.84	13	0	1
R143	833139.75	821889.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821783.15	13	0	1
R145+R146	833812.48	821976.55	834004.58	821516.03	17	0	1
R147+R148	833735.44	821989.35	833931.13	821727.74	16	0	1
R149	833728.61	821749.82	833807.73	821694.38	14	0	1
R149	833774.08	821643.52	833807.73	821694.38	13	0	1
R150	833736.87	821756.23	833687.71	821603.87	11	0	1
R151	833613.61	821610.98	833693.60	821643.70	13	0	1
R151	833692.60	821643.70	833775.28	821642.63	14	0	1
R152	833774.08	821643.52	833828.17	821600.88	20	0	1
R153	833991.31	822389.76	834028.77	822434.27	18	0	1
R154	833950.46	822320.45	833992.00	822389.87	18	0	1
R155	833909.46	822271.35	833950.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.39	18	0	1
R157	833866.58	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.91	822299.62	834113.90	822344.34	18	0	1
R160	834090.39	822287.53	834127.63	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.90	822201.68	834034.90	822250.02	18	0	1
R164	834007.86	822189.33	834049.42	822238.28	15	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.39	833964.75	822190.50	18	0	1
R167	833883.47	822042.45	834007.88	822189.33	18	0	1
R168+R169	833815.72	821975.47	833878.35	822050.03	21	0	1
R170+R171	833726.44	821888.35	833812.49	821978.50	18	0	1
R172+R173	833884.92	821822.32	833719.28	821687.65	20	0	1
R174+R175	833561.78	821677.56	833883.38	821823.55	16	0	1
R176	833496.77	821508.45	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.66	821688.47	20	0	1
R178	833440.44	821529.99	833488.60	821808.61	16	0	1
R179	833451.86	821526.31	833511.33	821600.38	17	0	1
R180	834218.31	822258.35	834305.99	822385.39	18	0	1
R181	834181.98	822212.22	834218.31	822258.38	18	0	1
R182	834140.62	822162.67	834181.76	822212.38	18	0	1
R183	834099.34	822113.33	834140.62	822162.87	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.84	834071.90	822084.58	13	0	1
R184	834071.90	822086.18	834097.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.60	822287.44	18	0	1
R186	834221.54	822088.63	834273.34	822139.83	19	0	1
R187	834150.59	822037.73	834231.76	822086.45	18	0	1
R188+R189	834004.98	821815.03	834085.24	821880.22	16	0	1
R190+R191	833931.13	821727.74	834004.08	821816.03	19	0	1
R192+R193	833878.32	821660.78	833930.65	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.48	20	0	1
R196+R202	833781.01	821523.35	833828.17	821600.58	20	0	1
R197	834364.30	822060.94	834400.13	822104.71	17	0	1
R198	834322.77	822010.68	834364.35	822060.94	18	0	1
R199	834281.93	821961.17	834323.00	822010.48	19	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R300	834239.17	821914.13	834327.69	821840.33	16	0	1

Vehicle count for each road Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
50	13	9	6	7	10	50	50	100	100	100	150	150	150	200	200	150	250	300	250	150	150	100	100
50	19	12	8	10	14	50	50	150	150	150	150	150	150	200	200	150	200	200	150	100	100	100	50
100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
100	50	50	25	50	50	100	200	400	450	400	350	350	350	350	350	250	350	350	250	200	150	150	100
21	12	7	4	5	8	22	60	72	73	70	69	119	118	120	119	115	169	220	166	111	109	58	57
29	16	10	7	7	12	31	63	150	150	150	150	150	100	150	100	100	100	150	100	100	100	100	71
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	50	50	50	24	17	14	13	10
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	150	150	150	100	100	100
100	100	50	50	50	50	100	200	250	250	200	200	250	250	250	250	300	300	300	250	200	200	150	150
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	200	150	150	100	100	100
450	350	300	250	200	250	400	800	800	800	800	800	800	800	750	700	700	700	650	550	450	400	400	300
500	400	350	300	250	250	450	1050	1300	1100	1050	950	950	1000	950	900	950	900	900	750	650	550	500	400
450	350	300	250	200	250	400	900	1100	950	900	850	850	900	850	800	850	850	850	700	600	500	500	400
23	19	15	14	10	12	22	50	50	50	50	50	50	50	50	50	50	100	50	50	50	50	50	50
100	50	50	50	50	50	100	200	250	200	200	150	150	150	150	150	150	150	150	100	100	100	100	50
150	100	100	100	50	50	150	300	350	300	300	300	300	300	300	300	350	350	350	300	250	200	200	150
200	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	350	300	250	250	200	150
200	150	150	100	100	100	200	400	500	450	450	450	450	500	500	500	550	600	600	500	400	350	350	250
150	100	100	100	50	100	150	300	400	350	300	300	300	350	300	300	350	350	350	300	250	200	200	150
150	100	100	100	50	100	150	300	400	350	300	300	300	350	350	350	350	400	350	300	250	250	200	150
300	250	200	150	150	150	250	600	750	650	600	600	600	650	650	650	700	700	700	550	500	450	400	300
250	200	150	150	100	100	200	450	600	500	500	450	500	550	500	500	550	550	550	450	400	350	350	250
400	350	300	200	200	200	350	850	1050	950	900	900	900	1050	1050	1050	1150	1250	1150	950	850	750	700	550
350	300	250	200	150	200	350	750	950	900	800	800	900	950	900	1000	1050	1150	1100	900	800	700	650	450
450	350	250	250	200	250	400	850	1100	1000	950	900	950	1050	1050	1050	1100	1200	1100	950	800	700	700	550
450	350	300	250	200	250	450	900	1150	1000	950	950	950	1050	1000	1000	1050	1100	1100	900	750	650	650	500
300	250	200	150	150	150	300	650	800	700	650	600	600	600	600	550	600	600	550	450	400	350	350	250
250	200	150	150	100	100	200	500	600	550	500	500	500	550	550	550	600	650	600	500	450	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	600	600	600	550	600	600	550	450	400	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	650	700	700	700	750	800	800	650	550	500	450	350
150	150	100	100	100	100	150	350	450	350	350	300	350	350	350	300	350	350	350	300	250	200	200	150
12	9	8	7	5	6	11	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	20
50	24	19	17	13	14	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
24	20	16	13	11	12	22	50	50	50	50	50	50	50	50	50	50	50	50	50	24	21	20	16
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
100	50	50	50	50	50	100	150	200	200	200	200	200	200	200	200	200	250	200	200	150	150	150	100
19	16	12	11	8	11	17	50	50	50	50	50	50	50	50	50	50	50	50	50	22	19	18	14
100	50	50	50	50	50	100	150	200	200	150	150	150	150	150	150	150	150	150	100	100	100	100	50
64	62	59	58	57	58	63	150	200	200	150	150	200	200	200	200	200	200	200	200	150	150	150	119
71	68	64	62	29	33	40	150	150	150	150	150	200	200	200	200	250	250	250	200	200	150	150	119
36	29	25	22	17	19	32	100	100	100	75	73	73	73	70	70	68	65	65	64	64	61	61	26
60	59	57	55	55	55	59	173	200	173	171	119	117	117	116	114	114	112	112	110	58	57	57	55
100	100	44	38	31	35	100	150	200	150	100	100	100	100	100	100	100	100	100	100	100	100	100	71
8	7	5	4	4	4	7	17	21	17	14	12	11	11	9	7	7	4	4	4	3	3	3	1
16	13	11	9	7	8	14	50	50	50	50	50	50	50	22	19	18	15	15	13	11	10	9	6
20	17	14	11	8	10	19	50	50	50	50	50	50	50	50	50	23	20	19	17	13	11	11	9
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT) Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833434.80	822408.45	833960.46	822643.00	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833960.46	822643.00	833985.46	822646.78	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R008+R009	833861.17	822398.31	833963.59	822397.15	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R008+R009	833893.59	822397.16	833841.85	822460.34	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833544.64	822390.48	833587.56	822384.80	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R014+R015	833485.77	822318.11	833587.56	822384.80	14	0	1	0.0159	0.0160	0.0161	0.0159	0.0157	0.0160	0.0159	0.0202	0.0184	0.0161	0.0154	0.0158	0.0144	0.0166	0.0159	0.0163	0.0162	0.0172	0.0185	0.0160	0.0148	0.0126	0.0134	0.0163
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R016+R017	833633.17	822374.91	833861.17	822398.31	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R019	833082.67	822192.03	833209.07	822239.78	16	0	1	0.0234	0.0210	0.0234	0.0260	0.0250	0.0223	0.0232	0.0252	0.0231	0.0234	0.0237	0.0239	0.0229	0.0245	0.0239	0.0242	0.0229	0.0243	0.0264	0.0239	0.0236	0.0230	0.0238	0.0268
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0222	0.0231	0.0219	0.0241	0.0234	0.0212	0.0218	0.0257	0.0232	0.0239	0.0237	0.0237	0.0233	0.0244	0.0238	0.0239	0.0224	0.0235	0.0255	0.0226	0.0226	0.0221	0.0230	0.0239
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0228	0.0191	0.0195	0.0179	0.0203	0.0195	0.0224	0.0250	0.0237	0.0241	0.0237	0.0239	0.0237	0.0243	0.0247	0.0248	0.0236	0.0249	0.0269	0.0238	0.0227	0.0238	0.0230	0.0239
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0232	0.0191	0.0199	0.0177	0.0180	0.0196	0.0230	0.0254	0.0236	0.0240	0.0236	0.0238	0.0237	0.0243	0.0244	0.0245	0.0227	0.0242	0.0268	0.0240	0.0227	0.0230	0.0229	0.0236
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0235	0.0214	0.0234	0.0257	0.0248	0.0225	0.0233	0.0250	0.0236	0.0239	0.0240	0.0242	0.0243	0.0249	0.0244	0.0250	0.0234	0.0247	0.0274	0.0242	0.0232	0.0233	0.0229	0.0238
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0204	0.0202	0.0205	0.0213	0.0210	0.0207	0.0203	0.0268	0.0260	0.0238	0.0224	0.0224	0.0204	0.0236	0.0216	0.0224	0.0229	0.0229	0.0233	0.0218	0.0215	0.0190	0.0188	0.0214
R027	833503.01	822278.46	833673.82	822341.72	13	0	1	0.0223	0.0229	0.0222	0.0235	0.0231	0.0216	0.0231	0.0252	0.0248	0.0252	0.0250	0.0245	0.0246	0.0254	0.0249	0.0250	0.0234	0.0247	0.0271	0.0242	0.0231	0.0235	0.0229	0.0240
R028	833673.82	822341.72	833768.11	822376.03	13	0	1	0.0220	0.0212	0.0240	0.0272	0.0260	0.0228	0.0216	0.0258	0.0236	0.0239	0.0239	0.0238	0.0239	0.0242	0.0239	0.0242	0.0230	0.0245	0.0263	0.0240	0.0224	0.0231	0.0225	0.0234
R029	833768.03	822376.15	833848.76	822405.79	13	0	1	0.0186	0.0185	0.0196	0.0165	0.0163	0.0191	0.0184	0.0267	0.0252	0.0229	0.0216	0.0219	0.0199	0.0240	0.0220	0.0232	0.0250	0.0239	0.0246	0.0235	0.0246	0.0220	0.0218	0.0237
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	0.0182	0.0180	0.0177	0.0182	0.0178	0.0184	0.0182	0.0246	0.0237	0.0208	0.0194	0.0204	0.0207	0.0214	0.0213	0.0215	0.0219	0.0220	0.0241	0.0207	0.0203	0.0184	0.0181	0.0202
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	0.0182	0.0196	0.0165	0.0169	0.0169	0.0165	0.0182	0.0285	0.0270	0.0245	0.0230	0.0227	0.0204	0.0243	0.0218	0.0227	0.0241	0.0228	0.0240	0.0223	0.0231	0.0208	0.0205	0.0231
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	0.0310	0.0284	0.0169	0.0169	0.0170	0.0171	0.0170	0.0231	0.0213	0.0213	0.0209	0.0212	0.0214	0.0221	0.0217	0.0219	0.0208	0.0215	0.0234	0.0213	0.0204	0.0210	0.0206	0.0218
R033	833121.79	822072.07	833253.39	822120.94	16	0	1	0.0205	0.0203	0.0203	0.0205	0.0205	0.0205	0.0203	0.0232	0.0215	0.0217	0.0216	0.0218	0.0213	0.0222	0.0218	0.0219	0.0210	0.0219	0.0239	0.0212	0.0204	0.0206	0.0206	0.0214
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0167	0.0167	0.0171	0.0178	0.0178	0.0182	0.0173	0.0214	0.0202	0.0190	0.0192	0.0198	0.0199	0.0202	0.0202	0.0207	0.0199	0.0209	0.0227	0.0199	0.0186	0.0193	0.0190	0.0201
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0243	0.0236	0.0232	0.0226	0.0227	0.0226	0.0230	0.0269	0.0255	0.0257	0.0253	0.0257	0.0264	0.0265	0.0264	0.0261	0.0238	0.0245	0.0270	0.0254	0.0245	0.0267	0.0258	0.0256
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0205	0.0204	0.0204	0.0206	0.0206	0.0206	0.0204	0.0238	0.0223	0.0224	0.0224	0.0221	0.0221	0.0226	0.0226	0.0227	0.0214	0.0228	0.0243	0.0220	0.0206	0.0213	0.0212	0.0215
R037	833653.40	822269.00	833694.88	822284.07	19	0	1	0.0238	0.0236	0.0239	0.0237	0.0238	0.0239	0.0238	0.0263	0.0250	0.0262	0.0260	0.0256	0.0252	0.0253	0.0246	0.0244	0.0224	0.0230	0.0249	0.0222	0.0217	0.0228	0.0221	0.0227
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0244	0.0243	0.0243	0.0241	0.0242	0.0243	0.0242	0.0268	0.0254	0.0268	0.0264	0.0260	0.0254	0.0254	0.0246	0.0242	0.0222	0.0231	0.0245	0.0223	0.0210	0.0217	0.0214	0.0221
R039	833761.98	822311.12	833789.45	822320.76	14	0	1	0.0308	0.0256	0.0267	0.0274	0.0276	0.0277	0.0265	0.0324	0.0308	0.0346	0.0350	0.0330	0.0338	0.0314	0.0316	0.0305	0.0269	0.0275	0.0295	0.0268	0.0257	0.0279	0.0277	0.0273
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	0.0291	0.0296	0.0298	0.0301	0.0303	0.0301	0.0298	0.0315	0.0299	0.0336	0.0334	0.0321	0.0325	0.0303	0.0300	0.0291	0.0255	0.0261	0.0280	0.0255	0.0235	0.0267	0.0264	0.0262
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	0.0307	0.0273	0.0278	0.0285	0.0281	0.0285	0.0279	0.0324	0.0308	0.0345	0.0349	0.0330	0.0336	0.0313	0.0315	0.0305	0.0269	0.0275	0.0295	0.0267	0.0258	0.0279	0.0278	0.0274
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	0.0306	0.0278	0.0285	0.0288	0.0289	0.0289	0.0283	0.0324	0.0308	0.0340	0.0344	0.0331	0.0332	0.0314	0.0311	0.0301	0.0264	0.0275	0.0296	0.0268	0.0257	0.0280	0.0278	0.0274
R043	833950.46	822320.48	834034.90	822250.52	18	0	1	0.0339	0.0339	0.0335	0.0341	0.0336	0.0338	0.0335	0.0343	0.0328	0.0377	0.0383	0.0367	0.0373	0.0349	0.0347	0.0335	0.0292	0.0298	0.0321	0.0299	0.0285	0.0325	0.0320	0.0307
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0294	0.0295	0.0301	0.0299	0.0302	0.0300	0.0299	0.0317	0.0295	0.0331	0.0334	0.0322	0.0325	0.0305	0.0301	0.0292	0.0256	0.0268	0.0288	0.0258	0.0240	0.0269	0.0265	0.0265
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	0.0302	0.0197	0.0195	0.0214	0.0219	0.0222	0.0305	0.0315	0.0299	0.0337	0.0333	0.0321	0.0322	0.0306	0.0308	0.0299	0.0264	0.0270	0.0291	0.0268	0.0253	0.0279	0.0277	0.0275
R046	834231.72	822086.85	834323.21	822011.22	18	0	1	0.0302	0.0265	0.0273	0.0276	0.0278	0.0278	0.0302	0.0320	0.0299	0.0335	0.0337	0.0325	0.0327	0.0310	0.0307	0.0297	0.0262	0.0273	0.0293	0.0265	0.0251	0.0276	0.0273	0.0271
R047	834322.77	822010.68	834394.01	821969.66	18	0	1	0.0305	0.0261	0.0265	0.0276	0.0271	0.0279	0.0304	0.0315	0.0300	0.0335	0.0339	0.0327	0.0328	0.0312	0.0307	0.0298	0.0264	0.0269	0.0290	0.0266	0.0252	0.0279	0.0277	0.0272
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	0.0240	0.0228	0.0229	0.0231	0.0231	0.0231	0.0241	0.0264	0.0256	0.0281	0.0276	0.0266	0.0267	0.0259	0.0256	0.0251	0.0224	0.0234	0.0252	0.0225	0.0217	0.0240	0.0237	0.0232
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0240	0.0241	0.0240	0.0240	0.0241	0.0241	0.0240	0.0261	0.0253	0.0273	0.0272	0.0262	0.0263	0.0252	0.0249	0.0244	0.0218	0.0228	0.0246	0.0222	0.0216	0.0239	0.0237	0.0232
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	0.0236	0.0236	0.0235	0.0235	0.0235	0.0235	0.0235	0.0257	0.0249	0.0274	0.0268	0.0259	0.0263	0.0256	0.0253	0.0252	0.0226	0.0239	0.0260	0.0229	0.0212	0.0229	0.0228	0.0227
R051	833274.00	822006.60	833438.70	822067.62	16	0	1	0.0256	0.0257	0.0258	0.0257	0.0257	0.0257	0.0257	0.0273	0.0262	0.0293	0.0291	0.0285	0.0289	0.0278	0.0278	0.0276	0.0245	0.0256	0.0281	0.0249	0.0238	0.0270	0.0267	0.0258
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0305	0.0276	0.0276	0.0278	0.0277	0.0277	0.0296	0.0300	0.0289	0.0323	0.0327	0.0314	0.0318	0.0296	0.0294	0.0284	0.0247	0.0254	0.0280	0.0256	0.0252	0.0284	0.0286	0.0276
R053	833786.86	822123.44	833736.66	822163.25	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R053	833736.66	822163.25	833688.33	822174.73	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R055	833786.53	822123.04	833872.14	822061.39	16	0	1	0.0259	0.0259	0.0259	0.0261	0.0260	0.0259	0.0261	0.0273	0.0257	0.0286	0.0285	0.0276	0.0276	0.0264	0.0260	0.0252	0.0222	0.0230	0.0250	0.0226	0.0220	0.0246	0.0241	0.0235
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0330	0.0327	0.0332	0.0329	0.0333	0.0333	0.0332	0.0333	0.0313	0.0366	0.0380	0.0366	0.0380	0.0351	0.0356	0.0344	0.0295	0.0303	0.0333	0.0311	0.0306	0.0366	0.0358	0.0328
R057	833873.30	822052.66	834159.21	821814.78	15	0	1	0.0272	0.0240	0.0246	0.0251	0.0250	0.0251	0.0271	0.0286	0.0272	0.0299	0.0303	0.0290	0.0295	0.0276	0.0280	0.0273	0.0238	0.0245	0.0267	0.0245	0.0229	0.0256	0.0257	0.0255
R058	834159.21	821814.78	834256.10	821736.42	15	0	1	0.0307	0.0264	0.0271	0.0280	0.0279	0.0281	0.0307	0.0314	0.0293	0.0338	0.0343	0.0326	0.0329	0.0303	0.0300	0.0286	0.0247	0.0250	0.0269	0.0248	0.0243	0.0277	0.0271	0.0260
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	0.0307	0.0309	0.0306	0.0305	0.0309	0.0308	0.0307	0.0316	0.0300	0.0337	0.0350	0.0334	0.0343	0.0315	0.0322	0.0311	0.0267	0.0274	0.0298	0.0276	0.0261	0.0301	0.0300	0.0289
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0291	0.0298	0.0304	0.0302	0.0305	0.0306	0.0301	0.0306	0.0283	0.0330	0.0346	0.0337	0.0356	0.0322	0.0330	0.0321	0.0273	0.0286	0.0314	0.0287	0.0273	0.0341	0.0331	0.0301
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	0.0240	0.0218	0.0218	0.0218	0.0222	0.0219	0.0237	0.0234	0.0230	0.0229	0.0231	0.0233	0.0232	0.0227	0.0233	0.0227	0.0228	0.0228	0.0232	0.0230	0.0232	0.0237	0.0216	0.0221
R062	833139.76	821889.31	833296.76	821947.78	16	0	1	0.0185	0.0188	0.0186	0.0190	0.0188	0.0184	0.0188	0.0222	0.0209	0.0199	0.0198	0.0201	0.0203	0.0199	0.0204	0.0206	0.0201	0.0202	0.0216	0.0184	0.0181	0.0182	0.0172	0.0196
R063	833296.66	821947.56	833460.51	822007.97	16	0	1	0.0223	0.0182	0.0188	0.0170	0.0196	0.0185	0.0221	0.0250	0.0229	0.0233	0.0234	0.0234	0.0230	0.0235	0.0235	0.0235	0.0222	0.0232	0.0252	0.0226	0.0220	0.0225	0.0221	0.0238
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R065	833160.17	821834.07	833315.06	821891.67	16	0	1	0.0191	0.0191	0.0197	0.0200	0.0201	0.0193	0.0204	0.0233	0.0213	0.0213	0.0216	0.0215	0.0218	0.0213	0.0209	0.0212	0.0203	0.0201	0.0212	0.0182	0.0180	0.0177	0.0178	0.0191
R066	833315.06	821891.68	833481.00	821962.76	16	0	1	0.0202	0.0194	0.0190	0.0196	0.0196	0.0190	0.0201	0.0227	0.0212	0.0211	0.0212	0.0218	0.0215	0.0220	0.0221	0.0220	0.0206	0.0221	0.0236	0.0210	0.0196	0.0204	0.0204	0.0217
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	0.0150	0.0150	0.0149	0.0149	0.0149	0.0150	0.0150	0.0185	0.0179	0.0183	0.0178	0.0171	0.0169	0.0173	0.0172	0.0175	0.0165	0.0171	0.0187	0.0156	0.0140	0.0140	0.0141	0.0147
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0182	0.0179	0.0183	0.0169	0.0165	0.0162	0.0168	0.0166	0.0168	0.0159	0.0171	0.0187	0.0152	0.0140	0.0141	0.0141	0.0147
R069	833166.60	821757.87	833260.16	821796.91	29	0	1	0.0129	0.0128	0.0129	0.0129	0.0129	0.0129	0.0129	0.0160	0.0145	0.0137	0.0128	0.0130	0.0122	0.0134	0.0130	0.0133	0.0130	0.0143	0.0157	0.0128	0.0120	0.0114	0.0116	0.0128
R070	833249.00	821820.73	833326.89	821883.87	13	0	1	0.0180	0.0180	0.0180	0.0181	0.0178	0.0179	0.0179	0.0206	0.0192	0.0196	0.0186	0.0188	0.0182	0.0190	0.0183	0.0183	0.0173	0.0184	0.0196	0.0173	0.0168	0.0171	0.0169	0.0176

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	0.0179	0.0178	0.0178	0.0179	0.0177	0.0177	0.0178	0.0203	0.0186	0.0190	0.0183	0.0183	0.0179	0.0185	0.0181	0.0181	0.0171	0.0180	0.0196	0.0172	0.0168	0.0171	0.0170	0.0178
R072	833397.24	821875.22	833501.75	821907.07	20	0	1	0.0191	0.0189	0.0192	0.0187	0.0188	0.0191	0.0190	0.0215	0.0194	0.0199	0.0197	0.0195	0.0190	0.0194	0.0189	0.0190	0.0176	0.0182	0.0199	0.0178	0.0169	0.0173	0.0174	0.0185
R073	833451.50	821860.54	833397.24	821875.22	17	0	1	0.0165	0.0165	0.0163	0.0163	0.0163	0.0166	0.0164	0.0190	0.0171	0.0167	0.0163	0.0166	0.0160	0.0171	0.0166	0.0169	0.0163	0.0169	0.0183	0.0165	0.0159	0.0157	0.0157	0.0169
R074	833261.64	821790.34	833451.50	821860.54	20	0	1	0.0172	0.0174	0.0173	0.0174	0.0169	0.0170	0.0173	0.0197	0.0178	0.0176	0.0172	0.0173	0.0166	0.0175	0.0169	0.0170	0.0161	0.0167	0.0182	0.0162	0.0156	0.0155	0.0155	0.0165
R075	833449.48	821961.09	833506.97	821883.06	16	0	1	0.0169	0.0169	0.0173	0.0166	0.0167	0.0170	0.0171	0.0198	0.0177	0.0175	0.0170	0.0171	0.0163	0.0173	0.0165	0.0167	0.0158	0.0165	0.0179	0.0158	0.0152	0.0146	0.0151	0.0161
R076	833501.48	821897.80	833548.66	821899.77	16	0	1	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R078	833682.38	821822.36	833873.32	821660.75	18	0	1	0.0213	0.0217	0.0215	0.0218	0.0212	0.0214	0.0214	0.0235	0.0216	0.0228	0.0226	0.0220	0.0213	0.0212	0.0205	0.0201	0.0184	0.0186	0.0202	0.0182	0.0178	0.0184	0.0181	0.0190
R079	833673.29	821811.43	833867.51	821651.48	16	0	1	0.0156	0.0155	0.0157	0.0157	0.0153	0.0156	0.0156	0.0183	0.0165	0.0158	0.0152	0.0155	0.0145	0.0159	0.0153	0.0155	0.0150	0.0156	0.0169	0.0151	0.0147	0.0142	0.0141	0.0153
R080	833875.67	821661.16	833999.54	821587.94	16	0	1	0.0179	0.0180	0.0178	0.0179	0.0179	0.0182	0.0181	0.0204	0.0183	0.0186	0.0182	0.0183	0.0177	0.0185	0.0176	0.0179	0.0168	0.0172	0.0188	0.0167	0.0165	0.0171	0.0168	0.0176
R081	833867.01	821659.95	833993.09	821582.98	20	0	1	0.0158	0.0158	0.0160	0.0160	0.0156	0.0158	0.0158	0.0184	0.0166	0.0160	0.0154	0.0157	0.0149	0.0162	0.0155	0.0157	0.0153	0.0158	0.0171	0.0153	0.0150	0.0145	0.0144	0.0156
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R083	833436.83	821855.11	833496.18	821813.12	16	0	1	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R083	833524.36	821772.29	833589.81	821682.62	14	0	1	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R084	833587.54	821687.02	833582.59	821644.65	13	0	1	0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
R084	833582.09	821644.65	833607.71	821603.87	13	0	1	0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
R085	833609.34	821609.84	833640.24	821575.52	14	0	1	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
R087	833648.49	821548.43	833695.49	821508.30	13	0	1	0.0215	0.0215	0.0215	0.0215	0.0215	0.0214	0.0214	0.0221	0.0219	0.0219	0.0218	0.0219	0.0216	0.0222	0.0220	0.0220	0.0219	0.0219	0.0223	0.0215	0.0216	0.0217	0.0216	0.0214
R088	833254.24	821811.88	833365.50	821856.64	17	4	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833365.50	821856.64	833416.50	821866.51	17	7	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833416.50	821866.51	833487.63	821841.09	17	9	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833574.60	821657.75	833600.16	821605.82	17	7	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R089	833256.85	821801.44	833370.08	821846.87	16	4	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833598.99	821594.44	833699.93	821509.87	16	6	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R090+R091	833289.78	821629.64	833337.84	821634.13	17	0	1	0.0193	0.0192	0.0188	0.0188	0.0189	0.0194	0.0195	0.0235	0.0225	0.0214	0.0206	0.0209	0.0203	0.0216	0.0214	0.0220	0.0210	0.0222	0.0239	0.0209	0.0197	0.0187	0.0193	0.0213
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1	0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	0.0109	0.0110	0.0109	0.0109	0.0111	0.0111	0.0110	0.0118	0.0110	0.0113	0.0104	0.0105	0.0096	0.0102	0.0091	0.0092	0.0090	0.0093	0.0088	0.0080	0.0082	0.0074	0.0070	0.0084
R095	833609.59	821601.72	833648.49	821548.43	17	0	1	0.0252	0.0246	0.0247	0.0247	0.0249	0.0247	0.0249	0.0260	0.0254	0.0256	0.0257	0.0255	0.0253	0.0253	0.0251	0.0251	0.0248	0.0248	0.0253	0.0242	0.0242	0.0244	0.0245	0.0243
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1	0.0231	0.0282	0.0160	0.0163	0.0161	0.0171	0.0228	0.0258	0.0260	0.0267	0.0244	0.0246	0.0241	0.0258	0.0261	0.0250	0.0243	0.0241	0.0280	0.0243	0.0234	0.0241	0.0251	0.0235
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	0.0307	0.0316	0.0303	0.0301	0.0334	0.0319	0.0324	0.0337	0.0325	0.0373	0.0364	0.0349	0.0350	0.0339	0.0332	0.0323	0.0276	0.0293	0.0319	0.0280	0.0258	0.0282	0.0286	0.0278
R100+R101	834127.62	822332.11	834218.31	822256.35	18	0	1	0.0277	0.0273	0.0276	0.0289	0.0281	0.0304	0.0278	0.0313	0.0292	0.0327	0.0314	0.0317	0.0315	0.0311	0.0306	0.0301	0.0266	0.0279	0.0302	0.0273	0.0262	0.0273	0.0269	0.0285
R102+R103	834218.31	822256.35	834309.95	822180.58	18	0	1	0.0292	0.0308	0.0262	0.0297	0.0278	0.0286	0.0297	0.0292	0.0284	0.0304	0.0313	0.0305	0.0306	0.0297	0.0278	0.0279	0.0251	0.0252	0.0275	0.0241	0.0243	0.0249	0.0259	0.0261
R104+R105	834309.95	822180.58	834407.46	822098.56	18	0	1	0.0260	0.0284	0.0234	0.0260	0.0250	0.0228	0.0276	0.0295	0.0275	0.0291	0.0271	0.0266	0.0265	0.0262	0.0271	0.0256	0.0239	0.0246	0.0271	0.0238	0.0238	0.0255	0.0255	0.0269
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	0.0212	0.0194	0.0210	0.0228	0.0223	0.0205	0.0209	0.0236	0.0228	0.0224	0.0221	0.0220	0.0222	0.0233	0.0235	0.0239	0.0225	0.0242	0.0262	0.0230	0.0219	0.0225	0.0224	0.0232
R107	833991.05	822370.04	834090.39	822287.63	18	0	1	0.0204	0.0201	0.0219	0.0241	0.0234	0.0212	0.0202	0.0243	0.0219	0.0216	0.0215	0.0217	0.0212	0.0228	0.0228	0.0231	0.0221	0.0229	0.0254	0.0223	0.0223	0.0221	0.0230	0.0229
R108	834090.84	822288.08	834181.98	822212.22	16	0	1	0.0202	0.0197	0.0217	0.0238	0.0226	0.0208	0.0199	0.0231	0.0215	0.0211	0.0210	0.0215	0.0209	0.0222	0.0224	0.0225	0.0222	0.0229	0.0248	0.0226	0.0214	0.0219	0.0227	0.0239
R109	834181.96	822212.22	834273.05	822136.48	17	0	1	0.0201	0.0197	0.0217	0.0239	0.0227	0.0208	0.0198	0.0232	0.0215	0.0212	0.0210	0.0218	0.0213	0.0228	0.0220	0.0230	0.0220	0.0227	0.0250	0.0223	0.0211	0.0230	0.0215	0.0244
R110	834273.34	822136.83	834364.58	822060.94	17	0	1	0.0206	0.0213	0.0203	0.0218	0.0214	0.0199	0.0204	0.0236	0.0216	0.0211	0.0211	0.0214	0.0209	0.0224	0.0221	0.0225	0.0218	0.0229	0.0246	0.0222	0.0218	0.0223	0.0214	0.0225
R111	834363.46	822059.86	834400.74	822029.83	18	0	1	0.0212	0.0192	0.0210	0.0226	0.0221	0.0202	0.0209	0.0234	0.0217	0.0213	0.0214	0.0215	0.0211	0.0225	0.0223	0.0226	0.0218	0.0224	0.0246	0.0220	0.0212	0.0214	0.0221	0.0230
R112	833848.76	822405.79	833902.96	822360.57	19	0	1	0.0351	0.0348	0.0326	0.0377	0.0354	0.0354	0.0337	0.0354	0.0335	0.0381	0.0384	0.0369	0.0368	0.0351	0.0355	0.0342	0.0293	0.0309	0.0336	0.0304	0.0286	0.0320	0.0315	0.0309
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	0.0180	0.0200	0.0151	0.0148	0.0155	0.0220	0.0204	0.0223	0.0206	0.0199	0.0198	0.0203	0.0197	0.0208	0.0207	0.0213	0.0205	0.0215	0.0233	0.0206	0.0195	0.0214	0.0199	0.0225
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	0.0206	0.0203	0.0197	0.0207	0.0203	0.0204	0.0204	0.0232	0.0223	0.0224	0.0220	0.0223	0.0219	0.0230	0.0228	0.0231	0.0221	0.0226	0.0247	0.0222	0.0210	0.0212	0.0212	0.0220
R115	833994.06	822200.75	834077.01	822132.06	18	0	1	0.0257	0.0262	0.0259	0.0255	0.0262	0.0259	0.0257	0.0275	0.0261	0.0280	0.0282	0.0278	0.0279	0.0274	0.0272	0.0269	0.0244	0.0252	0.0272	0.0251	0.0240	0.0259	0.0255	0.0257
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	0.0197	0.0193	0.0195	0.0207	0.0203	0.0203	0.0199	0.0224	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0215	0.0218	0.0212	0.0219	0.0235	0.0214	0.0203	0.0207	0.0208	0.0217
R117	834097.30	822115.02	834190.59	822037.73	16	0	1	0.0200	0.0197	0.0198	0.0190	0.0206	0.0195	0.0198	0.0223	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0214	0.0217	0.0208	0.0219	0.0235	0.0214	0.0203	0.0207	0.0207	0.0218
R118	834190.59	822037.73	834242.25	821993.98	18	0	1	0.0199	0.0196	0.0198	0.0189	0.0205	0.0194	0.0197	0.0221	0.0209	0.0206	0.0205	0.0209	0.0206	0.0216	0.0215	0.0218	0.0214	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
R119	834242.94	821993.85	834282.16	821961.45	19	0	1	0.0197	0.0197	0.0191	0.0202	0.0198	0.0199	0.0195	0.0222	0.0208	0.0208	0.0204	0.0208	0.0206	0.0216	0.0214	0.0218	0.0213	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
R120	834281.93	821961.17	834359.17	821896.80	18	0	1	0.0196	0.0197	0.0202	0.0201	0.0197	0.0198	0.0198	0.0223	0.0214	0.0211	0.0207	0.0210	0.0206	0.0217	0.0218	0.0218	0.0213	0.0218	0.0238	0.0214	0.0202	0.0207	0.0208	0.0217
R121	833768.03	822376.15	833789.11	822318.98	18	0	1	0.0178	0.0178	0.0172	0.0181	0.0176	0.0179	0.0177	0.0211	0.0185	0.0178	0.0168	0.0176	0.0163	0.0198	0.0181	0.0184	0.0184	0.0199	0.0217	0.0195	0.0196	0.0199	0.0192	0.0200
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	0.0195	0.0204	0.0215	0.0227	0.0216	0.0202	0.0188	0.0219	0.0201	0.0197	0.0187	0.0192	0.0178	0.0199	0.0185	0.0190	0.0184	0.0198	0.0210	0.0185	0.0182	0.0158	0.0160	0.0182
R123	833868.78	822222.16	833954.75	822150.50	18	0	1	0.0162	0.0161	0.0162	0.0162	0.0160	0.0160	0.0161	0.0200	0.0190	0.0167	0.0155	0.0160	0.0146	0.0168	0.0164	0.0170	0.0166	0.0180	0.0194	0.0169	0.0154	0.0134	0.0135	0.0164
R124	833673.82	822341.72	833694.86	822284.07	18	0	1	0.0191	0.0192	0.0192	0.0190	0.0188	0.0191	0.0191	0.0216	0.0201	0.0202	0.0190	0.0196	0.0186	0.0211	0.0200	0.0203	0.0202	0.0208	0.0222	0.0201	0.0212	0.0216	0.0211	0.0199
R125	833694.86	822284.07	833827.77	822172.95	18	0	1	0.0184	0.0184	0.0184	0.0182	0.0183	0.0183	0.0184	0.0215	0.0192	0.0190	0.0177	0.0182	0.0167	0.0183	0.0178	0.0182	0.0176	0.0185	0.0197	0.0172	0.0164	0.0151	0.0142	0.0169
R126	833653.40	822269.00	833689.33	822174.73	13	0	1	0.0224	0.0234	0.0220	0.0240	0.0233	0.0214	0.0221	0.0249	0.0234	0.0236	0.0236	0.0236	0.0234	0.0243	0.0237	0.0241	0.0228	0.0242	0.0262	0.0230	0.0225	0.0235	0.0224	0.0236
R127	833489.65	822315.75	833503.51	822278.46	18	0	1	0.0184	0.0184	0.0181	0.0183	0.0184	0.0184	0.0183	0.0215	0.0199	0.0187	0.0179	0.0185	0.0172	0.0192	0.0182	0.0186	0.0188	0.0193	0.0211	0.0184	0.0184	0.0169	0.0166	0.0184
R128	833503.51	822278.46	833524.35	822221.21	18	0	1	0.0176	0.0176	0.0174	0.0175	0.0174	0.0178	0.0176	0.0208	0.0188	0.0176	0.0169	0.0175	0.0163	0.0184	0.0174	0.0179	0.0181	0.0190	0.0204	0.0178	0.0177	0.0166	0.0165	0.0182
R129	833377.80	822232.03	833356.00	822293.72	18	0	1	0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0196	0.0178	0.0164	0.0154	0.0159	0.0147	0.0168	0.0159	0.0163	0.0163	0.0173	0.0187	0.0162	0.0158	0.0147	0.0145	0.0162
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0195	0.0177	0.0163	0.0152	0.0158	0.0145	0.0166	0.0157	0.0162	0.0161	0.0171	0.0183	0.0161	0.0160	0.0145	0.0144	0.0161
R131	833398.42	822175.04	833434.10	822080.76	18	0	1	0.0163	0.0164	0.0163	0.0164	0.0164	0.0164	0.0163	0.0203	0.0190	0.0178	0.0159	0.0163	0.0154	0.0173	0.0160	0.0169	0.0172	0.0173	0.0186	0.0160	0.0159	0.0144	0.0140	0.0166
R132	833433.92	822080.70	833460.51	822007.97	16	0	1	0.0156	0.0161	0.0163	0.0163	0.0159	0.0149	0.0137	0.0141	0.0146	0.0160	0.0148	0.0143	0.0147	0.0138	0.0132	0.0129	0.0120	0.0126	0.0130	0.0115	0.0121	0.0115	0.0108	0.0112
R133	833460.46	822007.95	833481.00	821952.76	16	0	1	0.0201	0.0215	0.0231	0.0242	0.0232	0.0212	0.0191	0.0222	0.0214	0.0224	0.0207	0.0208	0.0200	0.0204	0.0199	0.0191	0.0181	0.0193	0.0213	0.0180	0.0174	0.0154	0.0153	0.0174
R134	833481.00	821952.76	833506.87	821883.06	16	0	1	0.0185	0.0196	0.0207	0.0221	0.0211	0.0193	0.0176	0.0208	0.0200	0.0193	0.0184	0.0187	0.0179	0.0191	0.0187	0.0189	0.0178	0.0193	0.0210	0.0185	0.0162	0.0160	0.0162	0.0178
R135	833209.07	822239.78	833232.06	822178.07	18	0	1	0.0261	0.0301	0.0376	0.0376	0.0360	0.0278	0.0221	0.0240	0.0197	0.0188	0.0195	0.0195	0.0183	0.0205	0.0194	0.0199	0.0195	0.0193	0.0204	0.0189	0.0223	0.0196	0.0197	0.0205
R136	833232.03	822178.06	833263.39	822120.94	18	0	1	0.0165	0.0176	0.0150	0.0150	0.0150	0.0150	0.0165	0.0207	0.0183	0.0171	0.0159	0.0165	0.0153	0.0176	0.0164	0.0169	0.0169	0.0179	0.0194	0.0170	0.0167	0.0150	0.0154	0.0171
R137	833089.91	822182.63	833100.53	822129.44	18	0	1	0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
R138	833100.53	822129.44	833121.78	822072.07	18	0	1	0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
R139	833121.68	822072.03	833156.56	821977.96	18	0	1	0.0153	0.0154	0.0154	0.0154	0.0152	0.0154	0.0153	0.0190	0.0168	0.0153	0.0145	0.0151	0.0138	0.0160	0.0152	0.0157	0.0157	0.0164	0.0179	0.0156	0.0156	0.0145	0.0145	0.0158
R140	833274.46	822007.07	833296.88	821947.56	17	0	1	0.0212	0.0217	0.0212	0.0223	0.0217	0.0208	0.0210	0.0242	0.0217	0.0220	0.0211	0.0208	0.0194	0.0205	0.0192	0.0192	0.0177	0.0185	0.0202	0.0175	0.0167	0.0151	0.0156	0.0178

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R141	833295.35	821947.25	833315.58	821981.67	13	0	1
R142	833329.88	821853.87	833318.98	821891.84	13	0	1
R143	833139.75	821869.31	833110.17	821834.07	13	0	1
R144	833169.17	821834.07	833118.74	821783.15	13	0	1
R145+R146	833812.49	821975.50	834004.09	821916.03	17	0	1
R147+R148	833738.44	821888.38	833931.13	821727.74	16	0	1
R149	833729.01	821749.32	833807.73	821684.26	14	0	1
R149	833774.08	821643.52	833807.73	821684.36	13	0	1
R150	833736.67	821759.22	833807.71	821803.87	11	0	1
R151	833613.61	821610.08	833683.50	821543.73	13	0	1
R151	833693.80	821543.70	833775.28	821642.53	14	0	1
R152	833774.08	821643.52	833828.17	821600.58	20	0	1
R153	833991.31	822369.76	834028.77	822414.27	15	0	1
R154	833950.46	822320.46	833992.00	822369.87	16	0	1
R155	833909.68	822271.38	833950.46	822320.45	18	0	1
R156	833868.78	822222.18	833908.65	822271.35	18	0	1
R157	833868.56	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.96	833778.49	822113.30	18	0	1
R159	834075.61	822299.62	834112.90	822344.34	15	0	1
R160	834090.39	822287.53	834127.62	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.48	834034.90	822250.62	15	0	1
R164	834007.86	822189.33	834049.42	822235.28	15	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.38	833964.75	822160.59	19	0	1
R167	833885.47	822042.40	834007.88	822189.33	19	0	1
R168+R169	833813.72	821975.47	833876.38	822050.03	21	0	1
R170+R171	833738.44	821888.35	833812.49	821976.50	18	0	1
R172+R173	833684.02	821822.33	833739.28	821887.65	20	0	1
R174+R175	833581.78	821677.98	833683.38	821823.68	18	0	1
R176	833496.77	821608.49	833565.47	821680.73	20	0	1
R177	833513.09	821699.34	833673.68	821668.47	20	0	1
R178	833440.44	821529.90	833489.00	821609.61	15	0	1
R179	833451.64	821526.21	833511.32	821600.28	17	0	1
R180	834218.31	822256.35	834328.06	822305.33	15	0	1
R181	834191.98	822212.22	834218.31	822256.35	18	0	1
R182	834140.62	822162.67	834191.78	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.18	13	0	1
R184	834071.90	822084.18	834087.30	822118.02	14	0	1
R185	834309.95	822180.58	834382.68	822207.44	19	0	1
R186	834231.54	822086.63	834273.34	822136.83	18	0	1
R187	834190.09	822037.73	834231.76	822086.45	16	0	1
R188+R189	834004.08	821816.03	834088.34	821899.22	18	0	1
R190+R191	833931.13	821727.74	834004.08	821816.03	18	0	1
R192+R193	833875.22	821660.70	833900.85	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.49	22	0	1
R196+R202	833761.01	821523.38	833828.17	821600.66	20	0	1
R197	834364.36	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.94	16	0	1
R199	834281.93	821961.17	834322.00	822010.48	15	0	1
R200	834339.17	821814.13	834280.06	821963.18	14	0	1
R200	834239.17	821814.13	834327.69	821848.33	18	0	1

RSP (g/VMT) Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
0.0210	0.0190	0.0176	0.0176	0.0172	0.0173	0.0209	0.0240	0.0214	0.0224	0.0214	0.0205	0.0197	0.0208	0.0190	0.0187	0.0173	0.0162	0.0196	0.0173	0.0164	0.0151	0.0147	0.0175
0.0138	0.0120	0.0125	0.0104	0.0113	0.0128	0.0159	0.0154	0.0144	0.0163	0.0163	0.0165	0.0175	0.0171	0.0173	0.0177	0.0168	0.0176	0.0181	0.0174	0.0177	0.0208	0.0196	0.0183
0.0210	0.0215	0.0210	0.0220	0.0216	0.0206	0.0216	0.0237	0.0221	0.0231	0.0216	0.0215	0.0202	0.0210	0.0199	0.0197	0.0186	0.0192	0.0203	0.0183	0.0172	0.0160	0.0157	0.0182
0.0211	0.0216	0.0210	0.0222	0.0217	0.0207	0.0209	0.0239	0.0220	0.0222	0.0214	0.0210	0.0196	0.0208	0.0193	0.0193	0.0181	0.0188	0.0200	0.0180	0.0172	0.0161	0.0156	0.0182
0.0176	0.0176	0.0183	0.0169	0.0165	0.0179	0.0174	0.0210	0.0184	0.0177	0.0164	0.0169	0.0153	0.0173	0.0161	0.0165	0.0161	0.0173	0.0186	0.0161	0.0144	0.0121	0.0128	0.0161
0.0171	0.0169	0.0173	0.0172	0.0172	0.0176	0.0173	0.0208	0.0184	0.0173	0.0161	0.0165	0.0150	0.0170	0.0159	0.0163	0.0159	0.0169	0.0182	0.0157	0.0139	0.0114	0.0124	0.0160
0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0152	0.0176	0.0164	0.0170	0.0171	0.0178	0.0194	0.0169	0.0169	0.0155	0.0158	0.0173
0.0186	0.0179	0.0181	0.0184	0.0188	0.0185	0.0188	0.0220	0.0202	0.0187	0.0175	0.0180	0.0161	0.0179	0.0171	0.0176	0.0168	0.0177	0.0191	0.0168	0.0158	0.0142	0.0146	0.0164
0.0186	0.0179	0.0182	0.0184	0.0188	0.0185	0.0188	0.0220	0.0202	0.0190	0.0174	0.0178	0.0167	0.0185	0.0172	0.0176	0.0170	0.0179	0.0193	0.0165	0.0156	0.0138	0.0142	0.0164
0.0187	0.0179	0.0182	0.0185	0.0188	0.0186	0.0189	0.0224	0.0208	0.0192	0.0179	0.0184	0.0164	0.0183	0.0174	0.0179	0.0171	0.0180	0.0194	0.0170	0.0162	0.0142	0.0145	0.0164
0.0223	0.0211	0.0212	0.0207	0.0200	0.0207	0.0217	0.0278	0.0259	0.0251	0.0238	0.0240	0.0225	0.0241	0.0224	0.0224	0.0219	0.0227	0.0233	0.0205	0.0190	0.0169	0.0172	0.0192
0.0204	0.0204	0.0198	0.0200	0.0198	0.0200	0.0205	0.0254	0.0238	0.0227	0.0216	0.0234	0.0199	0.0222	0.0204	0.0207	0.0203	0.0210	0.0223	0.0195	0.0184	0.0169	0.0165	0.0191
0.0200	0.0200	0.0199	0.0201	0.0199	0.0201	0.0201	0.0233	0.0216	0.0207	0.0196	0.0199	0.0186	0.0201	0.0189	0.0191	0.0187	0.0192	0.0205	0.0184	0.0174	0.0162	0.0163	0.0184
0.0190	0.0197	0.0208	0.0213	0.0151	0.0155	0.0192	0.0220	0.0192	0.0190	0.0186	0.0189	0.0179	0.0203	0.0197	0.0196	0.0183	0.0198	0.0208	0.0190	0.0178	0.0182	0.0183	0.0206
0.0194	0.0201	0.0200	0.0191	0.0198	0.0193	0.0198	0.0230	0.0206	0.0206	0.0201	0.0196	0.0188	0.0199	0.0188	0.0186	0.0177	0.0186	0.0198	0.0180	0.0171	0.0172	0.0173	0.0182
0.0184	0.0183	0.0182	0.0187	0.0180	0.0189	0.0187	0.0221	0.0203	0.0195	0.0193	0.0193	0.0187	0.0200	0.0193	0.0195	0.0189	0.0198	0.0217	0.0188	0.0186	0.0184	0.0184	0.0193
0.0193	0.0195	0.0192	0.0198	0.0197	0.0192	0.0192	0.0224	0.0205	0.0206	0.0195	0.0194	0.0184	0.0200	0.0185	0.0187	0.0179	0.0184	0.0196	0.0173	0.0169	0.0169	0.0163	0.0162
0.0198	0.0198	0.0197	0.0198	0.0198	0.0200	0.0199	0.0233	0.0212	0.0214	0.0207	0.0205	0.0196	0.0206	0.0195	0.0198	0.0185	0.0189	0.0206	0.0182	0.0176	0.0172	0.0171	0.0186
0.0184	0.0184	0.0182	0.0187	0.0181	0.0189	0.0181	0.0215	0.0196	0.0189	0.0179	0.0183	0.0173	0.0186	0.0175	0.0178	0.0170	0.0177	0.0194	0.0172	0.0167	0.0161	0.0162	0.0178
0.0209	0.0212	0.0207	0.0215	0.0213	0.0207	0.0208	0.0239	0.0221	0.0223	0.0218	0.0217	0.0208	0.0215	0.0208	0.0208	0.0196	0.0202	0.0218	0.0195	0.0187	0.0186	0.0187	0.0197
0.0176	0.0174	0.0175	0.0176	0.0177	0.0176	0.0174	0.0211	0.0199	0.0180	0.0175	0.0176	0.0164	0.0177	0.0171	0.0175	0.0172	0.0178	0.0188	0.0168	0.0150	0.0129	0.0136	0.0164
0.0270	0.0272	0.0273	0.0273	0.0273	0.0272	0.0270	0.0292	0.0276	0.0301	0.0298	0.0286	0.0289	0.0282	0.0276	0.0268	0.0242	0.0248	0.0269	0.0241	0.0237	0.0256	0.0253	0.0246
0.0108	0.0112	0.0113	0.0107	0.0110	0.0108	0.0110	0.0127	0.0123	0.0118	0.0115	0.0115	0.0111	0.0114	0.0112	0.0115	0.0111	0.0119	0.0118	0.0107	0.0104	0.0085	0.0095	0.0109
0.0125	0.0125	0.0124	0.0129	0.0125	0.0126	0.0128	0.0133	0.0128	0.0139	0.0133	0.0135	0.0136	0.0137	0.0131	0.0131	0.0123	0.0128	0.0132	0.0122	0.0126	0.0136	0.0129	0.0122
0.0186	0.0185	0.0186	0.0187	0.0184	0.0185	0.0187	0.0221	0.0199	0.0197	0.0190	0.0193	0.0184	0.0198	0.0190	0.0193	0.0186	0.0195	0.0211	0.0186	0.0178	0.0173	0.0174	0.0187
0.0200	0.0200	0.0198	0.0202	0.0192	0.0201	0.0201	0.0236	0.0221	0.0216	0.0211	0.0212	0.0205	0.0219	0.0210	0.0212	0.0202	0.0212	0.0228	0.0201	0.0193	0.0190	0.0190	0.0201
0.0204	0.0202	0.0202	0.0200	0.0204	0.0203	0.0203	0.0233	0.0215	0.0216	0.0211	0.0209	0.0202	0.0210	0.0206	0.0206	0.0196	0.0204	0.0219	0.0200	0.0194	0.0195	0.0196	0.0204
0.0189	0.0188	0.0188	0.0186	0.0190	0.0187	0.0187	0.0216	0.0194	0.0194	0.0190	0.0193	0.0186	0.0197	0.0192	0.0194	0.0185	0.0197	0.0209	0.0187	0.0179	0.0179	0.0178	0.0191
0.0219	0.0216	0.0217	0.0217	0.0216	0.0215	0.0220	0.0242	0.0228	0.0234	0.0224	0.0221	0.0215	0.0220	0.0212	0.0211	0.0200	0.0205	0.0219	0.0202	0.0200	0.0203	0.0202	0.0208
0.0216	0.0216	0.0216	0.0214	0.0217	0.0217	0.0215	0.0239	0.0221	0.0229	0.0226	0.0227	0.0229	0.0237	0.0233	0.0234	0.0218	0.0227	0.0246	0.0223	0.0214	0.0226	0.0224	0.0229
0.0208	0.0210	0.0212	0.0210	0.0206	0.0212	0.0213	0.0245	0.0228	0.0221	0.0217	0.0219	0.0209	0.0223	0.0216	0.0216	0.0205	0.0214	0.0234	0.0207	0.0205	0.0199	0.0199	0.0212
0.0169	0.0167	0.0169	0.0172	0.0165	0.0163	0.0171	0.0236	0.0209	0.0205	0.0202	0.0204	0.0191	0.0230	0.0222	0.0221	0.0204	0.0211	0.0230	0.0213	0.0215	0.0195	0.0193	0.0216
0.0198	0.0204	0.0214	0.0221	0.0168	0.0166	0.0203	0.0231	0.0204	0.0202	0.0200	0.0205	0.0195	0.0208	0.0199	0.0204	0.0193	0.0199	0.0217	0.0197	0.0201	0.0181	0.0180	0.0204
0.0208	0.0216	0.0228	0.0240	0.0171	0.0169	0.0214	0.0239	0.0210	0.0214	0.0212	0.0219	0.0211	0.0223	0.0192	0.0197	0.0189	0.0199	0.0217	0.0198	0.0199	0.0204	0.0207	0.0228
0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
0.0202	0.0209	0.0203	0.0209	0.0216	0.0211	0.0206	0.0238	0.0216	0.0215	0.0212	0.0210	0.0205	0.0219	0.0212	0.0213	0.0203	0.0218	0.0230	0.0204	0.0200	0.0200	0.0200	0.0216
0.0220	0.0228	0.0248	0.0257	0.0169	0.0257	0.0223	0.0247	0.0216	0.0224	0.0225	0.0231	0.0222	0.0229	0.0196	0.0200	0.0190	0.0200	0.0219	0.0199	0.0200	0.0204	0.0209	0.0234
0.0215	0.0210	0.0217	0.0222	0.0207	0.0205	0.0219	0.0246	0.0225	0.0223	0.0224	0.0229	0.0222	0.0232	0.0228	0.0232	0.0222	0.0231	0.0247	0.0222	0.0216	0.0224	0.0211	0.0231
0.0181	0.0191	0.0203	0.0189	0.0195	0.0190	0.0186	0.0208	0.0195	0.0202	0.0186	0.0189	0.0185	0.0200	0.0192	0.0191	0.0183	0.0189	0.0205	0.0186	0.0184	0.0173	0.0170	0.0199
0.0212	0.0220	0.0209	0.0217	0.0201	0.0197	0.0217	0.0242	0.0216	0.0219	0.0208	0.0217	0.0204	0.0218	0.0208	0.0209	0.0198	0.0208	0.0227	0.0202	0.0199	0.0188	0.0188	0.0204
0.0187	0.0196	0.0204	0.0211	0.0206	0.0202	0.0170	0.0192	0.0172	0.0167	0.0159	0.0164	0.0153	0.0171	0.0159	0.0170	0.0163	0.0156	0.0154	0.0156	0.0204	0.0177	0.0159	0.0177
0.0217	0.0221	0.0226	0.0232	0.0237	0.0232	0.0219	0.0248	0.0231	0.0235	0.0235	0.0232	0.0218	0.0228	0.0225	0.0223	0.0222	0.0229	0.0236	0.0227	0.0221	0.0222	0.0223	0.0236
0.0210	0.0210	0.0205	0.0204	0.0205	0.0204	0.0210	0.0224	0.0223	0.0207	0.0202	0.0206	0.0197	0.0210	0.0202	0.0208	0.0206	0.0209	0.0216	0.0204	0.0201	0.0193	0.0192	0.0226
0.0169	0.0172	0.0165	0.0169	0.0169	0.0169	0.0172	0.0252	0.0221	0.0233	0.0244	0.0166	0.0154	0.0177	0.0161	0.0170	0.0169	0.0176	0.0190	0.0166	0.0174	0.0163	0.0160	0.0150
0.0169	0.0168	0.0171	0.0167	0.0172	0.0169	0.0166	0.0229	0.0202	0.0200	0.0200	0.0205	0.0199	0.0215	0.0211	0.0219	0.0209	0.0226	0.0245	0.0232	0.0232	0.0260	0.0274	0.0163
0.0224	0.0232	0.0245	0.0265	0.0180	0.0265	0.0228	0.0248	0.0236	0.0232	0.0204	0.0210	0.0205	0.0217	0.0178	0.0183	0.0184	0.0192	0.0198	0.0187	0.0181	0.0175	0.0175	0.0190
0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185
0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833434.80	822408.45	833960.46	822643.00	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833960.46	822643.00	833985.46	822646.76	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833973.71	822626.09	834046.15	822636.54	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R008+R009	833661.17	822398.31	833663.59	822397.15	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R008+R009	833663.59	822397.15	833841.85	822460.34	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833544.64	822390.48	833587.56	822384.80	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R014+R015	833485.77	822318.11	833587.56	822384.80	14	0	1	0.0147	0.0147	0.0148	0.0146	0.0144	0.0147	0.0146	0.0184	0.0169	0.0148	0.0142	0.0146	0.0133	0.0153	0.0146	0.0150	0.0149	0.0158	0.0170	0.0148	0.0137	0.0116	0.0123	0.0150
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	0.0216	0.0193	0.0215	0.0239	0.0230	0.0205	0.0214	0.0230	0.0212	0.0215	0.0218	0.0220	0.0211	0.0226	0.0220	0.0223	0.0211	0.0224	0.0242	0.0220	0.0218	0.0212	0.0219	0.0246
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0205	0.0213	0.0202	0.0222	0.0215	0.0195	0.0201	0.0235	0.0211	0.0220	0.0218	0.0218	0.0214	0.0225	0.0219	0.0220	0.0206	0.0216	0.0234	0.0208	0.0208	0.0204	0.0211	0.0220
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0209	0.0175	0.0180	0.0165	0.0186	0.0180	0.0206	0.0229	0.0218	0.0222	0.0218	0.0220	0.0218	0.0224	0.0227	0.0227	0.0217	0.0229	0.0247	0.0219	0.0210	0.0219	0.0212	0.0219
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0213	0.0176	0.0183	0.0163	0.0166	0.0181	0.0211	0.0233	0.0217	0.0221	0.0217	0.0220	0.0218	0.0224	0.0224	0.0225	0.0209	0.0223	0.0247	0.0220	0.0210	0.0212	0.0211	0.0217
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0216	0.0197	0.0215	0.0236	0.0228	0.0207	0.0214	0.0229	0.0218	0.0220	0.0222	0.0223	0.0224	0.0229	0.0224	0.0230	0.0215	0.0227	0.0252	0.0223	0.0214	0.0215	0.0211	0.0219
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0187	0.0186	0.0189	0.0196	0.0193	0.0190	0.0186	0.0246	0.0239	0.0219	0.0207	0.0206	0.0188	0.0217	0.0199	0.0206	0.0211	0.0210	0.0214	0.0200	0.0198	0.0176	0.0173	0.0196
R027	833503.01	822278.46	833673.82	822341.72	13	0	1	0.0205	0.0210	0.0204	0.0216	0.0213	0.0199	0.0212	0.0231	0.0228	0.0232	0.0230	0.0225	0.0226	0.0233	0.0229	0.0229	0.0215	0.0227	0.0249	0.0222	0.0213	0.0217	0.0211	0.0221
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	0.0202	0.0195	0.0221	0.0250	0.0239	0.0210	0.0199	0.0236	0.0217	0.0221	0.0220	0.0219	0.0220	0.0223	0.0220	0.0223	0.0212	0.0225	0.0242	0.0221	0.0207	0.0214	0.0207	0.0216
R029	833768.03	822376.15	833846.76	822405.79	13	0	1	0.0171	0.0170	0.0181	0.0152	0.0150	0.0176	0.0170	0.0245	0.0232	0.0210	0.0199	0.0202	0.0183	0.0221	0.0202	0.0213	0.0230	0.0220	0.0226	0.0216	0.0226	0.0203	0.0200	0.0218
R030	833846.76	822405.79	833917.83	822431.11	14	0	1	0.0168	0.0166	0.0162	0.0168	0.0164	0.0170	0.0167	0.0225	0.0217	0.0191	0.0178	0.0187	0.0190	0.0196	0.0196	0.0197	0.0201	0.0202	0.0222	0.0190	0.0187	0.0170	0.0167	0.0186
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	0.0168	0.0181	0.0152	0.0156	0.0156	0.0152	0.0168	0.0261	0.0248	0.0225	0.0212	0.0209	0.0188	0.0223	0.0200	0.0209	0.0221	0.0210	0.0221	0.0205	0.0213	0.0192	0.0189	0.0213
R032+R301	833076.99	822065.71	833121.79	822072.07	18	0	1	0.0285	0.0262	0.0155	0.0156	0.0156	0.0157	0.0156	0.0212	0.0196	0.0195	0.0193	0.0195	0.0196	0.0203	0.0200	0.0201	0.0191	0.0198	0.0215	0.0195	0.0188	0.0193	0.0190	0.0200
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	0.0188	0.0187	0.0187	0.0189	0.0189	0.0189	0.0187	0.0212	0.0197	0.0199	0.0198	0.0200	0.0196	0.0204	0.0201	0.0201	0.0193	0.0201	0.0220	0.0195	0.0188	0.0190	0.0190	0.0197
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0154	0.0154	0.0158	0.0164	0.0164	0.0168	0.0159	0.0195	0.0186	0.0174	0.0176	0.0182	0.0183	0.0186	0.0186	0.0190	0.0183	0.0192	0.0209	0.0182	0.0171	0.0178	0.0175	0.0185
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0224	0.0217	0.0214	0.0208	0.0209	0.0209	0.0212	0.0246	0.0234	0.0236	0.0233	0.0237	0.0243	0.0244	0.0243	0.0240	0.0219	0.0225	0.0249	0.0234	0.0226	0.0246	0.0238	0.0236
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0189	0.0188	0.0188	0.0189	0.0190	0.0190	0.0188	0.0218	0.0205	0.0206	0.0206	0.0203	0.0204	0.0208	0.0208	0.0209	0.0197	0.0210	0.0223	0.0203	0.0190	0.0196	0.0195	0.0198
R037	833653.40	822269.00	833694.68	822284.07	19	0	1	0.0219	0.0218	0.0220	0.0218	0.0219	0.0220	0.0219	0.0240	0.0230	0.0241	0.0240	0.0236	0.0232	0.0233	0.0226	0.0224	0.0206	0.0212	0.0229	0.0204	0.0200	0.0210	0.0204	0.0209
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0224	0.0224	0.0224	0.0222	0.0223	0.0224	0.0223	0.0245	0.0233	0.0246	0.0243	0.0239	0.0234	0.0234	0.0226	0.0223	0.0204	0.0213	0.0225	0.0205	0.0194	0.0200	0.0197	0.0203
R039	833761.98	822311.12	833788.45	822320.76	14	0	1	0.0283	0.0236	0.0246	0.0253	0.0254	0.0255	0.0244	0.0297	0.0284	0.0319	0.0322	0.0304	0.0311	0.0288	0.0291	0.0281	0.0248	0.0253	0.0272	0.0246	0.0236	0.0258	0.0255	0.0252
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	0.0268	0.0272	0.0275	0.0278	0.0279	0.0278	0.0274	0.0289	0.0275	0.0309	0.0307	0.0295	0.0299	0.0279	0.0276	0.0268	0.0235	0.0240	0.0257	0.0234	0.0217	0.0246	0.0243	0.0241
R041	833833.16	822335.17	833902.96	822360.57	18	0	1	0.0283	0.0252	0.0256	0.0263	0.0259	0.0263	0.0257	0.0297	0.0283	0.0318	0.0322	0.0303	0.0310	0.0288	0.0289	0.0280	0.0247	0.0253	0.0272	0.0245	0.0237	0.0257	0.0256	0.0252
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	0.0282	0.0256	0.0262	0.0265	0.0266	0.0266	0.0261	0.0297	0.0284	0.0313	0.0316	0.0304	0.0306	0.0289	0.0286	0.0276	0.0243	0.0253	0.0272	0.0246	0.0237	0.0258	0.0256	0.0253
R043	833950.46	822320.45	834034.90	822250.52	18	0	1	0.0312	0.0312	0.0308	0.0314	0.0309	0.0311	0.0309	0.0315	0.0301	0.0346	0.0352	0.0338	0.0343	0.0321	0.0319	0.0307	0.0269	0.0274	0.0295	0.0275	0.0263	0.0300	0.0295	0.0283
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0271	0.0271	0.0277	0.0275	0.0278	0.0277	0.0275	0.0290	0.0271	0.0304	0.0308	0.0296	0.0299	0.0280	0.0277	0.0268	0.0235	0.0246	0.0265	0.0237	0.0222	0.0248	0.0244	0.0244
R045	834140.62	822162.67	834231.72	822086.65	19	0	1	0.0278	0.0181	0.0180	0.0197	0.0201	0.0205	0.0280	0.0289	0.0275	0.0310	0.0306	0.0296	0.0297	0.0282	0.0283	0.0274	0.0243	0.0248	0.0267	0.0246	0.0233	0.0257	0.0255	0.0253
R046	834231.72	822086.65	834322.21	822011.22	18	0	1	0.0278	0.0244	0.0251	0.0254	0.0256	0.0256	0.0278	0.0293	0.0275	0.0308	0.0310	0.0299	0.0300	0.0285	0.0282	0.0273	0.0241	0.0251	0.0269	0.0244	0.0231	0.0254	0.0252	0.0250
R047	834322.77	822010.68	834384.01	821959.66	18	0	1	0.0281	0.0240	0.0244	0.0254	0.0250	0.0257	0.0280	0.0289	0.0275	0.0308	0.0312	0.0301	0.0301	0.0287	0.0282	0.0274	0.0242	0.0247	0.0266	0.0245	0.0232	0.0257	0.0255	0.0251
R048	833097.20	821955.43	833156.56	821977.96	17	0	1	0.0220	0.0209	0.0210	0.0212	0.0212	0.0212	0.0221	0.0242	0.0236	0.0258	0.0254	0.0244	0.0245	0.0238	0.0236	0.0230	0.0206	0.0215	0.0231	0.0207	0.0199	0.0221	0.0217	0.0213
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0221	0.0221	0.0221	0.0220	0.0221	0.0221	0.0220	0.0238	0.0232	0.0251	0.0250	0.0241	0.0242	0.0232	0.0229	0.0224	0.0200	0.0209	0.0225	0.0204	0.0199	0.0220	0.0217	0.0213
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	0.0216	0.0216	0.0216	0.0215	0.0215	0.0216	0.0216	0.0236	0.0229	0.0252	0.0247	0.0238	0.0242	0.0236	0.0233	0.0212	0.0208	0.0220	0.0239	0.0210	0.0195	0.0210	0.0209	0.0208
R051	833274.46	822006.60	833434.70	822067.62	16	0	1	0.0235	0.0236	0.0236	0.0236	0.0236	0.0236	0.0236	0.0250	0.0241	0.0269	0.0267	0.0262	0.0266	0.0256	0.0256	0.0254	0.0225	0.0235	0.0258	0.0229	0.0219	0.0249	0.0245	0.0237
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0280	0.0254	0.0254	0.0255	0.0255	0.0254	0.0272	0.0275	0.0265	0.0297	0.0300	0.0288	0.0292	0.0272	0.0270	0.0261	0.0227	0.0233	0.0257	0.0235	0.0231	0.0261	0.0262	0.0254
R053	833786.86	822123.44	833736.66	822163.25	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R053	833736.66	822163.25	833688.33	822174.73	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R055	833786.53	822123.04	833872.14	822061.39	16	0	1	0.0238	0.0238	0.0238	0.0239	0.0239	0.0238	0.0239	0.0250	0.0236	0.0263	0.0262	0.0253	0.0254	0.0242	0.0239	0.0231	0.0204	0.0211	0.0229	0.0208	0.0203	0.0226	0.0221	0.0216
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0303	0.0300	0.0305	0.0302	0.0306	0.0305	0.0305	0.0305	0.0288	0.0336	0.0349	0.0336	0.0349	0.0322	0.0327	0.0316	0.0271	0.0278	0.0305	0.0286	0.0281	0.0337	0.0329	0.0301
R057	833873.30	822052.66	834159.21	821914.78	19	0	1	0.0249	0.0221	0.0226	0.0230	0.0229	0.0230	0.0249	0.0262	0.0250	0.0275	0.0278	0.0267	0.0271	0.0254	0.0257	0.0251	0.0219	0.0225	0.0244	0.0225	0.0211	0.0236	0.0236	0.0234
R058	834159.21	821914.78	834256.10	821736.42	16	0	1	0.0282	0.0243	0.0249	0.0257	0.0256	0.0258	0.0282	0.0287	0.0269	0.0311	0.0315	0.0299	0.0302	0.0279	0.0275	0.0263	0.0226	0.0229	0.0247	0.0228	0.0223	0.0255	0.0249	0.0238
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	0.0282	0.0284	0.0281	0.0280	0.0284	0.0283	0.0282	0.0289	0.0276	0.0310	0.0322	0.0307	0.0315	0.0290	0.0296	0.0286	0.0246	0.0252	0.0274	0.0253	0.0240	0.0277	0.0276	0.0266
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0267	0.0274	0.0279	0.0278	0.0280	0.0281	0.0277	0.0280	0.0260	0.0304	0.0318	0.0310	0.0327	0.0296	0.0303	0.0295	0.0251	0.0262	0.0288	0.0263	0.0251	0.0314	0.0304	0.0277
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	0.0220	0.0200	0.0200	0.0201	0.0203	0.0201	0.0218	0.0214	0.0211	0.0211	0.0212	0.0214	0.0213	0.0209	0.0214	0.0209	0.0209	0.0210	0.0213	0.0211	0.0213	0.0217	0.0199	0.0203
R062	833139.76	821889.31	833296.76	821947.76	16	0	1	0.0170	0.0172	0.0171	0.0175	0.0173	0.0169	0.0173	0.0203	0.0192	0.0184	0.0182	0.0185	0.0187	0.0183	0.0188	0.0190	0.0185	0.0187	0.0199	0.0169	0.0167	0.0168	0.0159	0.0180
R063	833296.66	821947.56	833460.51	822007.97	16	0	1	0.0205	0.0167	0.0173	0.0157	0.0181	0.0170	0.0203	0.0228	0.0211	0.0215	0.0216	0.0215	0.0212	0.0217	0.0216	0.0216	0.0204	0.0213	0.0231	0.0208	0.0203	0.0207	0.0204	0.0219
R064	833460.49	822008.03	833543.73	822038.72	18	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833543.73	822038.72	833563.70	821983.31	18	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R065	833160.17	821834.07	833315.66	821891.67	16	0	1	0.0176	0.0175	0.0182	0.0184	0.0185	0.0178	0.0187	0.0213	0.0196	0.0196	0.0199	0.0197	0.0201	0.0196	0.0192	0.0194	0.0187	0.0185	0.0195	0.0167	0.0166	0.0164	0.0163	0.0176
R066	833315.66	821891.68	833481.00	821962.76	16	0	1	0.0186	0.0178	0.0174	0.0180	0.0180	0.0174	0.0185	0.0208	0.0195	0.0194	0.0195	0.0201	0.0198	0.0203	0.0203	0.0202	0.0189	0.0204	0.0217	0.0193	0.0181	0.0188	0.0187	0.0199
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0138	0.0168	0.0164	0.0168	0.0163	0.0156	0.0155	0.0158	0.0159	0.0160	0.0151	0.0157	0.0171	0.0143	0.0129	0.0129	0.0130	0.0135
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0166	0.0164	0.0168	0.0155	0.0151	0.0149	0.0154	0.0152	0.0154	0.0146	0.0157	0.0171	0.0140	0.0128	0.0130	0.0129	0.0135
R069	833166.60	821757.87	833260.16	821796.91	29	0	1	0.0118	0.0118	0.0118	0.0117	0.0117	0.0117	0.0119	0.0146	0.0134	0.0125	0.0117	0.0119	0.0112	0.0123	0.0120	0.0123	0.0119	0.0132	0.0144	0.0117	0.0111	0.0105	0.0106	0.0117
R070	833249.90	821820.73	833329.89	821853.87	13	0	1	0.0165	0.0165	0.0165	0.0166	0.0164	0.0164	0.0164	0.0188	0.0177	0.0180	0.0171	0.0173	0.0167	0.0174	0.0168	0.0168	0.0159	0.0169	0.0180	0.0159	0.0154	0.0157	0.0155	0.0161

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	16	0	1	0.0164	0.0163	0.0164	0.0164	0.0162	0.0163	0.0163	0.0185	0.0171	0.0174	0.0168	0.0168	0.0165	0.0170	0.0166	0.0166	0.0157	0.0165	0.0180	0.0157	0.0154	0.0158	0.0156	0.0163
R072	833397.24	821875.22	833501.75	821897.07	20	0	1	0.0175	0.0173	0.0176	0.0171	0.0173	0.0175	0.0174	0.0196	0.0178	0.0182	0.0181	0.0179	0.0174	0.0178	0.0174	0.0174	0.0161	0.0167	0.0182	0.0163	0.0156	0.0159	0.0159	0.0169
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	0.0151	0.0151	0.0149	0.0149	0.0150	0.0152	0.0150	0.0173	0.0156	0.0153	0.0149	0.0152	0.0147	0.0157	0.0152	0.0155	0.0150	0.0155	0.0167	0.0151	0.0146	0.0144	0.0144	0.0155
R074	833281.64	821790.34	833451.80	821860.54	20	0	1	0.0158	0.0159	0.0159	0.0159	0.0155	0.0156	0.0158	0.0179	0.0163	0.0162	0.0158	0.0159	0.0153	0.0161	0.0155	0.0156	0.0148	0.0153	0.0166	0.0148	0.0144	0.0143	0.0142	0.0151
R075	833449.48	821861.09	833506.97	821883.08	16	0	1	0.0155	0.0155	0.0158	0.0152	0.0153	0.0156	0.0157	0.0180	0.0162	0.0160	0.0156	0.0156	0.0150	0.0158	0.0152	0.0153	0.0145	0.0151	0.0164	0.0145	0.0140	0.0135	0.0139	0.0148
R076	833501.48	821897.80	833548.66	821899.77	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R078	833682.38	821822.35	833875.32	821880.75	16	0	1	0.0196	0.0199	0.0198	0.0200	0.0194	0.0197	0.0197	0.0215	0.0198	0.0209	0.0207	0.0202	0.0196	0.0194	0.0188	0.0184	0.0168	0.0171	0.0185	0.0167	0.0164	0.0169	0.0166	0.0174
R079	833673.29	821811.43	833867.51	821851.46	16	0	1	0.0143	0.0142	0.0144	0.0144	0.0140	0.0143	0.0143	0.0167	0.0151	0.0145	0.0139	0.0142	0.0133	0.0146	0.0140	0.0142	0.0138	0.0143	0.0155	0.0138	0.0135	0.0130	0.0129	0.0140
R080	833875.67	821861.18	833989.54	821887.94	16	0	1	0.0164	0.0165	0.0163	0.0164	0.0164	0.0167	0.0166	0.0186	0.0167	0.0170	0.0167	0.0168	0.0162	0.0169	0.0162	0.0164	0.0154	0.0157	0.0172	0.0153	0.0151	0.0157	0.0154	0.0161
R081	833867.01	821650.88	833983.08	821582.98	20	0	1	0.0145	0.0144	0.0146	0.0147	0.0143	0.0145	0.0145	0.0168	0.0152	0.0147	0.0142	0.0144	0.0137	0.0148	0.0142	0.0144	0.0140	0.0145	0.0157	0.0140	0.0138	0.0133	0.0132	0.0143
R082	833458.18	821804.41	833510.75	821821.12	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R082	833536.29	821785.93	833670.13	821687.58	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R083	833436.83	821855.11	833496.18	821813.12	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R083	833524.36	821772.29	833559.81	821682.62	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
R084	833582.69	821644.68	833607.71	821603.87	13	0	1	0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
R087	833648.49	821548.42	833695.49	821508.30	13	0	1	0.0197	0.0197	0.0198	0.0197	0.0197	0.0197	0.0197	0.0203	0.0201	0.0201	0.0199	0.0201	0.0198	0.0204	0.0201	0.0202	0.0201	0.0201	0.0204	0.0198	0.0198	0.0199	0.0199	0.0196
R088	833254.24	821811.68	833305.50	821856.64	17	4	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833305.50	821856.64	833416.50	821865.51	17	7	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833600.16	821605.82	833712.09	821511.11	17	6	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R089	833256.86	821891.44	833370.08	821846.87	16	4	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833480.60	821829.25	833522.48	821786.30	16	10	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833522.48	821786.30	833543.19	821725.47	16	9	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833543.19	821725.47	833582.07	821653.37	16	8	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833582.07	821653.37	833598.99	821594.44	16	8	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833598.99	821594.44	833669.93	821506.87	16	6	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R090+R091	833259.78	821829.64	833317.84	821634.13	17	0	1	0.0178	0.0177	0.0173	0.0173	0.0174	0.0178	0.0179	0.0214	0.0207	0.0197	0.0190	0.0192	0.0187	0.0198	0.0196	0.0202	0.0193	0.0204	0.0220	0.0193	0.0183	0.0173	0.0178	0.0196
R092+R093	833337.92	821632.03	833449.56	821640.31	20	0	1	0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
R092+R093	833449.06	821640.31	833513.09	821599.24	20	0	1	0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	0.0101	0.0101	0.0101	0.0101	0.0102	0.0102	0.0101	0.0109	0.0101	0.0104	0.0096	0.0097	0.0089	0.0095	0.0084	0.0085	0.0083	0.0086	0.0082	0.0074	0.0076	0.0068	0.0065	0.0078
R095	833609.59	821591.72	833648.49	821548.43	17	0	1	0.0231	0.0226	0.0227	0.0227	0.0228	0.0227	0.0228	0.0239	0.0234	0.0236	0.0236	0.0234	0.0233	0.0233	0.0231	0.0231	0.0228	0.0228	0.0233	0.0223	0.0222	0.0224	0.0225	0.0224
R096+R097	833980.88	822454.38	834028.77	822414.27	18	0	1	0.0213	0.0260	0.0147	0.0150	0.0148	0.0157	0.0210	0.0236	0.0240	0.0246	0.0225	0.0227	0.0222	0.0238	0.0240	0.0230	0.0223	0.0222	0.0258	0.0224	0.0216	0.0222	0.0231	0.0217
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	0.0282	0.0291	0.0279	0.0277	0.0308	0.0294	0.0298	0.0309	0.0299	0.0342	0.0335	0.0321	0.0322	0.0312	0.0306	0.0297	0.0253	0.0270	0.0293	0.0257	0.0238	0.0260	0.0263	0.0255
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1	0.0255	0.0251	0.0254	0.0266	0.0258	0.0279	0.0256	0.0287	0.0269	0.0301	0.0290	0.0292	0.0290	0.0286	0.0281	0.0277	0.0245	0.0257	0.0277	0.0252	0.0241	0.0252	0.0248	0.0263
R102+R103	834216.31	822256.36	834309.95	822180.58	16	0	1	0.0269	0.0284	0.0241	0.0273	0.0256	0.0263	0.0273	0.0268	0.0261	0.0280	0.0288	0.0281	0.0282	0.0273	0.0256	0.0257	0.0231	0.0232	0.0253	0.0222	0.0224	0.0229	0.0238	0.0240
R104+R106	834309.96	822180.68	834407.46	822098.55	16	0	1	0.0239	0.0261	0.0216	0.0239	0.0230	0.0210	0.0254	0.0271	0.0252	0.0268	0.0249	0.0244	0.0244	0.0241	0.0249	0.0235	0.0220	0.0226	0.0249	0.0219	0.0220	0.0235	0.0234	0.0248
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	0.0195	0.0179	0.0193	0.0210	0.0205	0.0189	0.0192	0.0215	0.0209	0.0206	0.0203	0.0203	0.0204	0.0215	0.0215	0.0219	0.0208	0.0223	0.0240	0.0213	0.0202	0.0207	0.0206	0.0214
R107	833991.55	822370.04	834090.39	822287.63	18	0	1	0.0188	0.0185	0.0201	0.0222	0.0215	0.0195	0.0186	0.0222	0.0201	0.0199	0.0198	0.0199	0.0196	0.0210	0.0210	0.0212	0.0203	0.0211	0.0234	0.0206	0.0205	0.0204	0.0211	0.0210
R108	834090.84	822288.08	834181.98	822212.22	18	0	1	0.0185	0.0181	0.0200	0.0219	0.0208	0.0192	0.0183	0.0211	0.0198	0.0194	0.0193	0.0198	0.0193	0.0205	0.0206	0.0207	0.0204	0.0211	0.0228	0.0208	0.0198	0.0201	0.0209	0.0220
R109	834181.88	822212.22	834273.05	822136.48	17	0	1	0.0185	0.0181	0.0200	0.0220	0.0209	0.0192	0.0183	0.0212	0.0198	0.0195	0.0194	0.0200	0.0197	0.0210	0.0203	0.0211	0.0203	0.0209	0.0230	0.0205	0.0194	0.0212	0.0198	0.0224
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	0.0189	0.0196	0.0187	0.0200	0.0197	0.0183	0.0187	0.0216	0.0198	0.0194	0.0195	0.0197	0.0192	0.0206	0.0203	0.0207	0.0201	0.0210	0.0226	0.0205	0.0201	0.0206	0.0197	0.0207
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	0.0195	0.0177	0.0193	0.0208	0.0203	0.0186	0.0192	0.0214	0.0199	0.0196	0.0197	0.0198	0.0194	0.0207	0.0205	0.0208	0.0201	0.0206	0.0226	0.0203	0.0195	0.0197	0.0203	0.0212
R112	833849.76	822405.79	833902.86	822360.57	19	0	1	0.0323	0.0320	0.0300	0.0346	0.0326	0.0326	0.0310	0.0325	0.0308	0.0351	0.0354	0.0340	0.0339	0.0323	0.0327	0.0314	0.0270	0.0285	0.0309	0.0279	0.0264	0.0295	0.0290	0.0285
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	0.0166	0.0184	0.0140	0.0136	0.0142	0.0203	0.0188	0.0204	0.0189	0.0183	0.0182	0.0187	0.0182	0.0192	0.0191	0.0196	0.0189	0.0198	0.0214	0.0190	0.0180	0.0197	0.0183	0.0208
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	0.0189	0.0187	0.0181	0.0190	0.0187	0.0187	0.0187	0.0212	0.0205	0.0206	0.0203	0.0205	0.0202	0.0212	0.0210	0.0212	0.0203	0.0208	0.0227	0.0204	0.0193	0.0195	0.0195	0.0202
R115	833994.06	822200.75	834077.01	822132.08	16	0	1	0.0237	0.0241	0.0239	0.0235	0.0241	0.0239	0.0237	0.0253	0.0240	0.0258	0.0259	0.0256	0.0256	0.0252	0.0250	0.0247	0.0224	0.0231	0.0249	0.0231	0.0221	0.0238	0.0235	0.0236
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	0.0181	0.0178	0.0180	0.0191	0.0187	0.0187	0.0183	0.0205	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0197	0.0200	0.0195	0.0201	0.0215	0.0197	0.0187	0.0191	0.0191	0.0200
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	0.0184	0.0181	0.0183	0.0175	0.0190	0.0179	0.0182	0.0204	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0196	0.0200	0.0192	0.0201	0.0215	0.0197	0.0188	0.0191	0.0190	0.0201
R118	834190.59	822037.73	834243.25	821993.98	19	0	1	0.0183	0.0181	0.0182	0.0174	0.0189	0.0179	0.0182	0.0202	0.0192	0.0189	0.0188	0.0192	0.0190	0.0198	0.0197	0.0200	0.0196	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
R119	834242.94	821993.86	834282.16	821961.45	19	0	1	0.0181	0.0182	0.0176	0.0186	0.0183	0.0183	0.0179	0.0203	0.0191	0.0191	0.0188	0.0191	0.0189	0.0198	0.0197	0.0200	0.0195	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
R120	834281.93	821961.17	834309.17	821886.80	18	0	1	0.0180	0.0181	0.0186	0.0185	0.0181	0.0182	0.0182	0.0204	0.0196	0.0194	0.0190	0.0193	0.0189	0.0199	0.0201	0.0200	0.0195	0.0200	0.0219	0.0196	0.0187	0.0190	0.0192	0.0200
R121	833768.03	822376.18	833709.11	822318.98	18	0	1	0.0164	0.0164	0.0158	0.0166	0.0161	0.0164	0.0162	0.0193	0.0170	0.0164	0.0154	0.0162	0.0150	0.0182	0.0167	0.0169	0.0169	0.0184	0.0200	0.0180	0.0181	0.0183	0.0176	0.0184
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	0.0179	0.0187	0.0197	0.0209	0.0199	0.0186	0.0172	0.0201	0.0185	0.0181	0.0172	0.0177	0.0164	0.0183	0.0170	0.0174	0.0169	0.0182	0.0193	0.0170	0.0168	0.0146	0.0148	0.0168
R123	833868.78	822222.16	833964.75	822150.60	16	0	1	0.0149	0.0148	0.0149	0.0149	0.0147	0.0148	0.0148	0.0183	0.0174	0.0153	0.0144	0.0147	0.0135	0.0155	0.0151	0.0156	0.0154	0.0165	0.0178	0.0155	0.0143	0.0124	0.0124	0.0150
R124	833673.82	822341.72	833694.88	822284.07	18	0	1	0.0176	0.0177	0.0177	0.0175	0.0173	0.0176	0.0176	0.0198	0.0185	0.0185	0.0175	0.0181	0.0172	0.0194	0.0184	0.0187	0.0186	0.0192	0.0205	0.0185	0.0195	0.0199	0.0194	0.0182
R125	833694.86	822284.07	833827.77	822172.98	18	0	1	0.0169	0.0169	0.0169	0.0167	0.0169	0.0168	0.0169	0.0197	0.0178	0.0175	0.0163	0.0168	0.0154	0.0168	0.0165	0.0168	0.0162	0.0171	0.0181	0.0159	0.0151	0.0139	0.0130	0.0155
R126	833653.46	822269.00	833668.33	822174.73	13	0	1	0.0206	0.0215	0.0202	0.0221	0.0215	0.0197	0.0203	0.0228	0.0216	0.0217	0.0218	0.0218	0.0216	0.0224	0.0219	0.0222	0.0210	0.0222	0.0240	0.0213	0.0208	0.0216	0.0206	0.0218
R127	833409.65	822315.75	833503.51	822278.46	16	0	1	0.0169	0.0169	0.0167	0.0168	0.0169	0.0169	0.0168	0.0196	0.0183	0.0172	0.0166	0.0170	0.0159	0.0177	0.0168	0.0171	0.0174	0.0178	0.0194	0.0170	0.0170	0.0156	0.0153	0.0169
R128	833503.61	822278.46	833524.35	822221.21	18	0	1	0.0162	0.0162	0.0160	0.0161	0.0160	0.0163	0.0162	0.0190	0.0173	0.0162	0.0156	0.0161	0.0150	0.0169	0.0160	0.0164	0.0166	0.0175	0.0188	0.0164	0.0163	0.0153	0.0152	0.0167
R129	833377.80	822232.03	833308.00	822293.72	18	0	1	0.0146	0.0146	0.0145	0.0146	0.0145	0.0145	0.0146	0.0179	0.0164	0.0151	0.0141	0.0146	0.0135	0.0154	0.0146	0.0150	0.0149	0.0159	0.0172	0.0149	0.0146	0.0136	0.0134	0.0150
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	0.0145	0.0144	0.0144	0.0144	0.0144	0.0145	0.0145	0.0178	0.0163	0.0150	0.0139	0.0145	0.0134	0.0153	0.0144	0.0148	0.0148	0.0158	0.0168	0.0148	0.0148	0.0134	0.0132	0.0148
R131	833398.42	822175.04	833434.10	822080.75	18	0	1	0.0150	0.0151	0.0151	0.0151	0.0151	0.0151	0.0150	0.0185	0.0174	0.0164	0.0146	0.0150	0.0142	0.0159	0.0146	0.0155	0.0158	0.0159	0.0170	0.0148	0.0147	0.0133	0.0129	0.0153
R132	833433.92	822080.70	833460.51	822007.87	18	0	1	0.0144	0.0148	0.0151	0.0151	0.0147	0.0137	0.0126	0.0130	0.0134	0.0147	0.0137	0.0132	0.0136	0.0127	0.0121	0.0118	0.0111	0.0116	0.0120	0.0106	0.0112	0.0106	0.0100	0.0104
R133	833460.45	822007.98	833481.00	821952.76	19	0	1	0.0185	0.0198	0.0213	0.0223	0.0214	0.0195	0.0176	0.0203	0.0196	0.0206	0.0190	0.0191	0.0184	0.0188	0.0183	0.0175	0.0166	0.0178	0.0195	0.0165	0.0161	0.0142	0.0141	0.0160
R134	833481.06	821952.76	833506.97	821883.06	16	0	1	0.0171	0.0180	0.0191	0.0203	0.0194	0.0178	0.0162	0.0190	0.0184	0.0177	0.0170	0.0172	0.0165	0.0176	0.0172	0.0174	0.0164	0.0177	0.0193	0.0170	0.0149	0.0147	0.0149	0.0164
R135	833209.07	822239.78	833232.08	822178.07	16	0	1	0.0240	0.0277	0.0346	0.0346	0.0331	0.0256	0.0203	0.0220	0.0181	0.0173	0.0180	0.0180	0.0169	0.0188	0.0179	0.0183	0.0179	0.0178	0.0187	0.0174	0.0206	0.0180	0.0181	0.0189
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	0.0152	0.0161	0.0138	0.0138	0.0138	0.0138	0.0152	0.0189	0.0168	0.0157	0.0147	0.0152	0.0141	0.0162	0.0151	0.0155	0.0155	0.0164	0.0178	0.0156	0.0154	0.0139	0.0141	0.0157
R137	833080.91	822182.83	833100.53	822129.44	18	0	1	0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
R139	833121.68	822072.03	833166.58	821977.96	18	0	1	0.0141	0.0142	0.0142	0.0142	0.0141	0.0142	0.0141	0.0173	0.0155	0.0141	0.0134	0.0139	0.0128	0.0148	0.0140	0.0145	0.0145	0.0151	0.0165	0.0144	0.0144	0.0134	0.0134	0.0146
R140	833274.48	822007.07	833296.88	821947.58	17	0	1	0.0195	0.0200	0.0195	0.0205	0.0199	0.0191	0.0193	0.0222	0.0199	0.0202	0.0194	0.0191	0.0179	0.0188	0.0177	0.0176	0.0163	0.0170	0.0186	0.0161	0.0155	0.0140	0.0143	0.0164

Caline 4 input for 2034 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R141	833295.35	821947.28	833315.58	821891.67	13	0	1
R142	833329.89	821853.87	833315.98	821891.84	13	0	1
R143	833135.75	821888.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821793.15	13	0	1
R145+R146	833912.49	821978.50	834004.99	821818.03	17	0	1
R147+R148	833738.44	821988.35	833931.13	821727.74	19	0	1
R149	833728.61	821749.52	833807.73	821684.38	14	0	1
R149	833774.08	821643.52	833807.73	821684.38	13	0	1
R150	833736.07	821758.23	833807.71	821603.67	11	0	1
R151	833612.61	821610.08	833685.50	821543.70	13	0	1
R161	833693.50	821643.70	833776.28	821542.53	14	0	1
R152	833774.08	821643.52	833826.17	821600.58	20	0	1
R153	833991.21	822369.79	834019.77	822414.27	19	0	1
R154	833950.46	822320.45	833982.00	822369.67	18	0	1
R155	833909.66	822271.38	833950.46	822320.45	16	0	1
R156	833868.78	822222.16	833909.65	822271.38	18	0	1
R157	833868.08	822222.34	833837.77	822172.98	18	0	1
R158	833837.77	822172.08	833776.49	822113.30	18	0	1
R159	834075.91	822299.62	834112.50	822346.34	16	0	1
R160	834090.38	822287.53	834177.62	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.88	834034.90	822250.52	16	0	1
R164	834007.88	822189.33	834049.41	822238.28	19	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.28	833964.75	822190.50	18	0	1
R167	833885.47	822042.45	834007.88	822188.33	16	0	1
R168+R169	833813.72	821975.47	833873.36	822050.03	21	0	1
R170+R171	833738.44	821898.35	833812.49	821975.53	18	0	1
R172+R173	833684.93	821822.32	833739.28	821887.65	20	0	1
R174+R175	833561.78	821677.58	833683.38	821823.55	16	0	1
R176	833488.77	821608.48	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.68	821668.47	20	0	1
R178	833440.44	821529.90	833468.50	821608.61	16	0	1
R179	833451.64	821528.21	833511.32	821600.38	17	0	1
R180	834218.31	822259.38	834325.00	822385.39	19	0	1
R181	834181.98	822212.22	834219.31	822258.35	18	0	1
R182	834140.62	822162.67	834181.78	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	16	0	1
R184	834077.01	822132.08	834001.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.18	13	0	1
R184	834071.90	822084.18	834067.30	822115.02	14	0	1
R186	834309.88	822189.58	834382.69	822267.44	18	0	1
R188	834231.54	822088.63	834373.34	822138.83	18	0	1
R187	834190.88	822037.73	834231.76	822089.45	19	0	1
R188+R189	834104.98	821916.03	834098.34	821990.22	19	0	1
R190+R191	833931.15	821727.74	834004.99	821816.03	16	0	1
R192+R193	833872.32	821600.75	833930.80	821727.86	20	0	1
R194+R196	833825.79	821600.80	833867.51	821601.46	20	0	1
R196+R202	833751.01	821623.38	833824.17	821600.56	20	0	1
R197	834364.36	822000.88	834402.15	822104.71	17	0	1
R198	834322.77	822010.88	834363.36	822060.38	18	0	1
R199	834281.93	821961.17	834323.00	822010.48	18	0	1
R200	834239.17	821914.13	834290.08	821962.18	16	0	1
R200	834239.17	821914.13	834377.00	821880.33	16	0	1

FSP (g/VMT)																								
Road Pair	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	0.0193	0.0175	0.0161	0.0161	0.0158	0.0159	0.0192	0.0220	0.0197	0.0206	0.0197	0.0189	0.0181	0.0191	0.0175	0.0172	0.0159	0.0168	0.0180	0.0160	0.0151	0.0139	0.0135	0.0161
R142	0.0127	0.0110	0.0115	0.0097	0.0104	0.0118	0.0146	0.0141	0.0131	0.0149	0.0150	0.0152	0.0161	0.0158	0.0160	0.0163	0.0155	0.0162	0.0167	0.0160	0.0163	0.0192	0.0181	0.0168
R143	0.0193	0.0198	0.0193	0.0202	0.0198	0.0190	0.0199	0.0217	0.0203	0.0212	0.0199	0.0199	0.0187	0.0194	0.0183	0.0181	0.0171	0.0177	0.0187	0.0169	0.0158	0.0148	0.0145	0.0167
R144	0.0194	0.0198	0.0193	0.0204	0.0199	0.0190	0.0192	0.0219	0.0203	0.0205	0.0198	0.0193	0.0181	0.0191	0.0177	0.0178	0.0166	0.0173	0.0184	0.0166	0.0158	0.0148	0.0143	0.0167
R145+R146	0.0161	0.0161	0.0168	0.0156	0.0152	0.0164	0.0160	0.0192	0.0169	0.0162	0.0151	0.0155	0.0141	0.0159	0.0148	0.0152	0.0148	0.0160	0.0171	0.0149	0.0133	0.0111	0.0117	0.0148
R147+R148	0.0157	0.0156	0.0159	0.0158	0.0158	0.0161	0.0159	0.0190	0.0169	0.0159	0.0149	0.0152	0.0138	0.0156	0.0146	0.0150	0.0147	0.0155	0.0167	0.0144	0.0129	0.0105	0.0114	0.0147
R149	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R149	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R150	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R151	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
R161	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
R152	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0140	0.0162	0.0151	0.0156	0.0157	0.0164	0.0178	0.0156	0.0156	0.0143	0.0145	0.0159
R153	0.0171	0.0164	0.0167	0.0170	0.0173	0.0170	0.0173	0.0201	0.0186	0.0172	0.0162	0.0166	0.0149	0.0165	0.0158	0.0161	0.0155	0.0163	0.0176	0.0154	0.0146	0.0131	0.0134	0.0151
R154	0.0171	0.0165	0.0167	0.0170	0.0173	0.0171	0.0173	0.0201	0.0186	0.0176	0.0160	0.0164	0.0155	0.0171	0.0158	0.0162	0.0156	0.0165	0.0177	0.0152	0.0144	0.0128	0.0131	0.0151
R155	0.0172	0.0165	0.0168	0.0170	0.0173	0.0171	0.0174	0.0206	0.0191	0.0177	0.0166	0.0170	0.0152	0.0169	0.0161	0.0163	0.0158	0.0166	0.0179	0.0157	0.0150	0.0131	0.0134	0.0151
R156	0.0205	0.0194	0.0195	0.0190	0.0185	0.0190	0.0200	0.0255	0.0238	0.0231	0.0219	0.0221	0.0207	0.0222	0.0206	0.0206	0.0202	0.0209	0.0215	0.0189	0.0175	0.0156	0.0158	0.0176
R157	0.0187	0.0187	0.0183	0.0184	0.0182	0.0184	0.0188	0.0233	0.0220	0.0209	0.0199	0.0197	0.0188	0.0204	0.0188	0.0190	0.0187	0.0193	0.0205	0.0179	0.0169	0.0156	0.0151	0.0175
R158	0.0184	0.0183	0.0183	0.0185	0.0183	0.0185	0.0185	0.0214	0.0198	0.0191	0.0181	0.0184	0.0172	0.0185	0.0175	0.0176	0.0172	0.0177	0.0189	0.0170	0.0161	0.0149	0.0150	0.0169
R159	0.0175	0.0181	0.0192	0.0196	0.0140	0.0142	0.0177	0.0201	0.0176	0.0175	0.0172	0.0175	0.0165	0.0187	0.0181	0.0181	0.0169	0.0183	0.0191	0.0176	0.0165	0.0168	0.0169	0.0190
R160	0.0179	0.0186	0.0184	0.0176	0.0182	0.0178	0.0182	0.0210	0.0189	0.0190	0.0184	0.0181	0.0173	0.0183	0.0174	0.0171	0.0163	0.0171	0.0182	0.0166	0.0158	0.0159	0.0159	0.0168
R161	0.0170	0.0169	0.0168	0.0172	0.0166	0.0174	0.0173	0.0202	0.0187	0.0179	0.0177	0.0178	0.0172	0.0184	0.0177	0.0179	0.0174	0.0182	0.0200	0.0173	0.0171	0.0169	0.0169	0.0178
R162	0.0178	0.0180	0.0177	0.0182	0.0181	0.0177	0.0177	0.0205	0.0188	0.0189	0.0180	0.0178	0.0169	0.0183	0.0171	0.0172	0.0165	0.0169	0.0180	0.0159	0.0156	0.0156	0.0150	0.0168
R163	0.0183	0.0183	0.0182	0.0183	0.0182	0.0185	0.0183	0.0212	0.0194	0.0196	0.0191	0.0188	0.0180	0.0189	0.0179	0.0181	0.0169	0.0174	0.0189	0.0167	0.0162	0.0159	0.0157	0.0171
R164	0.0170	0.0169	0.0166	0.0172	0.0166	0.0174	0.0167	0.0196	0.0180	0.0174	0.0165	0.0169	0.0159	0.0171	0.0161	0.0164	0.0157	0.0164	0.0179	0.0159	0.0155	0.0149	0.0149	0.0164
R165	0.0193	0.0195	0.0191	0.0198	0.0196	0.0191	0.0192	0.0219	0.0203	0.0205	0.0200	0.0199	0.0191	0.0197	0.0191	0.0191	0.0180	0.0186	0.0200	0.0179	0.0173	0.0171	0.0172	0.0181
R166	0.0162	0.0160	0.0161	0.0162	0.0163	0.0162	0.0160	0.0193	0.0181	0.0165	0.0161	0.0162	0.0151	0.0163	0.0157	0.0161	0.0158	0.0164	0.0173	0.0155	0.0138	0.0118	0.0125	0.0151
R167	0.0249	0.0251	0.0252	0.0251	0.0251	0.0253	0.0249	0.0267	0.0254	0.0277	0.0274	0.0263	0.0266	0.0259	0.0254	0.0246	0.0222	0.0228	0.0248	0.0221	0.0218	0.0236	0.0233	0.0226
R168+R169	0.0100	0.0104	0.0105	0.0100	0.0102	0.0100	0.0102	0.0117	0.0114	0.0109	0.0106	0.0106	0.0102	0.0105	0.0104	0.0106	0.0102	0.0110	0.0109	0.0098	0.0096	0.0088	0.0087	0.0101
R170+R171	0.0116	0.0116	0.0115	0.0120	0.0116	0.0117	0.0118	0.0123	0.0112	0.0128	0.0123	0.0124	0.0125	0.0126	0.0120	0.0121	0.0114	0.0118	0.0122	0.0112	0.0116	0.0125	0.0119	0.0113
R172+R173	0.0171	0.0171	0.0171	0.0172	0.0170	0.0170	0.0172	0.0202	0.0182	0.0181	0.0175	0.0177	0.0170	0.0182	0.0175	0.0177	0.0173	0.0179	0.0194	0.0171	0.0163	0.0159	0.0159	0.0172
R174+R175	0.0184	0.0183	0.0181	0.0186	0.0177	0.0185	0.0184	0.0216	0.0204	0.0199	0.0194	0.0195	0.0189	0.0201	0.0193	0.0195	0.0186	0.0195	0.0209	0.0185	0.0178	0.0175	0.0175	0.0184
R176	0.0188	0.0186	0.0186	0.0185	0.0188	0.0187	0.0187	0.0213	0.0197	0.0198	0.0194	0.0193	0.0186	0.0194	0.0190	0.0190	0.0181	0.0188	0.0201	0.0184	0.0179	0.0179	0.0180	0.0188
R177	0.0174	0.0173	0.0174	0.0171	0.0175	0.0172	0.0173	0.0197	0.0179	0.0178	0.0175	0.0178	0.0171	0.0182	0.0177	0.0178	0.0171	0.0181	0.0192	0.0172	0.0166	0.0165	0.0164	0.0176
R178	0.0202	0.0199	0.0200	0.0200	0.0199	0.0198	0.0202	0.0221	0.0210	0.0215	0.0207	0.0203	0.0198	0.0202	0.0195	0.0194	0.0184	0.0189	0.0201	0.0186	0.0184	0.0187	0.0186	0.0191
R179	0.0199	0.0199	0.0199	0.0197	0.0200	0.0199	0.0198	0.0219	0.0203	0.0211	0.0208	0.0209	0.0210	0.0217	0.0214	0.0215	0.0200	0.0208	0.0226	0.0205	0.0197	0.0208	0.0207	0.0211
R180	0.0192	0.0193	0.0195	0.0193	0.0190	0.0195	0.0195	0.0225	0.0209	0.0204	0.0200	0.0202	0.0193	0.0205	0.0199	0.0199	0.0190	0.0198	0.0216	0.0191	0.0190	0.0184	0.0183	0.0195
R181	0.0156	0.0154	0.0156	0.0158	0.0152	0.0150	0.0157	0.0216	0.0193	0.0189	0.0186	0.0188	0.0176	0.0211	0.0204	0.0203	0.0188	0.0194	0.0212	0.0196	0.0198	0.0180	0.0177	0.0199
R182	0.0182	0.0187	0.0197	0.0204	0.0154	0.0153	0.0187	0.0211	0.0188	0.0186	0.0184	0.0188	0.0179	0.0192	0.0183	0.0187	0.0178	0.0183	0.0199	0.0182	0.0185	0.0167	0.0166	0.0187
R183	0.0192	0.0199	0.0210	0.0221	0.0157	0.0156	0.0197	0.0219	0.0193	0.0197	0.0195	0.0202	0.0194	0.0206	0.0177	0.0181	0.0174	0.0183	0.0199	0.0182	0.0184	0.0188	0.0190	0.0210
R184	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R184	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R184	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R186	0.0156	0.0192	0.0187	0.0192	0.0199	0.0194	0.0189	0.0218	0.0199	0.0198	0.0196	0.0194	0.0189	0.0202	0.0195	0.0196	0.0187	0.0201	0.0212	0.0188	0.0185	0.0185	0.0184	0.0199
R188	0.0202	0.0210	0.0228	0.0236	0.0156	0.0236	0.0206	0.0226	0.0199	0.0206	0.0207	0.0213	0.0204	0.0211	0.0180	0.0184	0.0175	0.0185	0.0201	0.0183	0.0184	0.0186	0.0192	0.0215
R187	0.0198	0.0193	0.0199	0.0204	0.0190	0.0188	0.0202	0.0226	0.0207	0.0206	0.0206	0.0211	0.0205	0.0214	0.0211	0.0213	0.0204	0.0213	0.0228	0.0204	0.0199	0.0206	0.0194	0.0212
R188+R189	0.0167	0.0176	0.0187	0.0174	0.0180	0.0175	0.0171	0.0191	0.0179	0.0186	0.0171	0.0174	0.0171	0.0184	0.0177	0.0176	0.0169	0.0174	0.0189	0.0171	0.0169	0.0160	0.0157	0.0183
R190+R191	0.0195	0.0202	0.0192	0.0200	0.0185	0.0181	0.0199	0.0221	0.0199	0.0202	0.0192	0.0200	0.0188	0.0201	0.0192	0.0192	0.0183	0.0192	0.0209	0.0186	0.0183	0.0173	0.0173	0.0187
R192+R193	0.0173	0.0180	0.0188	0.0194	0.0190	0.0186	0.0157	0.0176	0.0159	0.0154	0.0147	0.0151	0.0141	0.0157	0.0147	0.0157	0.0150	0.0144	0.0142	0.0144	0.0188	0.0163	0.0146	0.0183
R194+R196	0.0199	0.0203	0.0208	0.0213	0.0218	0.0213	0.0201	0.0227	0.0212	0.0216	0.0216	0.0213	0.0201	0.0209	0.0207	0.0205	0.0204	0.0210	0.0217	0.0209	0.0203	0.0204	0.0205	0.0216
R196+R202	0.0193	0.0194	0.0188	0.0187	0.0188	0.0187	0.0193	0.0205	0.0205	0.0190	0.0186	0.0189	0.0181	0.0193	0.0186	0.0191	0.0190	0.0192	0.0198	0.0187	0.0185	0.0178	0.0177	0.0208
R197	0.0156	0.0158	0.0152	0.0156	0.0156	0.0156	0.0158	0.0238	0.0203	0.0215	0.0224	0.0153	0.0142	0.0163	0.0149	0.0156	0.0155	0.0162	0.0175	0.0153	0.0160	0.0151	0.0147	0.0138
R198	0.0156	0.0154	0.0157	0.0154	0.0158	0.0156	0.0153	0.0209	0.0186	0.0184	0.0184	0.0189	0.0183	0.0198	0.0194	0.0201	0.0193	0.0208	0.0226	0.0213	0.0214	0.0240	0.0252	0.0150
R199	0.0206	0.0214	0.0225	0.0244	0.0166	0.0244	0.0210	0.0227	0.0217	0.0214	0.0188	0.0193	0.0189	0.0200	0.0164	0.0169	0.0170	0.0177	0.0183	0.0172	0.0167	0.0162	0.0162	0.0175
R200	0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170
R200	0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R001	833125.78	822224.11	833177.37	822330.25	20	0	1
R002	833177.37	822330.28	833231.08	822345.76	20	0	1
R003	833231.06	822345.76	833434.80	822408.45	20	0	1
R003	833434.80	822408.45	833909.49	822643.09	20	0	1
R003	833909.46	822643.00	833985.46	822646.78	20	0	1
R004	833118.29	822308.10	833185.93	822315.62	19	0	1
R004	833185.93	822315.62	833425.15	822386.41	19	0	1
R004	833425.15	822386.41	833518.28	822421.58	19	0	1
R005	833518.28	822421.58	833673.75	822496.58	18	0	1
R005	833673.75	822496.58	833933.87	822514.65	18	0	1
R005	833933.87	822514.65	833973.71	822526.09	19	0	1
R005	833973.71	822526.09	834046.15	822526.54	19	0	1
R006+R007	833527.00	822419.51	833627.55	822455.21	14	0	1
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1
R008+R009	833861.17	822398.31	833863.59	822307.15	13	0	1
R008+R009	833863.59	822307.15	833841.85	822488.34	13	0	1
R010+R011	833978.15	822463.30	833898.64	822432.88	12	0	1
R010+R011	833898.64	822432.88	833883.54	822462.40	12	0	1
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1
R012+R013	833387.26	822507.47	833423.59	822558.02	10	0	1
R012+R013	833423.59	822558.02	833418.09	822482.07	10	0	1
R012+R013	833418.05	822482.07	833447.62	822425.39	10	0	1
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1
R012+R013	833544.64	822390.48	833587.58	822364.60	10	0	1
R014+R015	833488.77	822318.11	833587.58	822364.60	14	0	1
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1
R016+R017	833633.17	822374.91	833861.17	822398.31	15	0	1
R019	833092.67	822192.93	833209.07	822239.78	16	0	1
R021	833209.07	822239.78	833355.00	822293.72	16	0	1
R022	833355.00	822293.72	833480.61	822340.13	16	0	1
R022	833480.61	822340.13	833489.65	822316.75	16	0	1
R023	833073.42	822119.68	833100.53	822129.44	14	0	1
R024	833100.53	822129.44	833232.06	822178.07	14	0	1
R025	833232.06	822178.07	833377.80	822232.03	14	0	1
R026	833377.80	822232.03	833503.34	822278.92	14	0	1
R027	833503.51	822278.46	833673.82	822341.72	13	0	1
R028	833673.82	822341.72	833768.11	822378.93	13	0	1
R029	833768.03	822378.19	833846.76	822405.79	13	0	1
R030	833846.78	822405.79	833917.83	822431.11	14	0	1
R031	833917.83	822431.11	833980.58	822454.38	14	0	1
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1
R033	833121.79	822072.07	833253.39	822120.94	16	0	1
R034	833253.39	822120.94	833396.77	822175.17	16	0	1
R035	833396.77	822175.17	833524.35	822221.21	18	0	1
R036	833624.35	822221.21	833653.40	822269.00	18	0	1
R037	833653.40	822269.00	833694.86	822284.07	16	0	1
R038	833694.68	822284.56	833761.79	822309.61	18	0	1
R039	833761.88	822311.12	833799.40	822320.78	14	0	1
R040	833785.11	822318.98	833833.16	822335.17	18	0	1
R041	833833.16	822335.17	833902.06	822360.57	16	0	1
R042	833902.96	822360.57	833960.46	822320.45	16	0	1
R043	833960.46	822320.46	834034.80	822250.62	18	0	1
R044	834034.80	822250.52	834140.62	822162.07	18	0	1
R045	834140.62	822162.67	834231.78	822086.45	19	0	1
R046	834231.72	822086.85	834323.21	822011.22	18	0	1
R047	834322.77	822010.68	834384.01	821969.66	18	0	1
R048	833097.20	821955.42	833156.58	821977.86	17	0	1
R049	833156.56	821977.98	833424.10	822086.78	16	0	1
R050	833101.47	821842.33	833274.46	822007.07	21	0	1
R051	833274.06	822000.00	833438.70	822067.61	16	0	1
R052	833434.10	822080.21	833688.33	822174.73	16	0	1
R053	833796.66	822123.44	833756.66	822163.26	16	0	1
R053	833736.66	822163.26	833688.33	822174.73	16	0	1
R054	833438.83	822067.29	833586.71	822122.03	16	0	1
R054	833586.71	822122.03	833649.55	822144.40	16	0	1
R054	833649.56	822144.40	833693.68	822152.80	16	0	1
R054	833693.68	822152.80	833713.86	822149.82	16	0	1
R054	833713.88	822149.82	833757.63	822128.56	16	0	1
R054	833757.83	822128.50	833778.49	822113.30	16	0	1
R055	833796.83	822123.04	833872.14	822061.39	16	0	1
R056	833778.48	822113.30	833867.20	822039.12	16	0	1
R057	833873.20	822062.60	834159.21	821814.78	19	0	1
R058	834159.21	821814.78	834250.10	821738.42	16	0	1
R059	833867.29	822039.23	834058.34	821880.22	17	0	1
R060	834058.34	821880.22	834241.81	821727.45	16	0	1
R061	833115.37	821880.29	833139.75	821889.31	16	0	1
R062	833139.75	821889.31	833296.76	821947.78	16	0	1
R063	833296.86	821947.86	833460.51	822007.97	16	0	1
R064	833460.68	822008.03	833543.73	822028.72	15	0	1
R064	833543.73	822028.73	833593.70	821983.31	15	0	1
R064	833460.98	821952.82	833593.70	821983.21	15	0	1
R065	833160.17	821834.07	833316.58	821891.67	16	0	1
R066	833315.60	821891.08	833461.00	821962.76	16	0	1
R067	833154.01	821775.07	833178.47	821783.88	19	0	1
R068	833178.74	821783.16	833253.68	821913.88	18	0	1
R069	833168.80	821757.87	833260.16	821756.91	29	0	1
R070	833249.92	821820.73	833329.89	821853.87	13	0	1

Vehicle count for each road

Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
64	23	14	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	41
63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
50	22	14	10	11	16	50	100	150	200	150	150	100	100	100	100	50	50	50	50	50	50	23	18
50	50	18	12	14	20	50	100	200	250	200	200	200	150	200	150	100	150	150	100	100	50	50	50
50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	300	150	200	250	200	150	100	100	100
50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	200	150	200	250	200	150	100	100	100
50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	100
50	19	11	7	10	13	50	50	150	150	150	150	200	200	250	250	200	300	350	300	200	150	150	100
50	50	16	11	13	18	50	100	200	200	200	200	250	250	300	350	300	400	450	350	250	200	200	150
50	25	15	11	13	18	50	100	200	200	200	200	200	250	250	250	200	300	300	250	200	150	150	100
100	50	50	20	22	50	100	150	350	350	350	300	350	350	400	350	300	400	450	350	250	200	200	150
50	20	13	9	10	15	50	50	150	150	150	150	150	200	200	200	200	250	300	250	150	150	100	100
24	13	8	5	6	9	25	50	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
50	50	20	14	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
14	8	5	4	4	5	14	50	50	100	50	50	100	100	100	100	100	100	150	100	100	50	50	50
105	54	54	54	54	54	108	268	400	400	321	318	368	367	417	416	467	517	565	412	308	257	206	154
150	100	100	100	100	100	200	450	700	650	600	600	650	650	750	800	850	1000	1050	800	550	450	450	300
150	100	100	100	100	100	200	450	750	700	600	600	650	650	750	800	850	1050	1050	800	550	500	450	300
250	200	200	150	150	200	350	800	1250	1150	1000	900	950	950	1000	1000	1000	1150	1100	850	600	550	450	350
300	250	200	200	200	250	400	950	1450	1350	1150	1100	1150	1100	1200	1250	1300	1500	1450	1150	800	650	600	450
250	200	150	150	150	200	300	750	1150	1100	950	850	900	900	950	950	950	1100	1050	800	550	500	450	300
250	200	150	150	150	200	300	750	1150	1100	950	900	900	900	950	1000	1000	1150	1100	850	600	500	450	350
200	150	100	100	100	150	250	550	850	850	700	650	700	650	700	700	700	850	800	600	450	350	350	250
150	150	100	100	100	150	200	500	750	750	600	550	600	550	600	600	600	650	650	500	350	300	250	200
200	150	150	150	150	150	250	600	900	850	750	650	700	650	700	700	700	800	750	600	400	350	300	200
250	200	150	150	150	200	300	700	1100	1050	900	850	900	900	950	1000	1000	1200	1200	900	650	550	500	350
150	100	100	100	100	100	150	400	650	600	550	500	550	550	600	600	650	750	750	550	400	350	300	200
150	150	100	100	100	150	200	500	800	750	650	600	650	650	700	700	750	850	850	650	450	400	350	250
100	100	50	50	50	100	150	350	550	550	450	450	450	450	500	550	550	650	650	500	350	300	300	200
200	150	100	100	100	150	200	550	800	750	650	600	650	650	700	700	750	850	850	650	450	400	350	250
150	100	100	100	100	100	200	450	700	700	600	550	600	600	650	650	700	800	800	600	450	350	350	250
600	450	400	400	350	450	750	1750	2700	2550	2150	1950	2000	1900	1950	1950	1950	2200	2050	1600	1100	950	850	600
500	400	350	350	350	400	650	1500	2350	2200	1850	1650	1650	1550	1600	1550	1500	1650	1550	1200	800	700	550	450
600	450	400	400	400	450	750	1750	2650	2550	2200	2050	2150	2100	2250	2350	2400	2800	2750	2100	1450	1250	1150	800
500	400	350	300	300	350	600	1450	2250	2100	1800	1650	1750	1700	1800	1850	1850	2150	2100	1600	1150	950	850	600
300	250	200	200	200	250	400	950	1500	1400	1250	1150	1200	1150	1250	1300	1300	1550	1500	1150	800	700	600	450
350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
450	350	300	300	300	350	550	1350	2100	1950	1700	1550	1650	1550	1650	1700	1750	2000	1950	1500	1050	900	800	550
250	200	150	150	150	200	300	700	1050	1000	900	800	850	850	900	950	950	1150	1100	850	600	500	450	350
300	250	200	200	200	250	400	950	1450	1400	1150	1050	1100	1050	1100	1100	1100	1250	1200	900	650	550	500	350
300	200	200	200	200	200	350	850	1350	1250	1050	950	1000	950	1000	950	950	1100	1050	800	550	450	400	300
200	150	100	100	100	150	250	550	850	800	700	650	700	700	800	850	900	1050	1050	800	550	500	450	300
150	150	100	100	100	150	200	550	800	800	700	650	700	700	750	800	850	1000	1000	750	500	450	400	300
50	22	14	9	10	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
50	50	22	16	17	50	50	150	250	300	250	250	250	250	300	300	200	300	300	250	150	150	150	100
50	18	11	8	9	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
50	24	15	11	12	18	50	100	200	200	150	150	150	150	150	150	100	150	150	100	100	50	50	50
50	50	18	12	15	22	50	100	200	250	200	200	250	250	300	250	200	300	350	250	200	150	150	100
1300	1050	900	850	850	1000	1600	3850	4750	4750	4750	4400	4600	4400	4700	4750	4750	4750	4750	4150	2900	2450	2250	1550
1200	950	800	800	750	900	1500	3550	4750	4750	4400	4050	4250	4100	4350	4450	4550	4750	4750	3900	2700	2300	2100	1500
800	650	550	550	550	600	1000	2450	3750	3550	3100	2900	3100	3050	3350	3450	3600	4250	4250	3250	2250	1950	1750	1250
350	250	250	250	200	250	450	1050	1550	1500	1300	1200	1250	1200	1250	1300	1300	1500	1450	1100	750	650	600	400

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	16	0	1	400	300	250	250	250	300	500	1150	1750	1650	1450	1300	1400	1350	1400	1450	1500	1700	1650	1300	900	750	700	500
R072	833397.24	821875.22	833501.75	821887.07	20	0	1	150	150	100	100	100	150	200	500	800	750	650	600	650	650	700	700	750	900	900	700	450	400	350	250
R073	833451.80	821880.54	833397.24	821875.22	17	0	1	200	150	150	150	150	150	250	650	950	950	800	700	750	700	750	750	750	800	800	600	400	350	300	250
R074	833281.64	821790.34	833451.50	821880.84	20	0	1	200	150	150	150	150	150	250	600	900	900	750	700	750	700	750	800	800	950	900	700	500	400	400	250
R075	833449.46	821861.00	833506.97	821883.06	16	0	1	150	100	100	100	100	100	150	400	650	600	500	450	500	450	500	500	500	550	550	400	300	250	250	150
R076	833501.46	821897.80	833548.86	821899.77	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R076	833548.86	821899.77	833603.43	821888.09	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R076	833603.43	821888.09	833684.92	821822.32	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R077	833500.57	821884.14	833553.57	821884.36	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R078	833682.38	821822.35	833875.32	821880.75	16	0	1	150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	550	500	400	300	250	200	150
R079	833873.29	821811.42	833867.51	821851.46	16	0	1	200	150	150	150	150	150	300	650	1000	950	800	750	800	750	800	800	800	900	900	700	500	400	350	250
R080	833875.67	821861.10	833998.54	821587.94	16	0	1	100	100	100	100	100	100	150	400	550	550	500	450	500	450	500	550	550	650	650	500	350	300	250	200
R081	833867.01	821850.08	833983.08	821582.08	20	0	1	250	200	150	150	150	200	300	700	1100	1050	900	850	900	850	950	950	1000	1150	1150	850	600	500	450	350
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R083	833436.87	821858.11	833496.18	821813.12	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R083	833524.36	821772.29	833589.81	821652.62	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R084	833567.54	821687.02	833582.89	821644.65	13	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
R084	833582.89	821644.08	833607.71	821603.87	13	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
R085	833605.34	821605.84	833640.24	821578.52	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R085	833640.24	821575.52	833681.67	821546.20	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R085	833681.67	821545.20	833728.52	821512.89	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R086	833550.79	821649.69	833603.89	821583.69	17	0	1	100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
R086	833603.85	821583.58	833646.83	821546.45	17	0	1	100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
R087	833648.49	821542.42	833666.49	821508.30	12	0	1	100	100	100	50	50	100	150	350	500	500	450	400	400	400	400	400	400	400	400	300	200	200	150	100
R088	833254.24	821811.68	833368.50	821858.64	17	4	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833368.50	821866.64	833418.50	821865.01	17	7	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833418.50	821865.51	833487.63	821841.09	17	9	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833487.63	821841.09	833623.63	821786.07	17	10	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833553.83	821786.07	833574.80	821687.75	17	3	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833574.80	821687.75	833600.16	821605.62	17	7	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833600.16	821605.82	833712.08	821511.51	17	6	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R089	833256.66	821891.44	833370.08	821846.87	16	6	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833370.06	821846.87	833427.36	821852.03	16	7	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833427.36	821852.03	833480.60	821829.28	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833480.60	821829.20	833522.46	821786.20	16	10	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833598.99	821594.44	833600.93	821508.87	16	6	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R090+R091	833259.76	821629.64	833317.84	821634.13	17	0	1	250	250	200	200	200	250	350	850	1350	1300	1050	950	1000	950	1000	1000	1000	1150	1050	800	550	500	400	300
R092+R093	833337.92	821632.93	833449.86	821640.31	20	0	1	250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	800	900	850	700	450	400	350	250
R092+R093	833449.86	821640.31	833513.09	821599.24	20	0	1	250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	800	900	850	700	450	400	350	250
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	50	50	50	50	50	50	50	150	250	250	200	200	200	150	200	200	200	200	200	150	100	100	100	50
R095	833609.59	821591.72	833648.49	821548.43	17	0	1	100	100	50	50	50	100	150	350	500	500	400	400	400	350	400	400	350	400	400	300	200	200	150	100
R096+R097	833960.89	822454.38	834028.77	822414.27	18	0	1	28	16	8	6	7	11	29	62	150	150	124	123	123	122	150	123	68	122	150	69	63	62	61	58
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	60	55	21	14	17	25	61	121	250	300	250	250	250	250	250	250	200	250	250	200	150	150	150	70
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1	100	100	43	31	33	73	100	250	500	550	500	450	450	450	450	450	350	450	450	350	250	200	200	150
R102+R103	834216.31	822256.35	834309.65	822180.58	16	0	1	72	31	19	14	16	23	74	100	250	250	250	250	250	250	300	300	200	300	300	250	200	150	100	100
R104+R105	834309.65	822180.68	834407.46	822098.58	18	0	1	40	23	13	10	11	16	43	100	200	200	150	150	150	150	250	200	150	200	300	200	150	150	150	100
R106	833917.83	822431.11	833991.76	822388.39	18	0	1	50	50	21	15	16	24	50	100	250	250	250	200	250	200	250	250	200	250	250	200	150	100	100	100
R107	833991.55	822373.04	834090.39	822287.53	16	0	1	50	50	17	12	14	20	50	100	200	200	200	150	150	150	150	100	100	100	100	50	50	50	50	50
R108	834090.84	822288.08	834181.68	822212.22	18	0	1	50	50	18	13	16	22	50	100	200	250	200	200	200	200	200	150	150	150	150	150	100	100	50	50
R109	834181.88	822212.33	834273.00	822136.48	17	0	1	50	50	17	12	15	21	50	100	200	250	200	150	150	150	150	150	100	100	100	100	50	50	50	50
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
R111	834363.46	822059.86	834400.74	822028.83	16	0	1	50	50	20	15	16	24	50	100	250	250	250	200	200	150	200	150	100	150	150	100	50	50	50	50
R112	833848.76	822405.79	833902.96	822360.57	19	0	1	50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	150
R113	833833.16	822338.17	833909.68	822371.35	16	0	1	50	17	10	7	8	12	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R114	833909.65	822271.36	833994.47	822201.23	18	0	1	200	100	50	50	50	50	200	400	750	800	750	650	650	650	700	650	500	600	650	500	350	300	250	200
R115	833994.06	822200.75	834077.01	822122.98	16	0	1	150	100	50	50	50	50	150	350	700	750	650	600	600	600	650	650	500	650	650	500	350	300	250	200
R116	834076.80	822131.94	834097.30	822115.02	16	0	1	150	100	50	50	50	50	200	350	700	750	650	650	650	600	700	650	500	650	650	500	350	300	250	200
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	150	100	50	50	50	50	150	300	650	700	600	600	600	550	600	600	450	600	600	500	350	300	250	200
R118	834190.59	822037.73	834243.25	821985.98	19	0	1	150	100	50	50	50	50	150	350	650	700	650	600	650	600	700	700	550	700	750	600	400	350	300	250
R119	834242.94	821993.80	834282.10	821961.45	16	0	1	200	100	50	50	50	100	200	400	750	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
R120	834281.93	821961.17	834306.17	821896.80	16	0	1	200	100	50	50	50	100	200	400	850	900	800	750	750	750	850	800	600	800	850	650	450	400	350	250
R121	833768.03	822378.10	833799.11	822318.08	18	0	1	20	11	7	5	6	8	21	50	100	100	100	100	100	100	100	100	100	150	150	150	100	100	50	50
R122	833761.86	822311.12	833868.76	822222.16	18	0	1	100	50	50	24	50	50	100	200	350	400	350	350	350	350	400	400	300	450	450	400	250	200	200	150
R123	833868.78	822222.16	833964.75	822160.50	18	0	1	50	50	19	13	15	22	50	100	250	250	200	200	200	200	250	250	200	250	300	250	150	150	100	100
R124	833673.82	822341.72	833699.88	822294.07	18	0	1	50	50	17	12	14	21	50	100	200	250	200	200	150	150	150	150	100	150	150	100	100	50	50	50
R125	833694.86	822284.07	833827.77	822172.95	18	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	150	200	200	150	200	200	150	100	100	100	50
R126	833653.40	822269.06	833685.33	822174.73	13	0	1	50	50	19	13	15	22	50	100	200	250	150	250	250	250	300	300	350	350	400	300	200	200	150	150
R127	833489.66	822316.78	833503.51	822278.46	16	0	1	50	20	12	9	10	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
R128	833503.61	822278.46	833504.35	822221.21	18	0	1	50	50	16	11	12	19	50	100	200	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
R129	833377.80	822232.03	833308.00	822293.72	18	0	1	100	100	100	100	100	100	150	350	550	500	450	400	400	400	450	450	450	500	500	350	250	200	200	150
R130	833377.80	822232.01	833398.77	822175.17	18	0	1	150	100	100	100	100	100	200	450	700	700	600	550	550	550	550	600	600	700	650	500	350	300	250	200
R131	833398.42	822175.04	833454.10	822080.76	18	0	1	250	200	200	150	150	200	300	750	1200	1150	900	800	800	750	750	750	750	800	700	550	400	300	300	200
R132	833433.92	822080.70	833460.51	822007.97	18	0	1	200	150	100	100	100	150	200	500	750	700	650	600	650	600	700	700	750	850	850	650	500	400	350	250
R133	833460.45	822007.08	833481.00	821952.76	16	0	1	150	100	50	50	50	50	150	300	650	700	650	600	600	600	700	650	500	700	750	600	400	350	300	250
R134	833481.06	821952.76	833506.97	821883.08	16	0	1	200	100	50	50	50	100	200	350	700	800	700	700	700	700	850	800	650	900	950	750	550	450	400	300
R135	833209.07	822239.78	833232.08	822178.07	16	0	1	7	5	3	3	2	3	6	12	22	50	23	23	50	50	50	50	23	50	50	50	21	17	16	12
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	3	3	1	1	1	2	5	11	21	24	21	21	23	23	50	50	21	50	50	50	18	15	14	11
R137	833080.91	822182.03	833100.53	822129.44	18	0	1	6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
R139	833121.68	822072.03	833156.56	821977.96	18	0	1	100	50	50	21	23	50	100	150	350	400	350	350	350	400	450	450	350	500	550	450	300	250	250	200
R140	833274.48	822007.07	833298.88	821947.58	17	0	1	100	50	50	22	50	50	100	200	400	400	400	400	400	450	500	500	400	600	650	500	350	300	250	200

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833295.35	821947.25	833315.56	821891.87	13	0	1
R142	833329.89	821853.87	833315.98	821891.84	13	0	1
R143	833139.75	821889.31	833160.17	821834.07	13	0	1
R144	833180.17	821834.07	833178.74	821783.15	13	0	1
R145+R146	833812.48	821976.55	834004.98	821516.03	17	0	1
R147+R148	833735.44	821888.35	833931.13	821727.74	16	0	1
R148	833728.61	821749.82	833807.73	821684.38	14	0	1
R149	833774.08	821643.52	833807.73	821684.38	13	0	1
R150	833736.87	821756.23	833687.71	821603.87	11	0	1
R151	833613.61	821610.98	833693.50	821643.70	13	0	1
R151	832692.00	821543.70	833775.28	821642.83	14	0	1
R152	833774.08	821643.52	833828.17	821500.58	20	0	1
R153	833991.31	822380.76	834028.77	822414.27	18	0	1
R154	833960.48	822330.48	833992.00	822389.67	18	0	1
R155	833909.48	822271.35	833960.48	822330.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.38	18	0	1
R157	833866.58	822222.34	833807.77	822172.98	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.81	822299.62	834113.90	822384.34	18	0	1
R160	834090.39	822287.53	834127.63	822332.11	15	0	1
R161	834034.90	822250.52	834075.81	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.68	834034.90	822250.02	18	0	1
R164	834007.86	822199.33	834049.42	822238.28	15	0	1
R165	833963.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.39	833964.75	822190.50	18	0	1
R167	833883.47	822042.45	834007.88	822180.33	18	0	1
R168+R169	833815.72	821975.47	833878.36	822050.03	21	0	1
R170+R171	833734.44	821888.35	833812.49	821978.50	18	0	1
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1
R174+R175	833561.78	821677.56	833683.38	821823.55	16	0	1
R176	833496.77	821508.48	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.66	821688.47	20	0	1
R178	833440.48	821529.99	833488.60	821608.61	16	0	1
R179	833451.84	821526.31	833511.33	821600.38	17	0	1
R180	834218.31	822298.35	834305.96	822385.39	18	0	1
R181	834181.98	822212.72	834218.31	822298.35	18	0	1
R182	834140.62	822162.67	834181.76	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822094.58	13	0	1
R184	834071.90	822086.18	834087.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.68	822287.44	19	0	1
R186	834231.54	822088.63	834273.34	822139.83	19	0	1
R187	834190.59	822037.73	834231.76	822086.45	18	0	1
R188+R189	834004.88	821815.03	834065.34	821880.22	16	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1
R192+R193	833878.32	821660.78	833930.65	821727.88	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.48	20	0	1
R196+R202	833781.01	821523.38	833826.17	821600.58	20	0	1
R197	834364.38	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.38	822060.94	18	0	1
R199	834281.93	821961.17	834322.00	822010.48	18	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R300	834239.17	821914.13	834327.69	821840.33	18	0	1

Vehicle count for each road																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
50	13	9	6	7	10	50	50	100	100	100	150	150	150	200	200	150	250	300	250	150	150	100	100
50	19	12	8	10	14	50	50	150	150	150	150	150	150	200	200	150	200	200	150	100	100	100	50
100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
100	50	50	25	50	50	100	200	400	450	400	350	350	350	350	350	250	350	350	250	200	150	150	100
21	12	7	4	5	8	22	60	72	73	70	69	119	118	120	119	115	169	220	166	111	109	58	57
29	16	10	7	7	12	31	63	150	150	150	150	150	100	150	100	100	100	150	100	100	100	100	71
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	50	50	50	24	17	14	13	10
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	150	150	150	100	100	100
100	100	50	50	50	50	100	200	250	250	200	200	250	250	250	250	300	300	300	250	200	200	150	150
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	200	150	150	100	100	100
450	350	300	250	200	250	400	800	800	800	800	800	800	800	750	700	700	700	650	550	450	400	400	300
500	400	350	300	250	250	450	1050	1300	1100	1050	950	950	1000	950	900	950	900	900	750	650	550	500	400
450	350	300	250	200	250	400	900	1100	950	900	850	850	900	850	800	850	850	850	700	600	500	500	400
23	19	15	14	10	12	22	50	50	50	50	50	50	50	50	50	50	100	50	50	50	50	50	50
100	50	50	50	50	50	100	200	250	200	200	150	150	150	150	150	150	150	150	100	100	100	100	50
150	100	100	100	50	50	150	300	350	300	300	300	300	300	300	300	350	350	350	300	250	200	200	150
200	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	350	300	250	250	200	150
200	150	150	100	100	100	200	400	500	450	450	450	450	500	500	500	550	600	600	500	400	350	350	250
150	100	100	100	50	100	150	300	400	350	300	300	300	350	300	300	350	350	350	300	250	200	200	150
150	100	100	100	50	100	150	300	400	350	300	300	300	350	350	350	350	400	350	300	250	250	200	150
300	250	200	150	150	150	250	600	750	650	600	600	600	650	650	650	700	700	700	550	500	450	400	300
250	200	150	150	100	100	200	450	600	500	500	450	500	550	500	500	550	550	550	450	400	350	350	250
400	350	300	200	200	200	350	850	1050	950	900	900	900	1050	1050	1050	1150	1250	1150	950	850	750	700	550
350	300	250	200	150	200	350	750	950	900	800	800	900	950	900	1000	1050	1150	1100	900	800	700	650	450
450	350	250	250	200	250	400	850	1100	1000	950	900	950	1050	1050	1050	1100	1200	1100	950	800	700	700	550
450	350	300	250	200	250	450	900	1150	1000	950	950	950	1050	1000	1000	1050	1100	1100	900	750	650	650	500
300	250	200	150	150	150	300	650	800	700	650	600	600	600	600	550	600	600	550	450	400	350	350	250
250	200	150	150	100	100	200	500	600	550	500	500	500	550	550	550	600	650	600	500	450	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	600	600	600	550	600	600	550	450	400	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	650	700	700	700	750	800	800	650	550	500	450	350
150	150	100	100	100	100	150	350	450	350	350	300	350	350	350	300	350	350	350	300	250	200	200	150
12	9	8	7	5	6	11	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	20
50	24	19	17	13	14	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
24	20	16	13	11	12	22	50	50	50	50	50	50	50	50	50	50	50	50	50	24	21	20	16
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
100	50	50	50	50	50	100	150	200	200	200	200	200	200	200	200	200	250	200	200	150	150	150	100
19	16	12	11	8	11	17	50	50	50	50	50	50	50	50	50	50	50	50	50	22	19	18	14
100	50	50	50	50	50	100	150	200	200	150	150	150	150	150	150	150	150	150	100	100	100	100	50
64	62	59	58	57	58	63	150	200	200	150	150	200	200	200	200	200	200	200	200	150	150	150	119
71	68	64	62	29	33	69	150	150	150	150	150	200	200	200	200	250	250	250	200	200	150	150	119
36	29	25	22	17	19	32	100	100	100	75	73	73	73	70	70	68	65	65	64	64	61	61	26
60	59	57	55	55	55	59	173	200	173	171	119	117	117	116	114	114	112	112	110	58	57	57	55
100	100	44	38	31	35	100	150	200	150	100	100	100	100	100	100	100	100	100	100	100	100	100	71
8	7	5	4	4	4	7	17	21	17	14	12	11	11	9	7	7	4	4	4	3	3	3	1
16	13	11	9	7	8	14	50	50	50	50	50	50	50	22	19	18	15	15	13	11	10	9	6
20	17	14	11	8	10	19	50	50	50	50	50	50	50	50	50	23	20	19	17	13	11	11	9
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833960.46	822543.00	833985.46	822546.76	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R008+R009	833681.17	822398.31	833663.59	822397.15	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833544.64	822390.48	833587.56	822384.80	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R014+R018	833488.77	822318.11	833587.56	822384.80	14	0	1	0.0159	0.0160	0.0161	0.0159	0.0157	0.0160	0.0159	0.0202	0.0184	0.0161	0.0154	0.0158	0.0144	0.0166	0.0159	0.0163	0.0162	0.0172	0.0185	0.0160	0.0148	0.0126	0.0134	0.0163
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	0.0234	0.0210	0.0234	0.0260	0.0250	0.0223	0.0232	0.0252	0.0231	0.0234	0.0237	0.0239	0.0229	0.0245	0.0239	0.0242	0.0229	0.0243	0.0264	0.0239	0.0236	0.0230	0.0238	0.0268
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0222	0.0231	0.0219	0.0241	0.0234	0.0212	0.0218	0.0257	0.0232	0.0239	0.0237	0.0237	0.0233	0.0244	0.0238	0.0239	0.0224	0.0235	0.0255	0.0226	0.0226	0.0221	0.0230	0.0239
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R022	833480.61	822340.13	833469.65	822316.75	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0228	0.0191	0.0195	0.0179	0.0203	0.0195	0.0224	0.0250	0.0237	0.0241	0.0237	0.0239	0.0237	0.0243	0.0247	0.0248	0.0236	0.0249	0.0269	0.0238	0.0227	0.0238	0.0230	0.0239
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0232	0.0191	0.0199	0.0177	0.0180	0.0196	0.0230	0.0254	0.0236	0.0240	0.0236	0.0238	0.0237	0.0243	0.0244	0.0245	0.0227	0.0242	0.0268	0.0240	0.0227	0.0230	0.0229	0.0236
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0235	0.0214	0.0234	0.0257	0.0248	0.0225	0.0233	0.0250	0.0236	0.0239	0.0240	0.0242	0.0243	0.0249	0.0244	0.0250	0.0234	0.0247	0.0274	0.0242	0.0232	0.0233	0.0229	0.0238
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0204	0.0202	0.0205	0.0213	0.0210	0.0207	0.0203	0.0268	0.0260	0.0238	0.0224	0.0224	0.0204	0.0236	0.0216	0.0224	0.0229	0.0229	0.0233	0.0218	0.0215	0.0190	0.0188	0.0214
R027	833503.01	822278.46	833673.82	822341.72	13	0	1	0.0223	0.0229	0.0222	0.0235	0.0231	0.0216	0.0231	0.0252	0.0248	0.0252	0.0250	0.0245	0.0246	0.0254	0.0249	0.0250	0.0234	0.0247	0.0271	0.0242	0.0231	0.0235	0.0229	0.0240
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	0.0220	0.0212	0.0240	0.0272	0.0260	0.0228	0.0216	0.0258	0.0236	0.0239	0.0239	0.0238	0.0239	0.0242	0.0239	0.0242	0.0230	0.0245	0.0263	0.0240	0.0224	0.0231	0.0225	0.0234
R029	833768.03	822376.15	833846.76	822405.79	13	0	1	0.0186	0.0185	0.0196	0.0165	0.0163	0.0191	0.0184	0.0267	0.0252	0.0229	0.0216	0.0219	0.0199	0.0240	0.0220	0.0232	0.0250	0.0239	0.0246	0.0235	0.0246	0.0220	0.0218	0.0237
R030	833846.76	822405.79	833917.83	822431.11	14	0	1	0.0182	0.0180	0.0177	0.0182	0.0178	0.0184	0.0182	0.0246	0.0237	0.0208	0.0194	0.0204	0.0207	0.0214	0.0213	0.0215	0.0219	0.0220	0.0241	0.0207	0.0203	0.0184	0.0181	0.0202
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	0.0182	0.0196	0.0165	0.0169	0.0169	0.0165	0.0182	0.0285	0.0270	0.0245	0.0230	0.0227	0.0204	0.0243	0.0218	0.0227	0.0241	0.0228	0.0240	0.0223	0.0231	0.0208	0.0205	0.0231
R032+R301	833076.99	822055.71	833121.79	822072.07	18	0	1	0.0310	0.0284	0.0169	0.0169	0.0170	0.0171	0.0170	0.0231	0.0213	0.0213	0.0209	0.0212	0.0214	0.0221	0.0217	0.0219	0.0208	0.0215	0.0234	0.0213	0.0204	0.0210	0.0206	0.0218
R033	833121.79	822072.07	833253.39	822120.94	16	0	1	0.0205	0.0203	0.0203	0.0205	0.0205	0.0205	0.0203	0.0232	0.0215	0.0217	0.0216	0.0218	0.0213	0.0222	0.0218	0.0219	0.0210	0.0219	0.0239	0.0212	0.0204	0.0206	0.0206	0.0214
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0167	0.0167	0.0171	0.0178	0.0178	0.0182	0.0173	0.0214	0.0202	0.0190	0.0192	0.0198	0.0199	0.0202	0.0202	0.0207	0.0199	0.0209	0.0227	0.0199	0.0186	0.0193	0.0190	0.0201
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0243	0.0236	0.0232	0.0226	0.0227	0.0226	0.0230	0.0269	0.0255	0.0257	0.0253	0.0257	0.0264	0.0265	0.0264	0.0261	0.0238	0.0245	0.0270	0.0254	0.0245	0.0267	0.0258	0.0256
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0205	0.0204	0.0204	0.0206	0.0206	0.0206	0.0204	0.0238	0.0223	0.0224	0.0224	0.0221	0.0221	0.0226	0.0226	0.0227	0.0214	0.0228	0.0243	0.0220	0.0206	0.0213	0.0212	0.0215
R037	833653.40	822269.00	833694.86	822284.07	19	0	1	0.0238	0.0236	0.0239	0.0237	0.0238	0.0239	0.0238	0.0263	0.0250	0.0262	0.0260	0.0256	0.0252	0.0253	0.0246	0.0244	0.0224	0.0230	0.0249	0.0222	0.0217	0.0228	0.0221	0.0227
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0244	0.0243	0.0243	0.0241	0.0242	0.0243	0.0242	0.0268	0.0254	0.0268	0.0264	0.0260	0.0254	0.0254	0.0246	0.0242	0.0222	0.0231	0.0245	0.0223	0.0210	0.0217	0.0214	0.0221
R039	833761.98	822311.12	833789.45	822320.76	14	0	1	0.0308	0.0256	0.0267	0.0274	0.0276	0.0277	0.0265	0.0324	0.0308	0.0346	0.0350	0.0330	0.0338	0.0314	0.0316	0.0305	0.0269	0.0275	0.0295	0.0268	0.0257	0.0279	0.0277	0.0273
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	0.0291	0.0296	0.0298	0.0301	0.0303	0.0301	0.0298	0.0315	0.0299	0.0336	0.0334	0.0321	0.0325	0.0303	0.0300	0.0291	0.0255	0.0261	0.0280	0.0255	0.0235	0.0267	0.0264	0.0262
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	0.0307	0.0273	0.0278	0.0285	0.0281	0.0285	0.0279	0.0324	0.0308	0.0345	0.0349	0.0330	0.0336	0.0313	0.0315	0.0305	0.0269	0.0275	0.0295	0.0267	0.0258	0.0279	0.0278	0.0274
R042	833902.96	822360.57	833950.46	822320.45	16	0	1	0.0306	0.0278	0.0285	0.0288	0.0289	0.0289	0.0283	0.0324	0.0308	0.0340	0.0344	0.0331	0.0332	0.0314	0.0311	0.0301	0.0264	0.0275	0.0296	0.0268	0.0257	0.0280	0.0278	0.0274
R043	833950.46	822320.48	834034.90	822250.52	18	0	1	0.0339	0.0339	0.0335	0.0341	0.0336	0.0338	0.0335	0.0343	0.0328	0.0377	0.0383	0.0367	0.0373	0.0349	0.0347	0.0335	0.0292	0.0298	0.0321	0.0299	0.0285	0.0325	0.0320	0.0307
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0294	0.0295	0.0301	0.0299	0.0302	0.0300	0.0299	0.0317	0.0295	0.0331	0.0334	0.0322	0.0325	0.0305	0.0301	0.0292	0.0256	0.0268	0.0288	0.0258	0.0240	0.0269	0.0265	0.0265
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	0.0302	0.0197	0.0195	0.0214	0.0219	0.0222	0.0305	0.0315	0.0299	0.0337	0.0333	0.0321	0.0322	0.0306	0.0308	0.0299	0.0264	0.0270	0.0291	0.0268	0.0253	0.0279	0.0277	0.0275
R046	834231.72	822086.65	834323.21	822011.22	18	0	1	0.0302	0.0265	0.0273	0.0276	0.0278	0.0278	0.0302	0.0320	0.0299	0.0335	0.0337	0.0325	0.0327	0.0310	0.0307	0.0297	0.0262	0.0273	0.0293	0.0265	0.0251	0.0276	0.0273	0.0271
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	0.0305	0.0261	0.0265	0.0276	0.0271	0.0279	0.0304	0.0315	0.0300	0.0333	0.0339	0.0327	0.0328	0.0312	0.0307	0.0298	0.0264	0.0269	0.0290	0.0266	0.0252	0.0279	0.0277	0.0272
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	0.0240	0.0228	0.0229	0.0231	0.0231	0.0231	0.0241	0.0264	0.0256	0.0281	0.0276	0.0266	0.0267	0.0259	0.0256	0.0251	0.0224	0.0234	0.0252	0.0225	0.0217	0.0240	0.0237	0.0232
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0240	0.0241	0.0240	0.0240	0.0241	0.0241	0.0240	0.0261	0.0253	0.0273	0.0272	0.0262	0.0263	0.0252	0.0249	0.0244	0.0218	0.0228	0.0246	0.0222	0.0216	0.0239	0.0237	0.0232
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	0.0236	0.0236	0.0235	0.0235	0.0235	0.0235	0.0235	0.0257	0.0249	0.0274	0.0268	0.0259	0.0263	0.0256	0.0253	0.0252	0.0226	0.0239	0.0260	0.0229	0.0212	0.0229	0.0228	0.0227
R051	833274.06	822006.60	833438.70	822067.62	16	0	1	0.0256	0.0257	0.0258	0.0257	0.0257	0.0257	0.0257	0.0273	0.0262	0.0293	0.0291	0.0285	0.0289	0.0278	0.0278	0.0276	0.0245	0.0256	0.0281	0.0249	0.0238	0.0270	0.0267	0.0258
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0305	0.0276	0.0276	0.0278	0.0277	0.0277	0.0296	0.0300	0.0289	0.0323	0.0327	0.0314	0.0318	0.0296	0.0294	0.0284	0.0247	0.0254	0.0280	0.0256	0.0252	0.0284	0.0286	0.0276
R053	833786.86	822123.44	833736.06	822163.25	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R053	833736.06	822163.26	833688.33	822174.73	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833649.56	822144.40	833683.68	822152.80	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R055	833796.53	822123.04	833872.14	822061.39	16	0	1	0.0259	0.0259	0.0259	0.0261	0.0260	0.0259	0.0261	0.0273	0.0257	0.0286	0.0285	0.0276	0.0276	0.0264	0.0260	0.0252	0.0222	0.0230	0.0250	0.0226	0.0220	0.0246	0.0241	0.0235
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0330	0.0327	0.0332	0.0329	0.0333	0.0333	0.0332	0.0333	0.0313	0.0366	0.0380	0.0366	0.0380	0.0351	0.0356	0.0344	0.0295	0.0303	0.0333	0.0311	0.0306	0.0366	0.0358	0.0328
R057	833873.30	822052.66	834159.21	821814.78	15	0	1	0.0272	0.0240	0.0246	0.0251	0.0250	0.0251	0.0271	0.0286	0.0272	0.0299	0.0303	0.0290	0.0295	0.0276	0.0280	0.0273	0.0238	0.0245	0.0267	0.0245	0.0229	0.0256	0.0257	0.0255
R058	834159.21	821814.78	834256.10	821736.42	15	0	1	0.0307	0.0264	0.0271	0.0280	0.0279	0.0281	0.0307	0.0314	0.0293	0.0338	0.0343	0.0326	0.0329	0.0303	0.0300	0.0286	0.0247	0.0250	0.0269	0.0248	0.0243	0.0277	0.0271	0.0260
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	0.0307	0.0309	0.0306	0.0305	0.0309	0.0308	0.0307	0.0316	0.0300	0.0337	0.0350	0.0334	0.0343	0.0315	0.0322	0.0311	0.0267	0.0274	0.0298	0.0276	0.0261	0.0301	0.0300	0.0289
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0291	0.0298	0.0304	0.0302	0.0305	0.0306	0.0301	0.0306	0.0283	0.0330	0.0346	0.0337	0.0356	0.0322	0.0330	0.0321	0.0273	0.0286	0.0314	0.0287	0.0273	0.0341	0.0331	0.0301
R061	833118.37	821880.28	833139.76	821889.31	16	0	1	0.0240	0.0218	0.0218	0.0218	0.0222	0.0219	0.0237	0.0234	0.0230	0.0229	0.0231	0.0233	0.0232	0.0227	0.0233	0.0227	0.0228	0.0228	0.0232	0.0230	0.0232	0.0237	0.0216	0.0221
R062	833139.75	821889.31	833296.78	821947.78	16	0	1	0.0185	0.0188	0.0186	0.0190	0.0188	0.0184	0.0188	0.0222	0.0209	0.0199	0.0198	0.0201	0.0203	0.0199	0.0204	0.0206	0.0201	0.0202	0.0216	0.0184	0.0181	0.0182	0.0172	0.0196
R063	833296.66	821947.56	833460.51	822007.97	16	0	1	0.0223	0.0182	0.0188	0.0170	0.0196	0.0185	0.0221	0.0250	0.0229	0.0233	0.0234	0.0234	0.0230	0.0235	0.0235	0.0235	0.0222	0.0232	0.0252	0.0226	0.0220	0.0225	0.0221	0.0238
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R065	833160.17	821834.07	833315.66	821891.67	16	0	1	0.0191	0.0191	0.0197	0.0200	0.0201	0.0193	0.0204	0.0233	0.0213	0.0213	0.0216	0.0215	0.0218	0.0213	0.0209	0.0212	0.0203	0.0201	0.0212	0.0182	0.0180	0.0177	0.0178	0.0191
R066	833315.06	821891.68	833481.00	821952.76	16	0	1	0.0202	0.0194	0.0190	0.0196	0.0196	0.0190	0.0201	0.0227	0.0212	0.0211	0.0212	0.0218	0.0215	0.0220	0.0221	0.0220	0.0206	0.0221	0.0236	0.0210	0.0196	0.0204	0.0204	0.0217
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	0.0150	0.0150	0.0149	0.0149	0.0149	0.0150	0.0150	0.0185	0.0179	0.0183	0.0178	0.0171	0.0169	0.0173	0.0172	0.0175	0.0165	0.0171	0.0187	0.0156	0.0140	0.0140	0.0141	0.0147
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0182	0.0179	0.0183	0.0169	0.0165	0.0162	0.0168	0.0166	0.0168	0.0159	0.0171	0.0187	0.0152	0.0140	0.0141	0.0141	0.0147
R069	833166.60	821757.87	833250.16	821795.91	29	0	1	0.0129	0.0128	0.0129	0.0129	0.0129	0.0129	0.0129	0.0160	0.0145	0.0137	0.0128	0.0130	0.0122	0.0134	0.0130	0.0133	0.0130	0.0143	0.0157	0.0128	0.0120	0.0114	0.0116	0.0128
R070	833249.90	821820.73	833324.89	821883.67	13	0	1	0.0180	0.0180	0.0180	0.0181	0.0178	0.0179	0.0179	0.0206	0.0192	0.0196	0.0186	0.0188	0.0182	0.0190	0.0183	0.0183	0.0173	0.0184	0.0196	0.0173	0.0168	0.0171	0.0169	0.0176

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R071	833327.91	821859.29	833397.24	821875.22	18	0	1
R072	833397.24	821875.22	833501.75	821897.07	20	0	1
R073	833451.50	821860.54	833397.24	821875.22	17	0	1
R074	833261.64	821790.34	833451.50	821860.54	20	0	1
R075	833449.48	821961.09	833506.97	821883.06	16	0	1
R076	833501.48	821897.80	833548.66	821899.77	16	0	1
R076	833548.66	821899.77	833603.43	821886.99	16	0	1
R076	833603.43	821886.99	833684.92	821822.32	16	0	1
R077	833506.67	821884.14	833553.67	821884.36	17	0	1
R077	833553.67	821884.36	833600.48	821871.28	17	0	1
R077	833600.48	821871.28	833673.84	821812.09	17	0	1
R078	833682.38	821822.36	833873.32	821660.75	18	0	1
R079	833673.29	821811.43	833867.51	821651.48	16	0	1
R080	833875.67	821661.18	833969.54	821587.94	16	0	1
R081	833867.01	821659.86	833983.09	821582.98	20	0	1
R082	833458.18	821864.41	833510.75	821821.12	14	0	1
R082	833510.75	821821.12	833536.39	821785.93	14	0	1
R082	833536.39	821785.93	833570.13	821687.88	14	0	1
R083	833436.83	821855.11	833496.18	821813.12	14	0	1
R083	833496.18	821813.12	833524.36	821772.29	14	0	1
R083	833524.36	821772.29	833569.81	821682.62	14	0	1
R084	833567.54	821687.02	833582.59	821644.65	13	0	1
R084	833582.09	821644.65	833607.71	821603.87	13	0	1
R085	833609.34	821609.84	833640.24	821575.52	14	0	1
R085	833640.24	821575.52	833681.67	821545.20	14	0	1
R085	833681.67	821545.20	833720.52	821512.85	14	0	1
R086	833550.70	821649.89	833603.88	821583.58	17	0	1
R086	833603.88	821583.58	833646.83	821540.45	17	0	1
R087	833648.49	821548.43	833686.49	821508.30	13	0	1
R088	833254.24	821811.88	833365.50	821856.64	17	4	4
R088	833365.50	821856.64	833416.50	821866.51	17	7	4
R088	833416.50	821866.51	833487.63	821841.09	17	9	4
R088	833487.63	821841.09	833533.63	821786.07	17	10	4
R088	833533.63	821786.07	833574.80	821657.75	17	9	4
R088	833574.80	821657.75	833600.16	821606.82	17	7	4
R088	833600.16	821605.82	833712.08	821511.11	17	6	4
R089	833256.85	821801.44	833370.08	821846.87	16	4	4
R089	833370.08	821846.87	833427.36	821852.03	16	7	4
R089	833427.36	821852.03	833480.60	821829.25	16	9	4
R089	833480.60	821829.25	833522.46	821786.30	16	10	4
R089	833522.46	821786.30	833543.19	821725.47	16	9	4
R089	833543.19	821725.47	833562.07	821653.37	16	8	4
R089	833562.07	821653.37	833598.99	821594.44	16	8	4
R089	833598.99	821594.44	833689.93	821509.87	16	6	4
R090+R091	833289.78	821629.64	833337.84	821634.13	17	0	1
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1
R094	833337.84	821634.13	833341.51	821576.41	16	0	1
R095	833609.59	821601.72	833648.49	821548.43	17	0	1
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1
R100+R101	834127.62	822332.11	834218.31	822256.35	18	0	1
R102+R103	834218.31	822256.35	834309.95	822180.58	18	0	1
R104+R105	834309.95	822180.58	834407.48	822098.55	18	0	1
R106	833917.83	822431.11	833991.76	822368.39	18	0	1
R107	833991.05	822370.04	834090.39	822287.63	18	0	1
R108	834090.84	822288.08	834181.98	822212.22	16	0	1
R109	834181.96	822212.22	834273.05	822136.48	17	0	1
R110	834273.34	822136.83	834364.58	822060.94	17	0	1
R111	834363.48	822059.86	834400.74	822029.63	18	0	1
R112	833848.76	822405.79	833962.96	822300.57	19	0	1
R113	833833.16	822335.17	833909.65	822271.35	18	0	1
R114	833909.65	822271.35	833994.47	822201.23	18	0	1
R115	833994.06	822200.75	834077.01	822132.06	18	0	1
R116	834076.90	822131.94	834097.30	822115.02	18	0	1
R117	834097.30	822115.02	834190.59	822037.73	16	0	1
R118	834190.59	822037.73	834242.25	821993.88	18	0	1
R119	834242.94	821993.85	834282.16	821961.45	19	0	1
R120	834281.93	821961.17	834359.17	821896.80	16	0	1
R121	833768.03	822376.15	833799.11	822318.98	18	0	1
R122	833761.98	822311.12	833868.78	822222.16	18	0	1
R123	833868.78	822222.16	833954.75	822150.60	18	0	1
R124	833873.82	822341.72	833894.86	822294.07	18	0	1
R125	833894.86	822284.07	833827.77	822172.55	18	0	1
R126	833653.40	822269.00	833688.33	822174.73	13	0	1
R127	833489.65	822316.75	833503.51	822278.46	18	0	1
R128	833503.51	822278.46	833524.35	822221.21	18	0	1
R129	833377.80	822232.03	833366.00	822293.72	18	0	1
R130	833377.80	822232.03	833398.77	822175.17	18	0	1
R131	833398.42	822175.04	833434.10	822080.76	18	0	1
R132	833433.93	822080.70	833460.51	822007.97	16	0	1
R133	833460.46	822007.95	833481.00	821952.76	16	0	1
R134	833481.00	821952.76	833506.87	821883.06	16	0	1
R135	833209.07	822339.78	833232.06	822178.07	18	0	1
R136	833232.03	822178.06	833253.39	822120.94	18	0	1
R137	833080.91	822182.63	833100.53	822129.44	18	0	1
R138	833100.53	822129.44	833121.78	822072.07	18	0	1
R139	833121.68	822072.03	833166.56	821977.96	18	0	1
R140	833274.46	822007.07	833298.86	821947.56	17	0	1

RSP (g/VMT)

Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
0.0179	0.0178	0.0178	0.0179	0.0177	0.0177	0.0178	0.0203	0.0186	0.0190	0.0183	0.0183	0.0179	0.0185	0.0181	0.0181	0.0171	0.0180	0.0196	0.0172	0.0168	0.0171	0.0170	0.0178
0.0191	0.0189	0.0192	0.0187	0.0188	0.0191	0.0190	0.0215	0.0194	0.0199	0.0197	0.0195	0.0190	0.0194	0.0189	0.0190	0.0176	0.0182	0.0199	0.0178	0.0169	0.0173	0.0174	0.0185
0.0165	0.0165	0.0163	0.0163	0.0163	0.0166	0.0164	0.0190	0.0171	0.0167	0.0163	0.0166	0.0160	0.0171	0.0166	0.0169	0.0163	0.0169	0.0183	0.0165	0.0159	0.0157	0.0157	0.0169
0.0172	0.0174	0.0173	0.0174	0.0169	0.0170	0.0173	0.0197	0.0178	0.0176	0.0172	0.0173	0.0166	0.0175	0.0169	0.0170	0.0161	0.0167	0.0182	0.0162	0.0156	0.0155	0.0155	0.0165
0.0169	0.0169	0.0173	0.0166	0.0167	0.0170	0.0171	0.0198	0.0177	0.0175	0.0170	0.0171	0.0163	0.0173	0.0165	0.0167	0.0158	0.0165	0.0179	0.0158	0.0152	0.0146	0.0151	0.0161
0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
0.0213	0.0217	0.0215	0.0218	0.0212	0.0214	0.0214	0.0235	0.0216	0.0228	0.0226	0.0220	0.0213	0.0212	0.0205	0.0201	0.0184	0.0186	0.0202	0.0182	0.0178	0.0184	0.0181	0.0190
0.0156	0.0155	0.0157	0.0157	0.0153	0.0156	0.0156	0.0183	0.0165	0.0158	0.0152	0.0155	0.0145	0.0159	0.0153	0.0155	0.0150	0.0156	0.0169	0.0151	0.0147	0.0142	0.0141	0.0153
0.0179	0.0180	0.0178	0.0179	0.0179	0.0182	0.0181	0.0204	0.0183	0.0186	0.0182	0.0183	0.0177	0.0185	0.0176	0.0179	0.0168	0.0172	0.0188	0.0167	0.0165	0.0171	0.0168	0.0176
0.0158	0.0158	0.0160	0.0160	0.0156	0.0158	0.0158	0.0184	0.0166	0.0160	0.0154	0.0157	0.0149	0.0162	0.0155	0.0157	0.0153	0.0158	0.0171	0.0153	0.0150	0.0145	0.0144	0.0156
0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
0.0215	0.0215	0.0215	0.0215	0.0215	0.0214	0.0214	0.0221	0.0219	0.0219	0.0218	0.0219	0.0216	0.0222	0.0220	0.0220	0.0219	0.0219	0.0223	0.0215	0.0216	0.0217	0.0216	0.0214
0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
0.0193	0.0192	0.0188	0.0188	0.0189	0.0194	0.0195	0.0235	0.0225	0.0214	0.0206	0.0209	0.0203	0.0216	0.0214	0.0220	0.0210	0.0222	0.0239	0.0209	0.0197	0.0187	0.0193	0.0213
0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
0.0109	0.0110	0.0109	0.0109	0.0111	0.0111	0.0110	0.0118	0.0110	0.0113	0.0104	0.0105	0.0096	0.0102	0.0091	0.0092	0.0090	0.0093	0.0088	0.0080	0.0082	0.0074	0.0070	0.0084
0.0252	0.0246	0.0247	0.0247	0.0249	0.0247	0.0249	0.0260	0.0254	0.0256	0.0257	0.0255	0.0253	0.0253	0.0251	0.0251	0.0248	0.0248	0.0253	0.0242	0.0242	0.0244	0.0245	0.0243
0.0231	0.0282	0.0160	0.0163	0.0161	0.0171	0.0228	0.0258	0.0260	0.0267	0.0244	0.0246	0.0241	0.0258	0.0261	0.0250	0.0243	0.0241	0.0280	0.0243	0.0234	0.0241	0.0251	0.0235
0.0307	0.0316	0.0303	0.0301	0.0334	0.0319	0.0324	0.0337	0.0325	0.0373	0.0364	0.0349	0.0350	0.0339	0.0332	0.0323	0.0276	0.0293	0.0319	0.0280	0.0258	0.0282	0.0286	0.0278
0.0277	0.0273	0.0276	0.0289	0.0281	0.0304	0.0278	0.0313	0.0292	0.0327	0.0314	0.0317	0.0315	0.0311	0.0306	0.0301	0.0266	0.0279	0.0302	0.0273	0.0262	0.0273	0.0269	0.0285
0.0292	0.0308	0.0262	0.0297	0.0278	0.0286	0.0297	0.0292	0.0284	0.0304	0.0313	0.0305	0.0306	0.0297	0.0278	0.0279	0.0251	0.0252	0.0275	0.0241	0.0243	0.0249	0.0259	0.0261
0.0260	0.0284	0.0234	0.0260	0.0250	0.0228	0.0276	0.0295	0.0275	0.0291	0.0271	0.0266	0.0265	0.0262	0.0271	0.0256	0.0239	0.0246	0.0271	0.0238	0.0238	0.0255	0.0255	0.0269
0.0212	0.0194	0.0210	0.0228	0.0223	0.0205	0.0209	0.0236	0.0228	0.0224	0.0221	0.0220	0.0222	0.0233	0.0235	0.0239	0.0225	0.0242	0.0262	0.0230	0.0219	0.0225	0.0224	0.0232
0.0204	0.0201	0.0219	0.0241	0.0234	0.0212	0.0202	0.0243	0.0219	0.0216	0.0215	0.0217	0.0212	0.0228	0.0228	0.0231	0.0221	0.0229	0.0254	0.0223	0.0223	0.0221	0.0230	0.0229
0.0202	0.0197	0.0217	0.0238	0.0226	0.0208	0.0199	0.0231	0.0215	0.0211	0.0210	0.0215	0.0209	0.0222	0.0224	0.0225	0.0222	0.0229	0.0248	0.0226	0.0214	0.0219	0.0227	0.0239
0.0201	0.0197	0.0217	0.0239	0.0227	0.0208	0.0198	0.0232	0.0215	0.0212	0.0210	0.0218	0.0213	0.0228	0.0220	0.0230	0.0220	0.0227	0.0250	0.0223	0.0211	0.0230	0.0215	0.0244
0.0206	0.0213	0.0203	0.0218	0.0214	0.0199	0.0204	0.0236	0.0216	0.0211	0.0211	0.0214	0.0209	0.0224	0.0221	0.0225	0.0218	0.0229	0.0246	0.0222	0.0218	0.0223	0.0214	0.0225
0.0212	0.0192	0.0210	0.0226	0.0221	0.0202	0.0209	0.0234	0.0217	0.0213	0.0214	0.0215	0.0211	0.0225	0.0223	0.0226	0.0218	0.0224	0.0246	0.0220	0.0212	0.0214	0.0221	0.0230
0.0351	0.0348	0.0326	0.0377	0.0354	0.0354	0.0337	0.0354	0.0335	0.0381	0.0384	0.0369	0.0368	0.0351	0.0355	0.0342	0.0293	0.0309	0.0336	0.0304	0.0286	0.0320	0.0315	0.0309
0.0180	0.0200	0.0151	0.0148	0.0155	0.0220	0.0204	0.0223	0.0206	0.0199	0.0198	0.0203	0.0197	0.0208	0.0207	0.0213	0.0205	0.0215	0.0233	0.0206	0.0195	0.0214	0.0199	0.0225
0.0206	0.0203	0.0197	0.0207	0.0203	0.0204	0.0204	0.0232	0.0223	0.0224	0.0220	0.0223	0.0219	0.0230	0.0228	0.0231	0.0221	0.0226	0.0247	0.0222	0.0210	0.0212	0.0212	0.0220
0.0257	0.0262	0.0259	0.0255	0.0262	0.0259	0.0257	0.0275	0.0261	0.0280	0.0282	0.0278	0.0279	0.0274	0.0272	0.0269	0.0244	0.0252	0.0272	0.0251	0.0240	0.0259	0.0255	0.0257
0.0197	0.0193	0.0195	0.0207	0.0203	0.0203	0.0199	0.0224	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0215	0.0218	0.0212	0.0219	0.0235	0.0214	0.0203	0.0207	0.0208	0.0217
0.0200	0.0197	0.0198	0.0190	0.0206	0.0195	0.0198	0.0223	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0214	0.0217	0.0208	0.0219	0.0235	0.0214	0.0203	0.0207	0.0207	0.0218
0.0199	0.0196	0.0198	0.0189	0.0205	0.0194	0.0197	0.0221	0.0209	0.0206	0.0205	0.0209	0.0206	0.0216	0.0215	0.0218	0.0214	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
0.0197	0.0197	0.0191	0.0202	0.0198	0.0199	0.0195	0.0222	0.0208	0.0208	0.0204	0.0208	0.0206	0.0216	0.0214	0.0218	0.0213	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
0.0196	0.0197	0.0202	0.0201	0.0197	0.0198	0.0198	0.0223	0.0214	0.0211	0.0207	0.0210	0.0206	0.0217	0.0218	0.0218	0.0213	0.0218	0.0238	0.0214	0.0202	0.0207	0.0208	0.0217
0.0178	0.0178	0.0172	0.0181	0.0176	0.0179	0.0177	0.0211	0.0185	0.0178	0.0168	0.0176	0.0163	0.0198	0.0181	0.0184	0.0184	0.0199	0.0217	0.0195	0.0196	0.0199	0.0192	0.0200
0.0195	0.0204	0.0215	0.0227	0.0216	0.0202	0.0188	0.0219	0.0201	0.0197	0.0187	0.0192	0.0178	0.0199	0.0185	0.0190	0.0184	0.0198	0.0210	0.0185	0.0182	0.0158	0.0160	0.0182
0.0162	0.0161	0.0162	0.0162	0.0160	0.0160	0.0161	0.0200	0.0190	0.0167	0.0155	0.0160	0.0146	0.0168	0.0164	0.0170	0.0166	0.0180	0.0194	0.0169	0.0154	0.0134	0.0135	0.0164
0.0191	0.0192	0.0192	0.0190	0.0188	0.0191	0.0191	0.0216	0.0201	0.0202	0.0190	0.0196	0.0186	0.0211	0.0200	0.0203	0.0202	0.0208	0.0222	0.0201	0.0212	0.0216	0.0211	0.0199
0.0184	0.0184	0.0184	0.0182	0.0183	0.0183	0.0184	0.0215	0.0192	0.0190	0.0177	0.0182	0.0167	0.0183	0.0178	0.0182	0.0176	0.0185	0.0197	0.0172	0.0164	0.0151	0.0142	0.0169
0.0224	0.0234	0.0220	0.0240	0.0233	0.0214	0.0221	0.0249	0.0234	0.0236	0.0236	0.0236	0.0234	0.0243	0.0237	0.0241	0.0228	0.0242	0.0262	0.0230	0.0225	0.0235	0.0224	0.0236
0.0184	0.0184	0.0181	0.0183	0.0184	0.0184	0.0183	0.0215	0.0199	0.0187	0.0179	0.0185	0.0172	0.0192	0.0182	0.0186	0.0188	0.0193	0.0211	0.0184	0.0184	0.0169	0.0166	0.0184
0.0176	0.0176	0.0174	0.0175	0.0174	0.0178	0.0176	0.0208	0.0188	0.0176	0.0169	0.0175	0.0163	0.0184	0.0174	0.0179	0.0181	0.0190	0.0204	0.0178	0.0177	0.0166	0.0165	0.0182
0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0196	0.0178	0.0164	0.0154	0.0159	0.0147	0.0168	0.0159	0.0163	0.0163	0.0173	0.0187	0.0162	0.0158	0.0147	0.0145	0.0162
0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0195	0.0177	0.0163	0.0152	0.0158	0.0145	0.0166	0.0157	0.0162	0.0161	0.0171	0.0183	0.0161	0.0160	0.0145	0.0144	0.0161
0.0163	0.0164	0.0163	0.0164	0.0164	0.0164	0.0163	0.0203	0.0190	0.0178	0.0159	0.0163	0.0154	0.0173	0.0160	0.0169	0.0172	0.0173	0.0186	0.0160	0.0159	0.0144	0.0140	0.0166
0.0156	0.0161	0.0163	0.0163	0.0159	0.0149	0.0137	0.0141	0.0146	0.0160	0.0148	0.0143	0.0147	0.0138	0.0132	0.0129	0.0120	0.0126	0.0130	0.0115	0.0121	0.0115	0.0108	0.0112
0.0201	0.0215	0.0231	0.0242	0.0232	0.0212	0.0191	0.0222	0.0214	0.0224	0.0207	0.0208	0.0200	0.0204	0.0199	0.0191	0.0181	0.0193	0.0213	0.0180	0.0174	0.0154	0.0153	0.0174
0.0185	0.0196	0.0207	0.0221	0.0211	0.0193	0.0176	0.0208	0.0200	0.0193	0.0184	0.0187	0.0179	0.0191	0.0187	0.0189	0.0178	0.0193	0.0210	0.0185	0.0162	0.0160	0.0162	0.0178
0.0261	0.0301	0.0376	0.0376	0.0360	0.0278	0.0221	0.0240	0.0197	0.0188	0.0195	0.0195	0.0183	0.0205	0.0194	0.0199	0.0195	0.0193	0.0204	0.0189	0.0223	0.0196	0.0197	0.0205
0.0165	0.0176	0.0150	0.0150	0.0150	0.0150	0.0165	0.0207	0.0183	0.0171	0.0159	0.0165	0.0153	0.0176	0.0164	0.0169	0.0169	0.0179	0.0194	0.0170	0.0167	0.0150	0.0154	0.0171
0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
0.0153	0.0154	0.0154	0.0154	0.0152	0.0154	0.0153	0.0190	0.0168	0.0153	0.0145	0.0151	0.0138	0.0160	0.0152	0.0157	0.0157	0.0164	0.0179	0.0156	0.0156	0.0145	0.0145	0.0158
0.0212	0.0217	0.0212	0.0223	0.0217	0.0208	0.0210	0.0242	0.0217	0.0220	0.0211	0.0208	0.0194	0.0205	0.0192	0.0192	0.0177	0.0185	0.0202	0.0175	0.0167	0.0151	0.0156	0.0178

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833295.35	821847.25	833315.58	821861.67	13	0	1
R142	833329.88	821853.87	833318.98	821891.84	13	0	1
R143	833139.79	821889.31	833110.17	821834.07	13	0	1
R144	833169.17	821834.07	833118.74	821783.15	13	0	1
R145+R146	833812.49	821975.50	834004.09	821916.03	17	0	1
R147+R148	833738.44	821888.38	833931.13	821727.74	16	0	1
R149	833729.01	821749.32	833807.73	821684.36	14	0	1
R149	833774.08	821643.52	833807.73	821684.36	13	0	1
R150	833736.67	821759.22	833807.71	821803.87	11	0	1
R151	833613.61	821610.08	833683.50	821543.73	13	0	1
R151	833693.80	821543.70	833775.28	821642.53	14	0	1
R152	833774.08	821643.52	833828.17	821600.58	20	0	1
R153	833991.31	822369.76	834028.77	822414.27	15	0	1
R154	833950.46	822320.46	833992.00	822369.67	16	0	1
R155	833909.65	822271.38	833950.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.35	18	0	1
R157	833868.56	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.96	833778.49	822113.30	18	0	1
R159	834075.61	822299.62	834112.90	822344.34	15	0	1
R160	834090.39	822287.53	834127.62	822332.11	15	0	1
R161	834034.90	822250.52	834075.61	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.48	834034.90	822250.62	15	0	1
R164	834007.86	822188.33	834049.42	822238.28	15	0	1
R165	833952.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.38	833954.75	822150.59	19	0	1
R167	833885.47	822042.48	834007.88	822189.33	19	0	1
R168+R169	833813.72	821975.47	833876.38	822050.03	21	0	1
R170+R171	833738.44	821888.35	833812.49	821976.50	19	0	1
R172+R173	833664.02	821822.33	833739.28	821887.65	20	0	1
R174+R175	833561.79	821677.98	833683.38	821823.68	18	0	1
R176	833496.77	821608.49	833565.47	821680.73	20	0	1
R177	833513.09	821599.24	833673.68	821668.47	20	0	1
R178	833440.44	821529.90	833469.60	821609.61	15	0	1
R179	833451.64	821526.21	833811.32	821600.28	17	0	1
R180	834218.31	822256.35	834325.06	822385.33	15	0	1
R181	834191.98	822212.22	834218.31	822266.35	16	0	1
R182	834140.62	822162.47	834191.78	822212.39	16	0	1
R183	834099.34	822113.33	834140.62	822162.67	16	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.18	13	0	1
R184	834071.90	822084.18	834097.30	822118.02	14	0	1
R185	834309.95	822160.58	834382.68	822207.44	19	0	1
R186	834231.54	822096.63	834273.34	822136.83	16	0	1
R187	834190.09	822037.73	834231.76	822086.45	16	0	1
R188+R189	834004.09	821816.03	834080.34	821890.22	16	0	1
R190+R191	833931.13	821727.74	834004.09	821816.03	16	0	1
R192+R193	833875.32	821660.70	833900.85	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.49	22	0	1
R196+R202	833761.01	821523.38	833828.17	821600.60	20	0	1
R197	834364.36	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.94	16	0	1
R199	834281.93	821961.17	834322.00	822010.48	15	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R200	834239.17	821914.13	834327.89	821946.33	18	0	1

Road Pair	RSP (g/VMT)																							
	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	0.0210	0.0190	0.0176	0.0176	0.0172	0.0173	0.0209	0.0240	0.0214	0.0224	0.0214	0.0205	0.0197	0.0208	0.0190	0.0187	0.0173	0.0182	0.0196	0.0173	0.0164	0.0151	0.0147	0.0175
R142	0.0138	0.0120	0.0125	0.0104	0.0113	0.0128	0.0159	0.0154	0.0144	0.0163	0.0163	0.0165	0.0175	0.0171	0.0173	0.0177	0.0168	0.0176	0.0181	0.0174	0.0177	0.0208	0.0196	0.0183
R143	0.0210	0.0215	0.0210	0.0220	0.0216	0.0206	0.0216	0.0237	0.0221	0.0231	0.0216	0.0215	0.0202	0.0210	0.0199	0.0197	0.0186	0.0192	0.0203	0.0183	0.0172	0.0160	0.0157	0.0182
R144	0.0211	0.0216	0.0210	0.0222	0.0217	0.0207	0.0209	0.0239	0.0220	0.0222	0.0214	0.0210	0.0196	0.0208	0.0193	0.0193	0.0181	0.0188	0.0200	0.0180	0.0172	0.0161	0.0156	0.0182
R145+R146	0.0176	0.0176	0.0183	0.0169	0.0165	0.0179	0.0174	0.0210	0.0184	0.0177	0.0164	0.0169	0.0153	0.0173	0.0161	0.0165	0.0161	0.0173	0.0186	0.0161	0.0144	0.0121	0.0128	0.0161
R147+R148	0.0171	0.0169	0.0173	0.0172	0.0172	0.0176	0.0173	0.0208	0.0184	0.0173	0.0161	0.0165	0.0150	0.0170	0.0159	0.0163	0.0159	0.0169	0.0182	0.0157	0.0139	0.0114	0.0124	0.0160
R149	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R149	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R150	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R151	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
R151	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
R152	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0152	0.0176	0.0164	0.0170	0.0171	0.0178	0.0194	0.0169	0.0169	0.0155	0.0158	0.0173
R153	0.0186	0.0179	0.0181	0.0184	0.0188	0.0185	0.0188	0.0220	0.0203	0.0187	0.0175	0.0180	0.0161	0.0179	0.0171	0.0176	0.0168	0.0177	0.0191	0.0168	0.0158	0.0142	0.0146	0.0164
R154	0.0186	0.0179	0.0182	0.0184	0.0188	0.0185	0.0188	0.0220	0.0202	0.0190	0.0174	0.0178	0.0167	0.0185	0.0172	0.0176	0.0170	0.0179	0.0193	0.0165	0.0156	0.0138	0.0142	0.0164
R155	0.0187	0.0179	0.0182	0.0185	0.0188	0.0186	0.0189	0.0224	0.0208	0.0192	0.0179	0.0184	0.0164	0.0183	0.0174	0.0179	0.0171	0.0180	0.0194	0.0170	0.0162	0.0142	0.0145	0.0164
R156	0.0223	0.0211	0.0212	0.0207	0.0200	0.0207	0.0217	0.0278	0.0259	0.0251	0.0238	0.0240	0.0225	0.0241	0.0224	0.0224	0.0219	0.0227	0.0233	0.0205	0.0190	0.0169	0.0172	0.0192
R157	0.0204	0.0204	0.0198	0.0200	0.0198	0.0200	0.0205	0.0254	0.0238	0.0227	0.0216	0.0214	0.0199	0.0222	0.0204	0.0207	0.0203	0.0210	0.0223	0.0195	0.0184	0.0169	0.0165	0.0191
R158	0.0200	0.0200	0.0199	0.0201	0.0199	0.0201	0.0201	0.0233	0.0216	0.0207	0.0196	0.0199	0.0186	0.0201	0.0189	0.0191	0.0187	0.0192	0.0205	0.0184	0.0174	0.0162	0.0163	0.0184
R159	0.0190	0.0197	0.0208	0.0213	0.0151	0.0155	0.0192	0.0220	0.0192	0.0190	0.0186	0.0189	0.0179	0.0203	0.0197	0.0196	0.0183	0.0198	0.0208	0.0190	0.0178	0.0182	0.0183	0.0206
R160	0.0194	0.0201	0.0200	0.0191	0.0198	0.0193	0.0198	0.0230	0.0206	0.0206	0.0201	0.0196	0.0188	0.0199	0.0188	0.0186	0.0177	0.0186	0.0198	0.0180	0.0171	0.0172	0.0173	0.0182
R161	0.0184	0.0183	0.0182	0.0187	0.0180	0.0189	0.0187	0.0221	0.0203	0.0195	0.0193	0.0193	0.0187	0.0200	0.0193	0.0195	0.0189	0.0198	0.0217	0.0188	0.0186	0.0184	0.0184	0.0193
R162	0.0193	0.0195	0.0192	0.0198	0.0197	0.0192	0.0192	0.0224	0.0205	0.0206	0.0195	0.0194	0.0184	0.0200	0.0185	0.0187	0.0179	0.0184	0.0196	0.0173	0.0169	0.0169	0.0163	0.0162
R163	0.0198	0.0198	0.0197	0.0198	0.0198	0.0200	0.0199	0.0233	0.0212	0.0214	0.0207	0.0205	0.0196	0.0206	0.0195	0.0198	0.0185	0.0189	0.0206	0.0182	0.0176	0.0172	0.0171	0.0186
R164	0.0184	0.0184	0.0182	0.0187	0.0181	0.0189	0.0181	0.0215	0.0196	0.0189	0.0179	0.0183	0.0173	0.0186	0.0175	0.0178	0.0170	0.0177	0.0194	0.0172	0.0167	0.0161	0.0162	0.0178
R165	0.0209	0.0212	0.0207	0.0215	0.0213	0.0207	0.0208	0.0239	0.0221	0.0223	0.0218	0.0217	0.0208	0.0215	0.0208	0.0208	0.0196	0.0202	0.0218	0.0195	0.0187	0.0186	0.0187	0.0197
R166	0.0176	0.0174	0.0175	0.0176	0.0177	0.0176	0.0174	0.0211	0.0199	0.0180	0.0175	0.0176	0.0164	0.0177	0.0171	0.0175	0.0172	0.0178	0.0188	0.0168	0.0150	0.0129	0.0136	0.0164
R167	0.0270	0.0272	0.0273	0.0273	0.0273	0.0272	0.0270	0.0292	0.0276	0.0301	0.0298	0.0286	0.0289	0.0282	0.0276	0.0268	0.0242	0.0248	0.0269	0.0241	0.0237	0.0256	0.0253	0.0246
R168+R169	0.0108	0.0112	0.0113	0.0107	0.0110	0.0108	0.0110	0.0127	0.0123	0.0118	0.0115	0.0135	0.0111	0.0114	0.0112	0.0115	0.0111	0.0119	0.0118	0.0107	0.0104	0.0085	0.0095	0.0109
R170+R171	0.0125	0.0125	0.0124	0.0129	0.0125	0.0126	0.0128	0.0133	0.0128	0.0139	0.0133	0.0135	0.0136	0.0137	0.0131	0.0131	0.0123	0.0128	0.0132	0.0122	0.0126	0.0136	0.0129	0.0122
R172+R173	0.0186	0.0185	0.0186	0.0187	0.0184	0.0185	0.0187	0.0221	0.0199	0.0197	0.0190	0.0193	0.0184	0.0198	0.0190	0.0193	0.0186	0.0195	0.0211	0.0186	0.0178	0.0173	0.0174	0.0187
R174+R175	0.0200	0.0200	0.0198	0.0202	0.0192	0.0201	0.0201	0.0236	0.0221	0.0216	0.0211	0.0212	0.0205	0.0219	0.0210	0.0212	0.0202	0.0212	0.0228	0.0201	0.0193	0.0190	0.0190	0.0201
R176	0.0204	0.0202	0.0202	0.0200	0.0204	0.0203	0.0203	0.0233	0.0215	0.0216	0.0211	0.0209	0.0202	0.0210	0.0206	0.0206	0.0196	0.0204	0.0219	0.0200	0.0194	0.0195	0.0196	0.0204
R177	0.0189	0.0188	0.0188	0.0186	0.0190	0.0187	0.0187	0.0216	0.0194	0.0194	0.0190	0.0193	0.0186	0.0197	0.0192	0.0194	0.0185	0.0197	0.0209	0.0187	0.0179	0.0179	0.0178	0.0191
R178	0.0219	0.0216	0.0217	0.0217	0.0216	0.0215	0.0220	0.0242	0.0228	0.0234	0.0224	0.0221	0.0215	0.0220	0.0212	0.0211	0.0200	0.0205	0.0219	0.0202	0.0200	0.0203	0.0202	0.0208
R179	0.0216	0.0216	0.0216	0.0214	0.0217	0.0217	0.0215	0.0239	0.0221	0.0229	0.0226	0.0227	0.0229	0.0237	0.0233	0.0234	0.0218	0.0227	0.0246	0.0223	0.0214	0.0226	0.0224	0.0229
R180	0.0208	0.0210	0.0212	0.0210	0.0206	0.0212	0.0213	0.0245	0.0228	0.0221	0.0217	0.0219	0.0209	0.0223	0.0216	0.0216	0.0205	0.0214	0.0234	0.0207	0.0205	0.0199	0.0199	0.0212
R181	0.0169	0.0167	0.0169	0.0172	0.0165	0.0163	0.0171	0.0236	0.0209	0.0205	0.0202	0.0204	0.0191	0.0230	0.0222	0.0221	0.0204	0.0211	0.0230	0.0213	0.0215	0.0195	0.0193	0.0216
R182	0.0198	0.0204	0.0214	0.0221	0.0168	0.0166	0.0203	0.0231	0.0204	0.0202	0.0200	0.0205	0.0195	0.0208	0.0199	0.0204	0.0193	0.0199	0.0217	0.0197	0.0201	0.0181	0.0180	0.0204
R183	0.0208	0.0216	0.0228	0.0240	0.0171	0.0169	0.0214	0.0239	0.0210	0.0214	0.0212	0.0219	0.0211	0.0223	0.0192	0.0197	0.0189	0.0199	0.0217	0.0198	0.0199	0.0204	0.0207	0.0228
R184	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R184	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R184	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R185	0.0202	0.0209	0.0203	0.0209	0.0216	0.0211	0.0206	0.0238	0.0216	0.0215	0.0212	0.0210	0.0205	0.0219	0.0212	0.0213	0.0203	0.0218	0.0230	0.0204	0.0200	0.0200	0.0200	0.0216
R186	0.0220	0.0228	0.0248	0.0257	0.0169	0.0257	0.0223	0.0247	0.0216	0.0224	0.0225	0.0231	0.0222	0.0229	0.0196	0.0200	0.0190	0.0200	0.0219	0.0199	0.0200	0.0204	0.0209	0.0234
R187	0.0215	0.0210	0.0217	0.0222	0.0207	0.0205	0.0219	0.0246	0.0225	0.0223	0.0224	0.0229	0.0222	0.0232	0.0228	0.0232	0.0222	0.0231	0.0247	0.0222	0.0216	0.0224	0.0211	0.0231
R188+R189	0.0181	0.0191	0.0203	0.0189	0.0195	0.0190	0.0186	0.0208	0.0195	0.0202	0.0186	0.0189	0.0185	0.0200	0.0192	0.0191	0.0183	0.0189	0.0205	0.0186	0.0184	0.0173	0.0170	0.0199
R190+R191	0.0212	0.0220	0.0209	0.0217	0.0201	0.0197	0.0217	0.0242	0.0216	0.0219	0.0208	0.0217	0.0204	0.0218	0.0208	0.0209	0.0198	0.0208	0.0227	0.0202	0.0199	0.0188	0.0188	0.0204
R192+R193	0.0187	0.0196	0.0204	0.0211	0.0206	0.0202	0.0170	0.0192	0.0172	0.0167	0.0159	0.0164	0.0153	0.0171	0.0159	0.0170	0.0163	0.0156	0.0154	0.0156	0.0204	0.0177	0.0159	0.0177
R194+R195	0.0217	0.0221	0.0226	0.0232	0.0237	0.0232	0.0219	0.0248	0.0231	0.0235	0.0235	0.0232	0.0218	0.0228	0.0225	0.0223	0.0222	0.0229	0.0236	0.0227	0.0221	0.0222	0.0223	0.0236
R196+R202	0.0210	0.0210	0.0205	0.0204	0.0205	0.0204	0.0210	0.0224	0.0223	0.0207	0.0202	0.0206	0.0197	0.0210	0.0202	0.0208	0.0206	0.0209	0.0216	0.0204	0.0201	0.0193	0.0192	0.0226
R197	0.0169	0.0172	0.0165	0.0169	0.0169	0.0169	0.0172	0.0252	0.0221	0.0233	0.0244	0.0166	0.0154	0.0177	0.0161	0.0170	0.0169	0.0176	0.0190	0.0166	0.0174	0.0163	0.0160	0.0150
R198	0.0169	0.0168	0.0171	0.0167	0.0172	0.0169	0.0166	0.0229	0.0202	0.0200	0.0200	0.0205	0.0199	0.0215	0.0211	0.0219	0.0209	0.0226	0.0245	0.0232	0.0232	0.0260	0.0274	0.0163
R199	0.0224	0.0232	0.0245	0.0265	0.0180	0.0265	0.0228	0.0248	0.0236	0.0232	0.0204	0.0210	0.0205	0.0217	0.0178	0.0183	0.0184	0.0192	0.0198	0.0187	0.0181	0.0175	0.0175	0.0190
R200	0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185
R200	0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833960.46	822543.00	833985.46	822546.76	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R008+R009	833681.17	822398.31	833663.59	822397.15	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833544.64	822390.48	833587.56	822384.60	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R014+R015	833488.77	822318.11	833587.56	822384.60	14	0	1	0.0147	0.0147	0.0148	0.0146	0.0144	0.0147	0.0146	0.0184	0.0169	0.0148	0.0142	0.0146	0.0133	0.0153	0.0146	0.0150	0.0149	0.0158	0.0170	0.0148	0.0137	0.0116	0.0123	0.0150
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	0.0216	0.0193	0.0215	0.0239	0.0230	0.0205	0.0214	0.0230	0.0212	0.0215	0.0218	0.0220	0.0211	0.0226	0.0220	0.0223	0.0211	0.0224	0.0242	0.0220	0.0218	0.0212	0.0219	0.0246
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0205	0.0213	0.0202	0.0222	0.0215	0.0195	0.0201	0.0235	0.0211	0.0220	0.0218	0.0218	0.0214	0.0225	0.0219	0.0220	0.0206	0.0216	0.0234	0.0208	0.0208	0.0204	0.0211	0.0220
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0209	0.0175	0.0180	0.0165	0.0186	0.0180	0.0206	0.0229	0.0218	0.0222	0.0218	0.0220	0.0218	0.0224	0.0227	0.0227	0.0217	0.0229	0.0247	0.0219	0.0210	0.0219	0.0212	0.0219
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0213	0.0176	0.0183	0.0163	0.0166	0.0181	0.0211	0.0233	0.0217	0.0221	0.0217	0.0220	0.0218	0.0224	0.0224	0.0225	0.0209	0.0223	0.0247	0.0220	0.0210	0.0212	0.0211	0.0217
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0216	0.0197	0.0215	0.0236	0.0228	0.0207	0.0214	0.0229	0.0218	0.0220	0.0222	0.0223	0.0224	0.0229	0.0224	0.0230	0.0215	0.0227	0.0252	0.0223	0.0214	0.0215	0.0211	0.0219
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0187	0.0186	0.0189	0.0196	0.0193	0.0190	0.0186	0.0246	0.0239	0.0219	0.0207	0.0206	0.0188	0.0217	0.0199	0.0206	0.0211	0.0210	0.0214	0.0200	0.0198	0.0176	0.0173	0.0196
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	0.0205	0.0210	0.0204	0.0216	0.0213	0.0199	0.0212	0.0231	0.0228	0.0232	0.0230	0.0225	0.0226	0.0233	0.0229	0.0229	0.0215	0.0227	0.0249	0.0222	0.0213	0.0217	0.0211	0.0221
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	0.0202	0.0195	0.0221	0.0250	0.0239	0.0210	0.0199	0.0236	0.0217	0.0221	0.0220	0.0219	0.0220	0.0223	0.0220	0.0223	0.0212	0.0225	0.0242	0.0221	0.0207	0.0214	0.0207	0.0216
R029	833768.03	822376.15	833846.76	822405.79	13	0	1	0.0171	0.0170	0.0181	0.0152	0.0150	0.0176	0.0170	0.0245	0.0232	0.0210	0.0199	0.0202	0.0183	0.0221	0.0202	0.0213	0.0230	0.0220	0.0226	0.0216	0.0226	0.0203	0.0200	0.0218
R030	833846.76	822405.79	833917.83	822431.11	14	0	1	0.0168	0.0166	0.0162	0.0168	0.0164	0.0170	0.0167	0.0225	0.0217	0.0191	0.0178	0.0187	0.0190	0.0196	0.0196	0.0197	0.0201	0.0202	0.0222	0.0190	0.0187	0.0170	0.0167	0.0186
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	0.0168	0.0181	0.0152	0.0156	0.0156	0.0152	0.0168	0.0261	0.0248	0.0225	0.0212	0.0209	0.0188	0.0223	0.0200	0.0209	0.0221	0.0210	0.0221	0.0205	0.0213	0.0192	0.0189	0.0213
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	0.0285	0.0262	0.0155	0.0156	0.0156	0.0157	0.0156	0.0212	0.0196	0.0195	0.0193	0.0195	0.0196	0.0203	0.0200	0.0201	0.0191	0.0198	0.0215	0.0195	0.0188	0.0193	0.0190	0.0200
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	0.0188	0.0187	0.0187	0.0189	0.0189	0.0189	0.0187	0.0212	0.0197	0.0199	0.0198	0.0200	0.0196	0.0204	0.0201	0.0201	0.0193	0.0201	0.0220	0.0195	0.0188	0.0190	0.0190	0.0197
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0154	0.0154	0.0158	0.0164	0.0164	0.0168	0.0159	0.0195	0.0186	0.0174	0.0176	0.0182	0.0183	0.0186	0.0186	0.0190	0.0183	0.0192	0.0209	0.0182	0.0171	0.0178	0.0175	0.0185
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0224	0.0217	0.0214	0.0208	0.0209	0.0209	0.0212	0.0246	0.0234	0.0236	0.0233	0.0237	0.0243	0.0244	0.0243	0.0240	0.0219	0.0225	0.0249	0.0234	0.0226	0.0246	0.0238	0.0236
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0189	0.0188	0.0188	0.0189	0.0190	0.0190	0.0188	0.0218	0.0205	0.0206	0.0206	0.0203	0.0204	0.0208	0.0208	0.0209	0.0197	0.0210	0.0223	0.0203	0.0190	0.0196	0.0195	0.0198
R037	833653.40	822269.00	833694.68	822284.07	19	0	1	0.0219	0.0218	0.0220	0.0218	0.0219	0.0220	0.0219	0.0240	0.0230	0.0241	0.0240	0.0236	0.0232	0.0233	0.0226	0.0224	0.0206	0.0212	0.0229	0.0204	0.0200	0.0210	0.0204	0.0209
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0224	0.0224	0.0224	0.0222	0.0223	0.0224	0.0223	0.0245	0.0233	0.0246	0.0243	0.0239	0.0234	0.0234	0.0226	0.0223	0.0204	0.0213	0.0225	0.0205	0.0194	0.0200	0.0197	0.0203
R039	833761.98	822311.12	833788.45	822320.76	14	0	1	0.0283	0.0236	0.0246	0.0253	0.0254	0.0255	0.0244	0.0297	0.0284	0.0319	0.0322	0.0304	0.0311	0.0288	0.0291	0.0281	0.0248	0.0253	0.0272	0.0246	0.0236	0.0258	0.0255	0.0252
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	0.0268	0.0272	0.0275	0.0278	0.0279	0.0278	0.0274	0.0289	0.0275	0.0309	0.0307	0.0295	0.0299	0.0279	0.0276	0.0268	0.0235	0.0240	0.0257	0.0234	0.0217	0.0246	0.0243	0.0241
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	0.0283	0.0252	0.0256	0.0263	0.0259	0.0263	0.0257	0.0297	0.0283	0.0318	0.0322	0.0303	0.0310	0.0288	0.0289	0.0280	0.0247	0.0253	0.0272	0.0245	0.0237	0.0257	0.0256	0.0252
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	0.0282	0.0256	0.0262	0.0265	0.0266	0.0266	0.0261	0.0297	0.0284	0.0313	0.0316	0.0304	0.0306	0.0289	0.0286	0.0276	0.0243	0.0253	0.0272	0.0246	0.0237	0.0258	0.0256	0.0253
R043	833950.46	822320.48	834034.90	822250.52	18	0	1	0.0312	0.0312	0.0308	0.0314	0.0309	0.0311	0.0309	0.0315	0.0301	0.0346	0.0352	0.0338	0.0343	0.0321	0.0319	0.0307	0.0269	0.0274	0.0295	0.0275	0.0263	0.0300	0.0295	0.0283
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0271	0.0271	0.0277	0.0275	0.0278	0.0277	0.0275	0.0290	0.0271	0.0304	0.0308	0.0296	0.0299	0.0280	0.0277	0.0268	0.0235	0.0246	0.0265	0.0237	0.0222	0.0248	0.0244	0.0244
R045	834140.62	822162.67	834231.75	822086.45	19	0	1	0.0278	0.0181	0.0180	0.0197	0.0201	0.0205	0.0280	0.0289	0.0275	0.0310	0.0306	0.0296	0.0297	0.0282	0.0283	0.0274	0.0243	0.0248	0.0267	0.0246	0.0233	0.0257	0.0255	0.0253
R046	834231.72	822086.65	834323.21	822011.22	18	0	1	0.0278	0.0244	0.0251	0.0254	0.0256	0.0256	0.0278	0.0293	0.0275	0.0308	0.0310	0.0299	0.0300	0.0285	0.0282	0.0273	0.0241	0.0251	0.0269	0.0244	0.0231	0.0254	0.0252	0.0250
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	0.0281	0.0240	0.0244	0.0254	0.0250	0.0257	0.0280	0.0289	0.0275	0.0308	0.0312	0.0301	0.0301	0.0287	0.0282	0.0274	0.0242	0.0247	0.0266	0.0245	0.0232	0.0257	0.0255	0.0251
R048	833097.20	821955.43	833156.56	821977.96	17	0	1	0.0220	0.0209	0.0210	0.0212	0.0212	0.0212	0.0221	0.0242	0.0236	0.0258	0.0254	0.0244	0.0245	0.0238	0.0236	0.0230	0.0206	0.0215	0.0231	0.0207	0.0199	0.0221	0.0217	0.0213
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0221	0.0221	0.0221	0.0220	0.0221	0.0221	0.0220	0.0238	0.0232	0.0251	0.0250	0.0241	0.0242	0.0232	0.0229	0.0224	0.0200	0.0209	0.0225	0.0204	0.0199	0.0220	0.0217	0.0213
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	0.0216	0.0216	0.0216	0.0215	0.0215	0.0216	0.0216	0.0236	0.0229	0.0252	0.0247	0.0238	0.0242	0.0236	0.0233	0.0232	0.0208	0.0220	0.0239	0.0210	0.0195	0.0210	0.0209	0.0208
R051	833274.06	822006.90	833438.70	822067.62	16	0	1	0.0235	0.0236	0.0236	0.0236	0.0236	0.0236	0.0236	0.0250	0.0241	0.0269	0.0267	0.0262	0.0266	0.0256	0.0256	0.0254	0.0225	0.0235	0.0258	0.0229	0.0219	0.0249	0.0245	0.0237
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0280	0.0254	0.0254	0.0255	0.0255	0.0254	0.0272	0.0275	0.0265	0.0297	0.0300	0.0288	0.0292	0.0272	0.0270	0.0261	0.0227	0.0233	0.0257	0.0235	0.0231	0.0261	0.0262	0.0254
R053	833786.86	822123.44	833736.66	822163.25	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R053	833736.66	822163.26	833688.33	822174.73	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R055	833786.53	822123.04	833872.14	822061.39	16	0	1	0.0238	0.0238	0.0238	0.0239	0.0239	0.0238	0.0239	0.0250	0.0236	0.0263	0.0262	0.0253	0.0254	0.0242	0.0239	0.0231	0.0204	0.0211	0.0229	0.0208	0.0203	0.0226	0.0221	0.0216
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0303	0.0300	0.0305	0.0302	0.0306	0.0305	0.0305	0.0305	0.0288	0.0336	0.0349	0.0336	0.0349	0.0322	0.0327	0.0316	0.0271	0.0278	0.0305	0.0286	0.0281	0.0337	0.0329	0.0301
R057	833873.30	822052.66	834159.21	821814.78	15	0	1	0.0249	0.0221	0.0226	0.0230	0.0229	0.0230	0.0249	0.0262	0.0250	0.0275	0.0278	0.0267	0.0271	0.0254	0.0257	0.0251	0.0219	0.0225	0.0244	0.0225	0.0211	0.0236	0.0236	0.0234
R058	834159.21	821814.78	834256.10	821736.42	15	0	1	0.0282	0.0243	0.0249	0.0257	0.0256	0.0258	0.0282	0.0287	0.0269	0.0311	0.0315	0.0299	0.0302	0.0279	0.0275	0.0263	0.0226	0.0229	0.0247	0.0228	0.0223	0.0255	0.0249	0.0238
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	0.0282	0.0284	0.0281	0.0280	0.0284	0.0283	0.0282	0.0289	0.0276	0.0310	0.0322	0.0307	0.0315	0.0290	0.0296	0.0286	0.0246	0.0252	0.0274	0.0253	0.0240	0.0277	0.0276	0.0266
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0267	0.0274	0.0279	0.0278	0.0280	0.0281	0.0277	0.0280	0.0260	0.0304	0.0318	0.0310	0.0327	0.0296	0.0303	0.0295	0.0251	0.0262	0.0288	0.0263	0.0251	0.0314	0.0304	0.0277
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	0.0220	0.0200	0.0200	0.0201	0.0203	0.0201	0.0218	0.0214	0.0211	0.0211	0.0212	0.0214	0.0213	0.0209	0.0214	0.0209	0.0209	0.0210	0.0213	0.0211	0.0213	0.0217	0.0199	0.0203
R062	833139.76	821889.31	833296.78	821947.78	16	0	1	0.0170	0.0172	0.0171	0.0175	0.0173	0.0169	0.0173	0.0203	0.0192	0.0184	0.0182	0.0185	0.0187	0.0183	0.0188	0.0190	0.0185	0.0187	0.0199	0.0169	0.0167	0.0168	0.0159	0.0180
R063	833296.86	821947.56	833460.51	822007.97	16	0	1	0.0205	0.0167	0.0173	0.0157	0.0181	0.0170	0.0203	0.0228	0.0211	0.0215	0.0216	0.0215	0.0212	0.0217	0.0216	0.0216	0.0204	0.0213	0.0231	0.0208	0.0203	0.0207	0.0204	0.0219
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R065	833160.17	821834.07	833315.66	821891.67	16	0	1	0.0176	0.0175	0.0182	0.0184	0.0185	0.0178	0.0187	0.0213	0.0196	0.0196	0.0199	0.0197	0.0201	0.0196	0.0192	0.0194	0.0187	0.0185	0.0195	0.0167	0.0166	0.0164	0.0163	0.0176
R066	833315.66	821891.68	833481.00	821952.76	16	0	1	0.0186	0.0178	0.0174	0.0180	0.0180	0.0174	0.0185	0.0208	0.0195	0.0194	0.0195	0.0201	0.0198	0.0203	0.0203	0.0202	0.0189	0.0204	0.0217	0.0193	0.0181	0.0188	0.0187	0.0199
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0138	0.0168	0.0164	0.0168	0.0163	0.0156	0.0155	0.0158	0.0159	0.0160	0.0151	0.0157	0.0171	0.0143	0.0129	0.0129	0.0130	0.0135
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0166	0.0164	0.0168	0.0155	0.0151	0.0149	0.0154	0.0152	0.0154	0.0146	0.0157	0.0171	0.0140	0.0128	0.0130	0.0129	0.0135
R069	833166.60	821757.87	833260.16	821796.91	29	0	1	0.0118	0.0118	0.0118	0.0117	0.0117	0.0117	0.0119	0.0146	0.0134	0.0125	0.0117	0.0119	0.0112	0.0123	0.0120	0.0123	0.0119	0.0132	0.0144	0.0117	0.0111	0.0105	0.0106	0.0117
R070	833249.90	821820.73	833329.89	821883.87	13	0	1	0.0165	0.0165	0.0165	0.0166	0.0164	0.0164	0.0164	0.0188	0.0177	0.0180	0.0171	0.0173	0.0167	0.0174	0.0168	0.0168	0.0159	0.0169	0.0180	0.0159	0.0154	0.0157	0.0155	0.0161

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	16	0	1	0.0164	0.0163	0.0164	0.0164	0.0162	0.0163	0.0163	0.0185	0.0171	0.0174	0.0168	0.0168	0.0165	0.0170	0.0166	0.0166	0.0157	0.0165	0.0180	0.0157	0.0154	0.0158	0.0156	0.0163
R072	833397.24	821875.22	833501.75	821897.07	20	0	1	0.0175	0.0173	0.0176	0.0171	0.0173	0.0175	0.0174	0.0196	0.0178	0.0182	0.0181	0.0179	0.0174	0.0178	0.0174	0.0174	0.0161	0.0167	0.0182	0.0163	0.0156	0.0159	0.0159	0.0169
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	0.0151	0.0151	0.0149	0.0149	0.0150	0.0152	0.0150	0.0173	0.0156	0.0153	0.0149	0.0152	0.0147	0.0157	0.0152	0.0155	0.0150	0.0155	0.0167	0.0151	0.0146	0.0144	0.0144	0.0155
R074	833281.64	821790.34	833451.80	821860.54	20	0	1	0.0158	0.0159	0.0159	0.0159	0.0155	0.0156	0.0158	0.0179	0.0163	0.0162	0.0158	0.0159	0.0153	0.0161	0.0155	0.0156	0.0148	0.0153	0.0166	0.0148	0.0144	0.0143	0.0142	0.0151
R075	833449.48	821861.09	833506.97	821883.08	16	0	1	0.0155	0.0155	0.0158	0.0152	0.0153	0.0156	0.0157	0.0180	0.0162	0.0160	0.0156	0.0156	0.0150	0.0158	0.0152	0.0153	0.0145	0.0151	0.0164	0.0145	0.0140	0.0135	0.0139	0.0148
R076	833501.46	821897.80	833548.66	821899.77	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R077	833600.48	821871.28	833673.94	821812.09	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R078	833682.38	821822.35	833875.32	821680.75	16	0	1	0.0196	0.0199	0.0198	0.0200	0.0194	0.0197	0.0197	0.0215	0.0198	0.0209	0.0207	0.0202	0.0196	0.0194	0.0188	0.0184	0.0168	0.0171	0.0185	0.0167	0.0164	0.0169	0.0166	0.0174
R079	833673.29	821811.43	833867.51	821661.46	16	0	1	0.0143	0.0142	0.0144	0.0144	0.0140	0.0143	0.0143	0.0167	0.0151	0.0145	0.0139	0.0142	0.0133	0.0146	0.0140	0.0142	0.0138	0.0143	0.0155	0.0138	0.0135	0.0130	0.0129	0.0140
R080	833875.67	821661.18	833989.54	821587.94	16	0	1	0.0164	0.0165	0.0163	0.0164	0.0164	0.0167	0.0166	0.0186	0.0167	0.0170	0.0167	0.0168	0.0162	0.0169	0.0162	0.0164	0.0154	0.0157	0.0172	0.0153	0.0151	0.0157	0.0154	0.0161
R081	833867.01	821650.88	833983.08	821582.98	20	0	1	0.0145	0.0144	0.0146	0.0147	0.0143	0.0145	0.0145	0.0168	0.0152	0.0147	0.0142	0.0144	0.0137	0.0148	0.0142	0.0144	0.0140	0.0145	0.0157	0.0140	0.0138	0.0133	0.0132	0.0143
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R083	833436.83	821855.11	833496.18	821813.12	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R083	833524.36	821772.29	833558.81	821682.62	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
R084	833582.69	821644.68	833607.71	821603.87	13	0	1	0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
R087	833648.49	821548.42	833686.49	821508.30	13	0	1	0.0197	0.0197	0.0198	0.0197	0.0197	0.0197	0.0197	0.0203	0.0201	0.0201	0.0199	0.0201	0.0198	0.0204	0.0201	0.0202	0.0201	0.0201	0.0204	0.0198	0.0198	0.0199	0.0199	0.0196
R088	833254.24	821811.68	833365.50	821856.64	17	4	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833365.50	821856.64	833416.50	821865.51	17	7	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833600.16	821605.82	833712.09	821511.11	17	6	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R089	833256.86	821801.44	833370.08	821846.87	16	4	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833598.99	821594.44	833669.93	821508.87	16	6	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R090+R091	833259.78	821829.64	833337.84	821634.13	17	0	1	0.0178	0.0177	0.0173	0.0173	0.0174	0.0178	0.0179	0.0214	0.0207	0.0197	0.0190	0.0192	0.0187	0.0198	0.0196	0.0202	0.0193	0.0204	0.0220	0.0193	0.0183	0.0173	0.0178	0.0196
R092+R093	833337.92	821632.03	833449.56	821640.31	20	0	1	0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1	0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	0.0101	0.0101	0.0101	0.0101	0.0102	0.0102	0.0101	0.0109	0.0101	0.0104	0.0096	0.0097	0.0089	0.0095	0.0084	0.0085	0.0083	0.0086	0.0082	0.0074	0.0076	0.0068	0.0065	0.0078
R095	833609.59	821501.72	833648.49	821548.43	17	0	1	0.0231	0.0226	0.0227	0.0227	0.0228	0.0227	0.0228	0.0239	0.0234	0.0236	0.0236	0.0234	0.0233	0.0233	0.0231	0.0231	0.0228	0.0228	0.0233	0.0223	0.0222	0.0224	0.0225	0.0224
R096+R097	833980.89	822454.38	834028.77	822414.27	18	0	1	0.0213	0.0260	0.0147	0.0150	0.0148	0.0157	0.0210	0.0236	0.0240	0.0246	0.0225	0.0227	0.0222	0.0238	0.0240	0.0230	0.0223	0.0222	0.0258	0.0224	0.0216	0.0222	0.0231	0.0217
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	0.0282	0.0291	0.0279	0.0277	0.0308	0.0294	0.0298	0.0309	0.0299	0.0342	0.0335	0.0321	0.0322	0.0312	0.0306	0.0297	0.0253	0.0270	0.0293	0.0257	0.0238	0.0260	0.0263	0.0255
R100+R101	834127.62	822332.11	834218.31	822256.35	16	0	1	0.0255	0.0251	0.0254	0.0266	0.0258	0.0279	0.0256	0.0287	0.0269	0.0301	0.0290	0.0292	0.0290	0.0286	0.0281	0.0277	0.0245	0.0257	0.0277	0.0252	0.0241	0.0252	0.0248	0.0263
R102+R103	834218.31	822256.35	834309.95	822180.58	18	0	1	0.0269	0.0284	0.0241	0.0273	0.0256	0.0263	0.0273	0.0268	0.0261	0.0280	0.0288	0.0281	0.0282	0.0273	0.0256	0.0257	0.0231	0.0232	0.0253	0.0222	0.0224	0.0229	0.0238	0.0240
R104+R105	834309.95	822180.58	834407.46	822098.55	18	0	1	0.0239	0.0261	0.0216	0.0239	0.0230	0.0210	0.0254	0.0271	0.0252	0.0268	0.0249	0.0244	0.0244	0.0241	0.0249	0.0235	0.0220	0.0226	0.0249	0.0219	0.0220	0.0235	0.0234	0.0248
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	0.0195	0.0179	0.0193	0.0210	0.0205	0.0189	0.0192	0.0215	0.0209	0.0206	0.0203	0.0203	0.0204	0.0215	0.0215	0.0219	0.0208	0.0223	0.0240	0.0213	0.0202	0.0207	0.0206	0.0214
R107	833991.55	822370.04	834090.39	822287.63	18	0	1	0.0188	0.0185	0.0201	0.0222	0.0215	0.0195	0.0186	0.0222	0.0201	0.0199	0.0198	0.0199	0.0196	0.0210	0.0210	0.0212	0.0203	0.0211	0.0234	0.0206	0.0205	0.0204	0.0211	0.0210
R108	834090.84	822288.08	834181.98	822212.22	18	0	1	0.0185	0.0181	0.0200	0.0219	0.0208	0.0192	0.0183	0.0211	0.0198	0.0194	0.0193	0.0198	0.0193	0.0205	0.0206	0.0207	0.0204	0.0211	0.0228	0.0208	0.0198	0.0201	0.0209	0.0220
R109	834181.98	822212.22	834273.05	822136.48	17	0	1	0.0185	0.0181	0.0200	0.0220	0.0209	0.0192	0.0183	0.0212	0.0198	0.0195	0.0194	0.0200	0.0197	0.0210	0.0203	0.0211	0.0203	0.0209	0.0230	0.0205	0.0194	0.0212	0.0198	0.0224
R110	834273.34	822136.83	834364.38	822060.94	17	0	1	0.0189	0.0196	0.0187	0.0200	0.0197	0.0183	0.0187	0.0216	0.0198	0.0194	0.0195	0.0197	0.0192	0.0206	0.0203	0.0207	0.0201	0.0210	0.0226	0.0205	0.0201	0.0206	0.0197	0.0207
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	0.0195	0.0177	0.0193	0.0208	0.0203	0.0186	0.0192	0.0214	0.0199	0.0196	0.0197	0.0198	0.0194	0.0207	0.0205	0.0208	0.0201	0.0206	0.0226	0.0203	0.0195	0.0197	0.0203	0.0212
R112	833849.76	822405.79	833902.86	822360.57	19	0	1	0.0323	0.0320	0.0300	0.0346	0.0326	0.0326	0.0310	0.0325	0.0308	0.0351	0.0354	0.0340	0.0339	0.0323	0.0327	0.0314	0.0270	0.0285	0.0309	0.0279	0.0264	0.0295	0.0290	0.0285
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	0.0166	0.0184	0.0140	0.0136	0.0142	0.0203	0.0188	0.0204	0.0189	0.0183	0.0182	0.0187	0.0182	0.0192	0.0191	0.0196	0.0189	0.0198	0.0214	0.0190	0.0180	0.0197	0.0183	0.0208
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	0.0189	0.0187	0.0181	0.0190	0.0187	0.0187	0.0187	0.0212	0.0205	0.0206	0.0203	0.0205	0.0202	0.0212	0.0210	0.0212	0.0203	0.0208	0.0227	0.0204	0.0193	0.0195	0.0195	0.0202
R115	833994.06	822200.75	834077.01	822132.08	16	0	1	0.0237	0.0241	0.0239	0.0235	0.0241	0.0239	0.0237	0.0253	0.0240	0.0258	0.0259	0.0256	0.0256	0.0252	0.0250	0.0247	0.0224	0.0231	0.0249	0.0231	0.0221	0.0238	0.0235	0.0236
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	0.0181	0.0178	0.0180	0.0191	0.0187	0.0187	0.0183	0.0205	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0197	0.0200	0.0195	0.0201	0.0215	0.0197	0.0187	0.0191	0.0191	0.0200
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	0.0184	0.0181	0.0183	0.0175	0.0190	0.0179	0.0182	0.0204	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0196	0.0200	0.0192	0.0201	0.0215	0.0197	0.0188	0.0191	0.0190	0.0201
R118	834190.59	822037.73	834243.25	821993.98	19	0	1	0.0183	0.0181	0.0182	0.0174	0.0189	0.0179	0.0182	0.0202	0.0192	0.0189	0.0188	0.0192	0.0190	0.0198	0.0197	0.0200	0.0196	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
R119	834242.94	821993.86	834282.16	821961.45	19	0	1	0.0181	0.0182	0.0176	0.0186	0.0183	0.0183	0.0179	0.0203	0.0191	0.0191	0.0188	0.0191	0.0189	0.0198	0.0197	0.0200	0.0195	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
R120	834281.93	821961.17	834309.17	821886.80	18	0	1	0.0180	0.0181	0.0186	0.0185	0.0181	0.0182	0.0182	0.0204	0.0196	0.0194	0.0190	0.0193	0.0189	0.0199	0.0201	0.0200	0.0195	0.0200	0.0219	0.0196	0.0187	0.0190	0.0192	0.0200
R121	833768.03	822376.10	833789.11	822318.98	18	0	1	0.0164	0.0164	0.0158	0.0166	0.0161	0.0164	0.0162	0.0193	0.0170	0.0164	0.0154	0.0162	0.0150	0.0182	0.0167	0.0169	0.0169	0.0184	0.0200	0.0180	0.0181	0.0183	0.0176	0.0184
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	0.0179	0.0187	0.0197	0.0209	0.0199	0.0186	0.0172	0.0201	0.0185	0.0181	0.0172	0.0177	0.0164	0.0183	0.0170	0.0174	0.0169	0.0182	0.0193	0.0170	0.0168	0.0146	0.0148	0.0168
R123	833868.78	822222.16	833964.75	822150.60	16	0	1	0.0149	0.0148	0.0149	0.0149	0.0147	0.0148	0.0148	0.0183	0.0174	0.0153	0.0144	0.0147	0.0135	0.0155	0.0151	0.0156	0.0154	0.0165	0.0178	0.0155	0.0143	0.0124	0.0124	0.0150
R124	833673.82	822341.72	833694.86	822284.07	18	0	1	0.0176	0.0177	0.0177	0.0175	0.0173	0.0176	0.0176	0.0198	0.0185	0.0185	0.0175	0.0181	0.0172	0.0194	0.0184	0.0187	0.0186	0.0192	0.0205	0.0185	0.0195	0.0199	0.0194	0.0182
R125	833694.86	822284.07	833827.77	822172.98	19	0	1	0.0169	0.0169	0.0169	0.0167	0.0169	0.0168	0.0169	0.0197	0.0178	0.0175	0.0163	0.0168	0.0154	0.0168	0.0165	0.0168	0.0162	0.0171	0.0181	0.0159	0.0151	0.0139	0.0130	0.0155
R126	833653.40	822269.00	833668.33	822174.73	13	0	1	0.0206	0.0215	0.0202	0.0221	0.0215	0.0197	0.0203	0.0228	0.0216	0.0217	0.0218	0.0218	0.0216	0.0224	0.0219	0.0222	0.0210	0.0222	0.0240	0.0213	0.0208	0.0216	0.0206	0.0218
R127	833489.65	822315.75	833503.51	822278.46	16	0	1	0.0169	0.0169	0.0167	0.0168	0.0169	0.0169	0.0168	0.0196	0.0183	0.0172	0.0166	0.0170	0.0159	0.0177	0.0168	0.0171	0.0174	0.0178	0.0194	0.0170	0.0170	0.0156	0.0153	0.0169
R128	833503.61	822278.46	833524.35	822221.21	16	0	1	0.0162	0.0162	0.0160	0.0161	0.0160	0.0163	0.0162	0.0190	0.0173	0.0162	0.0156	0.0161	0.0150	0.0169	0.0160	0.0164	0.0166	0.0175	0.0188	0.0164	0.0163	0.0153	0.0152	0.0167
R129	833377.80	822332.03	833388.00	822293.72	16	0	1	0.0146	0.0146	0.0145	0.0146	0.0145	0.0145	0.0146	0.0179	0.0164	0.0151	0.0141	0.0146	0.0135	0.0154	0.0146	0.0150	0.0149	0.0159	0.0172	0.0149	0.0146	0.0136	0.0134	0.0150
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	0.0145	0.0144	0.0144	0.0144	0.0144	0.0145	0.0145	0.0178	0.0163	0.0150	0.0139	0.0145	0.0134	0.0153	0.0144	0.0148	0.0148	0.0158	0.0168	0.0148	0.0148	0.0134	0.0132	0.0148
R131	833398.42	822175.04	833434.10	822080.75	16	0	1	0.0150	0.0151	0.0151	0.0151	0.0151	0.0151	0.0150	0.0185	0.0174	0.0164	0.0146	0.0150	0.0142	0.0159	0.0146	0.0155	0.0158	0.0159	0.0170	0.0148	0.0147	0.0133	0.0129	0.0153
R132	833433.92	822080.70	833460.51	822007.97	18	0	1	0.0144	0.0148	0.0151	0.0151	0.0147	0.0137	0.0126	0.0130	0.0134	0.0147	0.0137	0.0132	0.0136	0.0127	0.0121	0.0118	0.0111	0.0116	0.0120	0.0106	0.0112	0.0106	0.0100	0.0104
R133	833460.45	822007.98	833481.00	821952.76	19	0	1	0.0185	0.0198	0.0213	0.0223	0.0214	0.0195	0.0176	0.0203	0.0196	0.0206	0.0190	0.0191	0.0184	0.0188	0.0183	0.0175	0.0166	0.0178	0.0195	0.0165	0.0161	0.0142	0.0141	0.0160
R134	833481.06	821952.76	833508.97	821883.06	16	0	1	0.0171	0.0180	0.0191	0.0203	0.0194	0.0178	0.0162	0.0190	0.0184	0.0177	0.0170	0.0172	0.0165	0.0176	0.0172	0.0174	0.0164	0.0177	0.0193	0.0170	0.0149	0.0147	0.0149	0.0164
R135	833209.07	822239.78	833232.06	822178.07	16	0	1	0.0240	0.0277	0.0346	0.0346	0.0331	0.0256	0.0203	0.0220	0.0181	0.0173	0.0180	0.0180	0.0169	0.0188	0.0179	0.0183	0.0179	0.0178	0.0187	0.0174	0.0206	0.0180	0.0181	0.0189
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	0.0152	0.0161	0.0138	0.0138	0.0138	0.0138	0.0152	0.0189	0.0168	0.0157	0.0147	0.0152	0.0141	0.0162	0.0151	0.0155	0.0155	0.0164	0.0178	0.0156	0.0154	0.0139	0.0141	0.0157
R137	833080.91	822182.03	833100.63	822129.44	18	0	1	0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
R138	833100.63	822129.44	833121.79	822072.07	18	0	1	0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
R139	833121.68	822072.03	833156.56	821977.95	18	0	1	0.0141	0.0142	0.0142	0.0142	0.0141	0.0142	0.0141	0.0173	0.0155	0.0141	0.0134	0.0139	0.0128	0.0148	0.0140	0.0145	0.0145	0.0151	0.0165	0.0144	0.0144	0.0134	0.0134	0.0146
R140	833274.40	822007.07	833296.88	821947.56	17	0	1	0.0195	0.0200	0.0195	0.0205	0.0199	0.0191	0.0193	0.0222	0.0199	0.0202	0.0194	0.0191	0.0179	0.0188	0.0177	0.0176	0.0163	0.0170	0.0186	0.0161	0.0155	0.0140	0.0143	0.0164

Caline 4 input for 2034 Q3

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R141	833295.35	821947.28	833315.56	821891.67	13	0	1
R142	833329.89	821853.87	833315.98	821891.84	13	0	1
R143	833135.75	821888.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821793.15	13	0	1
R145+R146	833912.49	821978.50	834004.99	821816.03	17	0	1
R147+R148	833738.44	821888.35	833931.13	821727.74	15	0	1
R149	833728.61	821749.52	833807.73	821684.35	14	0	1
R149	833774.08	821643.82	833807.73	821684.35	13	0	1
R150	833736.67	821758.23	833807.71	821603.87	11	0	1
R151	833613.61	821610.08	833681.50	821543.70	13	0	1
R161	833693.50	821643.70	833775.28	821542.53	14	0	1
R152	833774.08	821643.52	833826.17	821600.59	20	0	1
R153	833991.31	822369.79	834023.77	822414.27	19	0	1
R154	833950.46	822320.45	833962.00	822369.67	16	0	1
R155	833909.66	822271.38	833950.46	822320.45	16	0	1
R156	833868.78	822222.16	833909.65	822271.38	16	0	1
R157	833868.06	822222.34	833827.77	822172.98	16	0	1
R158	833827.77	822172.06	833776.49	822113.30	16	0	1
R159	834075.91	822299.62	834112.50	822346.34	16	0	1
R160	834090.38	822387.53	834177.62	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.83	15	0	1
R163	833993.06	822201.80	834034.90	822250.52	16	0	1
R164	834007.80	822189.33	834049.41	822238.28	15	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.38	833864.75	822150.80	16	0	1
R167	833885.47	822042.45	834007.88	822188.33	16	0	1
R168+R169	833813.72	821975.47	833873.38	822060.03	21	0	1
R170+R171	833738.44	821898.35	833812.49	821976.83	18	0	1
R172+R173	833684.93	821822.32	833735.23	821887.65	20	0	1
R174+R175	833561.78	821677.50	833663.38	821823.55	16	0	1
R176	833488.77	821608.40	833580.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.68	821668.47	20	0	1
R178	833440.44	821529.90	833468.80	821608.61	16	0	1
R179	833451.64	821526.21	833511.32	821600.38	17	0	1
R180	834218.31	822259.38	834325.00	822385.39	19	0	1
R181	834181.98	822212.22	834219.31	822258.35	18	0	1
R182	834140.62	822162.67	834181.78	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.06	834097.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.18	13	0	1
R184	834071.90	822084.18	834067.30	822115.02	14	0	1
R186	834309.80	822189.58	834382.69	822267.44	19	0	1
R186	834231.54	822088.63	834273.34	822138.83	18	0	1
R187	834190.88	822037.73	834231.76	822088.45	19	0	1
R188+R189	834104.98	821816.03	834098.34	821898.22	19	0	1
R190+R191	833931.13	821727.74	834004.99	821816.03	15	0	1
R192+R193	833873.32	821600.79	833930.80	821737.86	20	0	1
R194+R195	833825.79	821600.89	833887.51	821681.46	20	0	1
R196+R202	833751.01	821623.38	833826.17	821600.56	20	0	1
R197	834364.36	822060.88	834402.15	822104.71	17	0	1
R198	834322.77	822010.88	834363.36	822060.88	18	0	1
R199	834281.93	821961.17	834323.00	822010.48	16	0	1
R200	834239.17	821914.13	834290.08	821963.18	14	0	1
R200	834239.17	821914.13	834377.00	821846.33	16	0	1

FSP (g/VMT) Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
0.0193	0.0175	0.0161	0.0161	0.0158	0.0159	0.0192	0.0220	0.0197	0.0206	0.0197	0.0189	0.0181	0.0191	0.0175	0.0172	0.0159	0.0168	0.0180	0.0160	0.0151	0.0139	0.0135	0.0161
0.0127	0.0110	0.0115	0.0097	0.0104	0.0118	0.0146	0.0141	0.0131	0.0149	0.0150	0.0152	0.0161	0.0158	0.0160	0.0163	0.0155	0.0162	0.0167	0.0160	0.0163	0.0192	0.0181	0.0168
0.0193	0.0198	0.0193	0.0202	0.0198	0.0190	0.0199	0.0217	0.0203	0.0212	0.0199	0.0199	0.0187	0.0194	0.0183	0.0181	0.0171	0.0177	0.0187	0.0169	0.0158	0.0148	0.0145	0.0167
0.0194	0.0198	0.0193	0.0204	0.0199	0.0190	0.0192	0.0219	0.0203	0.0205	0.0198	0.0193	0.0181	0.0191	0.0177	0.0178	0.0166	0.0173	0.0184	0.0166	0.0158	0.0148	0.0143	0.0167
0.0161	0.0161	0.0168	0.0156	0.0152	0.0164	0.0160	0.0192	0.0169	0.0162	0.0151	0.0155	0.0141	0.0159	0.0148	0.0152	0.0148	0.0160	0.0171	0.0149	0.0133	0.0111	0.0117	0.0148
0.0157	0.0156	0.0159	0.0158	0.0158	0.0161	0.0159	0.0190	0.0169	0.0159	0.0149	0.0152	0.0138	0.0156	0.0146	0.0150	0.0147	0.0155	0.0167	0.0144	0.0129	0.0105	0.0114	0.0147
0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0140	0.0162	0.0151	0.0156	0.0157	0.0164	0.0178	0.0156	0.0156	0.0143	0.0145	0.0159
0.0171	0.0164	0.0167	0.0170	0.0173	0.0170	0.0173	0.0201	0.0186	0.0172	0.0162	0.0166	0.0149	0.0165	0.0158	0.0162	0.0155	0.0163	0.0176	0.0154	0.0146	0.0131	0.0134	0.0151
0.0171	0.0165	0.0167	0.0170	0.0173	0.0171	0.0173	0.0201	0.0186	0.0176	0.0160	0.0164	0.0155	0.0171	0.0158	0.0162	0.0156	0.0165	0.0177	0.0152	0.0144	0.0128	0.0131	0.0151
0.0172	0.0165	0.0168	0.0170	0.0173	0.0171	0.0174	0.0206	0.0191	0.0177	0.0166	0.0170	0.0152	0.0169	0.0161	0.0163	0.0158	0.0166	0.0179	0.0157	0.0150	0.0131	0.0134	0.0151
0.0205	0.0194	0.0195	0.0190	0.0185	0.0190	0.0200	0.0255	0.0238	0.0231	0.0219	0.0221	0.0207	0.0222	0.0206	0.0206	0.0202	0.0209	0.0215	0.0189	0.0175	0.0156	0.0158	0.0176
0.0187	0.0187	0.0183	0.0184	0.0182	0.0184	0.0188	0.0233	0.0220	0.0209	0.0199	0.0197	0.0183	0.0204	0.0188	0.0190	0.0187	0.0193	0.0205	0.0179	0.0169	0.0156	0.0151	0.0175
0.0184	0.0183	0.0181	0.0185	0.0183	0.0185	0.0185	0.0214	0.0198	0.0191	0.0181	0.0184	0.0172	0.0185	0.0175	0.0176	0.0172	0.0177	0.0189	0.0170	0.0161	0.0149	0.0150	0.0169
0.0175	0.0181	0.0192	0.0196	0.0140	0.0142	0.0177	0.0201	0.0176	0.0175	0.0172	0.0175	0.0165	0.0187	0.0181	0.0181	0.0169	0.0183	0.0191	0.0176	0.0165	0.0168	0.0169	0.0190
0.0179	0.0186	0.0184	0.0176	0.0182	0.0178	0.0182	0.0210	0.0189	0.0190	0.0184	0.0181	0.0173	0.0183	0.0174	0.0171	0.0163	0.0171	0.0182	0.0166	0.0158	0.0159	0.0159	0.0168
0.0170	0.0169	0.0168	0.0172	0.0166	0.0174	0.0173	0.0202	0.0187	0.0179	0.0177	0.0178	0.0172	0.0184	0.0177	0.0179	0.0174	0.0182	0.0200	0.0173	0.0171	0.0169	0.0169	0.0178
0.0178	0.0180	0.0177	0.0182	0.0181	0.0177	0.0177	0.0205	0.0188	0.0189	0.0180	0.0178	0.0169	0.0183	0.0171	0.0172	0.0165	0.0169	0.0180	0.0159	0.0156	0.0156	0.0150	0.0168
0.0183	0.0183	0.0182	0.0183	0.0182	0.0185	0.0183	0.0212	0.0194	0.0196	0.0191	0.0188	0.0180	0.0189	0.0179	0.0181	0.0169	0.0174	0.0189	0.0167	0.0162	0.0159	0.0157	0.0171
0.0170	0.0169	0.0168	0.0172	0.0166	0.0174	0.0167	0.0196	0.0180	0.0174	0.0165	0.0169	0.0159	0.0171	0.0161	0.0164	0.0157	0.0164	0.0179	0.0159	0.0155	0.0149	0.0149	0.0164
0.0193	0.0195	0.0191	0.0198	0.0196	0.0191	0.0192	0.0219	0.0203	0.0205	0.0200	0.0199	0.0191	0.0197	0.0191	0.0191	0.0180	0.0186	0.0200	0.0179	0.0173	0.0171	0.0172	0.0181
0.0162	0.0160	0.0161	0.0162	0.0163	0.0162	0.0160	0.0193	0.0183	0.0165	0.0161	0.0162	0.0151	0.0163	0.0157	0.0161	0.0158	0.0164	0.0173	0.0155	0.0138	0.0118	0.0125	0.0151
0.0249	0.0251	0.0252	0.0251	0.0251	0.0253	0.0249	0.0267	0.0254	0.0277	0.0274	0.0263	0.0266	0.0259	0.0254	0.0246	0.0222	0.0228	0.0248	0.0221	0.0218	0.0236	0.0233	0.0226
0.0100	0.0104	0.0105	0.0100	0.0102	0.0100	0.0102	0.0117	0.0114	0.0109	0.0106	0.0106	0.0102	0.0105	0.0104	0.0106	0.0102	0.0110	0.0109	0.0098	0.0096	0.0088	0.0087	0.0101
0.0116	0.0116	0.0115	0.0120	0.0116	0.0117	0.0118	0.0123	0.0112	0.0128	0.0123	0.0124	0.0125	0.0126	0.0120	0.0121	0.0114	0.0118	0.0122	0.0112	0.0116	0.0125	0.0119	0.0113
0.0171	0.0171	0.0171	0.0172	0.0170	0.0170	0.0172	0.0202	0.0182	0.0181	0.0175	0.0177	0.0170	0.0182	0.0175	0.0177	0.0171	0.0179	0.0194	0.0171	0.0163	0.0159	0.0159	0.0172
0.0184	0.0183	0.0181	0.0186	0.0177	0.0185	0.0184	0.0216	0.0204	0.0199	0.0194	0.0195	0.0189	0.0201	0.0193	0.0195	0.0186	0.0195	0.0209	0.0185	0.0178	0.0175	0.0175	0.0184
0.0188	0.0186	0.0186	0.0185	0.0188	0.0187	0.0187	0.0213	0.0197	0.0198	0.0194	0.0193	0.0186	0.0194	0.0190	0.0190	0.0181	0.0188	0.0201	0.0184	0.0179	0.0179	0.0180	0.0188
0.0174	0.0173	0.0174	0.0171	0.0175	0.0172	0.0173	0.0197	0.0179	0.0178	0.0175	0.0178	0.0171	0.0182	0.0177	0.0178	0.0171	0.0181	0.0192	0.0172	0.0166	0.0165	0.0164	0.0176
0.0202	0.0199	0.0200	0.0200	0.0199	0.0198	0.0202	0.0221	0.0210	0.0215	0.0207	0.0203	0.0198	0.0202	0.0195	0.0194	0.0184	0.0189	0.0201	0.0186	0.0184	0.0187	0.0186	0.0191
0.0199	0.0199	0.0199	0.0197	0.0200	0.0199	0.0198	0.0219	0.0203	0.0211	0.0208	0.0209	0.0210	0.0217	0.0214	0.0215	0.0200	0.0208	0.0226	0.0205	0.0197	0.0208	0.0207	0.0211
0.0192	0.0193	0.0195	0.0193	0.0190	0.0195	0.0195	0.0225	0.0209	0.0204	0.0200	0.0202	0.0193	0.0205	0.0199	0.0199	0.0190	0.0198	0.0216	0.0191	0.0190	0.0184	0.0183	0.0195
0.0156	0.0154	0.0156	0.0158	0.0152	0.0150	0.0157	0.0216	0.0191	0.0189	0.0186	0.0188	0.0176	0.0211	0.0204	0.0203	0.0188	0.0194	0.0212	0.0196	0.0198	0.0180	0.0177	0.0199
0.0182	0.0187	0.0197	0.0204	0.0154	0.0153	0.0187	0.0211	0.0188	0.0186	0.0184	0.0188	0.0179	0.0192	0.0183	0.0187	0.0178	0.0183	0.0199	0.0182	0.0185	0.0167	0.0166	0.0187
0.0192	0.0199	0.0210	0.0221	0.0157	0.0156	0.0197	0.0219	0.0193	0.0197	0.0195	0.0202	0.0194	0.0206	0.0177	0.0181	0.0174	0.0183	0.0199	0.0182	0.0184	0.0188	0.0190	0.0210
0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
0.0186	0.0192	0.0187	0.0192	0.0199	0.0194	0.0189	0.0218	0.0199	0.0198	0.0196	0.0194	0.0189	0.0202	0.0195	0.0196	0.0187	0.0201	0.0212	0.0188	0.0185	0.0185	0.0184	0.0199
0.0202	0.0210	0.0228	0.0236	0.0156	0.0236	0.0206	0.0226	0.0199	0.0206	0.0207	0.0213	0.0204	0.0211	0.0180	0.0184	0.0175	0.0185	0.0201	0.0183	0.0184	0.0186	0.0192	0.0215
0.0198	0.0193	0.0199	0.0204	0.0190	0.0188	0.0202	0.0226	0.0207	0.0206	0.0206	0.0211	0.0205	0.0214	0.0211	0.0213	0.0204	0.0213	0.0228	0.0204	0.0199	0.0206	0.0194	0.0212
0.0167	0.0176	0.0187	0.0174	0.0180	0.0175	0.0171	0.0191	0.0179	0.0186	0.0171	0.0174	0.0171	0.0184	0.0177	0.0176	0.0169	0.0174	0.0189	0.0171	0.0169	0.0160	0.0157	0.0183
0.0195	0.0202	0.0192	0.0200	0.0185	0.0181	0.0199	0.0221	0.0199	0.0202	0.0192	0.0200	0.0188	0.0201	0.0192	0.0192	0.0183	0.0192	0.0209	0.0186	0.0183	0.0173	0.0173	0.0187
0.0173	0.0180	0.0188	0.0194	0.0190	0.0186	0.0157	0.0176	0.0159	0.0154	0.0147	0.0151	0.0141	0.0157	0.0147	0.0157	0.0150	0.0144	0.0142	0.0144	0.0188	0.0163	0.0146	0.0163
0.0199	0.0203	0.0208	0.0213	0.0218	0.0213	0.0201	0.0227	0.0212	0.0216	0.0216	0.0213	0.0201	0.0209	0.0207	0.0205	0.0204	0.0210	0.0217	0.0209	0.0203	0.0204	0.0205	0.0216
0.0193	0.0194	0.0188	0.0187	0.0188	0.0187	0.0193	0.0205	0.0205	0.0190	0.0186	0.0189	0.0181	0.0193	0.0186	0.0191	0.0190	0.0192	0.0198	0.0187	0.0185	0.0178	0.0177	0.0208
0.0156	0.0158	0.0152	0.0156	0.0156	0.0156	0.0158	0.0230	0.0203	0.0215	0.0224	0.0153	0.0142	0.0163	0.0149	0.0156	0.0155	0.0162	0.0175	0.0153	0.0160	0.0151	0.0147	0.0138
0.0156	0.0154	0.0157	0.0154	0.0158	0.0156	0.0153	0.0209	0.0186	0.0184	0.0184	0.0189	0.0183	0.0198	0.0194	0.0201	0.0193	0.0208	0.0226	0.0213	0.0214	0.0240	0.0252	0.0150
0.0306	0.0214	0.0225	0.0244	0.0166	0.0244	0.0210	0.0227	0.0217	0.0214	0.0188	0.0193	0.0189	0.0200	0.0164	0.0169	0.0170	0.0177	0.0183	0.0172	0.0167	0.0162	0.0162	0.0175
0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170
0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R001	833125.78	822224.11	833177.37	822330.25	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R002	833177.37	822330.25	833231.08	822345.76	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	833231.08	822345.76	833434.80	822400.45	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	833434.80	822400.45	833909.40	822543.05	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R003	833960.46	822543.00	833985.46	822546.78	20	0	1	1050	700	450	350	350	600	1450	4250	5000	4000	3650	3400	3100	3100	3250	3450	3750	4150	4200	3550	2350	2250	2200	1500
R004	833118.29	822308.10	833185.93	822315.62	19	0	1	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R004	833425.15	822386.41	833518.28	822421.58	19	0	1	950	600	400	300	350	500	1250	3750	4450	3600	3400	3250	3000	3150	3350	3650	4050	4600	4800	4100	2700	2550	2500	1700
R005	833518.28	822421.58	833673.75	822486.58	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	833673.75	822486.58	833833.67	822514.65	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	833833.67	822514.65	833973.71	822526.09	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R005	833973.71	822526.09	834046.15	822526.54	19	0	1	950	600	400	300	300	500	1250	3750	4400	3600	3350	3250	3000	3100	3350	3650	4050	4600	4800	4100	2650	2550	2500	1700
R006+R007	833527.00	822419.51	833627.55	822455.21	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	833627.55	822455.21	833732.07	822494.47	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	833732.07	822494.47	833782.11	822441.65	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	14	8	6	3	4	6	16	30	66	68	69	70	73	100	100	73	65	67	64	61	58	30	27	21
R008+R009	833861.17	822398.31	833893.59	822307.15	13	0	1	32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
R008+R009	833893.59	822307.15	833841.85	822488.34	13	0	1	32	18	11	7	8	13	60	70	150	150	150	150	150	100	100	100	100	100	100	100	74	71	40	31
R010+R011	833978.15	822463.30	833898.64	822432.88	12	0	1	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R010+R011	833898.64	822432.88	833883.54	822462.40	12	0	1	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	100	43	26	18	20	30	100	150	350	350	300	250	250	250	250	250	200	250	300	250	150	150	100	100
R012+R013	833387.26	822387.47	833423.89	822355.02	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833423.89	822355.02	833416.08	822482.07	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R012+R013	833544.64	822390.48	833587.58	822364.60	10	0	1	5	2	1	1	1	2	5	10	20	23	21	21	22	21	25	23	19	27	29	24	16	13	13	10
R014+R015	833488.77	822318.11	833587.58	822364.60	14	0	1	64	23	14	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	41
R016+R017	833587.56	822354.60	833633.17	822374.91	15	0	1	63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
R016+R017	833633.17	822374.91	833861.17	822388.31	15	0	1	63	23	15	9	11	16	65	100	150	150	150	150	150	150	150	100	100	100	100	100	100	100	100	38
R019	833092.67	822192.93	833209.07	822239.78	16	0	1	50	22	14	10	11	16	50	100	150	200	150	150	100	100	100	100	50	50	50	50	50	50	23	18
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	50	50	18	12	14	20	50	100	200	250	200	200	200	150	200	150	100	150	150	100	100	50	50	50
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	200	150	200	250	200	150	100	100	100
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	50	23	16	11	13	17	50	100	200	200	200	150	200	200	200	200	150	200	250	200	150	100	100	100
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	100
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	50	19	11	7	10	13	50	50	150	150	150	150	200	200	250	250	200	300	350	300	200	150	150	100
R025	833232.06	822178.07	833377.60	822232.03	14	0	1	50	50	16	11	13	18	50	100	200	200	200	200	250	250	300	350	300	400	450	350	250	200	200	150
R026	833377.60	822232.03	833503.34	822278.92	14	0	1	50	25	15	11	13	18	50	100	200	200	200	200	200	250	250	250	200	300	300	250	200	150	150	100
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	100	50	50	20	22	50	100	150	350	350	350	300	350	350	400	350	300	400	450	350	250	200	200	150
R028	833673.82	822341.72	833768.11	822378.93	13	0	1	50	20	13	9	10	15	50	50	150	150	150	150	150	200	200	200	200	250	300	250	150	150	100	100
R029	833768.03	822378.18	833846.76	822405.79	13	0	1	24	13	8	5	6	9	25	50	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R030	833846.76	822405.79	833917.83	822431.11	14	0	1	50	50	20	14	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
R031	833917.83	822431.11	833980.58	822454.28	14	0	1	14	8	5	4	4	5	14	50	50	100	50	50	100	100	100	100	100	100	150	100	100	50	50	50
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1	105	54	54	54	54	54	108	268	400	400	321	318	368	367	417	416	467	517	565	412	308	257	206	154
R033	833121.79	822072.07	833253.39	822120.94	16	0	1	150	100	100	100	100	100	200	450	700	650	600	600	650	650	750	800	850	1000	1050	800	550	450	450	300
R034	833253.39	822120.94	833396.77	822175.17	16	0	1	150	100	100	100	100	100	200	450	750	700	600	600	650	650	750	800	850	1050	1050	800	550	500	450	300
R035	833396.77	822175.17	833524.35	822221.21	18	0	1	250	200	200	150	150	200	350	800	1250	1150	1000	900	950	950	1000	1000	1000	1150	1100	850	600	550	450	350
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	300	250	200	200	200	250	400	950	1450	1350	1150	1100	1150	1100	1200	1250	1300	1500	1450	1150	800	650	600	450
R037	833653.40	822269.00	833694.86	822284.07	16	0	1	250	200	150	150	150	200	300	750	1150	1100	950	850	900	900	950	950	950	1100	1050	800	550	500	450	300
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	250	200	150	150	150	200	300	750	1150	1100	950	900	900	900	950	1000	1000	1150	1100	850	600	500	450	350
R039	833761.88	822311.12	833798.40	822320.76	14	0	1	200	150	100	100	100	150	250	550	850	850	700	650	700	650	700	700	700	850	800	600	450	350	350	250
R040	833785.11	822318.98	833833.16	822335.17	18	0	1	150	150	100	100	100	150	200	500	750	750	600	550	600	550	600	600	600	650	650	500	350	300	250	200
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	200	150	150	150	150	150	250	600	900	850	750	650	700	650	700	700	700	800	750	600	400	350	300	200
R042	833902.96	822360.57	833980.46	822320.45	16	0	1	250	200	150	150	150	200	300	700	1100	1050	900	850	900	900	950	1000	1000	1200	1200	900	650	550	500	350
R043	833980.46	822330.46	834034.90	822250.63	18	0	1	150	100	100	100	100	100	150	400	650	600	550	500	550	550	600	600	650	750	750	550	400	350	300	200
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	150	150	100	100	100	150	200	500	800	750	650	600	650	550	700	700	750	850	850	650	450	400	350	250
R045	834140.62	822162.67	834231.72	822086.45	19	0	1	100	100	50	50	50	100	150	350	550	550	450	450	450	450	500	550	550	650	650	500	350	300	300	200
R046	834231.72	822086.85	834322.21	822011.22	18	0	1	200	150	100	100	100	150	200	550	800	750	650	600	650	650	700	700	750	850	850	650	450	400	350	250
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	150	100	100	100	100	100	200	450	700	700	600	550	600	600	650	650	700	800	800	600	450	350	350	250
R048	833097.20	821955.43	833156.58	821977.06	17	0	1	600	450	400	400	350	450	750	1750	2700	2550	2150	1950	2000	1900	1950	1950	1950	2200	2050	1600	1100	950	850	600
R049	833156.56	821977.98	833424.10	822080.76	16	0	1	500	400	350	350	350	400	650	1500	2350	2200	1850	1650	1650	1550	1600	1550	1500	1650	1550	1200	800	700	650	450
R050	833161.47	821942.33	833274.46	822007.07	21	0	1	600	450	400	400	400	450	750	1750	2650	2550	2200	2050	2150	2100	2250	2350	2400	2800	2750	2100	1450	1250	1150	800
R051	833274.06	822006.00	833438.70	822067.63	16	0	1	500	400	350	300	300	350	600	1450	2250	2100	1800	1650	1750	1700	1800	1850	1850	2150	2100	1600	1150	950	850	600
R052	833434.10	822080.21	833888.33	822174.73	16	0	1	300	250	200	200	200	250	400	950	1500	1400	1250	1150	1200	1150	1250	1300	1300	1550	1500	1150	800	700	600	450
R053	833796.86	822123.44	833756.88	822163.26	16	0	1	350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
R053	833726.88	822163.26	833688.33	822174.73	16	0	1	350	300	250	250	250	300	450	1150	1750	1650	1400	1350	1400	1400	1500	1550	1600	1900	1900	1450	1000	850	800	550
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833586.71	822122.03	833640.55	822144.40	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833640.56	822144.40	833683.68	822152.80	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833683.68	822152.80	833713.86	822149.82	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833713.86	822149.82	833757.83	822128.56	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R054	833757.83	822128.56	833778.49	822113.30	16	0	1	400	300	250	250	250	300	500	1200	1850	1750	1500	1400	1500	1450	1550	1600	1650	1950	1950	1500	1050	900	800	550
R055	833796.83	822123.04	833872.14	822061.39	16	0	1	450	350	300	300	300	350	550	1350	2100	1950	1700	1550	1650	1550	1650	1700	1750	2000	1950	1500	1050	900	800	550
R056	833778.48	822113.30	833867.20	822039.12	16	0	1	250	200	150	150	150	200	300	700	1050	1000	900	800	850	850	900	950	950	1150	1100	850	600	500	450	350
R057	833873.20	822062.60	834159.21	821814.78	19	0	1	300	250	200	200	200	250	400	950	1450	1400	1150	1050	1100	1050	1100	1100	1100	1250	1200	900	650	550	500	350
R058	834159.21	821814.78	834250.10	821738.42	16	0	1	300	200	200	200	200	200	350	850	1350	1250	1050	950	1000	950	1000	950	950	1100	1050	800	550	450	400	300
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	200	150	100	100	100	150	250	550	850	800	700	650	700	700	800	850	900	1050	1050	800	550	500	450	300
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	150	150	100	100	100	150	200	550	800	800	700	650	700	700	750	800	850	1000	1000	750	500	450	400	300
R061	833116.37	821880.28	833139.75	821889.31	16	0	1	50	22	14	9	10	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
R062	833139.75	821889.31	833296.76	821947.78	16	0	1	50	50	22	16	17	50	50	150	250	300	250	250	250	250	300	300	200	300	300	250	150	150	150	100
R063	833296.86	821947.56	833460.51	822007.57	16	0	1	50	18	11	8	9	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
R064	833460.68	822008.03	833543.73	822038.72	15	0	1	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R064	833460.56	821952.82	833563.70	821983.21	15	0	1	50	19	10	8	9	13	50	50	150	150	150	100	100	100	150	100	100	100	150	100	50	50	50	50
R065	833160.17	821834.07	833316.58	821891.67	16	0	1	50	24	15	11	12	18	50	100	200	200	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R066	833316.58	821891.68	833461.00	821962.76	16	0	1	50	50	18	12	15	22	50	100	200	250	200	200	250	250	300	250	200	300	350	250	200	150	150	100
R067	833154.01	821775.07	833178.47	821783.88	19	0	1	1300	1050	900	850	850	1000	1600	3850	4750	4750	4750	4400	4600	4400	4700	4750	4750	4750	4750	4150	2900	2450	2250	1550
R068	833178.74	821783.15	833253.68	821913.88	18	0	1	1200	950	800	800	750	900	1500	3550	4750	4750	4400	4050	4250	4100	4350	4450	4550	4750	4750	3900	2700	2300	2100	1500
R069	833166.60	821757.97	833260.16	821795.91	23	0	1	800	650	550	550	550	600	1000	2450	3750	3550	3100	2900	3100	3050	3350	3450	3600	4250	4250	3250	2250	1950	1750	1250
R070	833249.92	821820.73	833329.89	821853.67	13	0	1	350	250	250	250	200	250	450	1050	1550	1500	1300	1200	1250	1200	1250	1300	1300	1500	1450	1100	750	650	600	400

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	16	0	1	400	300	250	250	250	300	500	1150	1750	1650	1450	1300	1400	1350	1400	1450	1500	1700	1650	1300	900	750	700	500
R072	833397.24	821875.22	833561.75	821887.07	20	0	1	150	150	100	100	100	150	200	500	800	750	650	600	650	650	700	700	750	900	900	700	450	400	350	250
R073	833451.80	821880.54	833397.24	821875.22	17	0	1	200	150	150	150	150	150	250	650	950	950	800	700	750	700	750	750	750	800	800	600	400	350	300	250
R074	833281.64	821790.34	833451.50	821880.84	20	0	1	200	150	150	150	150	150	250	600	900	900	750	700	750	700	750	800	800	950	900	700	500	400	400	250
R075	833449.46	821861.00	833506.97	821883.06	16	0	1	150	100	100	100	100	100	150	400	650	600	500	450	500	450	500	500	500	550	550	400	300	250	250	150
R076	833501.46	821897.80	833548.86	821899.77	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R076	833548.06	821899.77	833603.43	821880.89	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R076	833603.43	821880.89	833684.92	821822.32	16	0	1	150	100	100	100	100	100	150	400	600	550	500	450	450	450	500	500	500	600	550	450	300	250	250	150
R077	833500.57	821884.14	833553.57	821884.36	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	250	200	200	200	200	200	350	850	1250	1200	1050	950	1000	950	1000	1050	1050	1200	1200	900	650	550	500	350
R078	833682.38	821822.35	833875.32	821880.75	16	0	1	150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	550	500	400	300	250	200	150
R079	833873.29	821811.42	833867.51	821851.46	16	0	1	200	150	150	150	150	150	300	650	1000	950	800	750	800	750	800	800	800	900	900	700	500	400	350	250
R080	833875.67	821861.10	833998.54	821567.94	16	0	1	100	100	100	100	100	100	150	400	550	550	500	450	500	450	500	550	550	650	650	500	350	300	250	200
R081	833867.01	821850.88	833983.69	821582.08	20	0	1	250	200	150	150	150	200	300	700	1100	1050	900	850	900	850	950	950	1000	1150	1150	850	600	500	450	350
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	650	700	750	750	850	800	650	450	350	350	250
R083	833436.87	821850.11	833495.18	821813.12	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R083	833495.18	821813.12	833524.36	821772.29	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R083	833524.36	821772.29	833589.81	821652.62	14	0	1	100	50	50	50	50	50	100	250	350	350	300	250	250	250	250	250	250	300	250	200	150	100	100	100
R084	833567.54	821687.02	833582.89	821644.65	13	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
R084	833582.89	821644.68	833607.71	821603.87	13	0	1	200	150	150	150	150	150	250	600	900	850	750	700	700	700	750	750	750	850	850	650	450	400	350	250
R085	833605.34	821605.64	833640.24	821575.62	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R085	833640.24	821575.62	833681.67	821545.20	14	0	1	200	150	150	150	100	150	250	550	650	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R085	833681.67	821545.20	833728.52	821512.89	14	0	1	200	150	150	150	100	150	250	550	850	850	700	650	700	650	700	700	700	800	800	600	400	350	300	250
R086	833550.79	821649.89	833603.88	821583.59	17	0	1	100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	100	50	50	50	50	50	100	250	350	350	300	250	300	250	300	300	300	300	300	250	150	150	100	100
R087	833648.49	821542.42	833866.49	821508.30	12	0	1	100	100	100	50	50	100	150	350	500	500	450	400	400	400	400	400	400	400	400	300	200	200	150	100
R088	833254.24	821811.68	833368.50	821858.64	17	4	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833368.50	821856.64	833418.50	821865.61	17	7	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833418.50	821865.51	833487.63	821841.09	17	9	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833487.63	821841.09	833623.63	821786.07	17	10	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833553.63	821786.07	833574.80	821607.75	17	9	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833574.80	821607.75	833600.16	821605.62	17	7	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R088	833600.16	821605.82	833712.08	821511.51	17	6	4	1050	750	500	350	350	550	1200	2550	3400	3200	2750	2650	2550	2450	2700	2800	2800	3350	3500	2750	2100	2150	2250	1650
R089	833256.86	821891.44	833370.08	821846.87	16	6	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833370.06	821846.87	833427.36	821862.03	16	7	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833427.36	821862.03	833489.60	821829.28	16	9	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833489.60	821829.28	833522.46	821786.30	16	10	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R089	833598.99	821594.44	833669.93	821508.87	16	6	4	750	550	350	250	250	400	850	1800	2450	2350	2050	2050	2000	1950	2250	2350	2400	2950	3200	2500	1900	1950	2050	1500
R090+R091	833269.76	821829.64	833317.84	821634.13	17	0	1	250	250	200	200	200	250	350	850	1350	1300	1050	950	1000	950	1000	1000	1000	1150	1050	800	550	500	400	300
R092+R093	833337.92	821632.93	833449.86	821640.31	20	0	1	250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	800	900	850	700	450	400	350	250
R092+R093	833449.86	821640.31	833913.09	821899.24	20	0	1	250	150	150	150	150	150	250	650	1000	1000	800	750	750	700	800	800	800	900	850	700	450	400	350	250
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	50	50	50	50	50	50	50	150	250	250	200	200	200	150	200	300	200	200	200	150	100	100	100	50
R095	833609.59	821591.72	833648.49	821548.43	17	0	1	100	100	50	50	50	100	150	350	500	500	400	400	400	350	400	400	350	400	400	300	200	200	150	100
R096+R097	833960.89	822454.38	834028.77	822414.27	18	0	1	28	16	8	6	7	11	29	62	150	150	124	123	123	122	150	123	68	122	150	69	63	62	61	58
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	60	55	21	14	17	25	61	121	250	300	250	250	250	250	250	250	200	250	250	200	150	150	150	70
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1	100	100	43	31	33	73	100	250	500	550	500	450	450	450	450	450	350	450	450	350	250	200	200	150
R102+R103	834216.31	822256.35	834309.05	822180.58	16	0	1	72	31	19	14	16	23	74	100	250	250	250	250	250	250	300	300	200	300	300	250	200	150	100	100
R104+R105	834309.05	822180.68	834407.46	822098.58	18	0	1	40	23	13	10	11	16	43	100	200	200	150	150	150	150	250	200	150	200	300	200	150	150	150	100
R106	833817.83	822431.11	833891.76	822368.39	18	0	1	50	50	21	15	16	24	50	100	250	250	250	200	250	200	250	250	200	250	250	200	150	100	100	100
R107	833981.55	822373.04	834090.39	822287.53	16	0	1	50	50	17	12	14	20	50	100	200	200	200	150	150	150	150	100	100	100	100	50	50	50	50	50
R108	834090.84	822298.08	834181.88	822212.22	18	0	1	50	50	18	13	16	22	50	100	200	250	200	200	200	200	200	150	150	150	150	150	100	100	50	50
R109	834181.88	822212.33	834273.00	822136.48	17	0	1	50	50	17	12	15	21	50	100	200	250	200	150	150	150	150	150	100	100	100	100	50	50	50	50
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	50	50	20	15	16	24	50	100	250	250	250	200	200	150	200	150	100	150	150	100	50	50	50	50
R112	833848.76	822405.79	833902.56	822360.57	19	0	1	50	21	12	9	10	15	50	100	150	150	150	200	200	200	250	300	250	350	400	300	200	200	150	150
R113	833833.16	822338.17	833909.88	822371.35	16	0	1	50	17	10	7	8	12	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R114	833909.65	822271.38	833994.47	822201.23	18	0	1	200	100	50	50	50	50	200	400	750	800	750	650	650	650	700	650	500	600	650	500	350	300	250	200
R115	833994.06	822200.75	834077.01	822122.88	16	0	1	150	100	50	50	50	50	150	350	700	750	650	600	600	600	650	650	500	650	650	500	350	300	250	200
R116	834076.80	822131.94	834097.30	822115.02	16	0	1	150	100	50	50	50	50	200	350	700	750	650	650	650	600	700	650	500	650	650	500	350	300	250	200
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	150	100	50	50	50	50	150	300	650	700	600	600	600	550	600	600	450	600	600	500	350	300	250	200
R118	834190.59	822037.73	834243.25	821985.98	19	0	1	150	100	50	50	50	50	150	350	650	700	650	600	650	600	700	700	550	700	750	600	400	350	300	250
R119	834242.94	821993.80	834282.10	821961.45	15	0	1	200	100	50	50	50	100	200	400	750	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
R120	834281.93	821961.17	834386.17	821886.80	16	0	1	200	100	50	50	50	100	200	400	850	900	800	750	750	750	850	800	600	800	850	650	450	400	350	250
R121	833768.03	822378.10	833799.11	822316.08	18	0	1	20	11	7	5	6	8	21	50	100	100	100	100	100	100	100	100	100	150	150	150	100	100	50	50
R122	833761.86	822311.12	833868.76	822222.16	18	0	1	100	50	50	24	50	50	100	200	350	400	350	350	350	350	400	400	300	450	450	400	250	200	200	150
R123	833868.78	822222.16	833964.75	822160.50	18	0	1	50	50	19	13	15	22	50	100	250	250	200	200	200	200	250	250	200	250	300	250	150	150	100	100
R124	833673.82	822341.72	833686.88	822284.07	18	0	1	50	50	17	12	14	21	50	100	200	250	200	200	150	150	150	150	100	150	150	100	100	50	50	50
R125	833694.86	822384.07	833827.77	822172.99	18	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	150	200	200	150	200	200	150	100	100	100	50
R126	833653.40	822369.06	833688.33	822174.73	13	0	1	50	50	19	13	15	22	50	100	200	250	250	250	250	250	300	300	350	350	400	300	200	200	150	150
R127	833489.66	822316.79	833503.51	822278.48	16	0	1	50	20	12	9	10	14	50	50	150	150	150	150	150	150	200	200	150	200	250	200	150	100	100	100
R128	833503.61	822278.46	833504.35	822221.21	18	0	1	50	50	16	11	12	19	50	100	200	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
R129	833377.88	822332.03	833368.00	822293.72	18	0	1	100	100	100	100	100	100	150	350	550	500	450	400	400	400	450	450	450	500	500	350	250	200	200	150
R130	833377.88	822232.01	833398.77	822176.17	18	0	1	150	100	100	100	100	100	200	450	700	700	600	550	550	550	550	600	600	700	650	500	350	300	250	200
R131	833398.42	822175.04	833454.10	822080.76	18	0	1	250	200	200	150	150	200	300	750	1200	1150	900	800	800	750	750	750	750	800	700	550	400	300	300	200
R132	833433.92	822080.70	833460.51	822007.97	18	0	1	200	150	100	100	100	150	200	500	750	700	650	600	650	600	700	700	750	850	850	650	500	400	350	250
R133	833469.45	822007.68	833481.00	821982.76	16	0	1	150	100	50	50	50	50	150	300	650	700	650	600	600	600	700	650	500	700	750	600	400	350	300	250
R134	833481.00	821952.76	833508.57	821883.08	16	0	1	200	100	50	50	50	100	200	350	700	800	700	700	700	700	850	800	650	900	950	750	550	450	400	300
R135	833209.07	822239.78	833232.08	822178.07	16	0	1	7	5	3	3	2	3	6	12	22	50	23	23	50	50	50	50	23	50	50	50	21	17	16	12
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	5	3	1	1	1	2	5	11	21	24	21	21	23	23	50	50	21	50	50	50	18	15	14	11
R137	833080.91	822182.03	833100.53	822129.44	18	0	1	6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	6	4	3	1	1	3	8	14	50	50	50	50	50	50	50	50	22	50	50	50	18	15	14	10
R139	833121.68	822072.03	833168.56	821977.98	18	0	1	100	50	50	21	23	50	100	150	350	400	350	350	350	400	450	450	350	500	550	450	300	250	250	200
R140	833274.48	822007.07	833298.88	821947.58	17	0	1	100	50	50	22	50	50	100	200	400	400	400	400	400	450	500	500	400	600	650	500	350	300	250	200

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833295.35	821947.25	833315.56	821891.07	13	0	1
R142	833329.89	821853.07	833315.56	821891.84	13	0	1
R143	833139.75	821889.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821783.15	13	0	1
R165+R166	833812.48	821976.55	833684.98	821516.03	17	0	1
R167+R168	833735.44	821888.35	833931.13	821727.74	16	0	1
R148	833728.61	821749.62	833807.73	821684.28	14	0	1
R149	833774.08	821643.52	833807.73	821684.28	13	0	1
R150	833736.87	821756.23	833687.71	821603.87	11	0	1
R151	833613.61	821610.98	833693.50	821643.70	13	0	1
R151	833692.00	821543.70	833778.28	821642.83	14	0	1
R152	833774.08	821643.52	833828.17	821600.88	20	0	1
R153	833991.31	822389.76	834028.77	822434.27	18	0	1
R154	833950.46	822330.45	833992.00	822389.67	18	0	1
R155	833909.65	822271.36	833950.46	822330.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.39	18	0	1
R157	833866.58	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.81	822299.62	834113.80	822344.34	18	0	1
R160	834090.39	822287.53	834127.63	822332.11	15	0	1
R161	834034.90	822250.52	834075.81	822299.62	15	0	1
R162	834049.42	822236.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.68	834034.00	822250.02	18	0	1
R164	834007.86	822196.33	834049.42	822230.28	15	0	1
R165	833963.31	822151.70	833994.47	822221.23	16	0	1
R166	833872.14	822051.39	833964.75	822190.50	18	0	1
R167	833883.47	822042.45	834007.89	822180.33	18	0	1
R168+R169	833815.72	821975.47	833876.36	822050.03	21	0	1
R170+R171	833734.44	821888.35	833812.49	821978.50	18	0	1
R172+R173	833884.92	821822.32	833719.28	821687.65	20	0	1
R174+R175	833561.78	821677.56	833863.38	821823.55	16	0	1
R176	833496.77	821508.49	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.66	821688.47	20	0	1
R178	833440.44	821529.99	833488.60	821908.61	16	0	1
R179	833451.86	821526.31	833511.33	821900.38	17	0	1
R180	834218.31	822296.35	834305.96	822385.39	18	0	1
R181	834181.98	822212.22	834218.31	822256.38	18	0	1
R182	834140.62	822162.67	834181.76	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.87	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822094.58	13	0	1
R184	834071.90	822086.18	834007.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.60	822287.44	18	0	1
R186	834231.54	822068.63	834273.34	822139.83	18	0	1
R187	834190.59	822037.73	834231.76	822086.45	18	0	1
R188+R189	834004.99	821815.03	834055.34	821680.22	16	0	1
R190+R191	833931.13	821727.74	834004.08	821816.03	19	0	1
R192+R193	833878.32	821660.75	833930.65	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.48	20	0	1
R196+R202	833781.01	821523.38	833826.17	821600.58	20	0	1
R197	834364.38	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.38	822060.94	18	0	1
R199	834281.93	821961.17	834323.00	822010.48	18	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R300	834239.17	821914.13	834327.69	821840.33	18	0	1

Vehicle count for each road																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
50	13	9	6	7	10	50	50	100	100	100	150	150	150	200	200	150	250	300	250	150	150	100	100
50	19	12	8	10	14	50	50	150	150	150	150	150	150	200	200	150	200	200	150	100	100	100	50
100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
100	50	50	25	50	50	100	200	400	450	400	350	350	350	350	350	250	350	350	250	200	150	150	100
21	12	7	4	5	8	22	60	72	73	70	69	119	118	120	119	115	169	220	166	111	109	58	57
29	16	10	7	7	12	31	63	150	150	150	150	150	100	150	100	100	100	150	100	100	100	100	71
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	23	50	23	19	13	10	10	7
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	14	50	50	50	50	50	50	50	50	50	23	50	24	19	13	11	10	8
14	8	5	4	4	5	15	50	50	50	50	50	50	50	50	50	50	50	50	24	17	14	13	10
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	150	150	150	100	100	100
100	100	50	50	50	50	100	200	250	250	200	200	250	250	250	250	300	300	300	250	200	200	150	150
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	200	200	200	200	150	150	100	100	100
450	350	300	250	200	250	400	800	800	800	800	800	800	800	750	700	700	700	650	550	450	400	400	300
500	400	350	300	250	250	450	1050	1300	1100	1050	950	950	1000	950	900	950	900	900	750	650	550	500	400
450	350	300	250	200	250	400	900	1100	950	900	850	850	900	850	800	850	850	850	700	600	500	500	400
23	19	15	14	10	12	22	50	50	50	50	50	50	50	50	50	50	100	50	50	50	50	50	50
100	50	50	50	50	50	100	200	250	200	200	150	150	150	150	150	150	150	150	100	100	100	100	50
150	100	100	100	50	50	150	300	350	300	300	300	300	300	300	300	350	350	350	300	250	200	200	150
200	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	350	300	250	250	200	150
200	150	150	100	100	100	200	400	500	450	450	450	450	500	500	500	550	600	600	500	400	350	350	250
150	100	100	100	50	100	150	300	400	350	300	300	300	350	300	300	350	350	350	300	250	200	200	150
150	100	100	100	50	100	150	300	400	350	300	300	300	350	350	350	350	400	350	300	250	250	200	150
300	250	200	150	150	150	250	600	750	650	800	600	600	650	650	650	700	700	700	550	500	450	400	300
250	200	150	150	100	100	200	450	600	500	500	450	500	550	500	500	550	550	550	450	400	350	350	250
400	350	300	200	200	200	350	850	1050	950	900	900	900	1050	1050	1050	1150	1250	1150	950	850	750	700	550
350	300	250	200	150	200	350	750	950	900	800	800	900	950	900	1000	1050	1150	1100	900	800	700	650	450
450	350	250	250	200	250	400	850	1100	1000	950	900	950	1050	1050	1050	1100	1200	1100	950	800	700	700	550
450	350	300	250	200	250	450	900	1150	1000	950	950	950	1050	1000	1000	1050	1100	1100	900	750	650	650	500
300	250	200	150	150	150	300	650	800	700	650	600	600	600	600	550	600	600	550	450	400	350	350	250
250	200	150	150	100	100	200	500	600	550	500	500	500	550	550	550	600	650	600	500	450	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	600	600	600	550	600	600	550	450	400	350	350	250
300	250	200	150	150	150	250	600	750	650	600	600	650	700	700	700	750	800	800	650	550	500	450	350
150	150	100	100	100	100	150	350	450	350	350	300	350	350	350	300	350	350	350	300	250	200	200	150
12	9	8	7	5	6	11	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	20
50	24	19	17	13	14	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
24	20	16	13	11	12	22	50	50	50	50	50	50	50	50	50	50	50	50	50	24	21	20	16
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	21	16	14	12	13	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
100	50	50	50	50	50	100	150	200	200	200	200	200	200	200	200	200	250	200	200	150	150	150	100
19	16	12	11	8	11	17	50	50	50	50	50	50	50	50	50	50	50	50	50	22	19	18	14
100	50	50	50	50	50	100	150	200	200	150	150	150	150	150	150	150	150	150	100	100	100	100	50
64	62	59	58	57	58	63	150	200	200	150	150	200	200	200	200	200	200	200	200	150	150	150	119
71	68	64	62	29	33	49	150	150	150	150	150	200	200	200	200	250	250	250	200	200	150	150	119
36	29	25	22	17	19	32	100	100	100	75	73	73	73	70	70	68	65	65	64	64	61	61	26
60	59	57	55	55	55	59	173	200	173	171	119	117	117	116	114	114	112	112	110	58	57	57	55
100	100	44	38	31	35	100	150	200	150	100	100	100	100	100	100	100	100	100	100	100	100	100	71
8	7	5	4	4	4	7	17	21	17	14	12	11	11	9	7	7	4	4	4	3	3	3	1
16	13	11	9	7	8	14	50	50	50	50	50	50	50	22	19	18	15	15	13	11	10	9	6
20	17	14	11	8	10	19	50	50	50	50	50	50	50	50	50	23	20	19	17	13	11	11	9
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	25	20	17	15	16	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R003	833960.46	822543.00	833985.46	822546.78	20	0	1	0.0092	0.0092	0.0092	0.0091	0.0091	0.0092	0.0092	0.0105	0.0106	0.0098	0.0098	0.0099	0.0095	0.0097	0.0095	0.0098	0.0099	0.0095	0.0094	0.0089	0.0093	0.0084	0.0088	0.0091
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0091	0.0091	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0093	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0083	0.0086	0.0089
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	0.0091	0.0091	0.0091	0.0092	0.0092	0.0092	0.0092	0.0100	0.0100	0.0095	0.0096	0.0097	0.0094	0.0096	0.0094	0.0097	0.0099	0.0097	0.0097	0.0091	0.0090	0.0082	0.0085	0.0089
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0089	0.0086	0.0093	0.0064	0.0064	0.0093	0.0086	0.0093	0.0090	0.0086	0.0084	0.0082	0.0074	0.0086	0.0077	0.0082	0.0071	0.0079	0.0073	0.0068	0.0063	0.0052	0.0052	0.0072
R008+R009	833681.17	822398.31	833863.59	822387.15	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	0.0074	0.0073	0.0064	0.0064	0.0064	0.0076	0.0072	0.0081	0.0088	0.0077	0.0077	0.0075	0.0071	0.0074	0.0072	0.0074	0.0072	0.0078	0.0073	0.0067	0.0066	0.0050	0.0049	0.0069
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0121	0.0127	0.0117	0.0082	0.0080	0.0110	0.0118	0.0112	0.0125	0.0124	0.0130	0.0123	0.0119	0.0120	0.0115	0.0120	0.0110	0.0117	0.0115	0.0111	0.0103	0.0111	0.0115	0.0105
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R012+R013	833544.64	822390.48	833587.56	822384.80	10	0	1	0.0181	0.0150	0.0150	0.0150	0.0150	0.0150	0.0181	0.0208	0.0184	0.0175	0.0166	0.0174	0.0158	0.0184	0.0171	0.0174	0.0174	0.0182	0.0199	0.0175	0.0182	0.0177	0.0171	0.0181
R014+R018	833485.77	822318.11	833587.56	822384.80	14	0	1	0.0159	0.0160	0.0161	0.0159	0.0157	0.0160	0.0159	0.0202	0.0184	0.0161	0.0154	0.0158	0.0144	0.0166	0.0159	0.0163	0.0162	0.0172	0.0185	0.0160	0.0148	0.0126	0.0134	0.0163
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	0.0158	0.0160	0.0160	0.0159	0.0157	0.0160	0.0159	0.0201	0.0183	0.0160	0.0152	0.0156	0.0143	0.0163	0.0156	0.0161	0.0160	0.0169	0.0181	0.0156	0.0140	0.0116	0.0126	0.0158
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	0.0234	0.0210	0.0234	0.0260	0.0250	0.0223	0.0232	0.0252	0.0231	0.0234	0.0237	0.0239	0.0229	0.0245	0.0239	0.0242	0.0229	0.0243	0.0264	0.0239	0.0236	0.0230	0.0238	0.0268
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0222	0.0231	0.0219	0.0241	0.0234	0.0212	0.0218	0.0257	0.0232	0.0239	0.0237	0.0237	0.0233	0.0244	0.0238	0.0239	0.0224	0.0235	0.0255	0.0226	0.0226	0.0221	0.0230	0.0239
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	0.0224	0.0222	0.0239	0.0261	0.0252	0.0235	0.0223	0.0258	0.0235	0.0238	0.0234	0.0236	0.0234	0.0241	0.0237	0.0239	0.0229	0.0236	0.0252	0.0231	0.0222	0.0230	0.0226	0.0239
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0228	0.0191	0.0195	0.0179	0.0203	0.0195	0.0224	0.0250	0.0237	0.0241	0.0237	0.0239	0.0237	0.0243	0.0247	0.0248	0.0236	0.0249	0.0269	0.0238	0.0227	0.0238	0.0230	0.0239
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0232	0.0191	0.0199	0.0177	0.0180	0.0196	0.0230	0.0254	0.0236	0.0240	0.0236	0.0238	0.0237	0.0243	0.0244	0.0245	0.0227	0.0242	0.0268	0.0240	0.0227	0.0230	0.0229	0.0236
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0235	0.0214	0.0234	0.0257	0.0248	0.0225	0.0233	0.0250	0.0236	0.0239	0.0240	0.0242	0.0243	0.0249	0.0244	0.0250	0.0234	0.0247	0.0274	0.0242	0.0232	0.0233	0.0229	0.0238
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0204	0.0202	0.0205	0.0213	0.0210	0.0207	0.0203	0.0268	0.0260	0.0238	0.0224	0.0224	0.0204	0.0236	0.0216	0.0224	0.0229	0.0229	0.0233	0.0218	0.0215	0.0190	0.0188	0.0214
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	0.0223	0.0229	0.0222	0.0235	0.0231	0.0216	0.0231	0.0252	0.0248	0.0252	0.0250	0.0245	0.0246	0.0254	0.0249	0.0250	0.0234	0.0247	0.0271	0.0242	0.0231	0.0235	0.0229	0.0240
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	0.0220	0.0212	0.0240	0.0272	0.0260	0.0228	0.0216	0.0258	0.0236	0.0239	0.0239	0.0238	0.0239	0.0242	0.0239	0.0242	0.0230	0.0245	0.0263	0.0240	0.0224	0.0231	0.0225	0.0234
R029	833768.03	822376.15	833848.76	822405.79	13	0	1	0.0186	0.0185	0.0196	0.0165	0.0163	0.0191	0.0184	0.0267	0.0252	0.0229	0.0216	0.0219	0.0199	0.0240	0.0220	0.0232	0.0250	0.0239	0.0246	0.0235	0.0246	0.0220	0.0218	0.0237
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	0.0182	0.0180	0.0177	0.0182	0.0178	0.0184	0.0182	0.0246	0.0237	0.0208	0.0194	0.0204	0.0207	0.0214	0.0213	0.0215	0.0219	0.0220	0.0241	0.0207	0.0203	0.0184	0.0181	0.0202
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	0.0182	0.0196	0.0165	0.0169	0.0169	0.0165	0.0182	0.0285	0.0270	0.0245	0.0230	0.0227	0.0204	0.0243	0.0218	0.0227	0.0241	0.0228	0.0240	0.0223	0.0231	0.0208	0.0205	0.0231
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	0.0310	0.0284	0.0169	0.0169	0.0170	0.0171	0.0170	0.0231	0.0213	0.0213	0.0209	0.0212	0.0214	0.0221	0.0217	0.0219	0.0208	0.0215	0.0234	0.0213	0.0204	0.0210	0.0206	0.0218
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	0.0205	0.0203	0.0203	0.0205	0.0205	0.0205	0.0203	0.0232	0.0215	0.0217	0.0216	0.0218	0.0213	0.0222	0.0218	0.0219	0.0210	0.0219	0.0239	0.0212	0.0204	0.0206	0.0206	0.0214
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0167	0.0167	0.0171	0.0178	0.0178	0.0182	0.0173	0.0214	0.0202	0.0190	0.0192	0.0198	0.0199	0.0202	0.0202	0.0207	0.0199	0.0209	0.0227	0.0199	0.0186	0.0193	0.0190	0.0201
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0243	0.0236	0.0232	0.0226	0.0227	0.0226	0.0230	0.0269	0.0255	0.0257	0.0253	0.0257	0.0264	0.0265	0.0264	0.0261	0.0238	0.0245	0.0270	0.0254	0.0245	0.0267	0.0258	0.0256
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0205	0.0204	0.0204	0.0206	0.0206	0.0206	0.0204	0.0238	0.0223	0.0224	0.0224	0.0221	0.0221	0.0226	0.0226	0.0227	0.0214	0.0228	0.0243	0.0220	0.0206	0.0213	0.0212	0.0215
R037	833653.40	822269.00	833694.88	822284.07	19	0	1	0.0238	0.0236	0.0239	0.0237	0.0238	0.0239	0.0238	0.0263	0.0250	0.0262	0.0260	0.0256	0.0252	0.0253	0.0246	0.0244	0.0224	0.0230	0.0249	0.0222	0.0217	0.0228	0.0221	0.0227
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0244	0.0243	0.0243	0.0241	0.0242	0.0243	0.0242	0.0268	0.0254	0.0268	0.0264	0.0260	0.0254	0.0254	0.0246	0.0242	0.0222	0.0231	0.0245	0.0223	0.0210	0.0217	0.0214	0.0221
R039	833761.98	822311.12	833789.45	822320.76	14	0	1	0.0308	0.0256	0.0267	0.0274	0.0276	0.0277	0.0265	0.0324	0.0308	0.0346	0.0350	0.0330	0.0338	0.0314	0.0316	0.0305	0.0269	0.0275	0.0295	0.0268	0.0257	0.0279	0.0277	0.0273
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	0.0291	0.0296	0.0298	0.0301	0.0303	0.0301	0.0298	0.0315	0.0299	0.0336	0.0334	0.0321	0.0325	0.0303	0.0300	0.0291	0.0255	0.0261	0.0280	0.0255	0.0235	0.0267	0.0264	0.0262
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	0.0307	0.0273	0.0278	0.0285	0.0281	0.0285	0.0279	0.0324	0.0308	0.0345	0.0349	0.0330	0.0336	0.0313	0.0315	0.0305	0.0269	0.0275	0.0295	0.0267	0.0258	0.0279	0.0278	0.0274
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	0.0306	0.0278	0.0285	0.0288	0.0289	0.0289	0.0283	0.0324	0.0308	0.0340	0.0344	0.0331	0.0332	0.0314	0.0311	0.0301	0.0264	0.0275	0.0296	0.0268	0.0257	0.0280	0.0278	0.0274
R043	833950.46	822320.46	834034.90	822250.52	18	0	1	0.0339	0.0339	0.0335	0.0341	0.0336	0.0338	0.0335	0.0343	0.0328	0.0377	0.0383	0.0367	0.0373	0.0349	0.0347	0.0335	0.0292	0.0298	0.0321	0.0299	0.0285	0.0325	0.0320	0.0307
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0294	0.0295	0.0301	0.0299	0.0302	0.0300	0.0299	0.0317	0.0295	0.0331	0.0334	0.0322	0.0325	0.0305	0.0301	0.0292	0.0256	0.0268	0.0288	0.0258	0.0240	0.0269	0.0265	0.0265
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	0.0302	0.0197	0.0195	0.0214	0.0219	0.0222	0.0305	0.0315	0.0299	0.0337	0.0333	0.0321	0.0322	0.0306	0.0308	0.0299	0.0264	0.0270	0.0291	0.0268	0.0253	0.0279	0.0277	0.0275
R046	834231.72	822086.85	834323.21	822011.22	18	0	1	0.0302	0.0265	0.0273	0.0276	0.0278	0.0278	0.0302	0.0320	0.0299	0.0335	0.0337	0.0325	0.0327	0.0310	0.0307	0.0297	0.0262	0.0273	0.0293	0.0265	0.0251	0.0276	0.0273	0.0271
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	0.0305	0.0261	0.0265	0.0276	0.0271	0.0279	0.0304	0.0315	0.0300	0.0335	0.0339	0.0327	0.0328	0.0312	0.0307	0.0298	0.0264	0.0269	0.0290	0.0266	0.0252	0.0279	0.0277	0.0272
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	0.0240	0.0228	0.0229	0.0231	0.0231	0.0231	0.0241	0.0264	0.0256	0.0281	0.0276	0.0266	0.0267	0.0259	0.0256	0.0251	0.0224	0.0234	0.0252	0.0225	0.0217	0.0240	0.0237	0.0232
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0240	0.0241	0.0240	0.0240	0.0241	0.0241	0.0240	0.0261	0.0253	0.0273	0.0272	0.0262	0.0263	0.0252	0.0249	0.0244	0.0218	0.0228	0.0246	0.0222	0.0216	0.0239	0.0237	0.0232
R050	833101.67	821942.33	833274.46	822007.07	21	0	1	0.0236	0.0236	0.0235	0.0235	0.0235	0.0235	0.0235	0.0257	0.0249	0.0274	0.0268	0.0259	0.0263	0.0256	0.0253	0.0252	0.0226	0.0239	0.0260	0.0229	0.0212	0.0229	0.0228	0.0227
R051	833274.06	822006.60	833438.70	822067.62	16	0	1	0.0256	0.0257	0.0258	0.0257	0.0257	0.0257	0.0257	0.0273	0.0262	0.0293	0.0291	0.0285	0.0289	0.0278	0.0278	0.0276	0.0245	0.0256	0.0281	0.0249	0.0238	0.0270	0.0267	0.0258
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0305	0.0276	0.0276	0.0278	0.0277	0.0277	0.0296	0.0300	0.0289	0.0323	0.0327	0.0314	0.0318	0.0296	0.0294	0.0284	0.0247	0.0254	0.0280	0.0256	0.0252	0.0284	0.0286	0.0276
R053	833786.86	822123.44	833736.66	822163.25	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R063	833736.66	822163.25	833688.33	822174.73	16	0	1	0.0285	0.0270	0.0271	0.0272	0.0272	0.0273	0.0286	0.0295	0.0282	0.0320	0.0321	0.0304	0.0312	0.0292	0.0290	0.0279	0.0244	0.0255	0.0277	0.0249	0.0241	0.0274	0.0269	0.0257
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0277	0.0277	0.0277	0.0278	0.0278	0.0277	0.0277	0.0286	0.0277	0.0309	0.0315	0.0309	0.0319	0.0304	0.0307	0.0301	0.0268	0.0281	0.0310	0.0281	0.0273	0.0320	0.0313	0.0291
R055	833796.53	822123.04	833872.14	822061.39	16	0	1	0.0259	0.0259	0.0259	0.0261	0.0260	0.0259	0.0261	0.0273	0.0257	0.0286	0.0285	0.0276	0.0276	0.0264	0.0260	0.0252	0.0222	0.0230	0.0250	0.0226	0.0220	0.0246	0.0241	0.0235
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0330	0.0327	0.0332	0.0329	0.0333	0.0333	0.0332	0.0333	0.0313	0.0366	0.0380	0.0386	0.0380	0.0351	0.0356	0.0344	0.0295	0.0303	0.0333	0.0311	0.0306	0.0366	0.0358	0.0328
R057	833873.20	822052.66	834159.21	821814.78	19	0	1	0.0272	0.0240	0.0246	0.0251	0.0250	0.0251	0.0271	0.0286	0.0272	0.0299	0.0303	0.0290	0.0295	0.0276	0.0280	0.0273	0.0238	0.0245	0.0267	0.0245	0.0229	0.0256	0.0257	0.0255
R058	834159.21	821814.78	834258.10	821738.42	16	0	1	0.0307	0.0264	0.0271	0.0280	0.0279	0.0281	0.0307	0.0314	0.0293	0.0338	0.0343	0.0326	0.0329	0.0303	0.0300	0.0286	0.0247	0.0250	0.0269	0.0248	0.0243	0.0277	0.0271	0.0260
R059	833867.29	822039.23	834058.34	821880.22	17	0	1	0.0307	0.0309	0.0306	0.0305	0.0309	0.0308	0.0307	0.0316	0.0300	0.0337	0.0350	0.0334	0.0343	0.0315	0.0322	0.0311	0.0267	0.0274	0.0298	0.0276	0.0261	0.0301	0.0300	0.0289
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0291	0.0298	0.0304	0.0302	0.0305	0.0306	0.0301	0.0306	0.0283	0.0330	0.0346	0.0337	0.0356	0.0322	0.0330	0.0321	0.0273	0.0286	0.0314	0.0287	0.0273	0.0341	0.0331	0.0301
R061	833118.37	821880.28	833139.76	821889.31	16	0	1	0.0240	0.0218	0.0218	0.0218	0.0222	0.0219	0.0237	0.0234	0.0230	0.0229	0.0231	0.0233	0.0232	0.0227	0.0233	0.0227	0.0228	0.0228	0.0232	0.0230	0.0232	0.0237	0.0216	0.0221
R062	833139.76	821889.31	833296.78	821947.78	16	0	1	0.0185	0.0188	0.0186	0.0190	0.0188	0.0184	0.0188	0.0222	0.0209	0.0199	0.0198	0.0201	0.0203	0.0199	0.0204	0.0206	0.0201	0.0202	0.0216	0.0184	0.0181	0.0182	0.0172	0.0196
R063	833296.66	821947.50	833460.51	822007.97	16	0	1	0.0223	0.0182	0.0188	0.0170	0.0196	0.0185	0.0221	0.0250	0.0229	0.0233	0.0234	0.0234	0.0230	0.0235	0.0235	0.0235	0.0222	0.0232	0.0252	0.0226	0.0220	0.0225	0.0221	0.0238
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0224	0.0182	0.0187	0.0169	0.0191	0.0185	0.0220	0.0251	0.0229	0.0232	0.0230	0.0235	0.0228	0.0238	0.0233	0.0231	0.0224	0.0231	0.0248	0.0222	0.0216	0.0217	0.0225	0.0232
R065	833160.17	821834.07	833315.66	821891.67	16	0	1	0.0191	0.0191	0.0197	0.0200	0.0201	0.0193	0.0204	0.0233	0.0213	0.0213	0.0216	0.0215	0.0218	0.0213	0.0209	0.0212	0.0203	0.0201	0.0212	0.0182	0.0180	0.0177	0.0178	0.0191
R066	833315.06	821891.68	833481.00	821952.76	16	0	1	0.0202	0.0194	0.0190	0.0196	0.0196	0.0190	0.0201	0.0227	0.0212	0.0211	0.0212	0.0218	0.0215	0.0220	0.0221	0.0220	0.0206	0.0221	0.0236	0.0210	0.0196	0.0204	0.0204	0.0217
R067	833104.01	821775.07	833178.47	821783.88	19	0	1	0.0150	0.0150	0.0149	0.0149	0.0149	0.0150	0.0150	0.0185	0.0179	0.0183	0.0178	0.0171	0.0169	0.0173	0.0172	0.0175	0.0165	0.0171	0.0187	0.0156	0.0140	0.0140	0.0141	0.0147
R068	833178.74	821783.15	833253.68	821913.88	18	0	1	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0149	0.0182	0.0179	0.0183	0.0169	0.0165	0.0162	0.0168	0.0166	0.0168	0.0159	0.0171	0.0187	0.0152	0.0140	0.0141	0.0141	0.0147
R069	833166.60	821757.87	833250.16	821795.91	29	0	1	0.0129	0.0128	0.0129	0.0129	0.0129	0.0129	0.0129	0.0160	0.0145	0.0137	0.0128	0.0130	0.0122	0.0134	0.0130	0.0133	0.0130	0.0143	0.0157	0.0128	0.0120	0.0114	0.0116	0.0128
R070	833249.90	821820.73	833326.89	821883.87	13	0	1	0.0180	0.0180	0.0180	0.0181	0.0178	0.0179	0.0179	0.0206	0.0192	0.0196	0.0186	0.0188	0.0182	0.0190	0.0183	0.0183	0.0173	0.0184	0.0196	0.0173	0.0168	0.0171	0.0169	0.0176

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	0.0179	0.0178	0.0178	0.0179	0.0177	0.0177	0.0178	0.0203	0.0186	0.0190	0.0183	0.0183	0.0179	0.0185	0.0181	0.0181	0.0171	0.0180	0.0196	0.0172	0.0168	0.0171	0.0170	0.0178
R072	833397.24	821875.22	833501.75	821907.07	20	0	1	0.0191	0.0189	0.0192	0.0187	0.0188	0.0191	0.0190	0.0215	0.0194	0.0199	0.0197	0.0195	0.0190	0.0194	0.0189	0.0190	0.0176	0.0182	0.0199	0.0178	0.0169	0.0173	0.0174	0.0185
R073	833451.50	821860.54	833397.24	821875.22	17	0	1	0.0165	0.0165	0.0163	0.0163	0.0163	0.0166	0.0164	0.0190	0.0171	0.0167	0.0163	0.0166	0.0160	0.0171	0.0166	0.0169	0.0163	0.0169	0.0183	0.0165	0.0159	0.0157	0.0157	0.0169
R074	833261.64	821790.34	833451.50	821860.54	20	0	1	0.0172	0.0174	0.0173	0.0174	0.0169	0.0170	0.0173	0.0197	0.0178	0.0176	0.0172	0.0173	0.0166	0.0175	0.0169	0.0170	0.0161	0.0167	0.0182	0.0162	0.0156	0.0155	0.0155	0.0165
R075	833449.48	821961.09	833506.97	821883.06	16	0	1	0.0169	0.0169	0.0173	0.0166	0.0167	0.0170	0.0171	0.0198	0.0177	0.0175	0.0170	0.0171	0.0163	0.0173	0.0165	0.0167	0.0158	0.0165	0.0179	0.0158	0.0152	0.0146	0.0151	0.0161
R076	833501.48	821897.80	833548.66	821899.77	16	0	1	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	0.0198	0.0200	0.0202	0.0204	0.0197	0.0202	0.0199	0.0224	0.0204	0.0212	0.0208	0.0204	0.0198	0.0200	0.0193	0.0191	0.0175	0.0180	0.0196	0.0175	0.0170	0.0173	0.0174	0.0182
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	0.0170	0.0171	0.0172	0.0173	0.0170	0.0172	0.0171	0.0198	0.0178	0.0177	0.0172	0.0173	0.0165	0.0175	0.0168	0.0169	0.0161	0.0166	0.0181	0.0161	0.0157	0.0155	0.0155	0.0165
R078	833682.38	821822.36	833873.32	821660.75	18	0	1	0.0213	0.0217	0.0215	0.0218	0.0212	0.0214	0.0214	0.0235	0.0216	0.0228	0.0226	0.0220	0.0213	0.0212	0.0205	0.0201	0.0184	0.0186	0.0202	0.0182	0.0178	0.0184	0.0181	0.0190
R079	833673.29	821811.43	833867.51	821651.48	16	0	1	0.0156	0.0155	0.0157	0.0157	0.0153	0.0156	0.0156	0.0183	0.0165	0.0158	0.0152	0.0155	0.0145	0.0159	0.0153	0.0155	0.0150	0.0156	0.0169	0.0151	0.0147	0.0142	0.0141	0.0153
R080	833875.67	821661.18	833999.54	821587.94	16	0	1	0.0179	0.0180	0.0178	0.0179	0.0179	0.0182	0.0181	0.0204	0.0183	0.0186	0.0182	0.0183	0.0177	0.0185	0.0176	0.0179	0.0168	0.0172	0.0188	0.0167	0.0165	0.0171	0.0168	0.0176
R081	833867.01	821659.95	833993.09	821552.98	20	0	1	0.0158	0.0158	0.0160	0.0160	0.0156	0.0158	0.0158	0.0184	0.0166	0.0160	0.0154	0.0157	0.0149	0.0162	0.0155	0.0157	0.0153	0.0158	0.0171	0.0153	0.0150	0.0145	0.0144	0.0156
R082	833458.18	821964.41	833510.75	821821.12	14	0	1	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	0.0187	0.0185	0.0187	0.0187	0.0188	0.0186	0.0185	0.0215	0.0198	0.0197	0.0192	0.0200	0.0192	0.0205	0.0202	0.0205	0.0199	0.0207	0.0224	0.0200	0.0199	0.0196	0.0195	0.0201
R083	833436.83	821855.11	833496.18	821813.12	14	0	1	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R083	833524.36	821772.29	833509.81	821682.62	14	0	1	0.0133	0.0137	0.0128	0.0128	0.0127	0.0140	0.0137	0.0136	0.0132	0.0139	0.0140	0.0140	0.0141	0.0143	0.0137	0.0141	0.0133	0.0136	0.0142	0.0135	0.0139	0.0156	0.0142	0.0140
R084	833567.54	821687.02	833582.59	821644.65	13	0	1	0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
R084	833582.09	821644.65	833607.71	821603.87	13	0	1	0.0179	0.0180	0.0181	0.0181	0.0181	0.0180	0.0181	0.0209	0.0191	0.0190	0.0184	0.0190	0.0182	0.0198	0.0190	0.0192	0.0189	0.0195	0.0211	0.0188	0.0190	0.0190	0.0183	0.0189
R085	833609.34	821609.84	833640.24	821575.52	14	0	1	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	0.0186	0.0187	0.0187	0.0188	0.0188	0.0187	0.0185	0.0211	0.0196	0.0196	0.0190	0.0192	0.0188	0.0198	0.0194	0.0196	0.0194	0.0199	0.0212	0.0192	0.0194	0.0189	0.0186	0.0192
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0202	0.0182	0.0180	0.0172	0.0180	0.0170	0.0185	0.0178	0.0179	0.0178	0.0182	0.0197	0.0179	0.0179	0.0178	0.0177	0.0182
R087	833648.49	821548.43	833695.49	821508.30	13	0	1	0.0215	0.0215	0.0215	0.0215	0.0215	0.0214	0.0214	0.0221	0.0219	0.0219	0.0218	0.0219	0.0216	0.0222	0.0220	0.0220	0.0219	0.0219	0.0223	0.0215	0.0216	0.0217	0.0216	0.0214
R088	833254.24	821811.88	833365.50	821856.64	17	4	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833365.50	821856.64	833416.50	821866.51	17	7	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833416.50	821866.51	833487.63	821841.09	17	9	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833574.80	821657.75	833600.16	821606.82	17	7	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	0.0083	0.0082	0.0083	0.0083	0.0082	0.0082	0.0083	0.0098	0.0101	0.0095	0.0091	0.0079	0.0079	0.0073	0.0071	0.0073	0.0065	0.0065	0.0063	0.0056	0.0058	0.0056	0.0058	0.0056
R089	833256.85	821801.44	833370.08	821846.87	16	4	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833480.60	821829.26	833522.46	821786.30	16	10	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R089	833598.99	821594.44	833699.93	821509.87	16	6	4	0.0082	0.0082	0.0082	0.0083	0.0083	0.0083	0.0082	0.0093	0.0086	0.0084	0.0085	0.0075	0.0074	0.0070	0.0068	0.0069	0.0062	0.0061	0.0059	0.0054	0.0058	0.0055	0.0057	0.0055
R090+R091	833289.78	821629.64	833337.84	821634.13	17	0	1	0.0193	0.0192	0.0188	0.0188	0.0189	0.0194	0.0195	0.0235	0.0225	0.0214	0.0206	0.0209	0.0203	0.0216	0.0214	0.0220	0.0210	0.0222	0.0239	0.0209	0.0197	0.0187	0.0193	0.0213
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1	0.0192	0.0197	0.0197	0.0198	0.0198	0.0199	0.0192	0.0233	0.0221	0.0210	0.0204	0.0204	0.0197	0.0214	0.0210	0.0215	0.0206	0.0224	0.0240	0.0210	0.0195	0.0189	0.0200	0.0206
R094	833337.84	821634.13	833341.51	821570.41	16	0	1	0.0109	0.0110	0.0109	0.0109	0.0111	0.0111	0.0110	0.0118	0.0110	0.0113	0.0104	0.0105	0.0096	0.0102	0.0091	0.0092	0.0090	0.0093	0.0088	0.0080	0.0082	0.0074	0.0070	0.0084
R095	833609.59	821601.72	833648.49	821548.43	17	0	1	0.0252	0.0246	0.0247	0.0247	0.0249	0.0247	0.0249	0.0260	0.0254	0.0256	0.0257	0.0255	0.0253	0.0253	0.0251	0.0251	0.0248	0.0248	0.0253	0.0242	0.0242	0.0244	0.0245	0.0243
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1	0.0231	0.0282	0.0160	0.0163	0.0161	0.0171	0.0228	0.0258	0.0260	0.0267	0.0244	0.0246	0.0241	0.0258	0.0261	0.0250	0.0243	0.0241	0.0280	0.0243	0.0234	0.0241	0.0251	0.0235
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	0.0307	0.0316	0.0303	0.0301	0.0334	0.0319	0.0324	0.0337	0.0325	0.0373	0.0364	0.0349	0.0350	0.0339	0.0332	0.0323	0.0276	0.0293	0.0319	0.0280	0.0258	0.0282	0.0286	0.0278
R100+R101	834127.62	822332.11	834218.31	822258.35	18	0	1	0.0277	0.0273	0.0276	0.0289	0.0281	0.0304	0.0278	0.0313	0.0292	0.0327	0.0314	0.0317	0.0315	0.0311	0.0306	0.0301	0.0266	0.0279	0.0302	0.0273	0.0262	0.0273	0.0269	0.0285
R102+R103	834218.31	822256.35	834309.95	822180.58	18	0	1	0.0292	0.0308	0.0262	0.0297	0.0278	0.0286	0.0297	0.0292	0.0284	0.0304	0.0313	0.0305	0.0306	0.0297	0.0278	0.0279	0.0251	0.0252	0.0275	0.0241	0.0243	0.0249	0.0259	0.0261
R104+R105	834309.95	822180.58	834407.46	822098.55	18	0	1	0.0260	0.0284	0.0234	0.0260	0.0250	0.0228	0.0276	0.0295	0.0275	0.0291	0.0271	0.0266	0.0265	0.0262	0.0271	0.0256	0.0239	0.0246	0.0271	0.0238	0.0238	0.0255	0.0255	0.0269
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	0.0212	0.0194	0.0210	0.0228	0.0223	0.0205	0.0209	0.0236	0.0228	0.0224	0.0221	0.0220	0.0222	0.0233	0.0235	0.0239	0.0225	0.0242	0.0262	0.0230	0.0219	0.0225	0.0224	0.0232
R107	833991.65	822370.04	834090.39	822287.63	18	0	1	0.0204	0.0201	0.0219	0.0241	0.0234	0.0212	0.0202	0.0243	0.0219	0.0216	0.0215	0.0217	0.0212	0.0228	0.0228	0.0231	0.0221	0.0229	0.0254	0.0223	0.0223	0.0221	0.0230	0.0229
R108	834090.84	822288.08	834181.98	822212.22	16	0	1	0.0202	0.0197	0.0217	0.0238	0.0226	0.0208	0.0199	0.0231	0.0215	0.0211	0.0210	0.0215	0.0209	0.0222	0.0224	0.0225	0.0222	0.0229	0.0248	0.0226	0.0214	0.0219	0.0227	0.0239
R109	834181.96	822212.22	834273.05	822136.48	17	0	1	0.0201	0.0197	0.0217	0.0239	0.0227	0.0208	0.0198	0.0232	0.0215	0.0212	0.0210	0.0218	0.0213	0.0228	0.0220	0.0230	0.0220	0.0227	0.0250	0.0223	0.0211	0.0230	0.0215	0.0244
R110	834273.34	822136.83	834364.58	822060.94	17	0	1	0.0206	0.0213	0.0203	0.0218	0.0214	0.0199	0.0204	0.0236	0.0216	0.0211	0.0211	0.0214	0.0209	0.0224	0.0221	0.0225	0.0218	0.0229	0.0246	0.0222	0.0218	0.0223	0.0214	0.0225
R111	834363.46	822059.86	834400.74	822029.63	18	0	1	0.0212	0.0192	0.0210	0.0226	0.0221	0.0202	0.0209	0.0234	0.0217	0.0213	0.0214	0.0215	0.0211	0.0225	0.0223	0.0226	0.0218	0.0224	0.0246	0.0220	0.0212	0.0214	0.0221	0.0230
R112	833848.76	822405.79	833902.36	822360.57	19	0	1	0.0351	0.0348	0.0326	0.0377	0.0354	0.0354	0.0337	0.0354	0.0335	0.0381	0.0384	0.0369	0.0368	0.0351	0.0355	0.0342	0.0293	0.0309	0.0336	0.0304	0.0286	0.0320	0.0315	0.0309
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	0.0180	0.0200	0.0151	0.0148	0.0155	0.0220	0.0204	0.0223	0.0206	0.0199	0.0198	0.0203	0.0197	0.0208	0.0207	0.0213	0.0205	0.0215	0.0233	0.0206	0.0195	0.0214	0.0199	0.0225
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	0.0206	0.0203	0.0197	0.0207	0.0203	0.0204	0.0204	0.0232	0.0223	0.0224	0.0220	0.0223	0.0219	0.0230	0.0228	0.0231	0.0221	0.0226	0.0247	0.0222	0.0210	0.0212	0.0212	0.0220
R115	833994.06	822200.75	834077.01	822132.06	18	0	1	0.0257	0.0262	0.0259	0.0255	0.0262	0.0259	0.0257	0.0275	0.0261	0.0280	0.0282	0.0278	0.0279	0.0274	0.0272	0.0269	0.0244	0.0252	0.0272	0.0251	0.0240	0.0259	0.0255	0.0257
R116	834076.90	822131.94	834097.30	822115.02	16	0	1	0.0197	0.0193	0.0195	0.0207	0.0203	0.0203	0.0199	0.0224	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0215	0.0218	0.0212	0.0219	0.0235	0.0214	0.0203	0.0207	0.0208	0.0217
R117	834097.30	822115.02	834190.59	822037.73	16	0	1	0.0200	0.0197	0.0198	0.0190	0.0206	0.0195	0.0198	0.0223	0.0210	0.0207	0.0207	0.0210	0.0207	0.0217	0.0214	0.0217	0.0208	0.0219	0.0235	0.0214	0.0203	0.0207	0.0207	0.0218
R118	834190.59	822037.73	834242.25	821993.88	18	0	1	0.0199	0.0196	0.0198	0.0189	0.0205	0.0194	0.0197	0.0221	0.0209	0.0206	0.0205	0.0209	0.0206	0.0216	0.0215	0.0218	0.0214	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
R119	834242.94	821993.65	834282.16	821961.45	19	0	1	0.0197	0.0197	0.0191	0.0202	0.0198	0.0199	0.0195	0.0222	0.0208	0.0208	0.0204	0.0208	0.0206	0.0216	0.0214	0.0218	0.0213	0.0219	0.0236	0.0216	0.0203	0.0209	0.0207	0.0218
R120	834281.93	821961.17	834359.17	821896.80	19	0	1	0.0196	0.0197	0.0202	0.0201	0.0197	0.0198	0.0198	0.0223	0.0214	0.0211	0.0207	0.0210	0.0206	0.0217	0.0218	0.0218	0.0213	0.0218	0.0238	0.0214	0.0202	0.0207	0.0208	0.0217
R121	833768.03	822376.15	833789.11	822318.98	18	0	1	0.0178	0.0178	0.0172	0.0181	0.0176	0.0179	0.0177	0.0211	0.0185	0.0178	0.0168	0.0176	0.0163	0.0198	0.0181	0.0184	0.0184	0.0199	0.0217	0.0195	0.0196	0.0199	0.0192	0.0200
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	0.0195	0.0204	0.0215	0.0227	0.0216	0.0202	0.0188	0.0219	0.0201	0.0197	0.0187	0.0192	0.0178	0.0199	0.0185	0.0190	0.0184	0.0198	0.0210	0.0185	0.0182	0.0158	0.0160	0.0182
R123	833868.78	822222.16	833954.75	822150.60	18	0	1	0.0162	0.0161	0.0162	0.0162	0.0160	0.0160	0.0161	0.0200	0.0190	0.0167	0.0155	0.0160	0.0146	0.0168	0.0164	0.0170	0.0166	0.0180	0.0194	0.0169	0.0154	0.0134	0.0135	0.0164
R124	833873.82	822341.72	833894.86	822284.07	18	0	1	0.0191	0.0192	0.0192	0.0190	0.0188	0.0191	0.0191	0.0216	0.0201	0.0202	0.0190	0.0196	0.0186	0.0211	0.0200	0.0203	0.0202	0.0208	0.0222	0.0201	0.0212	0.0216	0.0211	0.0199
R125	833894.86	822284.07	833927.77	822172.55	18	0	1	0.0184	0.0184	0.0184	0.0182	0.0183	0.0183	0.0184	0.0215	0.0192	0.0190	0.0177	0.0182	0.0167	0.0183	0.0178	0.0182	0.0176	0.0185	0.0197	0.0172	0.0164	0.0151	0.0142	0.0169
R126	833653.40	822269.00	833688.33	822174.73	13	0	1	0.0224	0.0234	0.0220	0.0240	0.0233	0.0214	0.0221	0.0249	0.0234	0.0236	0.0236	0.0236	0.0234	0.0243	0.0237	0.0241	0.0228	0.0242	0.0262	0.0230	0.0225	0.0235	0.0224	0.0236
R127	833489.65	822316.75	833503.51	822278.46	18	0	1	0.0184	0.0184	0.0181	0.0183	0.0184	0.0184	0.0183	0.0215	0.0199	0.0187	0.0179	0.0185	0.0172	0.0192	0.0182	0.0186	0.0188	0.0193	0.0211	0.0184	0.0184	0.0169	0.0166	0.0184
R128	833503.51	822278.46	833524.35	822221.21	18	0	1	0.0176	0.0176	0.0174	0.0175	0.0174	0.0178	0.0176	0.0208	0.0188	0.0176	0.0169	0.0175	0.0163	0.0184	0.0174	0.0179	0.0181	0.0190	0.0204	0.0178	0.0177	0.0166	0.0165	0.0182
R129	833377.80	822232.03	833356.00	822293.72	18	0	1	0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0158	0.0196	0.0178	0.0164	0.0154	0.0159	0.0147	0.0168	0.0159	0.0163	0.0163	0.0173	0.0187	0.0162	0.0158	0.0147	0.0145	0.0162
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0157	0.0195	0.0177	0.0163	0.0152	0.0158	0.0145	0.0166	0.0157	0.0162	0.0161	0.0171	0.0183	0.0161	0.0160	0.0145	0.0144	0.0161
R131	833398.42	822175.04	833434.10	822080.76	18	0	1	0.0163	0.0164	0.0163	0.0164	0.0164	0.0164	0.0163	0.0203	0.0190	0.0178	0.0159	0.0163	0.0154	0.0173	0.0160	0.0169	0.0172	0.0173	0.0186	0.0160	0.0159	0.0144	0.0140	0.0166
R132	833433.93	822080.70	833460.51	822007.97	16	0	1	0.0156	0.0161	0.0163	0.0163	0.0159	0.0149	0.0137	0.0141	0.0146	0.0160	0.0148	0.0143	0.0147	0.0138	0.0132	0.0129	0.0120	0.0126	0.0130	0.0115	0.0121	0.0115	0.0108	0.0112
R133	833460.46	822007.95	833481.00	821952.76	16	0	1	0.0201	0.0215	0.0231	0.0242	0.0232	0.0212	0.0191	0.0222	0.0214	0.0224	0.0207	0.0208	0.0200	0.0204	0.0199	0.0191	0.0181	0.0193	0.0211	0.0180	0.0174	0.0154	0.0153	0.0174
R134	833481.00	821952.76	833506.87	821883.06	16	0	1	0.0185	0.0196	0.0207	0.0221	0.0211	0.0193	0.0176	0.0208	0.0200	0.0193	0.0184	0.0187	0.0179	0.0191	0.0187	0.0189	0.0178	0.0193	0.0210	0.0185	0.0162	0.0160	0.0162	0.0178
R135	833209.07	822339.78	833232.06	822178.07	18	0	1	0.0261	0.0301	0.0376	0.0376	0.0360	0.0278	0.0221	0.0240	0.0197	0.0188	0.0195	0.0195	0.0183	0.0205	0.0194	0.0199	0.0195	0.0193	0.0204	0.0189	0.0223	0.0196	0.0197	0.0205
R136	833232.03	822178.06	833263.39	822120.94	18	0	1	0.0165	0.0176	0.0150	0.0150	0.0150	0.0150	0.0165	0.0207	0.0183	0.0171	0.0159	0.0165	0.0153	0.0176	0.0164	0.0169	0.0169	0.0179	0.0194	0.0170	0.0167	0.0150	0.0154	0.0171
R137	833080.91	822182.63	833100.53	822129.44	18	0	1	0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
R138	833100.53	822129.44	833121.78	822072.07	18	0	1	0.0149	0.0155	0.0160	0.0138	0.0138	0.0160	0.0155	0.0189	0.0168	0.0154	0.0144	0.0150	0.0139	0.0161	0.0150	0.0155	0.0156	0.0163	0.0178	0.0155	0.0151	0.0136	0.0140	0.0158
R139	833121.68	822072.03	833196.56	821977.96	18	0	1	0.0153	0.0154	0.0154	0.0154	0.0152	0.0154	0.0153	0.0190	0.0168	0.0153	0.0145	0.0151	0.0138	0.0160	0.0152	0.0157	0.0157	0.0164	0.0179	0.0156	0.0156	0.0145	0.0145	0.0158
R140	833274.46	822007.07	833298.88	821947.56	17	0	1	0.0212	0.0217	0.0212	0.0223	0.0217	0.0208	0.0210	0.0242	0.0217	0.0220	0.0211	0.0208	0.0194	0.0205	0.0192	0.0192	0.0177	0.0185	0.0202	0.0175	0.0167	0.0151	0.0156	0.0178

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	RSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.35	821847.25	833315.58	821881.87	13	0	1	0.0210	0.0190	0.0176	0.0176	0.0172	0.0173	0.0209	0.0240	0.0214	0.0224	0.0214	0.0205	0.0197	0.0208	0.0190	0.0187	0.0173	0.0162	0.0196	0.0173	0.0164	0.0151	0.0147	0.0175
R142	833329.89	821853.87	833318.98	821891.84	13	0	1	0.0138	0.0120	0.0125	0.0104	0.0113	0.0128	0.0159	0.0154	0.0144	0.0163	0.0163	0.0165	0.0175	0.0171	0.0173	0.0177	0.0168	0.0176	0.0181	0.0174	0.0177	0.0208	0.0196	0.0163
R143	833139.79	821889.31	833110.17	821834.07	13	0	1	0.0210	0.0215	0.0210	0.0220	0.0216	0.0206	0.0216	0.0237	0.0221	0.0231	0.0216	0.0215	0.0202	0.0210	0.0199	0.0197	0.0186	0.0192	0.0203	0.0183	0.0172	0.0160	0.0157	0.0182
R144	833169.17	821834.07	833118.74	821783.15	13	0	1	0.0211	0.0216	0.0210	0.0222	0.0217	0.0207	0.0209	0.0239	0.0220	0.0222	0.0214	0.0210	0.0196	0.0208	0.0193	0.0193	0.0181	0.0188	0.0200	0.0180	0.0172	0.0161	0.0156	0.0182
R145+R146	833812.49	821975.50	834004.99	821916.03	17	0	1	0.0176	0.0176	0.0183	0.0169	0.0165	0.0179	0.0174	0.0210	0.0184	0.0177	0.0164	0.0169	0.0153	0.0173	0.0161	0.0165	0.0161	0.0173	0.0186	0.0161	0.0144	0.0121	0.0128	0.0161
R147+R148	833738.94	821888.38	833931.13	821727.74	16	0	1	0.0171	0.0169	0.0173	0.0172	0.0172	0.0176	0.0173	0.0208	0.0184	0.0173	0.0161	0.0165	0.0150	0.0170	0.0159	0.0163	0.0159	0.0169	0.0182	0.0157	0.0139	0.0114	0.0124	0.0160
R149	833729.61	821749.32	833807.73	821684.36	14	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R149	833774.08	821642.52	833807.73	821684.36	13	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R150	833736.67	821759.22	833807.71	821683.87	11	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0153	0.0175	0.0165	0.0171	0.0170	0.0179	0.0195	0.0171	0.0172	0.0158	0.0155	0.0172
R151	833613.61	821619.08	833682.50	821543.73	13	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
R151	833693.50	821543.70	833775.28	821642.53	14	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0166	0.0206	0.0183	0.0168	0.0159	0.0166	0.0153	0.0175	0.0165	0.0169	0.0170	0.0178	0.0194	0.0171	0.0172	0.0152	0.0155	0.0169
R152	833774.08	821643.52	833828.17	821600.58	20	0	1	0.0166	0.0169	0.0165	0.0169	0.0169	0.0165	0.0165	0.0206	0.0183	0.0168	0.0160	0.0165	0.0152	0.0176	0.0164	0.0170	0.0171	0.0178	0.0194	0.0169	0.0169	0.0155	0.0158	0.0173
R153	833991.31	822369.76	834028.77	822414.27	15	0	1	0.0186	0.0179	0.0181	0.0184	0.0188	0.0185	0.0188	0.0220	0.0202	0.0187	0.0175	0.0180	0.0161	0.0179	0.0171	0.0176	0.0168	0.0177	0.0191	0.0168	0.0158	0.0142	0.0146	0.0164
R154	833950.46	822320.46	833992.00	822369.67	16	0	1	0.0186	0.0179	0.0182	0.0184	0.0188	0.0185	0.0188	0.0220	0.0202	0.0190	0.0174	0.0178	0.0167	0.0185	0.0172	0.0176	0.0170	0.0179	0.0193	0.0165	0.0156	0.0138	0.0142	0.0164
R155	833909.65	822271.30	833950.46	822320.45	18	0	1	0.0187	0.0179	0.0182	0.0185	0.0188	0.0186	0.0189	0.0224	0.0208	0.0192	0.0179	0.0184	0.0164	0.0183	0.0174	0.0179	0.0171	0.0180	0.0194	0.0170	0.0162	0.0142	0.0145	0.0164
R156	833868.78	822222.16	833908.65	822271.35	18	0	1	0.0223	0.0211	0.0212	0.0207	0.0200	0.0207	0.0217	0.0278	0.0259	0.0251	0.0238	0.0240	0.0225	0.0241	0.0224	0.0224	0.0219	0.0227	0.0233	0.0205	0.0190	0.0169	0.0172	0.0192
R157	833868.56	822222.34	833827.77	822172.95	18	0	1	0.0204	0.0204	0.0198	0.0200	0.0198	0.0200	0.0205	0.0254	0.0238	0.0227	0.0216	0.0234	0.0199	0.0222	0.0204	0.0207	0.0203	0.0210	0.0223	0.0195	0.0184	0.0169	0.0165	0.0191
R158	833827.77	822172.96	833778.49	822113.30	18	0	1	0.0200	0.0200	0.0199	0.0201	0.0199	0.0201	0.0201	0.0233	0.0216	0.0207	0.0196	0.0199	0.0186	0.0201	0.0189	0.0191	0.0187	0.0192	0.0205	0.0184	0.0174	0.0162	0.0163	0.0184
R159	834075.91	822299.62	834112.90	822344.34	15	0	1	0.0190	0.0197	0.0208	0.0213	0.0151	0.0155	0.0192	0.0220	0.0192	0.0190	0.0186	0.0189	0.0179	0.0203	0.0197	0.0196	0.0183	0.0198	0.0208	0.0190	0.0178	0.0182	0.0183	0.0206
R160	834090.29	822287.53	834127.62	822332.11	15	0	1	0.0194	0.0201	0.0200	0.0191	0.0198	0.0193	0.0198	0.0230	0.0206	0.0206	0.0201	0.0196	0.0188	0.0199	0.0188	0.0186	0.0177	0.0186	0.0198	0.0180	0.0171	0.0172	0.0173	0.0182
R161	834034.90	822250.52	834075.91	822299.62	15	0	1	0.0184	0.0183	0.0182	0.0187	0.0180	0.0189	0.0187	0.0221	0.0203	0.0195	0.0193	0.0193	0.0187	0.0200	0.0193	0.0195	0.0189	0.0198	0.0217	0.0188	0.0186	0.0184	0.0184	0.0193
R162	834049.42	822238.28	834090.29	822287.53	15	0	1	0.0193	0.0195	0.0192	0.0198	0.0197	0.0192	0.0192	0.0224	0.0205	0.0206	0.0195	0.0194	0.0184	0.0200	0.0185	0.0187	0.0179	0.0184	0.0196	0.0173	0.0169	0.0169	0.0163	0.0162
R163	833993.96	822201.68	834034.90	822250.62	15	0	1	0.0198	0.0198	0.0197	0.0198	0.0198	0.0200	0.0199	0.0233	0.0212	0.0214	0.0207	0.0205	0.0196	0.0206	0.0195	0.0198	0.0185	0.0189	0.0206	0.0182	0.0176	0.0172	0.0171	0.0186
R164	834007.86	822189.33	834049.42	822238.28	15	0	1	0.0184	0.0184	0.0182	0.0187	0.0181	0.0189	0.0181	0.0215	0.0196	0.0189	0.0179	0.0183	0.0173	0.0186	0.0175	0.0178	0.0170	0.0177	0.0194	0.0172	0.0167	0.0161	0.0162	0.0178
R165	833953.31	822151.70	833994.47	822201.23	16	0	1	0.0209	0.0212	0.0207	0.0215	0.0213	0.0207	0.0208	0.0239	0.0221	0.0223	0.0216	0.0217	0.0208	0.0215	0.0208	0.0208	0.0196	0.0202	0.0218	0.0195	0.0187	0.0186	0.0187	0.0197
R166	833872.14	822051.39	833964.75	822160.50	19	0	1	0.0176	0.0174	0.0175	0.0176	0.0177	0.0176	0.0174	0.0211	0.0199	0.0180	0.0175	0.0176	0.0164	0.0177	0.0171	0.0175	0.0172	0.0178	0.0188	0.0168	0.0150	0.0129	0.0136	0.0164
R167	833885.47	822042.48	834007.88	822189.33	19	0	1	0.0270	0.0272	0.0273	0.0273	0.0273	0.0272	0.0270	0.0292	0.0276	0.0301	0.0298	0.0286	0.0289	0.0282	0.0276	0.0268	0.0242	0.0248	0.0269	0.0241	0.0237	0.0256	0.0253	0.0246
R168+R169	833813.72	821975.47	833876.38	822050.03	21	0	1	0.0108	0.0112	0.0113	0.0107	0.0110	0.0108	0.0110	0.0127	0.0123	0.0118	0.0115	0.0135	0.0111	0.0114	0.0112	0.0115	0.0111	0.0119	0.0118	0.0107	0.0104	0.0095	0.0095	0.0109
R170+R171	833738.44	821888.35	833812.49	821976.50	18	0	1	0.0125	0.0125	0.0124	0.0129	0.0125	0.0126	0.0128	0.0133	0.0128	0.0139	0.0133	0.0135	0.0136	0.0137	0.0131	0.0131	0.0123	0.0128	0.0132	0.0122	0.0126	0.0136	0.0129	0.0122
R172+R173	833684.02	821822.33	833739.28	821887.65	20	0	1	0.0186	0.0185	0.0186	0.0187	0.0184	0.0185	0.0187	0.0221	0.0199	0.0197	0.0190	0.0193	0.0184	0.0198	0.0190	0.0193	0.0186	0.0195	0.0211	0.0186	0.0178	0.0173	0.0174	0.0187
R174+R175	833581.78	821677.38	833683.38	821823.68	18	0	1	0.0200	0.0200	0.0198	0.0202	0.0192	0.0201	0.0201	0.0236	0.0221	0.0216	0.0211	0.0212	0.0205	0.0219	0.0210	0.0212	0.0202	0.0212	0.0228	0.0201	0.0193	0.0190	0.0190	0.0201
R176	833490.77	821608.49	833565.47	821680.73	20	0	1	0.0204	0.0202	0.0202	0.0200	0.0204	0.0203	0.0203	0.0233	0.0215	0.0216	0.0211	0.0209	0.0202	0.0210	0.0206	0.0206	0.0196	0.0204	0.0219	0.0200	0.0194	0.0195	0.0196	0.0204
R177	833513.09	821699.24	833573.68	821668.47	20	0	1	0.0189	0.0188	0.0188	0.0186	0.0190	0.0187	0.0187	0.0216	0.0194	0.0194	0.0190	0.0193	0.0186	0.0197	0.0192	0.0194	0.0185	0.0197	0.0209	0.0187	0.0179	0.0179	0.0178	0.0191
R178	833440.44	821529.00	833488.00	821609.61	15	0	1	0.0219	0.0216	0.0217	0.0217	0.0216	0.0215	0.0220	0.0242	0.0228	0.0234	0.0224	0.0221	0.0215	0.0220	0.0212	0.0211	0.0200	0.0205	0.0219	0.0202	0.0200	0.0203	0.0202	0.0208
R179	833451.64	821526.21	833511.32	821600.28	17	0	1	0.0216	0.0216	0.0216	0.0214	0.0217	0.0217	0.0215	0.0239	0.0221	0.0229	0.0226	0.0227	0.0229	0.0237	0.0233	0.0234	0.0218	0.0227	0.0246	0.0223	0.0214	0.0226	0.0224	0.0229
R180	834218.31	822256.35	834308.06	822385.33	15	0	1	0.0208	0.0210	0.0212	0.0210	0.0206	0.0212	0.0213	0.0245	0.0228	0.0221	0.0217	0.0219	0.0209	0.0223	0.0216	0.0216	0.0205	0.0214	0.0234	0.0207	0.0205	0.0199	0.0199	0.0212
R181	834191.98	822212.22	834218.31	822256.35	18	0	1	0.0169	0.0167	0.0169	0.0172	0.0165	0.0163	0.0171	0.0236	0.0209	0.0205	0.0202	0.0204	0.0191	0.0230	0.0222	0.0221	0.0204	0.0211	0.0230	0.0213	0.0215	0.0195	0.0193	0.0216
R182	834140.62	822162.67	834191.78	822212.39	18	0	1	0.0198	0.0204	0.0214	0.0221	0.0168	0.0166	0.0203	0.0231	0.0204	0.0202	0.0200	0.0205	0.0195	0.0208	0.0199	0.0204	0.0193	0.0199	0.0217	0.0197	0.0201	0.0181	0.0180	0.0204
R183	834099.34	822113.33	834140.62	822162.67	18	0	1	0.0208	0.0216	0.0228	0.0240	0.0171	0.0169	0.0214	0.0239	0.0210	0.0214	0.0212	0.0219	0.0211	0.0223	0.0192	0.0197	0.0189	0.0199	0.0217	0.0198	0.0199	0.0204	0.0207	0.0228
R184	834077.01	822132.08	834051.51	822100.94	13	0	1	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R184	834051.51	822100.94	834071.90	822084.18	13	0	1	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R184	834071.90	822084.18	834097.30	822118.02	14	0	1	0.0175	0.0177	0.0174	0.0177	0.0176	0.0174	0.0175	0.0210	0.0185	0.0178	0.0163	0.0167	0.0152	0.0172	0.0160	0.0164	0.0162	0.0171	0.0183	0.0159	0.0146	0.0121	0.0129	0.0162
R185	834309.95	822180.58	834382.68	822287.44	19	0	1	0.0202	0.0209	0.0203	0.0209	0.0216	0.0211	0.0206	0.0238	0.0216	0.0215	0.0212	0.0210	0.0205	0.0219	0.0212	0.0213	0.0203	0.0218	0.0230	0.0204	0.0200	0.0200	0.0200	0.0216
R186	834231.54	822086.63	834273.34	822136.83	19	0	1	0.0230	0.0228	0.0248	0.0257	0.0169	0.0257	0.0223	0.0247	0.0216	0.0224	0.0225	0.0231	0.0222	0.0229	0.0196	0.0200	0.0190	0.0200	0.0219	0.0199	0.0200	0.0204	0.0209	0.0234
R187	834190.09	822037.73	834231.76	822086.45	16	0	1	0.0215	0.0210	0.0217	0.0222	0.0207	0.0205	0.0219	0.0246	0.0225	0.0223	0.0224	0.0229	0.0222	0.0232	0.0228	0.0232	0.0222	0.0231	0.0247	0.0222	0.0216	0.0224	0.0211	0.0231
R188+R189	834004.88	821816.03	834088.34	821890.22	19	0	1	0.0181	0.0191	0.0203	0.0189	0.0195	0.0190	0.0186	0.0208	0.0195	0.0202	0.0186	0.0189	0.0185	0.0200	0.0192	0.0191	0.0183	0.0189	0.0205	0.0186	0.0184	0.0171	0.0170	0.0199
R190+R191	833931.13	821727.74	834004.99	821816.03	18	0	1	0.0212	0.0220	0.0209	0.0217	0.0201	0.0197	0.0217	0.0242	0.0216	0.0219	0.0208	0.0217	0.0204	0.0218	0.0208	0.0209	0.0198	0.0208	0.0227	0.0202	0.0199	0.0188	0.0188	0.0204
R192+R193	833875.32	821660.76	833930.85	821727.58	20	0	1	0.0187	0.0196	0.0204	0.0211	0.0206	0.0202	0.0170	0.0192	0.0172	0.0167	0.0159	0.0164	0.0153	0.0171	0.0159	0.0170	0.0163	0.0156	0.0154	0.0156	0.0204	0.0177	0.0159	0.0177
R194+R195	833825.79	821600.86	833867.51	821651.49	20	0	1	0.0217	0.0221	0.0226	0.0232	0.0237	0.0232	0.0219	0.0248	0.0231	0.0235	0.0235	0.0232	0.0218	0.0228	0.0225	0.0223	0.0222	0.0229	0.0236	0.0227	0.0221	0.0222	0.0223	0.0236
R196+R202	833761.01	821523.38	833828.17	821600.66	20	0	1	0.0210	0.0210	0.0205	0.0204	0.0205	0.0204	0.0210	0.0224	0.0223	0.0207	0.0202	0.0206	0.0197	0.0210	0.0202	0.0208	0.0206	0.0209	0.0216	0.0204	0.0201	0.0193	0.0192	0.0226
R197	834364.36	822060.94	834400.15	822104.71	17	0	1	0.0169	0.0172	0.0165	0.0169	0.0169	0.0169	0.0172	0.0252	0.0221	0.0233	0.0244	0.0166	0.0154	0.0177	0.0161	0.0170	0.0169	0.0176	0.0190	0.0166	0.0174	0.0163	0.0160	0.0150
R198	834322.77	822010.68	834364.36	822060.94	16	0	1	0.0169	0.0168	0.0171	0.0167	0.0172	0.0169	0.0166	0.0229	0.0202	0.0200	0.0200	0.0205	0.0199	0.0215	0.0211	0.0219	0.0209	0.0226	0.0245	0.0232	0.0232	0.0260	0.0274	0.0163
R199	834281.93	821961.17	834322.00	822010.48	15	0	1	0.0224	0.0232	0.0245	0.0265	0.0180	0.0265	0.0228	0.0248	0.0236	0.0232	0.0204	0.0210	0.0205	0.0217	0.0178	0.0183	0.0184	0.0192	0.0198	0.0187	0.0181	0.0175	0.0175	0.0190
R200	834239.17	821914.13	834280.06	821963.18	14	0	1	0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185
R200	834239.17	821914.13	834327.89	821946.33	18	0	1	0.0184	0.0185	0.0187	0.0189	0.0193	0.0191	0.0185	0.0223	0.0211	0.0196	0.0175	0.0184	0.0167	0.0192	0.0174	0.0184	0.0186	0.0187	0.0195	0.0177	0.0177	0.0160	0.0154	0.0185

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R003	833960.46	822543.00	833985.46	822546.76	20	0	1	0.0085	0.0084	0.0083	0.0083	0.0083	0.0084	0.0084	0.0097	0.0098	0.0090	0.0090	0.0091	0.0087	0.0089	0.0087	0.0091	0.0091	0.0087	0.0087	0.0082	0.0085	0.0077	0.0081	0.0084
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0083	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0090	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	0.0084	0.0083	0.0083	0.0084	0.0083	0.0084	0.0084	0.0093	0.0092	0.0087	0.0089	0.0089	0.0086	0.0088	0.0087	0.0090	0.0091	0.0089	0.0090	0.0083	0.0083	0.0076	0.0079	0.0082
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	0.0083	0.0080	0.0086	0.0059	0.0059	0.0086	0.0080	0.0086	0.0084	0.0079	0.0077	0.0076	0.0069	0.0079	0.0072	0.0076	0.0066	0.0074	0.0068	0.0064	0.0059	0.0048	0.0049	0.0067
R008+R009	833681.17	822398.31	833863.59	822387.15	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	0.0069	0.0068	0.0059	0.0059	0.0059	0.0071	0.0067	0.0075	0.0082	0.0072	0.0072	0.0070	0.0066	0.0069	0.0067	0.0069	0.0067	0.0073	0.0067	0.0063	0.0062	0.0047	0.0046	0.0064
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	0.0112	0.0117	0.0108	0.0076	0.0074	0.0102	0.0109	0.0103	0.0116	0.0115	0.0121	0.0114	0.0110	0.0111	0.0107	0.0111	0.0101	0.0109	0.0107	0.0103	0.0096	0.0102	0.0106	0.0097
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R012+R013	833544.64	822390.48	833587.56	822384.80	10	0	1	0.0166	0.0138	0.0138	0.0138	0.0138	0.0138	0.0166	0.0190	0.0169	0.0161	0.0153	0.0160	0.0146	0.0170	0.0157	0.0160	0.0160	0.0167	0.0183	0.0161	0.0167	0.0163	0.0157	0.0166
R014+R015	833488.77	822318.11	833587.56	822384.80	14	0	1	0.0147	0.0147	0.0148	0.0146	0.0144	0.0147	0.0146	0.0184	0.0169	0.0148	0.0142	0.0146	0.0133	0.0153	0.0146	0.0150	0.0149	0.0158	0.0170	0.0148	0.0137	0.0116	0.0123	0.0150
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	0.0146	0.0147	0.0147	0.0146	0.0144	0.0147	0.0146	0.0183	0.0169	0.0148	0.0141	0.0144	0.0132	0.0151	0.0144	0.0148	0.0147	0.0156	0.0167	0.0144	0.0130	0.0107	0.0115	0.0145
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	0.0216	0.0193	0.0215	0.0239	0.0230	0.0205	0.0214	0.0230	0.0212	0.0215	0.0218	0.0220	0.0211	0.0226	0.0220	0.0223	0.0211	0.0224	0.0242	0.0220	0.0218	0.0212	0.0219	0.0246
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	0.0205	0.0213	0.0202	0.0222	0.0215	0.0195	0.0201	0.0235	0.0213	0.0220	0.0218	0.0218	0.0214	0.0225	0.0219	0.0220	0.0206	0.0216	0.0234	0.0208	0.0208	0.0204	0.0211	0.0220
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	0.0206	0.0204	0.0219	0.0240	0.0232	0.0216	0.0205	0.0236	0.0216	0.0218	0.0216	0.0217	0.0215	0.0221	0.0218	0.0220	0.0210	0.0217	0.0232	0.0212	0.0205	0.0212	0.0208	0.0220
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	0.0209	0.0175	0.0180	0.0165	0.0186	0.0180	0.0206	0.0229	0.0218	0.0222	0.0218	0.0220	0.0218	0.0224	0.0227	0.0227	0.0217	0.0229	0.0247	0.0219	0.0210	0.0219	0.0212	0.0219
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	0.0213	0.0176	0.0183	0.0163	0.0166	0.0181	0.0211	0.0233	0.0217	0.0221	0.0217	0.0220	0.0218	0.0224	0.0224	0.0225	0.0209	0.0223	0.0247	0.0220	0.0210	0.0212	0.0211	0.0217
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	0.0216	0.0197	0.0215	0.0236	0.0228	0.0207	0.0214	0.0229	0.0218	0.0220	0.0222	0.0223	0.0224	0.0229	0.0224	0.0230	0.0215	0.0227	0.0252	0.0223	0.0214	0.0215	0.0211	0.0219
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	0.0187	0.0186	0.0189	0.0196	0.0193	0.0190	0.0186	0.0246	0.0239	0.0219	0.0207	0.0206	0.0188	0.0217	0.0199	0.0206	0.0211	0.0210	0.0214	0.0200	0.0198	0.0176	0.0173	0.0196
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	0.0205	0.0210	0.0204	0.0216	0.0213	0.0199	0.0212	0.0231	0.0228	0.0232	0.0230	0.0225	0.0226	0.0233	0.0229	0.0229	0.0215	0.0227	0.0249	0.0222	0.0213	0.0217	0.0211	0.0221
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	0.0202	0.0195	0.0221	0.0250	0.0239	0.0210	0.0199	0.0236	0.0217	0.0221	0.0220	0.0219	0.0220	0.0223	0.0220	0.0223	0.0212	0.0225	0.0242	0.0221	0.0207	0.0214	0.0207	0.0216
R029	833768.03	822376.15	833848.76	822405.79	13	0	1	0.0171	0.0170	0.0181	0.0152	0.0150	0.0176	0.0170	0.0245	0.0232	0.0210	0.0199	0.0202	0.0183	0.0221	0.0202	0.0213	0.0230	0.0220	0.0226	0.0216	0.0226	0.0203	0.0200	0.0218
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	0.0168	0.0166	0.0162	0.0168	0.0164	0.0170	0.0167	0.0225	0.0217	0.0191	0.0178	0.0187	0.0190	0.0196	0.0196	0.0197	0.0201	0.0202	0.0222	0.0190	0.0187	0.0170	0.0167	0.0186
R031	833917.83	822431.11	833980.58	822464.39	14	0	1	0.0168	0.0181	0.0152	0.0156	0.0156	0.0152	0.0168	0.0261	0.0248	0.0225	0.0212	0.0209	0.0188	0.0223	0.0200	0.0209	0.0221	0.0210	0.0221	0.0205	0.0213	0.0192	0.0189	0.0213
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	0.0285	0.0262	0.0155	0.0156	0.0156	0.0157	0.0156	0.0212	0.0196	0.0195	0.0193	0.0195	0.0196	0.0203	0.0200	0.0201	0.0191	0.0198	0.0215	0.0195	0.0188	0.0193	0.0190	0.0200
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	0.0188	0.0187	0.0187	0.0189	0.0189	0.0189	0.0187	0.0212	0.0197	0.0199	0.0198	0.0200	0.0196	0.0204	0.0201	0.0201	0.0193	0.0201	0.0220	0.0195	0.0188	0.0190	0.0190	0.0197
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	0.0154	0.0154	0.0158	0.0164	0.0164	0.0168	0.0159	0.0195	0.0186	0.0174	0.0176	0.0182	0.0183	0.0186	0.0186	0.0190	0.0183	0.0192	0.0209	0.0182	0.0171	0.0178	0.0175	0.0185
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	0.0224	0.0217	0.0214	0.0208	0.0209	0.0209	0.0212	0.0246	0.0234	0.0236	0.0233	0.0237	0.0243	0.0244	0.0243	0.0240	0.0219	0.0225	0.0249	0.0234	0.0226	0.0246	0.0238	0.0236
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	0.0189	0.0188	0.0188	0.0189	0.0190	0.0190	0.0188	0.0218	0.0205	0.0206	0.0206	0.0203	0.0204	0.0208	0.0208	0.0209	0.0197	0.0210	0.0223	0.0203	0.0190	0.0196	0.0195	0.0198
R037	833653.40	822269.00	833694.86	822284.07	19	0	1	0.0219	0.0218	0.0220	0.0218	0.0219	0.0220	0.0219	0.0240	0.0230	0.0241	0.0240	0.0236	0.0232	0.0233	0.0226	0.0224	0.0206	0.0212	0.0229	0.0204	0.0200	0.0210	0.0204	0.0209
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	0.0224	0.0224	0.0224	0.0222	0.0223	0.0224	0.0223	0.0245	0.0233	0.0246	0.0243	0.0239	0.0234	0.0234	0.0226	0.0223	0.0204	0.0213	0.0225	0.0205	0.0194	0.0200	0.0197	0.0203
R039	833761.98	822311.12	833788.45	822320.76	14	0	1	0.0283	0.0236	0.0246	0.0253	0.0254	0.0255	0.0244	0.0297	0.0284	0.0319	0.0322	0.0304	0.0311	0.0288	0.0291	0.0281	0.0248	0.0253	0.0272	0.0246	0.0236	0.0258	0.0255	0.0252
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	0.0268	0.0272	0.0275	0.0278	0.0279	0.0278	0.0274	0.0289	0.0275	0.0309	0.0307	0.0295	0.0299	0.0279	0.0276	0.0268	0.0235	0.0240	0.0257	0.0234	0.0217	0.0246	0.0243	0.0241
R041	833833.16	822335.17	833902.96	822360.57	18	0	1	0.0283	0.0252	0.0256	0.0263	0.0259	0.0263	0.0257	0.0297	0.0283	0.0318	0.0322	0.0303	0.0310	0.0288	0.0289	0.0280	0.0247	0.0253	0.0272	0.0245	0.0237	0.0257	0.0256	0.0252
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	0.0282	0.0256	0.0262	0.0265	0.0266	0.0266	0.0261	0.0297	0.0284	0.0313	0.0316	0.0304	0.0306	0.0289	0.0286	0.0276	0.0243	0.0253	0.0272	0.0246	0.0237	0.0258	0.0256	0.0253
R043	833950.46	822320.46	834034.90	822250.52	18	0	1	0.0312	0.0312	0.0308	0.0314	0.0309	0.0311	0.0309	0.0315	0.0301	0.0346	0.0352	0.0338	0.0343	0.0321	0.0319	0.0307	0.0269	0.0274	0.0295	0.0275	0.0263	0.0300	0.0295	0.0283
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	0.0271	0.0271	0.0277	0.0275	0.0278	0.0277	0.0275	0.0290	0.0271	0.0304	0.0308	0.0296	0.0299	0.0280	0.0277	0.0268	0.0235	0.0246	0.0265	0.0237	0.0222	0.0248	0.0244	0.0244
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	0.0278	0.0181	0.0180	0.0197	0.0201	0.0205	0.0280	0.0289	0.0275	0.0310	0.0306	0.0296	0.0297	0.0282	0.0283	0.0274	0.0243	0.0248	0.0267	0.0246	0.0233	0.0257	0.0255	0.0253
R046	834231.72	822086.85	834323.21	822011.22	18	0	1	0.0278	0.0244	0.0251	0.0254	0.0256	0.0256	0.0278	0.0293	0.0275	0.0308	0.0310	0.0299	0.0300	0.0285	0.0282	0.0273	0.0241	0.0251	0.0269	0.0244	0.0231	0.0254	0.0252	0.0250
R047	834322.77	822010.68	834384.01	821959.66	18	0	1	0.0281	0.0240	0.0244	0.0254	0.0250	0.0257	0.0280	0.0289	0.0275	0.0308	0.0312	0.0301	0.0301	0.0287	0.0282	0.0274	0.0242	0.0247	0.0266	0.0245	0.0232	0.0257	0.0255	0.0251
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	0.0220	0.0209	0.0210	0.0212	0.0212	0.0212	0.0221	0.0242	0.0236	0.0258	0.0254	0.0244	0.0245	0.0238	0.0236	0.0230	0.0206	0.0215	0.0231	0.0207	0.0199	0.0221	0.0217	0.0213
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	0.0221	0.0221	0.0221	0.0220	0.0221	0.0221	0.0220	0.0238	0.0232	0.0251	0.0250	0.0241	0.0242	0.0232	0.0229	0.0224	0.0200	0.0209	0.0225	0.0204	0.0199	0.0220	0.0217	0.0213
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	0.0216	0.0216	0.0216	0.0215	0.0215	0.0216	0.0216	0.0236	0.0229	0.0252	0.0247	0.0238	0.0242	0.0236	0.0233	0.0232	0.0208	0.0220	0.0239	0.0210	0.0195	0.0210	0.0209	0.0208
R051	833274.06	822006.80	833438.70	822067.62	16	0	1	0.0235	0.0236	0.0236	0.0236	0.0236	0.0236	0.0236	0.0250	0.0241	0.0269	0.0267	0.0262	0.0266	0.0256	0.0256	0.0254	0.0225	0.0235	0.0258	0.0229	0.0219	0.0249	0.0245	0.0237
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	0.0280	0.0254	0.0254	0.0255	0.0255	0.0254	0.0272	0.0275	0.0265	0.0297	0.0300	0.0288	0.0292	0.0272	0.0270	0.0261	0.0227	0.0233	0.0257	0.0235	0.0231	0.0261	0.0262	0.0254
R053	833786.86	822123.44	833736.68	822163.25	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R053	833736.66	822163.26	833688.33	822174.73	16	0	1	0.0262	0.0248	0.0249	0.0250	0.0250	0.0251	0.0263	0.0270	0.0259	0.0294	0.0295	0.0280	0.0287	0.0269	0.0266	0.0257	0.0224	0.0234	0.0254	0.0229	0.0221	0.0252	0.0247	0.0236
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833649.56	822144.40	833683.68	822152.80	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	0.0255	0.0255	0.0254	0.0255	0.0255	0.0254	0.0254	0.0262	0.0254	0.0284	0.0290	0.0284	0.0293	0.0280	0.0282	0.0276	0.0246	0.0258	0.0284	0.0258	0.0251	0.0294	0.0287	0.0268
R055	833786.53	822123.04	833872.14	822061.39	16	0	1	0.0238	0.0238	0.0238	0.0239	0.0239	0.0238	0.0239	0.0250	0.0236	0.0263	0.0262	0.0253	0.0254	0.0242	0.0239	0.0231	0.0204	0.0211	0.0229	0.0208	0.0203	0.0226	0.0221	0.0216
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	0.0303	0.0300	0.0305	0.0302	0.0306	0.0305	0.0305	0.0305	0.0288	0.0336	0.0349	0.0336	0.0349	0.0322	0.0327	0.0316	0.0271	0.0278	0.0305	0.0286	0.0281	0.0337	0.0329	0.0301
R057	833873.30	822052.66	834159.21	821814.78	16	0	1	0.0249	0.0221	0.0226	0.0230	0.0229	0.0230	0.0249	0.0262	0.0250	0.0275	0.0278	0.0267	0.0271	0.0254	0.0257	0.0251	0.0219	0.0225	0.0244	0.0225	0.0211	0.0236	0.0236	0.0234
R058	834159.21	821814.78	834256.10	821736.42	15	0	1	0.0282	0.0243	0.0249	0.0257	0.0256	0.0258	0.0282	0.0287	0.0269	0.0311	0.0315	0.0299	0.0302	0.0279	0.0275	0.0263	0.0226	0.0229	0.0247	0.0228	0.0223	0.0255	0.0249	0.0238
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	0.0282	0.0284	0.0281	0.0280	0.0284	0.0283	0.0282	0.0289	0.0276	0.0310	0.0322	0.0307	0.0315	0.0290	0.0296	0.0286	0.0246	0.0252	0.0274	0.0253	0.0240	0.0277	0.0276	0.0266
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	0.0267	0.0274	0.0279	0.0278	0.0280	0.0281	0.0277	0.0280	0.0260	0.0304	0.0318	0.0310	0.0327	0.0296	0.0303	0.0295	0.0251	0.0262	0.0288	0.0263	0.0251	0.0314	0.0304	0.0277
R061	833115.37	821880.28	833139.78	821889.31	16	0	1	0.0220	0.0200	0.0200	0.0201	0.0203	0.0201	0.0218	0.0214	0.0211	0.0211	0.0212	0.0214	0.0213	0.0209	0.0214	0.0209	0.0209	0.0210	0.0213	0.0211	0.0213	0.0217	0.0199	0.0203
R062	833139.75	821889.31	833296.76	821947.78	16	0	1	0.0170	0.0172	0.0171	0.0175	0.0173	0.0169	0.0173	0.0203	0.0192	0.0184	0.0182	0.0185	0.0187	0.0183	0.0188	0.0190	0.0185	0.0187	0.0199	0.0169	0.0167	0.0168	0.0159	0.0180
R063	833296.66	821947.56	833460.51	822007.97	16	0	1	0.0205	0.0167	0.0173	0.0157	0.0181	0.0170	0.0203	0.0228	0.0211	0.0215	0.0216	0.0215	0.0212	0.0217	0.0216	0.0216	0.0204	0.0213	0.0231	0.0208	0.0203	0.0207	0.0204	0.0219
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	0.0206	0.0167	0.0172	0.0156	0.0176	0.0170	0.0202	0.0229	0.0211	0.0214	0.0212	0.0216	0.0210	0.0219	0.0215	0.0212	0.0206	0.0212	0.0227	0.0204	0.0199	0.0200	0.0207	0.0214
R065	833160.17	821834.07	833315.66	821891.67	16	0	1	0.0176	0.0175	0.0182	0.0184	0.0185	0.0178	0.0187	0.0213	0.0196	0.0196	0.0199	0.0197	0.0201	0.0196	0.0192	0.0194	0.0187	0.0185	0.0195	0.0167	0.0166	0.0164	0.0163	0.0176
R066	833315.66	821891.68	833481.00	821962.76	16	0	1	0.0186	0.0178	0.0174	0.0180	0.0180	0.0174	0.0185	0.0208	0.0195	0.0194	0.0195	0.0201	0.0198	0.0203	0.0203	0.0202	0.0189	0.0204	0.0217	0.0193	0.0181	0.0188	0.0187	0.0199
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0138	0.0168	0.0164	0.0168	0.0163	0.0156	0.0155	0.0158	0.0159	0.0160	0.0151	0.0157	0.0171	0.0143	0.0129	0.0129	0.0130	0.0135
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0166	0.0164	0.0168	0.0155	0.0151	0.0149	0.0154	0.0152	0.0154	0.0146	0.0157	0.0171	0.0140	0.0128	0.0130	0.0129	0.0135
R069	833166.60	821757.87	833260.16	821795.91	29	0	1	0.0118	0.0118	0.0118	0.0117	0.0117	0.0117	0.0119	0.0146	0.0134	0.0125	0.0117	0.0119	0.0112	0.0123	0.0120	0.0123	0.0119	0.0132	0.0144	0.0117	0.0111	0.0105	0.0106	0.0117
R070	833249.90	821820.73	833329.89	821883.67	13	0	1	0.0165	0.0165	0.0165	0.0166	0.0164	0.0164	0.0164	0.0188	0.0177	0.0180	0.0171	0.0173	0.0167	0.0174	0.0168	0.0168	0.0159	0.0169	0.0180	0.0159	0.0154	0.0157	0.0155	0.0161

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	16	0	1	0.0164	0.0163	0.0164	0.0164	0.0162	0.0163	0.0163	0.0185	0.0171	0.0174	0.0168	0.0168	0.0165	0.0170	0.0166	0.0166	0.0157	0.0165	0.0180	0.0157	0.0154	0.0158	0.0156	0.0163
R072	833397.24	821875.22	833501.75	821897.07	20	0	1	0.0175	0.0173	0.0176	0.0171	0.0173	0.0175	0.0174	0.0196	0.0178	0.0182	0.0181	0.0179	0.0174	0.0178	0.0174	0.0174	0.0161	0.0167	0.0182	0.0163	0.0156	0.0159	0.0159	0.0169
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	0.0151	0.0151	0.0149	0.0149	0.0150	0.0152	0.0150	0.0173	0.0156	0.0153	0.0149	0.0152	0.0147	0.0157	0.0152	0.0155	0.0150	0.0155	0.0167	0.0151	0.0146	0.0144	0.0144	0.0155
R074	833281.64	821790.34	833451.80	821860.54	20	0	1	0.0158	0.0159	0.0159	0.0159	0.0155	0.0156	0.0158	0.0179	0.0163	0.0162	0.0158	0.0159	0.0153	0.0161	0.0155	0.0156	0.0148	0.0153	0.0166	0.0148	0.0144	0.0143	0.0142	0.0151
R075	833449.48	821861.09	833506.97	821883.08	16	0	1	0.0155	0.0155	0.0158	0.0152	0.0153	0.0156	0.0157	0.0180	0.0162	0.0160	0.0156	0.0156	0.0150	0.0158	0.0152	0.0153	0.0145	0.0151	0.0164	0.0145	0.0140	0.0135	0.0139	0.0148
R076	833501.46	821897.80	833548.66	821899.77	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R076	833548.66	821899.77	833603.43	821886.09	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R076	833603.43	821886.09	833684.92	821822.32	16	0	1	0.0182	0.0183	0.0185	0.0187	0.0181	0.0185	0.0182	0.0205	0.0187	0.0194	0.0191	0.0187	0.0182	0.0183	0.0177	0.0175	0.0161	0.0165	0.0180	0.0161	0.0156	0.0159	0.0160	0.0167
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	0.0156	0.0157	0.0158	0.0159	0.0156	0.0158	0.0156	0.0180	0.0163	0.0162	0.0158	0.0159	0.0152	0.0160	0.0154	0.0155	0.0147	0.0152	0.0165	0.0147	0.0144	0.0143	0.0142	0.0151
R078	833682.38	821822.35	833875.32	821880.75	16	0	1	0.0196	0.0199	0.0198	0.0200	0.0194	0.0197	0.0197	0.0215	0.0198	0.0209	0.0207	0.0202	0.0196	0.0194	0.0188	0.0184	0.0168	0.0171	0.0185	0.0167	0.0164	0.0169	0.0166	0.0174
R079	833673.29	821811.43	833867.51	821851.46	16	0	1	0.0143	0.0142	0.0144	0.0144	0.0140	0.0143	0.0143	0.0167	0.0151	0.0145	0.0139	0.0142	0.0133	0.0146	0.0140	0.0142	0.0138	0.0143	0.0155	0.0138	0.0135	0.0130	0.0129	0.0140
R080	833875.67	821861.18	833989.54	821587.94	16	0	1	0.0164	0.0165	0.0163	0.0164	0.0164	0.0167	0.0166	0.0186	0.0167	0.0170	0.0167	0.0168	0.0162	0.0169	0.0162	0.0164	0.0154	0.0157	0.0172	0.0153	0.0151	0.0157	0.0154	0.0161
R081	833867.01	821850.88	833983.09	821582.98	20	0	1	0.0145	0.0144	0.0146	0.0147	0.0143	0.0145	0.0145	0.0168	0.0152	0.0147	0.0142	0.0144	0.0137	0.0148	0.0142	0.0144	0.0140	0.0145	0.0157	0.0140	0.0138	0.0133	0.0132	0.0143
R082	833458.18	821804.41	833510.75	821821.12	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R082	833536.29	821785.93	833570.13	821687.58	14	0	1	0.0173	0.0171	0.0172	0.0173	0.0173	0.0171	0.0170	0.0196	0.0182	0.0181	0.0177	0.0184	0.0177	0.0188	0.0186	0.0188	0.0183	0.0190	0.0206	0.0184	0.0183	0.0181	0.0179	0.0186
R083	833436.87	821855.11	833496.18	821813.12	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R083	833524.36	821772.29	833559.81	821652.62	14	0	1	0.0123	0.0127	0.0118	0.0118	0.0118	0.0129	0.0127	0.0125	0.0122	0.0128	0.0130	0.0129	0.0131	0.0132	0.0127	0.0130	0.0123	0.0126	0.0131	0.0125	0.0129	0.0144	0.0131	0.0130
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
R084	833582.69	821644.68	833607.71	821603.87	13	0	1	0.0165	0.0166	0.0166	0.0166	0.0166	0.0166	0.0167	0.0191	0.0176	0.0175	0.0169	0.0175	0.0167	0.0182	0.0174	0.0177	0.0174	0.0179	0.0194	0.0173	0.0175	0.0174	0.0168	0.0174
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	0.0171	0.0172	0.0172	0.0173	0.0173	0.0172	0.0170	0.0193	0.0180	0.0180	0.0175	0.0176	0.0173	0.0182	0.0178	0.0180	0.0178	0.0183	0.0195	0.0177	0.0178	0.0174	0.0172	0.0176
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0185	0.0168	0.0165	0.0158	0.0166	0.0157	0.0170	0.0164	0.0165	0.0164	0.0167	0.0181	0.0165	0.0165	0.0164	0.0163	0.0168
R087	833648.49	821548.42	833695.49	821508.30	13	0	1	0.0197	0.0197	0.0198	0.0197	0.0197	0.0197	0.0197	0.0203	0.0201	0.0201	0.0199	0.0201	0.0198	0.0204	0.0201	0.0202	0.0201	0.0201	0.0204	0.0198	0.0198	0.0199	0.0199	0.0196
R088	833254.24	821811.68	833365.50	821856.64	17	4	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833365.50	821856.64	833416.50	821865.51	17	7	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	0.0077	0.0076	0.0077	0.0076	0.0074	0.0076	0.0077	0.0090	0.0093	0.0087	0.0084	0.0073	0.0073	0.0067	0.0065	0.0066	0.0060	0.0060	0.0058	0.0051	0.0054	0.0052	0.0053	0.0051
R089	833256.86	821891.44	833370.08	821846.87	16	4	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R089	833598.98	821594.44	833699.93	821506.87	16	6	4	0.0076	0.0076	0.0075	0.0075	0.0076	0.0075	0.0076	0.0086	0.0080	0.0077	0.0078	0.0069	0.0069	0.0065	0.0062	0.0064	0.0057	0.0057	0.0055	0.0050	0.0053	0.0051	0.0053	0.0051
R090+R091	833259.78	821829.64	833317.84	821634.13	17	0	1	0.0178	0.0177	0.0173	0.0173	0.0174	0.0178	0.0179	0.0214	0.0207	0.0197	0.0190	0.0192	0.0187	0.0198	0.0196	0.0202	0.0193	0.0204	0.0220	0.0193	0.0183	0.0173	0.0178	0.0196
R092+R093	833337.92	821632.03	833449.56	821640.31	20	0	1	0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
R092+R093	833449.06	821640.31	833513.09	821599.24	20	0	1	0.0177	0.0182	0.0181	0.0182	0.0182	0.0183	0.0177	0.0213	0.0203	0.0192	0.0188	0.0188	0.0182	0.0197	0.0193	0.0198	0.0189	0.0205	0.0220	0.0193	0.0180	0.0174	0.0184	0.0190
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	0.0101	0.0101	0.0101	0.0101	0.0102	0.0102	0.0101	0.0109	0.0101	0.0104	0.0096	0.0097	0.0089	0.0095	0.0084	0.0085	0.0083	0.0086	0.0082	0.0074	0.0076	0.0068	0.0065	0.0078
R095	833609.59	821501.72	833648.49	821548.43	17	0	1	0.0231	0.0226	0.0227	0.0227	0.0228	0.0227	0.0228	0.0239	0.0234	0.0236	0.0236	0.0234	0.0233	0.0233	0.0231	0.0231	0.0228	0.0228	0.0233	0.0223	0.0222	0.0224	0.0225	0.0224
R096+R097	833980.89	822454.38	834028.77	822414.27	18	0	1	0.0213	0.0260	0.0147	0.0150	0.0148	0.0157	0.0210	0.0236	0.0240	0.0246	0.0225	0.0227	0.0222	0.0238	0.0240	0.0230	0.0223	0.0222	0.0258	0.0224	0.0216	0.0222	0.0231	0.0217
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	0.0282	0.0291	0.0279	0.0277	0.0308	0.0294	0.0298	0.0309	0.0299	0.0342	0.0335	0.0321	0.0322	0.0312	0.0306	0.0297	0.0253	0.0270	0.0293	0.0257	0.0238	0.0260	0.0263	0.0255
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1	0.0255	0.0251	0.0254	0.0266	0.0258	0.0279	0.0256	0.0287	0.0269	0.0301	0.0290	0.0292	0.0290	0.0286	0.0281	0.0277	0.0245	0.0257	0.0277	0.0252	0.0241	0.0252	0.0248	0.0263
R102+R103	834216.31	822256.36	834309.95	822180.58	18	0	1	0.0269	0.0284	0.0241	0.0273	0.0256	0.0263	0.0273	0.0268	0.0261	0.0280	0.0288	0.0281	0.0282	0.0273	0.0256	0.0257	0.0231	0.0232	0.0253	0.0222	0.0224	0.0229	0.0238	0.0240
R104+R105	834309.86	822180.68	834407.46	822098.55	18	0	1	0.0239	0.0261	0.0216	0.0239	0.0230	0.0210	0.0254	0.0271	0.0252	0.0268	0.0249	0.0244	0.0244	0.0241	0.0249	0.0235	0.0220	0.0226	0.0249	0.0219	0.0220	0.0235	0.0234	0.0248
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	0.0195	0.0179	0.0193	0.0210	0.0205	0.0189	0.0192	0.0215	0.0209	0.0206	0.0203	0.0203	0.0204	0.0215	0.0215	0.0219	0.0208	0.0223	0.0240	0.0213	0.0202	0.0207	0.0206	0.0214
R107	833991.55	822370.04	834090.39	822287.63	18	0	1	0.0188	0.0185	0.0201	0.0222	0.0215	0.0195	0.0186	0.0222	0.0201	0.0199	0.0198	0.0199	0.0196	0.0210	0.0210	0.0212	0.0203	0.0211	0.0234	0.0206	0.0205	0.0204	0.0211	0.0210
R108	834090.84	822288.08	834181.98	822212.22	18	0	1	0.0185	0.0181	0.0200	0.0219	0.0208	0.0192	0.0183	0.0211	0.0198	0.0194	0.0193	0.0198	0.0193	0.0205	0.0206	0.0207	0.0204	0.0211	0.0228	0.0208	0.0198	0.0201	0.0209	0.0220
R109	834181.88	822212.22	834273.05	822136.48	17	0	1	0.0185	0.0181	0.0200	0.0220	0.0209	0.0192	0.0183	0.0212	0.0198	0.0195	0.0194	0.0200	0.0197	0.0210	0.0203	0.0211	0.0203	0.0209	0.0230	0.0205	0.0194	0.0212	0.0198	0.0224
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	0.0189	0.0196	0.0187	0.0200	0.0197	0.0183	0.0187	0.0216	0.0198	0.0194	0.0195	0.0197	0.0192	0.0206	0.0203	0.0207	0.0201	0.0210	0.0226	0.0205	0.0201	0.0206	0.0197	0.0207
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	0.0195	0.0177	0.0193	0.0208	0.0203	0.0186	0.0192	0.0214	0.0199	0.0196	0.0197	0.0198	0.0194	0.0207	0.0205	0.0208	0.0201	0.0206	0.0226	0.0203	0.0195	0.0197	0.0203	0.0212
R112	833849.76	822405.79	833902.96	822360.57	19	0	1	0.0323	0.0320	0.0300	0.0346	0.0326	0.0326	0.0310	0.0325	0.0308	0.0351	0.0354	0.0340	0.0339	0.0323	0.0327	0.0314	0.0270	0.0285	0.0309	0.0279	0.0264	0.0295	0.0290	0.0285
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	0.0166	0.0184	0.0140	0.0136	0.0142	0.0203	0.0188	0.0204	0.0189	0.0183	0.0182	0.0187	0.0182	0.0192	0.0191	0.0196	0.0189	0.0198	0.0214	0.0190	0.0180	0.0197	0.0183	0.0208
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	0.0189	0.0187	0.0181	0.0190	0.0187	0.0187	0.0187	0.0212	0.0205	0.0206	0.0203	0.0205	0.0202	0.0212	0.0210	0.0212	0.0203	0.0208	0.0227	0.0204	0.0193	0.0195	0.0195	0.0202
R115	833994.06	822200.75	834077.01	822132.08	16	0	1	0.0237	0.0241	0.0239	0.0235	0.0241	0.0239	0.0237	0.0253	0.0240	0.0258	0.0259	0.0256	0.0256	0.0252	0.0250	0.0247	0.0224	0.0231	0.0249	0.0231	0.0221	0.0238	0.0235	0.0236
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	0.0181	0.0178	0.0180	0.0191	0.0187	0.0187	0.0183	0.0205	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0197	0.0200	0.0195	0.0201	0.0215	0.0197	0.0187	0.0191	0.0191	0.0200
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	0.0184	0.0181	0.0183	0.0175	0.0190	0.0179	0.0182	0.0204	0.0193	0.0190	0.0190	0.0193	0.0190	0.0199	0.0196	0.0200	0.0192	0.0201	0.0215	0.0197	0.0188	0.0191	0.0190	0.0201
R118	834190.59	822037.73	834243.25	821993.98	19	0	1	0.0183	0.0181	0.0182	0.0174	0.0189	0.0179	0.0182	0.0202	0.0192	0.0189	0.0188	0.0192	0.0190	0.0198	0.0197	0.0200	0.0196	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
R119	834242.94	821993.86	834282.16	821961.45	19	0	1	0.0181	0.0182	0.0176	0.0186	0.0183	0.0183	0.0179	0.0203	0.0191	0.0191	0.0188	0.0191	0.0189	0.0198	0.0197	0.0200	0.0195	0.0201	0.0216	0.0198	0.0187	0.0193	0.0191	0.0201
R120	834281.93	821961.17	834309.17	821886.80	18	0	1	0.0180	0.0181	0.0186	0.0185	0.0181	0.0182	0.0182	0.0204	0.0196	0.0194	0.0190	0.0193	0.0189	0.0199	0.0201	0.0200	0.0195	0.0200	0.0219	0.0196	0.0187	0.0190	0.0192	0.0200
R121	833768.03	822376.18	833789.11	822318.98	18	0	1	0.0164	0.0164	0.0158	0.0166	0.0161	0.0164	0.0162	0.0193	0.0170	0.0164	0.0154	0.0162	0.0150	0.0182	0.0167	0.0169	0.0169	0.0184	0.0200	0.0180	0.0181	0.0183	0.0176	0.0184
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	0.0179	0.0187	0.0197	0.0209	0.0199	0.0186	0.0172	0.0201	0.0185	0.0181	0.0172	0.0177	0.0164	0.0183	0.0170	0.0174	0.0169	0.0182	0.0193	0.0170	0.0168	0.0146	0.0148	0.0168
R123	833868.78	822222.16	833964.75	822150.69	16	0	1	0.0149	0.0148	0.0149	0.0149	0.0147	0.0148	0.0148	0.0183	0.0174	0.0153	0.0144	0.0147	0.0135	0.0155	0.0151	0.0156	0.0154	0.0165	0.0178	0.0155	0.0143	0.0124	0.0124	0.0150
R124	833673.82	822341.72	833694.88	822284.07	18	0	1	0.0176	0.0177	0.0177	0.0175	0.0173	0.0176	0.0176	0.0198	0.0185	0.0185	0.0175	0.0181	0.0172	0.0194	0.0184	0.0187	0.0186	0.0192	0.0205	0.0185	0.0195	0.0199	0.0194	0.0182
R125	833694.86	822384.07	833827.77	822172.98	19	0	1	0.0169	0.0169	0.0169	0.0167	0.0169	0.0168	0.0169	0.0197	0.0178	0.0175	0.0163	0.0168	0.0154	0.0168	0.0165	0.0168	0.0162	0.0171	0.0181	0.0159	0.0151	0.0139	0.0130	0.0155
R126	833653.40	822269.00	833685.33	822174.73	13	0	1	0.0206	0.0215	0.0202	0.0221	0.0215	0.0197	0.0203	0.0228	0.0216	0.0217	0.0218	0.0218	0.0216	0.0224	0.0219	0.0222	0.0210	0.0222	0.0240	0.0213	0.0208	0.0216	0.0206	0.0218
R127	833409.65	822315.75	833503.51	822278.46	16	0	1	0.0169	0.0169	0.0167	0.0168	0.0169	0.0169	0.0168	0.0196	0.0183	0.0172	0.0166	0.0170	0.0159	0.0177	0.0168	0.0171	0.0174	0.0178	0.0194	0.0170	0.0170	0.0156	0.0153	0.0169
R128	833503.61	822278.46	833524.35	822221.21	16	0	1	0.0162	0.0162	0.0160	0.0161	0.0160	0.0163	0.0162	0.0190	0.0173	0.0162	0.0156	0.0161	0.0150	0.0169	0.0160	0.0164	0.0166	0.0175	0.0188	0.0164	0.0163	0.0153	0.0152	0.0167
R129	833377.80	822332.03	833308.00	822293.72	16	0	1	0.0146	0.0146	0.0145	0.0146	0.0145	0.0145	0.0146	0.0179	0.0164	0.0151	0.0141	0.0146	0.0135	0.0154	0.0146	0.0150	0.0149	0.0159	0.0172	0.0149	0.0146	0.0136	0.0134	0.0150
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	0.0145	0.0144	0.0144	0.0144	0.0144	0.0145	0.0145	0.0178	0.0163	0.0150	0.0139	0.0145	0.0134	0.0153	0.0144	0.0148	0.0148	0.0158	0.0168	0.0148	0.0148	0.0134	0.0132	0.0148
R131	833398.42	822175.04	833434.10	822080.75	16	0	1	0.0150	0.0151	0.0151	0.0151	0.0151	0.0151	0.0150	0.0185	0.0174	0.0164	0.0146	0.0150	0.0142	0.0159	0.0146	0.0155	0.0158	0.0159	0.0170	0.0148	0.0147	0.0133	0.0129	0.0153
R132	833433.92	822080.70	833460.51	822007.87	18	0	1	0.0144	0.0148	0.0151	0.0151	0.0147	0.0137	0.0126	0.0130	0.0134	0.0147	0.0137	0.0132	0.0136	0.0127	0.0121	0.0118	0.0111	0.0116	0.0120	0.0106	0.0112	0.0106	0.0100	0.0104
R133	833460.45	822007.98	833481.00	821952.76	19	0	1	0.0185	0.0198	0.0213	0.0223	0.0214	0.0195	0.0176	0.0203	0.0196	0.0206	0.0190	0.0191	0.0184	0.0188	0.0183	0.0175	0.0166	0.0178	0.0195	0.0165	0.0161	0.0142	0.0141	0.0160
R134	833481.06	821952.76	833506.97	821883.06	16	0	1	0.0171	0.0180	0.0191	0.0203	0.0194	0.0178	0.0162	0.0190	0.0184	0.0177	0.0170	0.0172	0.0165	0.0176	0.0172	0.0174	0.0164	0.0177	0.0193	0.0170	0.0149	0.0147	0.0149	0.0164
R135	833209.07	822239.78	833232.08	822178.07	16	0	1	0.0240	0.0277	0.0346	0.0346	0.0331	0.0256	0.0203	0.0220	0.0181	0.0173	0.0180	0.0180	0.0169	0.0188	0.0179	0.0183	0.0179	0.0178	0.0187	0.0174	0.0206	0.0180	0.0181	0.0189
R136	833232.03	822178.06	833253.39	822120.94	16	0	1	0.0152	0.0161	0.0138	0.0138	0.0138	0.0138	0.0152	0.0189	0.0168	0.0157	0.0147	0.0152	0.0141	0.0162	0.0151	0.0155	0.0155	0.0164	0.0178	0.0156	0.0154	0.0139	0.0141	0.0157
R137	833080.91	822182.63	833100.53	822129.44	18	0	1	0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	0.0138	0.0142	0.0147	0.0128	0.0128	0.0147	0.0142	0.0173	0.0154	0.0142	0.0133	0.0138	0.0129	0.0149	0.0139	0.0143	0.0143	0.0150	0.0163	0.0143	0.0140	0.0126	0.0129	0.0145
R139	833121.68	822072.03	833166.58	821977.95	18	0	1	0.0141	0.0142	0.0142	0.0142	0.0141	0.0142	0.0141	0.0173	0.0155	0.0141	0.0134	0.0139	0.0128	0.0148	0.0140	0.0145	0.0145	0.0151	0.0165	0.0144	0.0144	0.0134	0.0134	0.0146
R140	833274.48	822007.07	833296.88	821947.56	17	0	1	0.0195	0.0200	0.0195	0.0205	0.0199	0.0191	0.0193	0.0222	0.0199	0.0202	0.0194	0.0191	0.0179	0.0188	0.0177	0.0176	0.0163	0.0170	0.0186	0.0161	0.0155	0.0140	0.0143	0.0164

Caline 4 input for 2034 Q4

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)	FSP (g/VMT) Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.35	821947.28	833315.58	821891.67	13	0	1	0.0193	0.0175	0.0161	0.0161	0.0158	0.0159	0.0192	0.0220	0.0197	0.0206	0.0197	0.0189	0.0181	0.0191	0.0175	0.0172	0.0159	0.0168	0.0180	0.0160	0.0151	0.0139	0.0135	0.0161
R142	833329.89	821853.87	833315.98	821891.84	13	0	1	0.0127	0.0110	0.0115	0.0097	0.0104	0.0118	0.0146	0.0141	0.0131	0.0149	0.0150	0.0152	0.0161	0.0158	0.0160	0.0163	0.0155	0.0162	0.0167	0.0160	0.0163	0.0192	0.0181	0.0168
R143	833135.78	821889.31	833160.17	821834.07	13	0	1	0.0193	0.0198	0.0193	0.0202	0.0198	0.0190	0.0199	0.0217	0.0203	0.0212	0.0199	0.0199	0.0187	0.0194	0.0183	0.0181	0.0171	0.0177	0.0187	0.0169	0.0158	0.0148	0.0145	0.0167
R144	833160.17	821834.07	833178.74	821793.16	13	0	1	0.0194	0.0198	0.0193	0.0204	0.0199	0.0190	0.0192	0.0219	0.0203	0.0205	0.0198	0.0193	0.0181	0.0191	0.0177	0.0178	0.0166	0.0173	0.0184	0.0166	0.0158	0.0148	0.0143	0.0167
R145+R146	833912.49	821978.50	834004.98	821816.03	17	0	1	0.0161	0.0161	0.0168	0.0156	0.0152	0.0164	0.0160	0.0192	0.0169	0.0162	0.0151	0.0155	0.0141	0.0159	0.0148	0.0152	0.0148	0.0160	0.0171	0.0149	0.0133	0.0111	0.0117	0.0148
R147+R148	833738.44	821888.35	833931.13	821727.74	19	0	1	0.0157	0.0156	0.0159	0.0158	0.0158	0.0161	0.0159	0.0190	0.0169	0.0159	0.0149	0.0152	0.0138	0.0156	0.0146	0.0150	0.0147	0.0155	0.0167	0.0144	0.0129	0.0105	0.0114	0.0147
R149	833728.61	821749.92	833807.73	821684.36	14	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R149	833774.08	821643.82	833807.73	821684.36	13	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R150	833736.07	821758.23	833807.71	821603.87	11	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0157	0.0156	0.0165	0.0179	0.0157	0.0158	0.0146	0.0142	0.0158
R151	833612.61	821610.08	833885.50	821543.70	13	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
R161	833693.50	821643.70	833776.28	821642.53	14	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0153	0.0188	0.0164	0.0155	0.0147	0.0152	0.0141	0.0161	0.0152	0.0156	0.0156	0.0164	0.0178	0.0157	0.0158	0.0140	0.0142	0.0156
R152	833774.08	821643.52	833826.17	821600.58	20	0	1	0.0153	0.0156	0.0152	0.0156	0.0156	0.0152	0.0152	0.0188	0.0168	0.0155	0.0147	0.0152	0.0140	0.0162	0.0151	0.0156	0.0157	0.0164	0.0178	0.0156	0.0156	0.0143	0.0145	0.0159
R153	833991.31	822369.79	834029.77	822414.27	19	0	1	0.0171	0.0164	0.0167	0.0170	0.0173	0.0170	0.0173	0.0201	0.0186	0.0172	0.0162	0.0166	0.0149	0.0165	0.0158	0.0162	0.0155	0.0163	0.0176	0.0154	0.0146	0.0131	0.0134	0.0151
R154	833950.46	822320.45	833962.00	822369.67	18	0	1	0.0171	0.0165	0.0167	0.0170	0.0173	0.0171	0.0173	0.0201	0.0186	0.0176	0.0160	0.0164	0.0155	0.0171	0.0158	0.0162	0.0156	0.0165	0.0177	0.0152	0.0144	0.0128	0.0131	0.0151
R155	833909.66	822271.38	833950.46	822320.45	16	0	1	0.0172	0.0165	0.0168	0.0170	0.0173	0.0171	0.0174	0.0206	0.0191	0.0177	0.0166	0.0170	0.0152	0.0169	0.0161	0.0165	0.0158	0.0166	0.0179	0.0157	0.0150	0.0131	0.0134	0.0151
R156	833868.78	822222.16	833909.65	822271.38	18	0	1	0.0205	0.0194	0.0195	0.0190	0.0185	0.0190	0.0200	0.0255	0.0238	0.0231	0.0219	0.0221	0.0207	0.0222	0.0206	0.0206	0.0202	0.0209	0.0215	0.0189	0.0175	0.0156	0.0158	0.0176
R157	833868.06	822222.34	833827.77	822172.98	18	0	1	0.0187	0.0187	0.0183	0.0184	0.0182	0.0184	0.0188	0.0233	0.0220	0.0209	0.0199	0.0197	0.0183	0.0204	0.0188	0.0190	0.0187	0.0193	0.0205	0.0179	0.0169	0.0156	0.0151	0.0175
R158	833827.77	822172.08	833776.49	822112.30	18	0	1	0.0184	0.0183	0.0183	0.0185	0.0183	0.0185	0.0185	0.0214	0.0198	0.0191	0.0181	0.0184	0.0172	0.0185	0.0175	0.0176	0.0172	0.0177	0.0189	0.0170	0.0161	0.0149	0.0150	0.0169
R159	834075.91	822299.62	834112.50	822344.34	16	0	1	0.0175	0.0181	0.0192	0.0196	0.0140	0.0142	0.0177	0.0201	0.0176	0.0175	0.0172	0.0175	0.0165	0.0187	0.0181	0.0181	0.0169	0.0183	0.0191	0.0176	0.0165	0.0168	0.0169	0.0190
R160	834090.39	822387.53	834127.62	822332.11	15	0	1	0.0179	0.0186	0.0184	0.0176	0.0182	0.0178	0.0182	0.0210	0.0189	0.0190	0.0184	0.0181	0.0173	0.0183	0.0174	0.0171	0.0163	0.0171	0.0182	0.0166	0.0158	0.0159	0.0159	0.0168
R161	834034.90	822250.52	834075.91	822299.62	15	0	1	0.0170	0.0169	0.0168	0.0172	0.0166	0.0174	0.0173	0.0202	0.0187	0.0179	0.0177	0.0178	0.0172	0.0184	0.0177	0.0179	0.0174	0.0182	0.0200	0.0173	0.0171	0.0169	0.0169	0.0178
R162	834049.42	822238.28	834090.39	822287.83	15	0	1	0.0178	0.0180	0.0177	0.0182	0.0181	0.0177	0.0177	0.0205	0.0188	0.0189	0.0180	0.0178	0.0169	0.0183	0.0171	0.0172	0.0165	0.0169	0.0180	0.0159	0.0156	0.0156	0.0150	0.0168
R163	833993.06	822201.60	834036.90	822250.52	16	0	1	0.0183	0.0183	0.0182	0.0183	0.0182	0.0185	0.0183	0.0212	0.0194	0.0196	0.0191	0.0188	0.0180	0.0189	0.0179	0.0181	0.0169	0.0174	0.0189	0.0167	0.0162	0.0159	0.0157	0.0171
R164	834007.80	822188.33	834049.42	822238.28	19	0	1	0.0170	0.0169	0.0168	0.0172	0.0166	0.0174	0.0167	0.0196	0.0180	0.0174	0.0165	0.0169	0.0159	0.0171	0.0161	0.0164	0.0157	0.0164	0.0179	0.0159	0.0155	0.0149	0.0149	0.0164
R165	833953.31	822161.70	833994.47	822201.23	16	0	1	0.0193	0.0195	0.0191	0.0198	0.0196	0.0191	0.0192	0.0219	0.0203	0.0205	0.0200	0.0199	0.0191	0.0197	0.0191	0.0191	0.0180	0.0186	0.0200	0.0179	0.0173	0.0171	0.0172	0.0181
R166	833872.14	822051.30	833964.75	822190.60	18	0	1	0.0162	0.0160	0.0161	0.0162	0.0163	0.0162	0.0160	0.0193	0.0183	0.0165	0.0161	0.0162	0.0151	0.0163	0.0157	0.0161	0.0158	0.0164	0.0173	0.0155	0.0138	0.0118	0.0125	0.0151
R167	833885.47	822042.45	834007.88	822188.33	16	0	1	0.0249	0.0251	0.0252	0.0251	0.0251	0.0253	0.0249	0.0267	0.0254	0.0277	0.0274	0.0263	0.0266	0.0259	0.0254	0.0246	0.0222	0.0228	0.0248	0.0221	0.0218	0.0236	0.0233	0.0226
R168+R169	833813.72	821975.47	833878.36	822050.03	21	0	1	0.0100	0.0104	0.0105	0.0100	0.0102	0.0100	0.0102	0.0117	0.0114	0.0109	0.0106	0.0106	0.0102	0.0105	0.0104	0.0106	0.0102	0.0110	0.0109	0.0098	0.0096	0.0088	0.0087	0.0101
R170+R171	833738.44	821898.35	833812.49	821976.53	18	0	1	0.0116	0.0116	0.0115	0.0120	0.0116	0.0117	0.0118	0.0123	0.0112	0.0128	0.0123	0.0124	0.0125	0.0126	0.0120	0.0121	0.0114	0.0118	0.0122	0.0112	0.0116	0.0125	0.0119	0.0113
R172+R173	833684.93	821622.32	833735.28	821887.65	20	0	1	0.0171	0.0171	0.0171	0.0172	0.0170	0.0170	0.0172	0.0202	0.0182	0.0181	0.0175	0.0177	0.0170	0.0182	0.0175	0.0177	0.0171	0.0179	0.0194	0.0171	0.0163	0.0159	0.0159	0.0172
R174+R175	833561.78	821677.50	833683.38	821823.55	16	0	1	0.0184	0.0183	0.0181	0.0186	0.0177	0.0185	0.0184	0.0216	0.0204	0.0199	0.0194	0.0195	0.0189	0.0201	0.0193	0.0195	0.0186	0.0195	0.0209	0.0185	0.0178	0.0175	0.0175	0.0184
R176	833488.77	821608.40	833500.47	821680.73	20	0	1	0.0188	0.0186	0.0186	0.0185	0.0188	0.0187	0.0187	0.0213	0.0197	0.0198	0.0194	0.0193	0.0186	0.0194	0.0190	0.0190	0.0181	0.0188	0.0201	0.0184	0.0179	0.0179	0.0180	0.0188
R177	833513.09	821599.24	833573.68	821988.47	20	0	1	0.0174	0.0173	0.0174	0.0171	0.0175	0.0172	0.0173	0.0197	0.0179	0.0178	0.0175	0.0178	0.0171	0.0182	0.0177	0.0178	0.0171	0.0181	0.0192	0.0172	0.0166	0.0165	0.0164	0.0176
R178	833440.44	821529.90	833488.80	821608.61	16	0	1	0.0202	0.0199	0.0200	0.0200	0.0199	0.0198	0.0202	0.0221	0.0210	0.0215	0.0207	0.0203	0.0198	0.0202	0.0195	0.0194	0.0184	0.0189	0.0201	0.0186	0.0184	0.0187	0.0186	0.0191
R179	833451.84	821526.21	833511.32	821600.38	17	0	1	0.0199	0.0199	0.0199	0.0197	0.0200	0.0199	0.0198	0.0219	0.0203	0.0211	0.0208	0.0209	0.0210	0.0217	0.0214	0.0215	0.0200	0.0208	0.0226	0.0205	0.0197	0.0208	0.0207	0.0211
R180	834218.31	822258.38	834328.00	822385.39	19	0	1	0.0192	0.0193	0.0195	0.0193	0.0190	0.0195	0.0195	0.0225	0.0209	0.0204	0.0200	0.0202	0.0193	0.0205	0.0199	0.0199	0.0190	0.0198	0.0216	0.0191	0.0190	0.0184	0.0183	0.0195
R181	834181.98	822212.22	834219.31	822258.35	18	0	1	0.0156	0.0154	0.0156	0.0158	0.0152	0.0150	0.0157	0.0216	0.0191	0.0189	0.0186	0.0188	0.0176	0.0211	0.0204	0.0203	0.0188	0.0194	0.0212	0.0196	0.0198	0.0180	0.0177	0.0199
R182	834140.62	822162.67	834181.78	822212.39	16	0	1	0.0182	0.0187	0.0197	0.0204	0.0154	0.0153	0.0187	0.0211	0.0188	0.0186	0.0184	0.0188	0.0179	0.0192	0.0183	0.0187	0.0178	0.0183	0.0199	0.0182	0.0185	0.0167	0.0166	0.0187
R183	834098.34	822113.33	834140.62	822162.67	16	0	1	0.0192	0.0199	0.0210	0.0221	0.0157	0.0156	0.0197	0.0219	0.0193	0.0197	0.0195	0.0202	0.0194	0.0206	0.0177	0.0181	0.0174	0.0183	0.0199	0.0182	0.0184	0.0188	0.0190	0.0210
R184	834077.01	822132.08	834091.51	822100.94	13	0	1	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R184	834051.81	822100.94	834071.90	822084.16	13	0	1	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R184	834071.90	822084.16	834097.30	822115.02	14	0	1	0.0161	0.0162	0.0160	0.0163	0.0161	0.0160	0.0161	0.0192	0.0170	0.0164	0.0150	0.0153	0.0140	0.0158	0.0148	0.0151	0.0150	0.0157	0.0168	0.0146	0.0134	0.0112	0.0118	0.0149
R186	834309.60	822189.58	834382.69	822267.44	19	0	1	0.0156	0.0192	0.0187	0.0192	0.0199	0.0194	0.0189	0.0218	0.0199	0.0198	0.0196	0.0194	0.0189	0.0202	0.0195	0.0196	0.0187	0.0201	0.0212	0.0188	0.0185	0.0185	0.0184	0.0199
R188	834231.54	822088.63	834273.34	822138.83	18	0	1	0.0202	0.0210	0.0228	0.0236	0.0156	0.0236	0.0206	0.0226	0.0199	0.0206	0.0207	0.0213	0.0204	0.0211	0.0180	0.0184	0.0175	0.0185	0.0201	0.0183	0.0184	0.0188	0.0192	0.0215
R187	834195.88	822037.73	834231.78	822088.45	19	0	1	0.0198	0.0193	0.0199	0.0204	0.0190	0.0188	0.0202	0.0226	0.0207	0.0206	0.0206	0.0211	0.0205	0.0214	0.0211	0.0213	0.0204	0.0213	0.0228	0.0204	0.0199	0.0206	0.0194	0.0212
R188+R189	834104.98	821816.03	834058.34	821890.22	19	0	1	0.0167	0.0176	0.0187	0.0174	0.0180	0.0175	0.0171	0.0191	0.0179	0.0186	0.0171	0.0174	0.0171	0.0184	0.0177	0.0176	0.0169	0.0174	0.0189	0.0171	0.0169	0.0160	0.0157	0.0183
R190+R191	833931.13	821727.74	834006.98	821816.03	16	0	1	0.0195	0.0202	0.0192	0.0200	0.0185	0.0181	0.0199	0.0221	0.0199	0.0202	0.0192	0.0200	0.0188	0.0201	0.0192	0.0192	0.0183	0.0192	0.0209	0.0186	0.0183	0.0173	0.0173	0.0187
R192+R193	833873.32	821600.75	833930.85	821727.86	20	0	1	0.0173	0.0180	0.0188	0.0194	0.0190	0.0186	0.0157	0.0176	0.0159	0.0154	0.0147	0.0151	0.0141	0.0157	0.0147	0.0157	0.0150	0.0144	0.0142	0.0144	0.0188	0.0163	0.0146	0.0163
R194+R195	833825.79	821600.86	833887.51	821691.46	20	0	1	0.0199	0.0203	0.0208	0.0213	0.0218	0.0213	0.0201	0.0227	0.0212	0.0216	0.0216	0.0213	0.0201	0.0209	0.0207	0.0205	0.0204	0.0210	0.0217	0.0209	0.0203	0.0204	0.0205	0.0216
R196+R202	833751.01	821623.30	833826.17	821600.58	20	0	1	0.0193	0.0194	0.0188	0.0187	0.0188	0.0187	0.0193	0.0205	0.0205	0.0190	0.0186	0.0189	0.0181	0.0193	0.0186	0.0191	0.0190	0.0192	0.0198	0.0187	0.0185	0.0178	0.0177	0.0208
R197	834364.36	822060.88	834402.15	822104.71	17	0	1	0.0156	0.0158	0.0152	0.0156	0.0156	0.0156	0.0158	0.0230	0.0203	0.0215	0.0224	0.0153	0.0142	0.0163	0.0149	0.0156	0.0155	0.0162	0.0175	0.0153	0.0160	0.0151	0.0147	0.0138
R198	834322.77	822010.88	834369.30	822060.88	18	0	1	0.0156	0.0154	0.0157	0.0154	0.0158	0.0156	0.0153	0.0209	0.0186	0.0184	0.0184	0.0189	0.0183	0.0198	0.0194	0.0201	0.0193	0.0208	0.0226	0.0213	0.0214	0.0240	0.0252	0.0150
R199	834281.93	821961.17	834323.00	822010.48	18	0	1	0.0206	0.0214	0.0225	0.0244	0.0166	0.0244	0.0210	0.0227	0.0217	0.0214	0.0188	0.0193	0.0189	0.0200	0.0164	0.0169	0.0170	0.0177	0.0183	0.0172	0.0167	0.0162	0.0162	0.0175
R200	834239.17	821914.13	834290.08	821962.18	16	0	1	0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170
R200	834239.17	821914.13	834377.00	821846.33	16	0	1	0.0170	0.0170	0.0172	0.0174	0.0178	0.0176	0.0170	0.0204	0.0194	0.0181	0.0161	0.0169	0.0154	0.0177	0.0160	0.0169	0.0171	0.0172	0.0179	0.0163	0.0164	0.0148	0.0142	0.0170

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833126.78	822324.11	833177.37	822330.25	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833177.37	822330.25	833231.06	822345.75	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833231.06	822345.79	833434.80	822408.45	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833434.80	822408.45	833560.48	822543.03	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833560.48	822543.08	833595.46	822546.76	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R004	833118.28	822306.10	833195.92	822315.62	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833195.93	822315.62	833425.16	822386.41	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833425.10	822386.41	833618.28	822421.59	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R005	833618.28	822421.55	833673.75	822498.58	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833673.75	822498.58	833933.67	822614.65	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833933.67	822614.60	833973.71	822620.01	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833973.71	822620.09	834046.15	822628.54	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833627.55	822455.21	833732.07	822494.47	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833732.07	822494.47	833782.11	822441.65	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833782.11	822441.65	833840.01	822456.02	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R008+R009	833651.17	822398.31	833693.59	822397.15	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R008+R009	833693.50	822397.15	833841.86	822450.34	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R010+R011	833978.10	822463.30	833998.84	822432.88	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R010+R011	833998.84	822432.88	833883.54	822462.40	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R011	833883.54	822462.40	833840.51	822458.02	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R013	833387.28	822507.47	833423.59	822556.02	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833423.59	822558.02	833416.08	822482.07	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833544.64	822390.48	833587.56	822354.80	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R014+R015	833468.77	822318.11	833587.56	822354.80	14	0	1	66	27	16	12	13	20	68	100	200	200	150	150	150	150	150	150	100	100	150	100	100	100	100	72
R016+R017	833587.56	822354.89	833613.17	822374.91	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R016+R017	833613.17	822374.91	833661.17	822398.31	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	50	50	16	11	13	19	50	100	200	200	200	150	150	150	150	100	50	100	50	50	50	50	50	21
R021	833209.07	822239.78	833305.00	822293.72	16	0	1	50	50	20	14	16	24	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R022	833305.00	822293.72	833480.61	822340.13	16	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R022	833480.61	822340.13	833549.46	822315.75	16	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R023	833073.42	822119.68	833100.03	822129.44	14	0	1	50	23	14	11	11	17	50	100	200	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R024	833100.03	822129.44	833232.06	822178.07	14	0	1	50	22	12	9	11	16	50	100	150	200	200	200	200	250	300	300	250	350	400	300	250	200	150	150
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	50	50	18	12	15	21	50	100	200	250	250	250	300	300	350	400	300	450	500	400	300	250	200	150
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	50	50	17	12	14	20	50	100	250	250	250	250	250	250	300	300	250	350	350	300	200	150	150	100
R027	833503.91	822278.46	833673.82	822341.72	13	0	1	100	50	50	22	25	50	100	200	350	400	350	350	350	350	450	400	350	450	500	400	250	250	200	150
R028	833673.82	822341.72	833766.11	822376.03	13	0	1	50	23	15	10	11	16	50	100	150	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
R029	833766.03	822376.16	833848.76	822405.79	13	0	1	50	15	9	6	8	10	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	50	50	24	17	19	50	50	150	300	350	300	300	350	350	400	400	300	450	500	400	300	250	200	150
R031	833917.83	822431.11	833999.68	822454.38	14	0	1	15	9	5	4	4	6	17	50	100	100	100	100	100	100	100	100	100	150	150	100	100	50	50	50
R032+R301	833078.09	822085.71	833121.79	822072.07	18	0	1	106	105	54	54	54	55	108	320	450	450	373	371	421	419	469	468	519	619	618	463	359	308	258	205
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	200	150	100	100	100	150	200	550	800	750	700	650	750	750	850	900	950	1150	1200	900	650	550	500	350
R034	833253.39	822120.94	833396.77	822175.17	18	0	1	200	150	100	100	100	150	200	550	850	800	700	700	750	750	850	950	1000	1200	1200	950	650	550	500	350
R035	833396.77	822175.17	833524.36	822221.21	18	0	1	300	250	200	200	200	250	400	900	1400	1350	1150	1050	1100	1050	1100	1150	1150	1300	1300	1000	700	600	550	400
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	350	300	250	250	250	250	450	1050	1650	1550	1150	1250	1300	1300	1400	1450	1450	1700	1700	1300	900	750	700	500
R037	833653.40	822269.00	833694.66	822284.07	18	0	1	300	250	200	200	200	200	350	890	1350	1250	1100	1000	1050	1000	1050	1100	1100	1250	1200	950	650	550	500	350
R038	833694.68	822284.56	833763.79	822309.51	18	0	1	300	250	200	200	200	200	350	900	1350	1250	1100	1000	1050	1000	1100	1100	1150	1300	1300	1000	700	600	550	350
R039	833781.99	822311.12	833798.46	822320.76	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	950	900	700	500	400	350	250
R040	833783.11	822316.09	833833.16	822335.17	18	0	1	200	150	150	150	100	150	250	550	900	850	700	650	650	650	650	650	650	750	700	550	400	350	300	200
R041	833833.16	822335.17	833902.96	822360.57	18	0	1	200	150	150	150	150	150	250	700	1050	1000	850	750	800	750	800	800	800	900	850	650	450	400	350	250
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	250	200	200	150	150	200	350	800	1250	1150	1000	950	1000	1000	1050	1100	1150	1350	1350	1050	700	600	550	400
R043	833950.46	822320.46	834034.00	822250.52	18	0	1	150	150	100	100	100	100	200	450	700	700	600	550	600	600	650	700	700	850	850	650	450	400	350	250
R044	834034.00	822250.62	834140.62	822162.67	18	0	1	200	150	150	150	100	150	250	550	900	850	750	700	750	700	750	800	850	950	950	750	500	450	400	300
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	150	100	100	100	100	100	150	400	650	600	500	500	550	550	600	600	650	750	750	600	400	350	300	200
R046	834231.72	822086.65	834322.21	822011.22	18	0	1	200	150	150	150	100	150	250	600	900	850	750	700	750	700	800	800	850	950	950	750	500	450	400	300
R047	834322.77	822010.68	834394.01	821959.68	18	0	1	200	150	100	100	100	150	200	550	800	750	650	650	700	650	700	750	800	900	900	700	500	400	350	250
R048	833097.20	821958.43	833158.98	821977.36	17	0	1	650	500	450	450	400	500	850	2000	3100	2900	2450	2200	2250	2150	2250	2250	2200	2500	2350	1800	1250	1050	950	700
R049	833155.06	821977.96	833434.10	822080.28	18	0	1	550	450	400	400	350	450	700	1700	2650	2500	2050	1850	1900	1750	1800	1750	1700	1900	1750	1350	950	800	700	500
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	650	500	450	450	450	500	800	1950	3000	2850	2450	2300	2450	2350	2550	2650	2700	3150	3100	2400	1650	1400	1300	900
R051	833274.50	822006.60	833418.76	822087.62	18	0	1	550	450	350	350	350	400	700	1650	2500	2350	2050	1850	1950	1900	2000	2050	2100	2450	2350	1800	1250	1100	950	700
R052	833434.10	822080.21	833588.33	822174.73	18	0	1	350	300	250	250	250	250	450	1100	1700	1600	1350	1250	1350	1300	1400	1450	1500	1750	1700	1300	900	800	700	500
R053	833786.86	822123.44	833736.66	822183.28	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R053	833736.66	822165.26	833898.23	822174.73	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R054	833438.63	822067.29	833586.71	822122.03	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833586.71	822122.03	833649.55	822144.40	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833649.55	822144.40	833683.68	822152.80	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833683.68	822152.80	833713.65	822149.02	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833713.85	822140.82	833757.83	822128.55	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833757.83	822128.56	833778.48	822113.30	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R055	833786.63	822123.04	833872.14	822051.39	19	0	1	500	400	350	350	350	400	650	1500	2350	2200	1900	1750	1850	1750	1850	1900	1950	2250	2200	1700	1150	1000	900	650
R056	833778.49	822113.36	833867.20	822039.12	18	0	1	250	200	150	150	150	200	300	750	1200	1100	950	900	950	950	1000	1050	1050	1250	1250	950	650	550	500	350
R057	833873.20	822052.68	834159.21	821814.78	18	0	1	350	250	250	250	250	250	450	1100	1650	1550	1300	1200	1250	1200	1250	1250	1250	1400	1350	1050	700	600	550	400
R058	834159.21	821814.78	834250.10	821738.42	18	0	1	300	250	200	200	200	250	400	950	1500	1400	1200	1050	1100	1050	1100	1100	1100	1200	1150	900	600	550	500	350
R059	833867.29	822039.23	834058.34	821880.22	17	0	1	200	150	150	150	150	150	250	600	950	900	800	750	800	800	900	950	1000	1200	1200	900	650	550	500	350
R060	834058.34	821880.22	834241.61	821727.45	16	0	1	200	150	150	150	150	150	250	600	900	850	750	700	800	750	850	900	900	1100	1100	850	600	500	450	300
R061	833116.37	821880.28	833139.76	821889.31	16	0	1	50	22	14	9	11	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
R062	833139.76	821889.31	833296.78	821947.28	18	0	1	50	50	50	18	20	50	100	150	300	350	300	300	300	300	350	300	250	350	350	300	200	150	150	100
R063	833296.86	821947.56	833460.51	822007.97	18	0	1	50	20	13	10	10	15	50	100	150	150	150	150	200	200	200	200	200	250	300	200	150	150	100	100
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833480.98	821952.82	833563.70	821982.31	18	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R065	833160.17	821834.07	833315.56	821891.61	16	0	1	50	50	17	12	14	20	50	100	200	250	200	200	200	150	200	150	150	150	150	150	100	50	50	50
R066	833315.56	821891.68	833481.00	821952.75	16	0	1	50	50	21	15	17	24	50	100	250	250	250	250	250	250	300	300	250	350	400	300	200	200	150	100
R067	833164.01	821773.07	833178.47	821783.88	18	0	1	1500	1200	1000	1000	950	1150	1900	4450	4750	4750	4730	4750	4750	4750	4750	4750	4750	4750	4750	4750	3350	2850	2600	1800
R068	833178.74	821783.16	833293.68	821813.88	18	0	1	1350	1100	950	900	900	1050	1750	4100	4750	4750	4750	4700	4750	4750	4750	4750	4750	4750	4750	4500	3150	2650	2400	1700
R069	833166.60	821757.87	833280.16	821795.91	29	0	1	950	750	650	600	600	700	1200	2850	4350	4100	3600	3400	3600	3550	3900	4050	4200	4750	4750	3800	2650	2250	2050	1450
R070	833240.90	821820.73	833329.69	821853.67	13	0	1	400	300	250	250	250	300	500	1200	1800	1700	1450	1350	1400	1350	1450	1450	1500	1700	1650	1250	900	750	700	500

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R071	833527.91	821859.29	833597.24	821875.22	18	0	1
R072	833597.24	821875.22	833691.75	821897.07	20	0	1
R073	833451.60	821860.54	833397.24	821875.22	17	0	1
R074	833261.06	821790.34	833451.50	821860.54	20	0	1
R075	833449.48	821861.09	833506.97	821583.08	16	0	1
R076	833501.48	821897.00	833548.66	821899.77	18	0	1
R076	833548.66	821899.77	833603.43	821886.09	18	0	1
R076	833603.43	821886.09	833689.92	821822.32	18	0	1
R077	833506.57	821884.14	833563.57	821884.30	17	0	1
R077	833563.57	821884.30	833660.48	821871.28	17	0	1
R077	833660.48	821871.28	833873.64	821812.01	17	0	1
R078	833683.38	821822.35	833875.32	821660.75	18	0	1
R079	833673.29	821911.43	833867.51	821651.46	16	0	1
R080	833675.67	821661.18	833999.54	821557.94	16	0	1
R081	833607.01	821050.86	833963.08	821853.08	20	0	1
R082	833468.18	821884.41	833510.75	821821.12	14	0	1
R082	833510.75	821821.12	833536.36	821785.93	14	0	1
R082	833536.39	821785.93	833570.13	821687.55	14	0	1
R083	833436.63	821850.11	833466.18	821812.11	18	0	1
R083	833499.18	821813.12	833524.36	821772.29	14	0	1
R083	833524.36	821772.29	833519.81	821652.62	14	0	1
R084	833587.54	821687.02	833582.69	821644.65	13	0	1
R084	833592.69	821644.65	833607.71	821603.07	13	0	1
R085	833609.34	821605.84	833640.24	821575.52	14	0	1
R085	833640.24	821575.52	833691.67	821645.20	14	0	1
R085	833681.67	821565.20	833720.52	821812.65	14	0	1
R086	833580.70	821648.89	833603.88	821583.58	17	0	1
R086	833603.88	821583.58	833646.83	821546.45	17	0	1
R087	833648.49	821548.43	833699.49	821508.30	13	0	1
R088	833254.24	821811.68	833365.50	821850.64	17	4	4
R088	833365.50	821850.04	833416.50	821866.81	17	7	4
R088	833416.50	821866.51	833487.63	821641.09	17	5	4
R088	833487.63	821841.09	833533.63	821786.07	17	10	4
R088	833533.63	821786.07	833574.80	821657.75	17	9	4
R088	833574.80	821657.75	833660.16	821605.82	17	7	4
R088	833660.16	821605.82	833712.08	821511.11	17	6	4
R089	833256.85	821801.44	833370.08	821846.87	16	4	4
R089	833370.08	821846.97	833427.36	821852.03	16	7	4
R089	833427.36	821852.03	833480.60	821829.25	16	9	4
R089	833485.60	821825.26	833522.46	821786.30	16	10	4
R089	833522.46	821786.30	833543.19	821725.47	16	9	4
R089	833543.19	821725.47	833563.07	821653.37	16	8	4
R089	833563.07	821653.37	833599.89	821594.44	16	8	4
R089	833599.89	821594.44	833659.53	821508.81	16	6	4
R090+R091	833269.78	821629.64	833337.84	821634.13	17	0	1
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1
R092+R093	833449.56	821640.31	833513.09	821599.26	20	0	1
R094	833337.84	821634.13	833341.51	821670.41	16	0	1
R095	833606.59	821501.72	833648.49	821548.43	17	0	1
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1
R100+R101	834127.62	822332.11	834218.21	822258.35	18	0	1
R102+R103	834218.31	822258.35	834309.95	822180.58	18	0	1
R104+R105	834309.95	822180.58	834407.46	822098.58	18	0	1
R106	833917.63	822431.11	833981.76	822309.38	18	0	1
R107	833981.55	822370.04	834090.35	822287.53	18	0	1
R108	834090.84	822288.06	834191.98	822212.22	18	0	1
R109	834181.98	822212.22	834273.08	822138.48	17	0	1
R110	834273.34	822138.83	834364.38	822060.94	17	0	1
R111	834363.46	822059.85	834400.74	822028.83	18	0	1
R112	833846.78	822405.79	833902.96	822380.57	19	0	1
R113	833832.46	822335.17	833909.60	822271.35	18	0	1
R114	833909.65	822271.35	833994.47	822201.23	18	0	1
R115	833994.06	822200.75	834077.01	822132.08	18	0	1
R116	834076.90	822131.84	834097.30	822115.02	18	0	1
R117	834097.30	822118.02	834190.89	822037.73	18	0	1
R118	834190.89	822037.73	834243.23	821992.95	19	0	1
R119	834242.94	821993.65	834282.16	821961.45	19	0	1
R120	834281.93	821961.17	834389.17	821898.80	18	0	1
R121	833768.03	822376.16	833799.11	822318.98	18	0	1
R122	833791.88	822311.12	833868.78	822222.18	18	0	1
R123	833868.78	822222.16	833984.75	822150.80	18	0	1
R124	833873.92	822341.72	833994.66	822284.07	18	0	1
R125	833096.86	822284.07	833827.77	822172.85	18	0	1
R126	833893.40	822269.00	833968.33	822174.73	13	0	1
R127	833459.65	822315.75	833593.51	822278.45	18	0	1
R128	833503.61	822278.46	833574.36	822221.24	18	0	1
R129	833377.80	822232.03	833355.00	822203.72	18	0	1
R130	833377.80	822232.03	833398.77	822175.17	18	0	1
R131	833398.42	822175.04	833434.16	822080.75	18	0	1
R132	833433.92	822080.79	833469.51	822007.87	18	0	1
R133	833460.45	822007.98	833481.00	821952.74	18	0	1
R134	833481.00	821952.78	833500.97	821883.08	18	0	1
R135	833209.07	822239.79	833232.06	822178.07	18	0	1
R136	833232.03	822178.08	833253.38	822120.04	18	0	1
R137	833080.91	822182.63	833100.03	822126.44	18	0	1
R138	833100.63	822126.44	833121.79	822072.07	18	0	1
R139	833121.68	822072.03	833138.56	821977.98	18	0	1
R140	833274.46	822007.07	833296.68	821947.38	17	0	1

Vehicle count for each road

Road Pair	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	450	350	300	300	300	350	550	1300	2000	1900	1650	1500	1600	1500	1650	1650	1700	1950	1900	1450	1000	850	800	550
R072	200	150	150	150	150	150	250	600	900	850	750	700	750	750	800	850	850	1000	1000	800	550	450	400	300
R073	250	200	150	150	150	200	300	750	1100	1050	900	800	850	800	850	850	850	950	900	700	500	400	350	250
R074	250	200	150	150	150	150	300	700	1050	1000	850	800	850	800	900	900	950	1100	1050	800	550	500	450	300
R075	150	150	100	100	100	100	200	450	750	700	600	550	550	550	550	550	600	650	650	500	350	300	250	200
R076	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R077	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R078	150	150	100	100	100	100	200	500	750	700	600	550	550	500	550	550	550	600	600	450	300	250	250	150
R079	250	200	150	150	150	200	300	750	1150	1100	950	850	900	850	900	900	950	1050	1050	800	550	450	400	300
R080	150	100	100	100	100	100	200	450	650	650	550	500	550	550	600	600	650	750	750	550	400	350	300	200
R081	250	200	200	200	200	200	350	800	1250	1200	1050	950	1000	1000	1050	1100	1150	1300	1300	1000	700	600	550	400
R082	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R082	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R082	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R083	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R084	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R084	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R085	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R086	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R086	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R087	100	100	100	100	100	100	150	350	500	500	450	400	400	400	400	400	400	400	450	350	200	200	150	150
R088	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R090+R091	350	250	250	250	250	250	450	1050	1600	1500	1250	1100	1200	1100	1150	1150	1150	1300	1200	950	650	550	500	350
R092+R093	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R092+R093	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R094	50	50	50	50	50	50	100	200	300	300	250	200	200	200	200	200	200	250	250	150	100	100	100	50
R095	100	100	100	50	50	100	150	350	500	500	450	400	400	350	400	400	400	400	400	300	200	200	150	100
R096+R097	57	19	11	7	7	14	57	64	150	150	150	150	150	150	150	150	70	150	150	121	64	63	62	58
R098+R099	62	56	25	17	20	28	63	150	300	300	300	250	250	250	300	250	200	250	300	250	200	150	150	73
R100+R101	100	100	73	34	40	100	150	300	600	650	550	500	550	500	550	550	350	500	500	450	250	250	250	150
R102+R103	100	36	22	16	16	26	100	150	250	300	250	250	300	300	300	300	250	350	350	250	200	200	150	100
R104+R105	71	27	16	11	11	19	72	100	200	200	200	200	250	250	250	250	200	300	300	200	150	150	150	100
R106	50	50	24	17	20	50	50	150	300	300	300	250	250	250	300	250	200	300	300	250	150	150	100	100
R107	50	50	20	14	16	22	50	100	250	250	200	200	200	150	150	150	100	100	100	100	50	50	50	50
R108	50	50	22	16	17	50	50	150	250	300	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R109	50	50	21	15	16	24	50	100	250	250	250	200	200	200	200	150	100	150	100	100	50	50	50	50
R110	100	50	50	20	21	50	100	150	350	350	300	250	250	250	250	200	150	150	150	150	100	100	50	50
R111	50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
R112	50	22	14	10	12	17	50	100	150	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R113	50	20	12	8	9	15	50	50	150	150	150	150	150	100	150	100	100	100	100	100	50	50	50	50
R114	200	100	50	50	50	100	200	450	850	950	850	750	750	700	800	750	550	700	750	550	400	350	300	250
R115	200	100	50	50	50	50	200	400	750	850	750	700	700	650	750	700	550	700	750	600	400	350	300	250
R116	200	100	50	50	50	100	200	400	800	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
R117	200	100	50	50	50	50	200	350	700	800	700	650	650	650	700	650	500	650	700	550	400	350	300	250
R118	200	100	50	50	50	50	200	350	750	800	750	700	700	700	800	750	600	800	850	700	500	400	350	300
R119	200	100	50	50	50	100	250	450	900	950	850	800	800	800	850	800	650	800	850	700	500	400	350	300
R120	250	150	100	50	50	100	250	500	950	1050	950	900	900	850	950	900	700	900	950	750	500	450	400	300
R121	23	13	8	6	6	9	50	50	100	100	100	100	100	100	150	150	100	150	200	150	100	100	100	50
R122	100	50	50	50	50	50	100	200	400	450	400	400	400	400	500	450	350	500	550	450	300	250	250	200
R123	50	50	22	15	17	50	50	150	250	300	250	250	250	250	300	300	200	300	350	250	200	150	150	100
R124	50	50	20	14	16	23	50	100	250	250	200	200	200	200	200	200	150	150	150	100	100	50	50	50
R125	50	50	20	14	16	23	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R126	50	50	22	15	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
R127	50	23	15	10	12	16	50	100	150	200	200	200	200	200	250	250	200	250	300	250	150	150	100	100
R128	50	50	18	14	15	21	50	100	200	250	250	250	250	250	300	300	250	350	400	300	200	200	150	150
R129	150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	600	550	450	300	250	250	150
R130	200	150	100	100	100	150	250	550	850	800	700	600	650	650	650	700	700	800	800	600	400	350	300	250
R131	300	250	200	200	200	250	400	900	1400	1300	1050	950	950	900	900	850	850	900	800	650	450	350	350	250
R132	200	150	150	150	150	150	250	550	850	800	700	700	750	700	800	800	850	1000	1000	750	550	450	400	300
R133	200	100	50	50	50	100	200	350	750	800	750	700	700	700	800	750	600	800	850	700	500	400	350	300
R134	200	100	100	50	50	100	200	400	800	900	850	800	850	850	950	950	750	1000	1100	900	600	500	450	350
R135	8	6	5	3	2	4	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	20	19	14
R136	6	4	3	1	1	3	7	13	50	50	50	50	50	50	50	50	50	50	50	50	22	18	17	13
R137	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R138	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R139	100	50	50	24	50	50	100	200	400	450	400	400	450	450	550	550	400	600	650	500	350	300	250	200
R140	100	50	50	50	50	50	100	200	450	450	450	450	500	500	600	600	500	650	750	600	400	350	300	250

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833256.35	821347.25	833315.56	821491.87	13	0	1	50	16	10	7	8	12	50	50	100	150	150	150	150	200	250	250	200	300	350	250	200	150	150	100
R142	833329.89	821853.87	833315.86	821891.84	13	0	1	50	22	14	10	11	17	50	100	200	200	200	150	200	200	200	200	150	250	250	200	150	100	100	100
R143	833139.75	821888.31	833160.17	821834.07	13	0	1	150	50	50	50	50	50	150	250	550	600	500	500	450	450	500	450	350	450	450	350	250	200	200	150
R144	833160.17	821834.07	833178.74	821783.15	13	0	1	100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
R145+R146	833812.49	821976.55	834004.98	821516.03	17	0	1	24	13	8	5	7	10	25	63	100	150	124	122	123	112	174	172	117	222	224	168	113	111	110	58
R147+R148	833736.44	821888.35	833931.13	821727.74	16	0	1	57	18	12	8	9	13	58	65	150	150	150	150	150	150	150	150	100	200	200	100	100	100	100	100
R149	833728.61	821749.62	833807.73	821494.38	14	0	1	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
R149	833774.08	821643.62	833807.73	821494.38	13	0	1	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
R150	833736.87	821756.23	833607.71	821603.87	11	0	1	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
R151	833613.61	821610.98	833693.50	821643.70	13	0	1	17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
R151	833692.60	821543.70	833778.28	821942.63	14	0	1	17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
R152	833774.08	821643.52	833826.17	821500.58	20	0	1	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	50	20	17	14	11
R153	833991.31	822380.76	834028.77	822434.27	18	0	1	100	100	100	50	50	50	100	250	300	250	250	200	200	250	200	200	200	200	200	150	150	150	100	100
R154	833960.48	822320.49	833992.00	822389.67	18	0	1	100	100	100	50	50	50	100	250	300	250	250	250	250	300	300	300	350	350	350	300	250	200	200	150
R155	833909.40	822271.35	833960.46	822320.45	18	0	1	100	100	50	50	50	50	100	250	300	250	250	200	200	250	200	200	250	250	200	200	150	150	150	100
R156	833888.78	822222.16	833909.65	822271.38	18	0	1	500	400	350	300	250	250	450	800	800	800	800	800	800	800	800	800	800	800	750	650	550	450	450	350
R157	833866.58	822222.34	833827.77	822173.95	18	0	1	600	500	400	300	250	300	550	1200	1500	1300	1200	1100	1100	1150	1100	1050	1050	1050	1000	850	750	650	600	450
R158	833827.77	822172.95	833778.49	822113.30	18	0	1	500	400	350	300	250	250	450	1000	1300	1100	1050	950	1000	1050	950	950	1000	1000	950	800	700	600	550	450
R159	834075.01	822259.62	834113.80	822384.34	18	0	1	50	23	18	15	12	15	24	50	50	50	50	50	50	50	50	50	100	100	100	50	50	50	50	50
R160	834090.39	822287.53	834137.63	822332.11	15	0	1	100	100	50	50	50	50	100	200	250	250	200	200	200	200	150	150	150	150	150	150	100	100	100	50
R161	834034.80	822250.52	834075.61	822299.62	15	0	1	150	150	100	100	50	100	150	350	400	350	350	350	350	400	350	350	400	400	400	350	300	250	250	200
R162	834049.42	822238.26	834090.39	822287.53	15	0	1	200	150	150	100	100	100	200	400	550	450	450	400	400	450	400	400	450	450	450	350	300	250	250	200
R163	833993.90	822201.68	834034.00	822250.02	18	0	1	250	200	150	150	100	100	200	450	600	550	500	500	550	600	600	600	650	700	700	550	500	450	400	300
R164	834007.86	822199.33	834049.42	822238.28	15	0	1	150	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	400	300	300	250	250	200
R165	833963.31	822151.78	833994.47	822221.23	18	0	1	150	150	100	100	100	100	150	350	450	400	350	350	350	400	400	400	400	450	400	350	300	250	250	200
R166	833872.14	822051.39	833964.76	822190.50	18	0	1	300	250	200	200	150	150	300	650	850	750	700	650	700	750	750	750	800	850	800	650	550	500	450	350
R167	833883.47	822042.45	834007.89	822180.33	18	0	1	250	200	150	150	100	150	250	550	650	600	550	550	550	600	600	600	650	650	650	550	450	400	350	300
R168+R169	833815.72	821975.47	833876.36	822050.03	21	0	1	500	350	300	300	200	200	450	950	1200	1050	1050	1050	1100	1200	1200	1250	1350	1450	1350	1150	1000	850	800	600
R170+R171	833724.44	821888.35	833812.49	821978.52	18	0	1	450	350	300	250	200	200	400	900	1100	1050	950	950	1000	1150	1100	1150	1250	1300	1250	1050	900	750	750	550
R172+R173	833884.92	821822.32	833739.28	821687.65	20	0	1	500	400	350	250	250	250	450	1000	1300	1150	1100	1050	1100	1200	1200	1200	1300	1350	1350	1100	950	800	800	600
R174+R175	833561.78	821677.58	833863.38	821823.58	18	0	1	550	450	350	300	250	250	450	1050	1350	1200	1100	1050	1100	1200	1150	1150	1250	1300	1200	1050	900	750	750	550
R176	833496.77	821508.49	833560.47	821680.73	20	0	1	350	300	250	200	150	200	300	750	900	800	700	650	700	700	650	650	650	650	650	500	450	400	350	300
R177	833513.09	821599.24	833573.66	821688.47	20	0	1	250	200	200	150	100	150	250	550	700	600	600	550	600	650	650	650	700	700	700	600	500	450	400	300
R178	833440.48	821529.99	833488.60	821908.61	16	0	1	350	250	200	200	150	150	300	700	850	750	700	650	650	700	650	650	850	650	650	550	450	400	400	300
R179	833451.84	821526.31	833511.33	821600.38	17	0	1	350	250	200	200	150	150	300	650	850	750	700	700	750	800	800	800	900	950	900	750	650	550	550	400
R180	834218.31	822256.35	834305.96	822385.39	18	0	1	200	150	150	100	100	100	200	400	500	450	400	400	400	400	400	400	400	400	400	300	300	250	250	200
R181	834181.98	822212.72	834218.31	822256.38	18	0	1	15	12	9	8	7	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24
R182	834140.62	822162.67	834181.76	822212.38	18	0	1	50	50	22	19	16	18	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R183	834099.34	822113.33	834140.62	822162.67	18	0	1	50	23	19	16	13	15	24	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24	22	17
R184	834077.01	822132.08	834051.51	822100.94	13	0	1	50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R184	834051.51	822100.94	834071.90	822094.58	13	0	1	50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R184	834071.00	822086.18	834007.30	822115.02	14	0	1	50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R185	834309.98	822180.58	834382.88	822387.44	18	0	1	100	100	50	50	50	50	100	200	250	200	200	200	200	250	250	250	250	250	250	200	200	150	150	100
R186	834231.54	822088.63	834273.34	822139.83	18	0	1	22	19	15	12	11	12	20	50	50	50	50	50	50	50	50	50	50	50	50	50	50	22	22	17
R187	834190.59	822037.73	834231.76	822086.45	18	0	1	100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	150	150	150	150	150	100	100	100	50
R188+R189	834004.98	821815.03	834065.34	821880.22	16	0	1	68	63	61	59	58	59	64	200	200	200	200	200	200	200	200	200	250	250	250	200	200	150	150	122
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1	100	70	66	64	36	63	72	150	200	200	200	200	200	200	200	250	250	300	250	250	200	200	200	122
R192+R193	833878.32	821660.79	833930.89	821727.98	20	0	1	42	35	29	24	22	23	38	100	100	100	100	100	100	100	73	73	70	68	68	66	66	62	62	31
R194+R195	833825.79	821600.86	833867.51	821651.48	20	0	1	64	60	58	57	55	56	62	200	200	200	200	172	172	171	119	117	116	115	114	112	111	58	58	57
R196+R202	833781.01	821523.38	833826.17	821650.58	20	0	1	100	100	70	40	33	38	100	150	200	150	150	150	100	150	100	100	100	150	100	100	100	100	100	24
R197	834364.38	822060.94	834400.13	822104.71	17	0	1	10	7	5	5	4	4	8	18	24	20	17	14	13	12	11	8	7	5	5	4	4	3	3	3
R198	834322.77	822010.68	834364.38	822060.94	18	0	1	19	15	12	10	8	9	16	50	50	50	50	50	50	50	50	22	21	18	18	15	13	11	11	9
R199	834281.93	821961.17	834323.00	822010.48	18	0	1	22	18	15	13	10	12	21	50	50	50	50	50	50	50	50	50	50	23	20	18	15	13	12	10
R200	834239.17	821914.13	834280.06	821963.18	14	0	1	50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R300	834239.17	821914.13	834327.89	821840.33	18	0	1	50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_x x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	21.5808	21.4322	21.2133	21.3155	21.5308	21.5336	22.0294	32.1606	33.9779	29.8862	27.5170	26.1324	23.6847	24.1868	23.9138	25.4303	28.5771	27.5863	28.2867	23.9047	20.7326	22.7202	23.0919	22.1030
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	21.5808	21.4322	21.2133	21.3155	21.5308	21.5336	22.0294	32.1606	33.9779	29.8862	27.5170	26.1324	23.6847	24.1868	23.9138	25.4303	28.5771	27.5863	28.2867	23.9047	20.7326	22.7202	23.0919	22.1030
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	21.5808	21.4322	21.2133	21.3155	21.5308	21.5336	22.0294	32.1606	33.9779	29.8862	27.5170	26.1324	23.6847	24.1868	23.9138	25.4303	28.5771	27.5863	28.2867	23.9047	20.7326	22.7202	23.0919	22.1030
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	21.5808	21.4322	21.2133	21.3155	21.5308	21.5336	22.0294	32.1606	33.9779	29.8862	27.5170	26.1324	23.6847	24.1868	23.9138	25.4303	28.5771	27.5863	28.2867	23.9047	20.7326	22.7202	23.0919	22.1030
R003	833960.46	822543.00	833985.46	822546.76	20	0	1	21.5808	21.4322	21.2133	21.3155	21.5308	21.5336	22.0294	32.1606	33.9779	29.8862	27.5170	26.1324	23.6847	24.1868	23.9138	25.4303	28.5771	27.5863	28.2867	23.9047	20.7326	22.7202	23.0919	22.1030
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	21.4382	21.2645	21.2281	21.3671	21.4618	21.4550	21.8197	29.0820	31.5982	27.5082	25.7947	24.8840	22.9228	23.6599	23.5609	25.3986	29.1263	29.3804	30.1450	25.1680	19.8978	21.8764	22.6417	21.2688
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	21.4382	21.2645	21.2281	21.3671	21.4618	21.4550	21.8197	29.0820	31.5982	27.5082	25.7947	24.8840	22.9228	23.6599	23.5609	25.3986	29.1263	29.3804	30.1450	25.1680	19.8978	21.8764	22.6417	21.2688
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	21.4382	21.2645	21.2281	21.3671	21.4618	21.4550	21.8197	29.0820	31.5982	27.5082	25.7947	24.8840	22.9228	23.6599	23.5609	25.3986	29.1263	29.3804	30.1450	25.1680	19.8978	21.8764	22.6417	21.2688
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	21.4011	21.2110	21.2383	21.3816	21.4995	21.4752	21.8359	29.0795	31.5977	27.5051	25.7939	24.8782	22.9151	23.6498	23.5525	25.3882	29.1177	29.3553	30.1343	25.1572	19.8828	21.8615	22.6260	21.2723
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	21.4011	21.2110	21.2383	21.3816	21.4995	21.4752	21.8359	29.0795	31.5977	27.5051	25.7939	24.8782	22.9151	23.6498	23.5525	25.3882	29.1177	29.3553	30.1343	25.1572	19.8828	21.8615	22.6260	21.2723
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	21.4011	21.2110	21.2383	21.3816	21.4995	21.4752	21.8359	29.0795	31.5977	27.5051	25.7939	24.8782	22.9151	23.6498	23.5525	25.3882	29.1177	29.3553	30.1343	25.1572	19.8828	21.8615	22.6260	21.2723
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	21.4011	21.2110	21.2383	21.3816	21.4995	21.4752	21.8359	29.0795	31.5977	27.5051	25.7939	24.8782	22.9151	23.6498	23.5525	25.3882	29.1177	29.3553	30.1343	25.1572	19.8828	21.8615	22.6260	21.2723
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	37.9318	35.8078	43.4613	24.3370	24.5581	41.3804	37.7094	40.5452	29.3174	39.7796	39.0849	38.4737	43.2462	33.5444	32.3073	32.8228	23.8690	22.4137	18.2669	23.7424	26.6451	42.1489	41.7157	28.2913
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	37.9318	35.8078	43.4613	24.3370	24.5581	41.3804	37.7094	40.5452	29.3174	39.7796	39.0849	38.4737	43.2462	33.5444	32.3073	32.8228	23.8690	22.4137	18.2669	23.7424	26.6451	42.1489	41.7157	28.2913
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	37.9318	35.8078	43.4613	24.3370	24.5581	41.3804	37.7094	40.5452	29.3174	39.7796	39.0849	38.4737	43.2462	33.5444	32.3073	32.8228	23.8690	22.4137	18.2669	23.7424	26.6451	42.1489	41.7157	28.2913
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	37.9318	35.8078	43.4613	24.3370	24.5581	41.3804	37.7094	40.5452	29.3174	39.7796	39.0849	38.4737	43.2462	33.5444	32.3073	32.8228	23.8690	22.4137	18.2669	23.7424	26.6451	42.1489	41.7157	28.2913
R008+R009	833681.17	822398.31	833663.59	822387.15	13	0	1	30.7756	33.8117	32.2617	24.3370	24.5581	31.2852	31.0632	36.3427	23.8354	33.6293	32.4966	33.2077	34.4968	26.0131	27.7207	30.1618	24.3792	22.4213	18.7634	23.1348	26.8238	43.4530	43.5077	26.7650
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	30.7756	33.8117	32.2617	24.3370	24.5581	31.2852	31.0632	36.3427	23.8354	33.6293	32.4966	33.2077	34.4968	26.0131	27.7207	30.1618	24.3792	22.4213	18.7634	23.1348	26.8238	43.4530	43.5077	26.7650
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	39.3033	38.4371	36.1140	34.5019	40.1639	44.1362	40.1174	44.9706	32.9844	42.7813	41.8313	43.6679	45.1478	37.8768	38.9518	42.6426	38.6543	35.6112	33.3089	36.7281	40.2537	53.9119	53.0991	41.4562
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	39.3033	38.4371	36.1140	34.5019	40.1639	44.1362	40.1174	44.9706	32.9844	42.7813	41.8313	43.6679	45.1478	37.8768	38.9518	42.6426	38.6543	35.6112	33.3089	36.7281	40.2537	53.9119	53.0991	41.4562
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	39.3033	38.4371	36.1140	34.5019	40.1639	44.1362	40.1174	44.9706	32.9844	42.7813	41.8313	43.6679	45.1478	37.8768	38.9518	42.6426	38.6543	35.6112	33.3089	36.7281	40.2537	53.9119	53.0991	41.4562
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	78.5968	86.5655	32.0799	35.0030	35.2241	35.2647	79.2280	96.9787	71.1687	83.2976	77.8302	84.3276	84.9536	89.3519	80.8395	84.6809	82.1712	85.8166	88.1195	85.8041	106.3384	121.8287	109.5053	90.5053
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	78.5968	86.5655	32.0799	35.0030	35.2241	35.2647	79.2280	96.9787	71.1687	83.2976	77.8302	84.3276	84.9536	89.3519	80.8395	84.6809	82.1712	85.8166	88.1195	85.8041	106.3384	121.8287	109.5053	90.5053
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	78.5968	86.5655	32.0799	35.0030	35.2241	35.2647	79.2280	96.9787	71.1687	83.2976	77.8302	84.3276	84.9536	89.3519	80.8395	84.6809	82.1712	85.8166	88.1195	85.8041	106.3384	121.8287	109.5053	90.5053
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	78.5968	86.5655	32.0799	35.0030	35.2241	35.2647	79.2280	96.9787	71.1687	83.2976	77.8302	84.3276	84.9536	89.3519	80.8395	84.6809	82.1712	85.8166	88.1195	85.8041	106.3384	121.8287	109.5053	90.5053
R012+R013	833544.64	822390.48	833587.56	822384.60	10	0	1	78.5968	86.5655	32.0799	35.0030	35.2241	35.2647	79.2280	96.9787	71.1687	83.2976	77.8302	84.3276	84.9536	89.3519	80.8395	84.6809	82.1712	85.8166	88.1195	85.8041	106.3384	121.8287	109.5053	90.5053
R014+R016	833485.77	822318.11	833587.56	822384.60	14	0	1	51.1974	51.6364	53.7028	60.4108	58.7616	58.2254	53.1842	70.8909	43.2911	55.1749	56.0598	58.9961	60.2793	55.2367	54.1637	59.2477	56.1676	53.9351	50.9096	54.5820	61.0642	79.8515	79.1142	58.6115
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	51.4314	52.2906	53.7028	48.8618	47.9736	58.2254	51.3689	68.6873	41.7111	53.9246	53.3104	54.9602	56.1373	49.3735	49.9735	53.4014	46.7658	45.3933	42.3019	45.0518	52.9940	70.0287	66.9169	51.3312
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	51.4314	52.2906	53.7028	48.8618	47.9736	58.2254	51.3689	68.6873	41.7111	53.9246	53.3104	54.9602	56.1373	49.3735	49.9735	53.4014	46.7658	45.3933	42.3019	45.0518	52.9940	70.0287	66.9169	51.3312
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	80.4960	80.0134	76.2107	81.4965	86.4802	78.4104	78.3917	90.2307	70.9624	81.9226	78.0343	82.3681	80.9037	79.3725	73.3283	79.9778	80.0980	71.6897	68.8874	72.1502	83.8825	105.0604	91.1007	83.3528
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	79.8826	79.6645	75.5339	82.4227	76.8697	84.4449	80.0892	90.8279	71.5682	82.4323	77.8745	82.3751	80.8873	79.0679	73.9024	80.7516	77.5796	72.6827	70.7225	71.8452	83.7484	101.8679	93.8223	78.5270
R022	833355.00	822293.72	833480.61	822346.13	16	0	1	88.6828	84.4492	87.7429	89.6506	86.8772	89.2263	89.6431	97.2351	79.8161	90.2195	86.7673	90.1879	89.0633	87.0030	81.4593	86.9888	87.1014	79.6609	76.9004	78.7037	88.0012	105.1312	97.8482	86.3538
R022	833480.61	822346.13	833489.65	822316.75	16	0	1	88.6828	84.4492	87.7429	89.6506	86.8772	89.2263	89.6431	97.2351	79.8161	90.2195	86.7673	90.1879	89.0633	87.0030	81.4593	86.9888	87.1014	79.6609	76.9004	78.7037	88.0012	105.1312	97.8482	86.3538
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	85.4371	79.6618	86.8190	85.2649	86.3245	82.0941	84.2061	96.5612	80.7516	90.4113	85.5908	89.6941	90.0436	88.3473	82.3129	87.7571	86.2259	82.1345	81.0978	80.7387	89.1172	105.8455	97.0511	84.2880
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	86.7188	81.7373	82.9200	81.1236	86.3245	85.0619	85.2332	95.1714	80.1035	90.5914	86.5613	89.5384	87.0331	87.8095	81.9847	87.6497	86.9684	82.2338	78.9983	78.5638	89.3075	104.7019	97.4234	84.4459
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	85.5515	85.1425	81.7978	86.6043	90.8804	83.7571	83.7802	94.2931	78.9799	91.8145	88.1077	91.2509	89.1225	86.9855	83.5599	89.4329	85.4652	83.7995	80.4276	79.6225	88.0855	107.2245	96.4894	84.0046
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	89.6353	89.6671	90.6984	92.3370	89.6762	87.3472	90.7599	99.6972	90.7832	97.2431	91.9964	94.7031	91.1563	90.4289	83.4759	89.4260	91.1145	84.8452	79.6277	79.6328	88.6118	102.0148	94.2119	83.5213
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	88.5076	86.9631	87.3882	87.2850	90.5222	90.6154	89.0077	99.7053	89.8273	99.1529	95.6821	98.0981	96.3615	94.0882	91.4873	93.7018	92.7892	88.1164	84.3622	83.7724	90.8320	108.7408	97.9692	86.5188
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	78.6577	76.9174	78.9861	86.1459	81.8910	76.9333	79.7759	88.6237	72.8266	84.4463	80.5578	84.0748	83.1112	80.4790	77.9227	84.0872	80.5881	76.6874	75.7430	75.0776	84.5675	103.9818	95.8073	78.7373
R029	833768.03	822376.15	833846.76	822405.79	13	0	1	75.6183	71.5664	78.7936	60.4108	73.4725	75.2513	74.8328	90.9819	75.1630	82.7237	75.8076	80.1550	77.2724	79.2206	72.3313	79.0097	82.0223	73.8899	69.8661	72.4729	83.4253	96.3703	88.8707	82.7206
R030	833846.76	822405.79	833917.83	822431.11	14	0	1	74.7525	74.2632	75.9310	76.3344	72.4208	74.7777	75.2940	91.2731	73.9876	84.2786	77.4971	82.5863	84.4039	80.8310	75.8657	82.6576	80.1800	77.0570	74.0989	73.1861	82.8539	101.1101	90.5924	78.4109
R031	833917.83	822431.11	833980.58	822484.38	14	0	1	71.6232	78.8661	65.1773	73.1148	73.4725	60.7766	76.8167	90.2241	76.3134	82.9084	77.3316	80.7606	77.3800	79.2344	72.0765	78.4407	80.1138	73.8712	70.4151	71.8284	82.3912	97.3642	88.9648	79.3323
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	79.4026	78.1523	69.4457	69.3591	68.8832	68.4578	70.1846	82.2825	66.6610	76.3227	72.5586	76.7785	75.4375	74.1786	69.3015	74.8059	73.3319	70.3279	68.1628	67.8779	77.6672	91.6295	84.2976	73.1829
R033	833121.79	822072.07	833253.39	822120.94	16	0	1	70.8934	70.8931	70.9469	71.3899	72.0383	71.2173	71.5500	82.8585	65.2550	75.2665	71.4711	75.1557	74.0289	72.4275	69.3910	75.0809	73.3927	70.2711	67.9309	67.7848	75.8275	92.4006	85.0930	71.7110
R034	833253.39	822120.94	833398.77	822175.17	16	0	1	67.6555	67.9547	67.3838	69.0047	68.8150	69.1021	68.9020	81.0067	65.6106	73.0309	69.5813	73.8382	72.7345	71.0513	68.1034	74.0981	72.5455	69.6121	67.0311	66.7028	74.6202	90.8849	83.9853	70.9176
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	74.9996	74.5890	74.2232	73.7936	74.2949	74.2454	74.7144	88.7489	73.7265	82.7866	79.0159	80.9654	80.1464	78.2642	72.9967	80.9377	78.7629	72.2312	69.6834	70.3719	78.1828	94.9787	87.4669	75.0898
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	72.1429	71.6003	71.6114	72.2598	72.0874	72.7247	72.3975	85.4480	71.5848	81.9181	76.2461	80.1167	78.7605	77.3273	72.4760	78.2250	76.5415	73.4764	71.2289	70.9711	78.8054	93.1071	85.9305	74.9933
R037	833653.40	822269.00	833694.88	822284.07	16	0	1	86.9591	86.6193	86.5802	87.2137	87.1113	87.0510	87.4194	101.6451	87.2790	96.9412	88.3983	91.7864	88.0684	87.5069	79.1946	84.1304	81.5433	76.5320	73.1326	72.5900	81.0820	97.0680	89.0238	76.8904
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	87.8963	87.5793	87.7750	87.7120	88.2811	88.0729	88.1728	102.8929	88.0297	98.0991	88.3723	91.2623	86.6930	85.1884	76.3301	80.7516	79.3811	71.4991	66.8199	67.0318	74.6501	90.5872	83.6028	71.4282
R039	833761.98	822311.12	833788.45	822320.76	14	0	1	94.2766	91.0918	91.5021	92.7865	93.2154	92.7499	92.4894	108.0415	100.4235	103.2809	95.7996	98.6540	93.5568	93.0453	82.0511	89.7213	87.3805	75.7443	69.1388	72.1487	79.7977	95.1425	84.3212	78.3207
R040	833785.11	822318.98	833833.16	822335.17	18	0	1	93.2649	93.6953	93.5890	94.5958	94.0371	94.5832	94.4763	107.6989	97.0343	102.5970	94.9168	95.5653	90.8391	90.1661	79.3192	87.1034	85.0767	75.6878	68.9667	70.2326	78.8150	92.6265	83.7645	77.8906
R041	833833.16	822335.17	833902.06	822360.57	16	0	1	94.2823	91.7714	92.7196	93.2201	92.7512	93.8000	93.0776	110.5994	100.1610	105.8250	95.6251	98.5019	93.5681	92.8639	81.9876	89.5955	87.2523	75.8215	69.2835	70.5816	79.8393	95.5270	84.4981	78.4788
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	94.4892	92.7336	92.5630	93.0096	93.0355	93.9224	93.5230	108.0163	97.5250	103.2077	93.0820	95.9303	90.9646	90.5691	79.5208	89.3147	86.8530	75.0245	68.0747	69.5675	78.9781	92.6652	83.6782	77.5851
R043	833950.46	822320.48	834034.90	822250.52	18	0	1	101.7194	102.0360	102.2667	102.1736	103.3143	102.9964	102.8497	113.3965	104.7426	108.8226	101.0502	104.4770	98.9467	100.1545	87.4252	96.5205	95.1489	83.7353	76.6312	77.9612	86.1036	101.1597	90.3040	86.6531
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	93.4990	93.2659	93.4638	94.5666	94.0126	94.1354	94.3966	107.5319	97.0669	102.5136	92.4916	95.6035	90.6167	90.0813	79.2725	86.8691	86.6609	75.0188	68.0880	69.3279	78.3946	92.1585	83.3232	77.1192
R045	834140.62	822162.67	834231.78	822086.45	19	0	1	94.2965	85.0979	85.8681	88.2324	89.5130	88.6221	94.4450	105.2843	95.0323	100.3832	93.2881	96.2003	91.3477	91.1100	80.4212	87.8852	85.9128	74.7065	68.2357	71.1678	78.4958	93.4186	84.7834	78.7459
R046	834231.72	822086.85	834323.21	822011.22	18	0	1	95.0445	92.5390	92.7858	93.8458	93.3288	93.9467	95.8303	108.4027	98.4367	103.7511	94.0519	96.7995	91.8663	91.2844	80.6828	87.8349	87.6047	76.1034	69.4265	70.7136	79.8452	92.9761	84.2793	78.6234
R047	834322.77	822010.68	834384.01	821989.66	18	0	1	94.9583	92.0667	92.7387	93.4791	93.8828	93.5475	95.8433	108.4693	96.1138	101.2924	94.0397	96.9788	91.9327	91.3894	80.7687	88.0280	85.7183	76.1659	69.3291	70.6882	79.9313	93.1103	84.4329	78.5371
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	70.4387	69.3304	69.3037	69.5309	69.8204	69.9403	70.8466	84.2796	78.0154	82.6793	74.3086	77.1102	74.0782	75.6818	67.4335	74.5689	74.0553	68.0806	65.1868	62.9317	71.1925	84.6976	75.8966	68.7208
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	70.5096	70.3098	70.3621	70.5050	70.7937	70.7214	70.9802	83.0027	74.8798	79.5186	71.5920	75.7901	72.8447	73.1865	65.1724	72.1659	71.7759	65.9793	62.2933	61.3574	71.4030	84.7837	76.0507	69.1385
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	74.4296	74.4039	74.4192	74.4278	74.6800	74.8718	74.9360	88.2183	82.0287	87.5287	77.7564	81.1880	77.0889	77.7045	69.9292	75.9897	74.2689	68.5935	63.8234	61.9764	68.0684	80.4072	71.4870	64.7260
R051	833274.06	822006.80	833438.70	822067.62	16	0	1	77.4544	77.4928	77.5869	77.6612	77.8497	78.0112	78.0415	90.1700	81.9461	87.4697	78.2066	82.0751	77.9759	79.8434	70.0621	77.5149	78.3891	70.0215	64.8724	63.5968	71.2222	83.9492	74.8190	70.3243
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	77.6091	75.5285	75.3618	75.9968	76.1621	76.2224	77.6245	87.1764	79.5697	80.9196	74.0943	77.9287	74.2811	75.9150	67.6363	75.6964	75.1417	67.0943	63.1598	62.8631	72.7225	85.7629	76.9351	71.8485
R053	833786.86	822123.44	833736.68	822163.25	16	0	1	79.8575	78.3427	78.4198	78.6626	79.0462	79.0966	80.0499	90.1185	83.3823	86.5942	77.6042	81.7392	77.5899	80.3696	71.3294	79.2603	79.1252	72.1802	68.2249	67.3096	75.7221	88.6396	78.8204	73.7263
R063	833736.06	822163.26	833688.33	822174.73	18	0	1	79.8575	78.3427	78.4198	78.6626	79.0462	79.0966	80.0499	90.1185	83.3823	86.5942	77.6042	81.7392	77.5899	80.3696	71.3294	79.2603	79.1252	72.1802	68.2249	67.3096	75.7221	88.6396	78.8204	73.7263
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	82.1401	82.0595	81.8110	82.2800	82.6938	82.5018	82.6236	92.2238	85.1368	89.3396	81.9902	85.3644	82.7422	85.4997	75.9994	85.0279	87.6050	78.4916	74.0131	73.2180	82.2905	94.7042	83.2197	80.5342
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	82.1401	82.0595	81.8110	82.2800	82.6938	82.5018	82.6236	92.2238	85.1368	89.3396	81.9902	85.3644	82.7422	85.4997	75.9994	85.0279	87.6050	78.4916	74.0131	73.2180	82.2905	94.7042	83.2197	80.5342
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	82.1401	82.0595	81.8110	82.2800	82.6938	82.5018	82.6236	92.2238	85.1368	89.3396	81.9902	85.3644	82.7422	85.4997	75.9994	85.0279	87.6050	78.4916	74.0131	73.2180	82.2905	94.7042	83.2197	80.5342
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	82.1401	82.0595	81.8110	82.2800	82.6938	82.5018	82.6236	92.2238	85.1368	89.3396	81.9902	85.3644	82.7422	85.4997	75.9994	85.0279	87.6050	78.4916	74.0131	73.2180	82.2905	94.7042	83.2197	80.5342
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	82.1401	82.0595	81.8110	82.2800	82.6938	82.5018	82.6236	92.2238	85.1368	89.3396	81.9902	85.3644	82.7422	85.4997	75.9994	85.0279	87.6050	78.4916	74.0131	73.2180	82.2905	94.7042	83.2197	80.5342
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	82.1401	82.0595	81.8110	82.2800	82.6938	82.5018	82.6236	92.2238	85.1368	89.3396	81.9902	85.3644	82.7422	85.4997	75.9994	85.0279	87.6050	78.4916	74.0131	73.2180	82.2905	94.7042	83.2197	80.5342
R055	833796.53	822123.04	833872.14	822061.39	16	0	1	77.8615	77.7874	77.7464	77.8372	78.2944	78.3730	78.3011	87.8492	78.5824	83.2067	75.9248	78.3817	74.3488	76.2855	67.0664	74.6905	73.8610	66.8571	63.3800	62.5138	72.2543	85.2058	76.4483	70.1465
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	88.1214	87.7479	88.0012	88.1482	88.4936	88.8104	88.6332	98.7186	91.0383	90.8688	84.7803	89.4011	84.6672	89.5036	77.2219	88.2213	90.2384	77.2318	70.9939	73.6870	84.7032	96.2563	83.8311	84.4264
R057	833873.30	822052.66	834159.21	821814.78	16	0	1	65.0388	62.3838	62.6442	63.5589	63.5390	63.6941	65.4422	75.1891	67.7983	67.7378	62.7044	65.2095	62.8887	61.6168	55.5065	64.5510	64.3817	55.5187	47.8055	51.6054	57.5900	69.2684	62.7231	60.3659
R058	834159.21	821814.78	834258.10	821738.42	16	0	1	83.1015	80.4662	80.5408	81.3374	81.5151	81.9198	83.6066	93.6505	85.5661	87.2177	79.1373	82.8807	78.0857	80.7317	69.8362	77.7719	77.4554	67.4966	63.0449	64.6048	74.7034	87.4172	77.7038	73.1600
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	71.5681	71.8163	71.4661	71.5319	72.4564	72.0522	72.1897	82.0266	75.2685	73.5909	69.1842	71.7793	68.6357	68.4337	60.6642	71.1491	71.6632	59.6249	51.2414	55.6059	62.2166	73.2693	65.5958	65.3243
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	85.2993	84.8279	86.0708	86.1632	86.2578	86.6060	86.3938	96.5952	87.7192	88.3726	82.4675	87.6415	83.3256	88.2088	75.7653	87.4875	89.8374	77.0665	70.8324	72.9495	84.4287	96.7064	83.2906	84.2959
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	109.7228	107.0563	108.4255	105.8148	100.5544	109.9558	109.0164	110.3815	105.7140	109.0719	107.5878	108.6478	107.4250	107.0454	105.0116	107.3714	108.1795	105.5139	105.6869	105.6088	107.3455	112.0250	110.6382	106.2858
R062	833139.76	821889.31	833296.78	821947.78	16	0	1	78.4412	76.9115	78.3909	76.9326	81.2363	79.8887	78.5168	89.1635	75.1132	83.9885	80.9739	84.9489	84.0706	82.0191	76.7922	83.1657	81.2892	76.7251	73.6127	74.1255	82.3982	99.4881	91.3824	81.2714
R063	833296.86	821947.50	833460.51	822007.97	16	0	1	80.1985	73.3731	81.6169	80.2257	80.7388	76.1852	78.6627	91.3593	72.1929	82.4299	78.6444	82.3910	81.2642	79.7819	74.6428	80.2590	79.4407	73.3549	72.3854	72.3414	82.6079	100.5800	93.3257	80.7304
R064	833460.49	822008.03	833543.73	822038.72	18	0	1	77.8302	70.2776	77.0114	79.0771	75.1908	74.7736	76.3154	89.9703	70.2529	80.8950	76.7401	81.8887	80.2181	78.3392	72.8867	79.6731	77.8018	71.4493	69.3416	71.7953	82.4428	100.6749	92.7372	81.6505
R064	833543.73	822038.72	833563.70	821983.31	18	0	1	77.8302	70.2776	77.0114	79.0771	75.1908	74.7736	76.3154	89.9703	70.2529	80.8950	76.7401	81.8887	80.2181	78.3392	72.8867	79.6731	77.8018	71.4493	69.3416	71.7953	82.4428	100.6749	92.7372	81.6505
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	77.8302	70.2776	77.0114	79.0771	75.1908	74.7736	76.3154	89.9703	70.2529	80.8950	76.7401	81.8887	80.2181	78.3392	72.8867	79.6731	77.8018	71.4493	69.3416	71.7953	82.4428	100.6749	92.7372	81.6505
R065	833160.17	821834.07	833315.06	821891.67	16	0	1	83.4422	79.6619	81.4124	81.9343	79.5315	78.2458	83.9362	92.1929	75.8565	85.7616	82.1292	86.2701	84.9901	82.2898	77.3658	82.1730	81.8388	75.7262	71.2930	73.1940	82.1524	99.0980	92.3733	81.4020
R066	833315.06	821891.68	833481.00	821962.76	16	0	1	81.2140	80.2526	79.7868	82.6954	80.7439	77.4548	81.6770	92.4137	74.2760	84.4478	80.6847	84.6919	82.8999	80.3004	77.2931	83.0503	78.9231	75.0704	71.6206	73.2288	81.5172	99.5526	91.5808	79.2730
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	50.1413	49.9263	49.6904	49.8508	49.9986	50.2553	50.6451	69.7154	56.2423	66.3655	61.5605	65.4811	62.9583	63.7405	57.4474	60.8818	59.0359	56.1517	56.0548	55.4835	55.5381	65.3378	58.7314	48.1721
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	49.7522	49.7254	49.5278	49.7522	49.8735	50.1220	50.3121	66.6433	56.0265	66.2187	61.3650	64.3920	62.8253	63.6003	57.3032	60.7488	58.9322	56.0540	55.9677	52.3330	54.1839	65.3089	58.7087	48.1064
R069	833166.60	821757.87	833250.16	821796.91	29	0	1	42.6142	42.6498	42.5178	42.5879	42.7954	42.9274	43.1395	52.0408	42.7528	50.8590	44.9079	47.4757	47.1451	47.1522	45.1880	48.5780	47.8681	51.7353	52.9228	45.1781	50.3692	62.9206	56.9535	44.8644
R070	833249.00	821820.73	833326.89	821883.87	13	0	1	67.2660	66.9861	67.0186	67.0461	67.4826	67.5607	67.6498	78.3195	65.2759	75.5801	68.3758	72.0810	69.5213	69.9793	63.9589	67.2390	66.5701	64.4419	63.1644	60.5871	68.5134	82.4161	75.3951	64.2879

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_X x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	66.2174	66.3200	66.4357	66.6422	66.6783	67.0088	66.9221	75.5005	62.1103	72.1803	66.4470	69.0095	66.5032	66.9487	61.9885	65.4018	63.5744	61.3237	60.9801	58.6614	67.5878	81.4170	74.6778	63.4906
R072	833397.24	821875.22	833591.76	821897.07	20	0	1	59.6986	59.4632	59.4049	59.8408	60.5603	59.7567	59.8383	69.0608	53.7639	61.5715	57.3065	60.4423	58.5555	57.2600	52.2973	56.9931	55.1758	50.9317	48.4488	49.5369	57.9159	71.8476	66.0789	55.7887
R073	833481.50	821860.54	833397.24	821875.22	17	0	1	62.8030	62.4036	62.7767	63.1293	63.3470	62.9188	63.1943	71.1925	55.9972	65.6670	61.3516	64.4859	62.8337	62.1167	58.0928	61.0247	59.2716	56.9287	56.6632	56.6309	64.3655	77.0990	71.7868	62.0314
R074	833261.64	821790.34	833481.50	821860.54	20	0	1	63.2049	62.9218	63.2561	62.9184	63.5326	63.4866	63.6475	71.4927	56.1911	65.0853	61.4515	64.3639	62.3660	61.5903	56.9377	59.8875	57.7524	55.8816	54.6439	54.3606	63.4372	77.3533	71.5468	59.8594
R075	833449.48	821961.09	833506.97	821683.08	16	0	1	59.1368	59.1432	58.7785	59.4809	59.3525	59.9501	59.7621	67.9307	52.0619	61.0387	57.5451	60.5302	58.9189	57.4702	53.3710	56.7134	54.4328	51.9595	51.2236	51.3349	59.9000	74.0927	68.7612	56.4314
R076	833501.48	821897.80	833548.66	821899.77	16	0	1	61.6141	62.3005	61.5912	62.4517	62.4324	62.1385	62.2970	71.5880	56.4298	63.9019	59.8245	63.4783	61.5028	61.7507	56.1661	60.8358	59.2773	55.6704	54.9955	54.9245	65.2904	79.7244	72.7599	60.9343
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	61.6141	62.3005	61.5912	62.4517	62.4324	62.1385	62.2970	71.5880	56.4298	63.9019	59.8245	63.4783	61.5028	61.7507	56.1661	60.8358	59.2773	55.6704	54.9955	54.9245	65.2904	79.7244	72.7599	60.9343
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	61.6141	62.3005	61.5912	62.4517	62.4324	62.1385	62.2970	71.5880	56.4298	63.9019	59.8245	63.4783	61.5028	61.7507	56.1661	60.8358	59.2773	55.6704	54.9955	54.9245	65.2904	79.7244	72.7599	60.9343
R077	833506.57	821884.14	833553.57	821884.35	17	0	1	59.6724	59.7863	59.7521	59.8972	60.3802	60.1690	60.3228	68.6984	53.5837	62.7212	58.3852	61.7260	60.0962	59.6754	55.2870	58.7364	56.8635	55.5690	54.7524	54.3590	63.9848	78.3229	72.0046	59.8010
R077	833553.57	821884.35	833600.48	821871.28	17	0	1	59.6724	59.7863	59.7521	59.8972	60.3802	60.1690	60.3228	68.6984	53.5837	62.7212	58.3852	61.7260	60.0962	59.6754	55.2870	58.7364	56.8635	55.5690	54.7524	54.3590	63.9848	78.3229	72.0046	59.8010
R077	833600.48	821871.28	833673.84	821812.08	17	0	1	59.6724	59.7863	59.7521	59.8972	60.3802	60.1690	60.3228	68.6984	53.5837	62.7212	58.3852	61.7260	60.0962	59.6754	55.2870	58.7364	56.8635	55.5690	54.7524	54.3590	63.9848	78.3229	72.0046	59.8010
R078	833682.38	821822.35	833875.32	821660.75	16	0	1	66.5529	66.0399	66.2801	66.6229	66.6914	67.1973	67.1207	76.1591	62.2776	68.9122	64.5064	68.0198	65.4350	65.7121	59.6780	64.0798	62.6693	58.4092	57.6178	57.6068	66.9868	80.9083	74.0383	63.7005
R079	833673.29	821911.43	833867.51	821651.48	16	0	1	57.4055	57.8687	57.4730	57.9026	58.0291	57.8142	58.1239	66.0559	49.6606	59.3714	56.5552	60.0129	58.9028	58.3902	54.7392	57.6215	55.7657	54.7071	55.7874	54.9337	64.8103	79.1770	73.0745	59.7970
R080	833876.67	821661.18	833999.54	821557.94	16	0	1	65.8806	65.9891	66.0189	66.3598	66.3925	65.8930	66.3369	75.0648	58.1680	68.1680	63.4896	67.3830	64.7530	65.5351	59.0830	62.7188	60.7568	57.5184	57.4105	56.6929	67.3488	81.8970	74.6267	62.7008
R081	833867.01	821650.86	833983.08	821552.08	20	0	1	59.8718	60.2274	59.9763	60.2280	60.3679	60.2277	60.7124	68.0763	52.6985	61.9015	59.2518	62.4642	61.1147	60.5721	57.0362	59.7416	57.8868	56.6338	57.7980	56.9079	66.2660	80.0708	74.3990	61.8051
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	85.1290	85.5718	84.8062	85.0954	85.5761	85.1270	85.7498	96.3152	81.7545	94.5164	87.5338	91.2947	88.6416	88.6761	82.6119	85.4525	83.2160	79.8536	79.5044	79.3089	87.6438	102.6151	95.3178	81.7898
R082	833510.75	821821.12	833536.39	821795.93	14	0	1	85.1290	85.5718	84.8062	85.0954	85.5761	85.1270	85.7498	96.3152	81.7545	94.5164	87.5338	91.2947	88.6416	88.6761	82.6119	85.4525	83.2160	79.8536	79.5044	79.3089	87.6438	102.6151	95.3178	81.7898
R082	833536.39	821795.93	833570.13	821687.58	14	0	1	85.1290	85.5718	84.8062	85.0954	85.5761	85.1270	85.7498	96.3152	81.7545	94.5164	87.5338	91.2947	88.6416	88.6761	82.6119	85.4525	83.2160	79.8536	79.5044	79.3089	87.6438	102.6151	95.3178	81.7898
R083	833436.83	821888.11	833496.18	821813.12	14	0	1	48.2901	48.8006	48.6146	49.1546	49.9162	49.5741	49.0558	51.8600	45.6886	52.0153	50.0399	50.8115	51.6118	47.4578	48.0112	49.6656	47.6528	45.8149	44.5878	46.5795	49.3818	59.5016	58.1833	49.4312
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	48.2901	48.8006	48.6146	49.1546	49.9162	49.5741	49.0558	51.8600	45.6886	52.0153	50.0399	50.8115	51.6118	47.4578	48.0112	49.6656	47.6528	45.8149	44.5878	46.5795	49.3818	59.5016	58.1833	49.4312
R083	833524.36	821772.29	833559.81	821652.62	14	0	1	48.2901	48.8006	48.6146	49.1546	49.9162	49.5741	49.0558	51.8600	45.6886	52.0153	50.0399	50.8115	51.6118	47.4578	48.0112	49.6656	47.6528	45.8149	44.5878	46.5795	49.3818	59.5016	58.1833	49.4312
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	86.0133	85.6158	85.3827	86.0573	86.1974	85.9241	86.3188	96.8174	81.7579	92.8300	88.4817	92.8050	90.5311	91.5774	85.7368	87.9476	86.1974	86.8185	86.7090	85.2852	94.3724	109.3025	101.9249	86.4441
R084	833582.69	821644.65	833607.71	821603.87	13	0	1	86.0133	85.6158	85.3827	86.0573	86.1974	85.9241	86.3188	96.8174	81.7579	92.8300	88.4817	92.8050	90.5311	91.5774	85.7368	87.9476	86.1974	86.8185	86.7090	85.2852	94.3724	109.3025	101.9249	86.4441
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	88.4146	88.7170	88.4032	88.7522	88.9030	89.2061	89.5990	98.6868	85.8829	95.3634	91.4912	95.3767	92.9913	93.6973	88.2593	90.1133	88.4008	86.7489	88.4629	85.0581	95.3532	109.7021	100.3455	88.2430
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	88.4146	88.7170	88.4032	88.7522	88.9030	89.2061	89.5990	98.6868	85.8829	95.3634	91.4912	95.3767	92.9913	93.6973	88.2593	90.1133	88.4008	86.7489	88.4629	85.0581	95.3532	109.7021	100.3455	88.2430
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	88.4146	88.7170	88.4032	88.7522	88.9030	89.2061	89.5990	98.6868	85.8829	95.3634	91.4912	95.3767	92.9913	93.6973	88.2593	90.1133	88.4008	86.7489	88.4629	85.0581	95.3532	109.7021	100.3455	88.2430
R086	833580.70	821649.89	833603.88	821583.58	17	0	1	86.9918	86.4842	87.1006	85.9585	87.1345	87.3249	87.3754	94.7771	79.3080	91.2749	84.7625	88.4403	85.5976	86.0519	80.2407	81.8902	79.4698	77.6224	78.4860	77.1970	86.9210	101.5429	95.4722	81.5709
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	86.9918	86.4842	87.1006	85.9585	87.1345	87.3249	87.3754	94.7771	79.3080	91.2749	84.7625	88.4403	85.5976	86.0519	80.2407	81.8902	79.4698	77.6224	78.4860	77.1970	86.9210	101.5429	95.4722	81.5709
R087	833648.49	821548.43	833696.49	821508.30	13	0	1	105.0802	104.8571	104.9910	104.4312	104.7471	104.7149	105.1832	107.7038	103.8887	107.5038	106.3521	107.1419	105.4772	105.4700	103.5578	104.1314	104.3909	103.4288	104.0801	101.8552	104.1301	108.4908	106.1606	103.4518
R088	833254.24	821811.68	833365.50	821856.64	17	4	4	21.4580	21.2699	21.1384	21.1648	21.2386	21.4483	21.8938	29.9360	31.6511	30.6114	29.8559	29.0555	26.3883	22.7448	25.2796	21.5898	24.0647	23.5708	20.8576	17.4882	18.6792	21.4066	21.7445	18.5468
R088	833365.50	821856.64	833416.50	821865.51	17	7	4	21.4580	21.2699	21.1384	21.1648	21.2386	21.4483	21.8938	29.9360	31.6511	30.6114	29.8559	29.0555	26.3883	22.7448	25.2796	21.5898	24.0647	23.5708	20.8576	17.4882	18.6792	21.4066	21.7445	18.5468
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	21.4580	21.2699	21.1384	21.1648	21.2386	21.4483	21.8938	29.9360	31.6511	30.6114	29.8559	29.0555	26.3883	22.7448	25.2796	21.5898	24.0647	23.5708	20.8576	17.4882	18.6792	21.4066	21.7445	18.5468
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	21.4580	21.2699	21.1384	21.1648	21.2386	21.4483	21.8938	29.9360	31.6511	30.6114	29.8559	29.0555	26.3883	22.7448	25.2796	21.5898	24.0647	23.5708	20.8576	17.4882	18.6792	21.4066	21.7445	18.5468
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	21.4580	21.2699	21.1384	21.1648	21.2386	21.4483	21.8938	29.9360	31.6511	30.6114	29.8559	29.0555	26.3883	22.7448	25.2796	21.5898	24.0647	23.5708	20.8576	17.4882	18.6792	21.4066	21.7445	18.5468
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	21.4580	21.2699	21.1384	21.1648	21.2386	21.4483	21.8938	29.9360	31.6511	30.6114	29.8559	29.0555	26.3883	22.7448	25.2796	21.5898	24.0647	23.5708	20.8576	17.4882	18.6792	21.4066	21.7445	18.5468
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	21.4580	21.2699	21.1384	21.1648	21.2386	21.4483	21.8938	29.9360	31.6511	30.6114	29.8559	29.0555	26.3883	22.7448	25.2796	21.5898	24.0647	23.5708	20.8576	17.4882	18.6792	21.4066	21.7445	18.5468
R089	833256.85	821801.44	833370.08	821846.87	16	4	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R089	833562.07	821653.37	833596.99	821594.44	16	6	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R089	833596.99	821594.44	833609.93	821508.87	16	6	4	21.2262	21.0403	20.9497	21.0772	21.2679	21.2503	21.5308	24.5514	24.9314	23.5704	24.0157	24.0208	22.6724	20.0578	22.4200	19.0297	21.7335	22.6943	20.7921	16.6096	18.2952	21.1966	21.1650	18.3647
R090+R091	833269.78	821629.64	833317.84	821634.13	17	0	1	65.7626	65.5285	65.0507	65.4972	66.3541	65.6654	66.3185	81.0775	62.6759	75.9199	69.7704	72.8911	73.4003	68.1926	65.6528	71.9493	69.0301	66.8052	62.8235	63.9070	71.1455	90.1624	81.8145	67.1787
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	64.5416	64.0258	66.1463	67.0349	66.5505	63.6588	65.7195	78.9799	59.9044	72.3267	68.9794	72.2178	72.2612	67.8308	64.8048	71.0522	68.6934	64.9097	61.2988	62.4767	70.6809	88.4079	81.9053	68.1643
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1	64.5416	64.0258	66.1463	67.0349	66.5505	63.6588	65.7195	78.9799	59.9044	72.3267	68.9794	72.2178	72.2612	67.8308	64.8048	71.0522	68.6934	64.9097	61.2988	62.4767	70.6809	88.4079	81.9053	68.1643
R094	833337.84	821634.13	833341.81	821576.41	16	0	1	54.2152	54.0196	53.8471	54.7276	55.1049	55.1680	54.0794	58.6721	46.6848	55.5822	52.5555	51.7877	51.1271	43.0059	42.0702	42.6421	38.1645	33.8607	29.1131	32.6400	36.7230	50.8669	50.0675	36.8813
R095	833609.59	821501.72	833648.49	821548.43	17	0	1	113.7586	113.0085	113.5261	113.7144	114.0539	114.3704	115.0342	119.8302	114.6757	117.6921	116.7629	118.0245	116.5845	116.1976	114.3117	115.7928	116.4147	114.4619	115.1960	112.1230	115.0025	120.7159	118.2237	114.6007
R096+R097	833980.59	822454.38	834028.77	822414.27	18	0	1	77.8298	88.6725	76.3041	56.7812	57.0803	82.8860	75.9435	92.0399	79.4855	89.3889	84.2530	86.0844	84.2649	83.4512	77.3432	83.7117	78.6266	74.0384	69.5868	70.2054	78.9300	98.8190	91.9441	79.7086
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	102.3635	101.9616	104.4382	107.3202	104.5748	97.7063	100.1433	110.2492	109.9799	119.2951	110.5860	109.7191	104.3035	102.1327	95.0525	99.3007	87.9272	81.8153	78.5082	79.6873	87.9933	103.5924	93.9933	83.7930
R100+R101	834127.62	822332.11	834218.31	822256.35	18	0	1	89.9090	89.5426	97.2671	90.6874	95.5662	89.6451	98.4651	105.5415	95.3085	110.3982	101.5468	100.5549	101.5259	94.5152	89.2927	97.2479	86.9726	81.7176	76.6356	77.4991	85.2404	105.5009	95.5590	84.7716
R102+R103	834218.31	822256.35	834309.95	822180.58	18	0	1	89.5253	95.5142	87.9050	89.0451	89.4713	94.2704	90.3298	107.5616	89.5016	100.4693	91.0849	95.5296	89.2049	87.2045	78.0824	85.9420	80.7304	71.7603	66.7711	69.6883	81.8109	100.1525	90.8595	80.4203
R104+R105	834309.95	822180.58	834407.46	822098.55	18	0	1	83.4997	91.4848	85.7727	81.4965	81.8910	89.3307	82.5087	101.6018	86.0510	94.3178	88.6325	92.7975	87.4308	84.1786	76.6559	83.8824	78.4294	72.6104	67.5100	70.5967	81.4918	99.2654	91.5163	80.4227
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	72.5432	72.7363	75.0828	74.0545	76.1903	71.2999	72.6955	85.6163	68.0003	80.4451	76.6261	80.7737	80.0737	78.2494	73.6224	80.7716	77.1620	73.9948	70.3949	72.2947	80.7501	100.2763	89.5984	76.6506
R107	833991.55	822370.04	834080.35	822287.55	18	0	1	75.1428	70.9458	75.5339	82.4227	76.8697	72.5269	75.6431	83.9982	65.1010	75.7987	72.2675	77.0127	76.5299	73.8493	69.1734	76.0040	74.9997	70.3834	66.2057	67.8140	77.7921	97.3010	90.6258	79.7457
R108	834090.84	822288.06	834181.98	822212.22	16	0	1	74.6204	71.5497	75.0332	80.4217	78.2463	77.2161	75.2689	84.0856	66.0757	76.7586	74.0483	77.1001	76.8769	74.9064	70.5638	77.1943	76.8855	71.1986	67.7752	69.1861	79.8567	97.9888	89.0253	76.8327
R109	834181.98	822212.22	834273.05	822136.48	17	0	1	73.4376	70.1919	73.8889	79.4911	77.1555	76.0969	74.0787	83.2304	64.6013	75.6290	72.9473	76.3180	75.5642	73.8711	69.5885	75.8324	75.3591	69.5415	66.3213	67.2072	77.4919	96.5313	90.4566	77.4159
R110	834273.34	822136.83	834364.36	822060.84	17	0	1	72.3558	72.1407	70.8577	76.0283	74.4878	71.8670	74.6035	84.0873	64.0710	75.6112	72.2288	76.0011	75.6549	73.1297	69.0538	75.4954	73.8349	68.4222	66.3078	68.0086	77.2219	94.8181	89.1265	76.5512
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	73.2495	73.8741	70.3973	74.1910	72.4327	71.5064	73.8946	83.5203	66.5709	78.0819	72.8265	76.8808	75.7769	73.0956	69.2809	74.9257	74.5326	68.8220	65.2040	67.9609	77.6972	96.6653	88.5806	73.3973
R112	833848.76	822405.79	833992.86	822380.57	19	0	1	105.4289	107.1034	111.7484	106.7994	108.0306	107.8963	107.8620	119.1369	109.4368	115.9948	107.7106	109.8818	108.0745	106.6432	93.5219	101.6088	93.1346	84.2252	80.4592	81.8363	90.6132	107.0793	96.3169	88.7522
R113	833833.16	822335.17	833909.66	822271.35	18	0	1	67.3207	66.9876	68.5679	64.7383	61.4559	70.5414	66.0436	75.2832	59.0521	69.8479	65.9135	70.2934	68.7247	65.4457	62.9880	67.8990	67.0466	62.0874	59.2905	60.0512	71.0491	87.2045	80.8331	68.9505
R114	833909.65	822271.35	833994.47	822301.23	18	0	1	74.6712	72.2043	72.8839	73.5866	73.3271	73.1999	74.8283	85.2435	74.0394	86.2874	81.4015	82.7774	81.5540	79.0283	77.2377	80.4085	79.3614	74.6959	71.3590	71.1764	77.9774	93.4526	85.0773	74.8475
R115	833984.06	822200.75	834077.01	822132.08	18	0	1	90.2034	89.9307	90.2737	90.3468	89.0420	90.2433	90.6438	99.6026	88.1317	97.6288	89.9353	93.0293	89.3836	88.9255	80.8270	86.6339	84.2788	76.1014	72.0111	73.8774	81.1576	96.0508	87.6289	80.6875
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	71.1750	71.0872	72.9862	73.6285	73.1248	73.0133	72.1768	80.8032	65.7788	77.1296	72.5994	75.9632	74.9162	72.9516	69.1644	74.4212	74.8868	68.8783	65.8428	67.4536	74.3529	89.1157	82.8791	72.7469
R117	834097.30	822115.02	834190.89	822037.73	18	0	1	71.4961	72.9414	71.9464	73.5012	73.7924	72.7715	72.7252	80.8834	66.3892	75.8954	73.2248	76.4473	75.2593	73.3349	69.6860	74.5018	75.4275	69.3755	66.2849	67.8556	74.5341	89.3449	83.3013	73.6625
R118	834190.59	822037.73	834243.28	821993.08	19	0	1	73.4406	73.1803	72.6244	74.1246	74.4288	73.4450	73.1973	81.4493	67.2077	76.4735	73.9722	76.8486	75.6955	73.7816	70.2303	75.0572	75.9503	69.8800	68.3679	68.2224	76.6962	89.6683	83.7361	73.4938
R119	834242.04	821993.65	834282.16	821961.45	19	0	1	71.5106	70.9157	71.9699	71.7548	70.9042	71.8103	72.1016	80.5578	67.5332	76.9566	74.3564	75.9564	75.0098	73.0710	71.1352	74.6633	75.7604	69.6332	68.3679	68.2224	76.6962	89.6683	83.7361	73.4938
R120	834281.93	821961.17	834359.17	821896.80	18	0	1	72.7265	72.9153	72.8976	72.5725	71.8846	73.9040	72.8117	83.1519	68.4937	78.0576	75.3872	78.6041	77.5781	75.4126	71.8726	76.9855	76.1347	71.6718	68.6602	68.4617	76.7769	89.5437	83.3619	74.0744
R121	833768.03	822376.16	833790.11	822318.08	18	0	1	87.9500	81.7291	91.9512	85.8187	86.2220	86.2884	84.3134	96.7523	73.7938	89.5173	85.6277	91.8420	92.7377	94.7521	91.4081	94.6803	94.3533	96.3250	99.7341	96.5114	111.4118	130.9425	119.6518	100.6876
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	89.2111	90.3550	89.7685	91.0419	92.5672	90.6132	89.2744	101.5607	83.4420	102.7035	92.2833	94.8606	90.7865	87.5811	82.8288	83.5180	72.9489	72.7175	73.6335	72.4186	79.0711	96.5633	91.0481	72.6327
R123	833868.78	822222.16	833954.75	822150.00	18	0	1	56.2058	55.8924	55.4414	55.3293	53.2234	58.8182	57.4989	68.6852	47.4370	61.1717	58.7691	61.9946	63.3772	58.1111	57.5372	62.1021	58.7144	58.9986	58.7532	58.4969	65.9883	85.5161	81.1079	61.0521
R124	833673.82	822341.72	833694.86	822284.07	18	0	1	95.1737	93.3060	93.1844	96.7065	93.7995	96.3284	94.1655	102.2929	88.5752	101.9535	96.4878	100.9005	100.4954	102.4540	97.4068	100.1941	103.0085	100.5098	102.6108	98.1500	111.7163	126.9490	119.6201	101.3163
R125	833694.86	822284.07	833827.77	822172.85	18	0	1	91.7849	94.4709	91.6911	94.2639	96.9107	91.7232	94.0613	104.6649	83.2160	99.8401	90.4194	91.8825	86.2535	82.4527	74.0480	73.6880	60.3867	59.4011	57.2654	57.9405	66.1021	82.9470	80.0093	62.9033
R126	833653.40	822269.00	833688.33	822174.73	13	0	1	80.4851	80.3535	78.3000	84.7284	87.3045	80.2757	81.6615	91.1494	75.0025	86.3234	82.0040	86.2996	84.5754	82.6586	79.4632	86.0004	82.1859	78.4072	77.6611	77.1337	85.5850	104.9717	95.7948	81.2092
R127	833489.65	822315.75	833503.51	822278.46	18	0	1	79.1379	82.7882	79.7455	79.0131	76.5553	78.9787	80.7886	89.6862	71.1381	84.0254	81.7283	86.1142	85.4680	83.6656	83.2612	86.9047	85.9126	85.7018	86.3416	85.2888	94.6557	112.6033	102.7655	86.4245
R128	833503.51	822278.46	833524.36	822221.21	18	0	1	76.5238	76.0597	78.9921	78.5516	76.5446	75.8084	76.0182	85.4767	65.2450	78.2880	75.7301	80.2752	80.0662	78.7668	77.9230	81.5846	80.5736	80.8168	81.5506	80.8668	89.7693	107.9859	101.3097	83.9967
R129	833377.80	822232.03	833355.00	822293.72	18	0	1	64.7049	64.4836	63.8803	65.0928	64.6278	65.2041	65.3449	76.0431	56.8576	69.7907	67.3436	70.3507	71.9982	69.2017	68.2119	71.7615	69.8360	69.8399	71.8311	69.2856	80.6250	96.0138	89.2539	73.0462
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	63.6192	63.4843	63.1541	63.3246	64.1079	63.6670	63.9629	75.0525	55.5780	68.7692	66.3419	69.2822	69.1918	68.1896	65.3940	70.7152	68.5754	68.7888	70.8425	68.2368	80.0889	95.5370	88.6057	71.8676
R131	833398.42	822175.04	833434.10	822080.76	18	0	1	66.1207	66.0252	66.1474	66.0690	66.8469	66.4050	66.6027	78.1196	61.0114	72.1342	66.4914	70.6912	70.0175	68.8486	64.3499	69.7257	68.9165	65.9137	65.6905	65.5594	74.8313	90.7534	83.6688	70.8470
R132	833433.92	822080.70	833460.51	822007.87	16	0	1	50.3477	50.3487	50.6108	50.6651	50.6844	50.8687	50.3553	54.5070	49.0146	55.9913	53.6202	53.7678	54.1518	48.2125	47.3805	48.5631	45.5077	42.5538	40.0608	41.9568	43.3636	54.4365	52.4644	42.8335
R133	833460.46	822007.95	833481.00	821952.76	16	0	1	80.3113	81.6900	82.6496	83.5894	83.6068	81.6461	80.1690	90.2595	77.5837	88.0577	81.2730	84.4657	80.9048	78.9609	71.7814	75.1066	67.9646	65.6788	63.8885	64.4487	72.6976	88.0777	79.7284	67.3704
R134	833481.00	821952.76	833500.97	821883.08	16	0	1	66.0125	67.4722	69.3323	70.9017	69.8575	67.8527	65.6618	76.4056	60.7755	70.6577	66.9079	69.8786	69.0146	65.8268	62.4964	66.9825	65.2598	62.8532	60.2089	60.1526	66.3474	83.0928	77.4211	63.6074
R135	833209.07	822239.76	833232.06	822178.07	18	0	1	72.3802	84.5355	94.5041	81.9462	78.9157	92.9358	82.9080	83.6690	61.4343	77.2680	71.5956	76.6701	78.3356	76.1958	74.2414	78.0318	74.4730	73.6272	73.4074	74.9066	86.2239	103.5197	99.8059	84.0962
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	60.1911	72.8976	85.5764	35.0030	35.2241	86.2884	79.0583	80.8335	59.5583	75.6385	69.9855	73.8192	75.8085	73.4096	71.4436	75.3938	71.9590	72.1432	72.3388	73.0657	82.2653	102.5801	98.5501	81.5613
R137	833080.91	822182.63	833100.83	822129.44	18	0	1	64.5815	64.5269	75.2462	32.5306	32.7397	75.8663	61.5459	72.9366	49.9135	64.1078	60.0747	64.4992	66.7710	64.7322	60.8760	65.3905	66.6126	63.4332	64.8780	65.4086	74.9580	94.1374	90.1210	71.8198
R138	833100.63	822129.44	833121.79	822072.07	18	0	1	64.5815	64.5269	75.2462	32.5306	32.7397	75.8663	61.5459	72.9366	49.9135	64.1078	60.0747	64.4992	66.7710	64.7322	60.8760	65.3905	66.6126	63.4332	64.8780	65.4086	74.9580	94.1374	90.1210	71.8198
R139	833121.68	822072.03	833156.56	821977.95	18	0	1	60.9886	60.4137	61.7027	59.3704	61.4591	61.8624	61.8177	71.3688	50.6123	63.4465	60.7088	65.3625	65.4984	54.3497	61.7552	65.4972	65.2887	64.6852	67.3163	64.8443	76.7424	94.6671	87.7900	70.0229
R140	833274.46	822007.07	833296.86	821947.56	17	0	1	93.6774	92.6886	92.3501	92.6409	92.5768	95.0566	94.0229	103.7599	83.2291	96.7198	89.2047	90.8388	86.1907	82.1862	74.5604	75.4433	65.4952	64.3654	62.5219	62.1002	70.7895	88.8531	84.0907	68.2593

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833295.56	821947.25	833315.58	821891.87	13	0	1
R142	833329.89	821853.87	833315.98	821891.84	13	0	1
R143	833120.75	821889.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833179.74	821783.15	13	0	1
R145+R146	833812.49	821976.50	834004.98	821816.03	17	0	1
R147+R148	833738.44	821888.36	833931.13	821727.74	16	0	1
R149	833728.61	821749.52	833807.73	821684.38	14	0	1
R149	833774.08	821843.52	833807.73	821684.38	13	0	1
R150	833736.67	821759.23	833867.71	821803.87	11	0	1
R151	833613.61	821610.98	833693.50	821543.70	13	0	1
R151	833693.50	821543.70	833775.28	821642.53	14	0	1
R152	833774.08	821643.52	833826.17	821600.56	20	0	1
R153	833991.31	822369.76	834026.77	822414.27	16	0	1
R154	833950.48	822320.45	833992.00	822369.87	18	0	1
R155	833909.68	822271.38	833950.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.35	18	0	1
R157	833868.56	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.91	822299.62	834112.90	822344.34	15	0	1
R160	834090.39	822287.53	834127.62	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.96	822201.48	834034.90	822250.82	16	0	1
R164	834007.86	822189.33	834049.42	822238.28	16	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.38	833964.75	822160.50	19	0	1
R167	833865.47	822042.45	834007.86	822189.33	19	0	1
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1
R170+R171	833738.44	821888.35	833812.49	821976.50	16	0	1
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1
R174+R175	833561.78	821677.98	833683.38	821823.65	16	0	1
R176	833498.77	821608.49	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.68	821668.47	20	0	1
R178	833440.44	821529.90	833483.00	821608.01	16	0	1
R179	833451.64	821526.21	833511.32	821600.38	17	0	1
R180	834218.31	822256.35	834335.06	822395.33	16	0	1
R181	834181.98	822212.22	834218.31	822256.35	16	0	1
R182	834140.62	822162.67	834181.78	822212.39	16	0	1
R183	834099.34	822113.33	834140.62	822162.67	16	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.13	13	0	1
R184	834071.90	822084.18	834097.30	822118.02	14	0	1
R185	834309.95	822180.58	834383.86	822267.44	19	0	1
R186	834231.54	822086.63	834273.34	822136.83	19	0	1
R187	834190.69	822037.73	834231.76	822086.45	16	0	1
R188+R189	834004.98	821816.03	834068.34	821890.22	19	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	16	0	1
R192+R193	833875.52	821660.75	833930.85	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.45	20	0	1
R196+R202	833761.01	821523.36	833828.17	821600.56	20	0	1
R197	834364.36	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.94	16	0	1
R199	834281.93	821961.17	834323.00	822010.48	19	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R200	834239.17	821914.13	834327.09	821948.33	18	0	1

NO_X x 100 (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
89.3564	87.9911	80.4767	78.5593	92.5967	93.5036	89.6531	102.9134	80.7093	95.1590	86.6001	88.5127	83.7070	79.2498	71.8740	72.7605	61.4951	59.8460	58.4116	59.4789	69.2041	88.3504	82.8529	64.9380
59.5789	55.2968	57.7137	56.2448	53.7142	58.6673	60.1399	63.8980	52.2530	61.6539	60.8109	62.0636	62.5302	56.7289	56.3054	59.0502	54.4987	50.7316	48.5783	51.9088	56.8409	72.5045	69.2127	56.8795
94.9572	94.8618	93.8604	93.9517	94.0726	96.9140	94.9802	104.2244	91.0358	103.4393	96.5236	97.8407	90.8156	87.2725	82.0670	80.4463	72.1030	68.3971	66.3259	67.1529	73.6310	90.8031	86.2040	70.9377
94.3526	94.1989	93.3150	94.8721	94.7353	96.6094	94.7446	103.7235	86.5249	99.6237	92.4795	94.2090	89.5325	85.8798	78.5798	79.2300	68.1552	66.8599	64.5678	64.0681	72.4471	90.0047	85.6678	69.8441
85.7216	81.7291	91.9512	65.4924	100.7928	81.1861	84.3096	93.5847	70.8822	86.9958	78.1190	80.5298	75.6338	69.7212	64.9864	64.8222	51.1082	50.6460	48.3066	50.3302	55.8818	74.1255	72.0658	54.7070
76.2156	77.1498	85.5764	92.1706	86.2220	82.3635	78.3071	88.3567	65.7655	80.5409	72.7822	73.7101	69.7846	63.1553	57.5748	57.2570	47.0155	45.6597	42.3860	44.9310	52.3265	68.0878	67.7005	50.6497
70.7037	68.6453	65.1773	73.1148	73.4725	78.9993	69.3337	81.5393	58.4054	72.3881	70.2697	73.9374	75.1712	73.6971	72.0208	74.5099	79.6910	77.6333	79.1251	77.3523	89.6666	108.3333	105.0590	85.5043
70.7037	68.6453	65.1773	73.1148	73.4725	78.9993	69.3337	81.5393	58.4054	72.3881	70.2697	73.9374	75.1712	73.6971	72.0208	74.5099	79.6910	77.6333	79.1251	77.3523	89.6666	108.3333	105.0590	85.5043
70.7037	68.6453	65.1773	73.1148	73.4725	78.9993	69.3337	81.5393	58.4054	72.3881	70.2697	73.9374	75.1712	73.6971	72.0208	74.5099	79.6910	77.6333	79.1251	77.3523	89.6666	108.3333	105.0590	85.5043
70.7037	68.6453	65.1773	73.1148	73.4725	78.9993	71.3359	81.5393	58.8898	72.8927	70.2697	73.9374	75.1712	73.6971	71.1610	74.5099	74.3216	76.1321	77.2122	75.2219	89.6666	108.3333	105.0590	80.3784
70.7037	68.6453	65.1773	73.1148	73.4725	78.9993	71.3359	81.5393	58.8898	72.8927	70.2697	73.9374	75.1712	73.6971	71.1610	74.5099	74.3216	76.1321	77.2122	75.2219	89.6666	108.3333	105.0590	80.3784
70.7037	68.6453	65.1773	73.1148	73.4725	78.9993	69.3337	81.5393	58.4054	72.3881	69.7058	73.2390	73.7644	71.7568	68.7840	74.1884	73.4555	73.8682	72.9698	72.3561	87.3390	105.7210	97.1588	76.1844
71.6190	72.0459	71.0502	71.0190	73.0663	73.1798	72.4523	84.7350	62.6209	76.7424	71.0957	71.2889	69.7408	66.6732	60.9364	64.4700	60.2219	56.7157	55.2666	56.7177	65.7530	84.5591	80.8475	63.2524
71.2542	72.4357	69.9828	71.5817	73.7802	71.8923	72.8062	84.8805	62.3737	76.3014	70.8192	72.6839	71.1277	66.3184	62.3412	65.3542	60.9188	58.1657	56.5775	57.9363	66.0116	84.4754	80.3336	62.9321
71.1932	72.4154	70.9527	70.8813	72.2922	72.5131	72.7750	87.0097	66.1773	78.8038	72.9925	73.0864	71.7367	68.7735	62.5342	66.0977	63.4303	60.0340	57.0789	58.2346	67.9372	87.5306	82.7740	63.7129
90.2271	87.2090	85.1990	85.1348	83.2918	83.5656	91.0188	114.3381	90.5876	106.4029	100.1801	102.7351	100.5261	94.3734	89.7963	92.1308	86.6557	83.3248	78.4656	77.6178	84.4932	100.8057	96.2691	75.2885
92.4038	89.7929	89.8412	87.4277	88.0560	88.2752	93.0874	115.5844	98.6655	107.9320	100.0141	99.2122	96.0863	94.1190	85.6092	87.0530	81.8945	78.4514	76.9063	75.7857	83.1844	98.9171	93.8910	75.2346
88.1035	88.3076	88.0775	88.3344	89.1966	88.8199	88.6117	100.2956	82.3284	95.9769	89.1591	89.1494	86.2875	84.9636	77.3512	78.6911	74.2358	71.3290	70.5443	71.0363	80.6035	95.9948	90.7793	74.8152
67.6074	68.0729	70.7940	70.1602	65.0455	70.5414	67.2004	77.4145	60.3517	71.5038	68.5739	73.0740	71.2233	69.8120	64.8306	69.8617	69.3549	66.3091	65.3070	65.7005	76.8557	93.0160	86.6124	74.3521
74.4212	74.0757	74.2493	75.0564	73.3360	75.4307	76.2570	87.1448	67.8436	79.6908	73.2095	76.6620	74.5192	73.1011	65.2641	68.4402	65.7660	62.0963	60.8346	60.8102	71.7058	89.2950	82.4375	67.1660
68.4065	68.0825	68.1589	67.4829	69.6698	68.3991	69.3905	82.1044	62.6060	74.1984	70.8439	75.1760	74.2108	72.9537	68.4470	73.3238	71.3174	68.6838	67.5913	68.1260	77.4475	95.0915	87.4704	73.2881
74.8914	74.6408	74.3050	74.6942	74.8017	75.0314	75.3613	86.9092	67.8798	79.2492	73.3024	76.9114	74.4540	72.5191	66.6641	70.2743	66.7348	63.1911	62.0594	61.1803	71.6966	89.2593	82.5968	67.2859
71.2311	71.6206	71.9821	70.9202	71.5047	72.1379	72.1637	84.0899	65.4466	76.4167	70.9068	74.1412	72.1054	69.9207	64.3725	68.9746	65.6912	63.1014	61.2709	60.7027	71.0455	88.9856	82.1338	66.3690
72.4200	72.2676	72.5074	71.6826	73.4150	72.8126	72.8831	82.7782	64.5786	76.6265	69.7755	73.4436	71.5766	72.0495	65.0901	68.1137	67.1007	64.7762	64.1830	62.8321	73.5974	91.0254	84.1400	68.6077
73.5391	73.1457	72.2841	72.9392	72.7084	73.8436	74.1564	84.1131	68.4161	76.7052	73.5555	76.4514	75.2168	72.8188	68.4868	72.7799	70.4276	67.0756	65.3223	66.1382	76.0944	90.2854	84.0625	71.3322
62.5783	60.9250	61.3448	61.6013	61.8559	61.8992	63.1875	72.3394	56.7766	66.1034	62.0967	63.1828	62.2024	56.2620	56.0109	58.6598	54.3107	51.7852	48.0989	49.5569	53.8990	67.7777	66.1302	53.7367
89.6809	89.7996	89.2790	89.6608	90.9120	90.1984	90.3960	105.1857	90.4638	97.7601	90.7328	94.2968	90.5970	30.3596	80.9755	87.3674	85.1813	76.9040	73.8604	75.3460	84.9878	101.6364	91.9319	81.9834
37.4086	36.7315	37.4402	37.9030	36.4003	36.8027	37.6020	44.4148	31.0999	39.4031	38.2564	39.1740	41.1457	34.5423	35.6088	38.2876	35.6178	33.3721	29.6878	32.5993	35.8784	50.6984	48.7189	35.3648
49.0049	49.2098	49.0491	48.3252	49.8811	49.7763	49.0361	55.9317	46.5332	54.3275	52.3226	52.6512	53.6279	47.8841	47.6258	49.0654	46.5524	44.7361	41.6845	43.7145	47.0271	58.2047	56.3806	46.0068
74.5584	73.7587	73.4916	73.8519	73.5552	74.4404	74.3480	86.3499	67.9946	80.1447	73.2160	76.6564	74.2789	73.1690	67.8372	71.1920	68.7229	65.1810	63.5898	63.7602	72.6269	89.1264	82.7673	68.4969
77.0498	76.3946	76.2717	76.9468	75.9824	76.4396	77.1241	92.3866	76.5874	86.1641	81.9879	84.6692	82.8865	83.3022	77.1944	81.2231	79.7911	77.4683	74.0692	73.8631	82.8622	97.9939	91.2920	75.7730
71.3149	71.1712	71.4050	71.7369	72.2290	71.9190	71.7144	82.9478	66.0870	75.7521	73.1451	76.9039	76.1852	75.1067	71.4199	76.5009	75.3778	72.9531	71.3650	70.2933	79.0426	94.0476	87.4740	76.5187
78.8550	78.9024	78.9338	78.8064	78.6356	79.4633	79.1506	88.0939	71.4689	81.2027	75.3263	77.9923	75.2416	74.6475	68.9263	71.9562	68.8571	64.6055	62.5860	62.3051	70.9952	87.3412	81.4017	68.5179
77.5310	77.2754	77.3315	77.7494	78.5920	77.7312	78.4645	88.6813	73.7438	82.0521	79.9916	84.2578	83.2729	83.8264	79.3929	84.3608	83.6989	81.8189	81.6745	79.3927	88.9369	102.9860	96.0941	84.5466
83.1404	82.8241	82.9172	83.1153	83.4494	83.4951	83.6042	94.7931	77.3439	87.6392	82.1603	85.7443	82.8892	82.4391	75.3796	80.3875	78.3256	72.5429	70.1491	71.2758	81.6769	95.7763	87.8853	77.3488
80.6447	80.7245	81.3448	81.2688	81.8418	80.9229	81.8948	94.2060	75.5057	88.8689	81.4460	85.8483	84.1587	82.6403	76.7533	81.7832	78.8443	75.4860	74.0182	74.6112	86.6536	106.6899	98.0155	80.4038
79.1251	72.8976	68.5772	73.1148	78.9366	73.5325	82.9489	88.3523	66.0044	79.7126	75.4171	79.4619	83.1241	80.8480	75.1510	81.3693	76.9252	77.6333	76.2959	74.7368	87.2773	107.4756	100.1943	81.3593
76.6754	76.1565	78.5721	77.7388	86.2265	80.5836	77.8137	87.1174	67.1580	77.7288	74.8277	79.0350	78.8258	79.8236	71.7486	77.4668	77.0452	74.6987	73.4136	71.7851	84.7534	107.3297	97.0535	80.5159
82.0607	83.5731	85.7417	86.0232	86.4802	89.9160	82.2395	93.3537	73.8682	85.6009	80.5232	83.4734	82.8414	80.4600	75.5066	75.6895	72.7343	69.7533	70.0944	72.2741	84.9725	105.2779	93.9809	82.6678
85.7254	83.6170	82.8923	82.6427	82.2991	86.2884	86.3556	95.9046	71.5878	88.2075	76.6976	78.0742	72.7132	66.5066	60.1404	61.3267	53.8231	49.9911	48.0171	49.2332	57.0619	75.3956	73.4551	53.4670
85.7254	83.6170	82.8923	82.6427	82.2991	86.2884	86.3556	95.9046	71.5878	88.2075	76.6976	78.0742	72.7132	66.5066	60.1404	61.3267	53.8231	49.9911	48.0171	49.2332	57.0619	75.3956	73.4551	53.4670
85.7254	83.6170	82.8923	82.6427	82.2991	86.2884	86.3556	95.9046	71.5878	88.2075	76.6976	78.0742	72.7132	66.5066	60.1404	61.3267	53.8231	49.9911	48.0171	49.2332	57.0619	75.3956	73.4551	53.4670
79.0816	78.7604	80.1496	79.3565	81.8418	79.4222	80.7726	90.0352	71.2745	82.2778	78.2124	83.2071	81.0088	81.9086	76.6484	81.6257	79.9799	75.8276	74.9867	73.6656	85.6416	103.9630	96.4356	80.3364
85.8659	85.8206	89.1857	90.3260	95.7995	90.8229	83.9698	95.8958	76.6371	85.7976	80.9159	86.2839	83.3815	80.8480	74.7406	73.3978	69.3700	67.8477	67.8210	70.0685	81.9291	101.6415	93.9809	82.6678
83.6994	85.7645	83.3290	86.0198	87.5330	86.1659	85.2351	96.9614	80.3814	89.4715	87.5078	91.8132	90.8911	88.7780	85.2601	90.5711	88.6438	86.1938	84.7290	85.7140	93.2657	109.4439	103.0759	90.1813
76.9606	75.8458	78.8627	81.3625	78.5718	77.9746	78.0059	86.0205	66.9903	78.9549	74.5244	77.4767	77.2487	73.7377	69.5580	72.5561	70.9793	67.4820	65.9122	65.9289	76.7015	92.0334	86.4912	73.9552
81.3400	83.3829	82.2879	83.7980	84.9919	83.4455	83.6347	92.9553	73.2566	84.7461	79.3322	83.2665	82.1325	80.4065	74.0975	79.7334	77.7201	73.0744	72.5667	72.6382	83.9746	102.2859	95.0374	78.6026
65.7183	65.8536	64.1392	66.0754	69.2816	65.5393	66.8283	74.6018	58.6349	68.1583	64.3679	68.5045	68.2293	66.6621	58.5864	62.3642	58.3837	55.0813	51.0501	54.8053	64.9475	70.4627	67.5307	65.7655
98.5991	95.4780	97.0116	101.4314	101.4436	97.8356	99.2012	103.2065	88.1567	98.6690	96.3128	102.0781	99.1895	97.2579	94.7589	97.2496	97.3304	96.0666	96.6075	96.4081	102.6820	111.2883	107.6762	101.5677
96.9553	97.7539	85.9772	91.1961	91.8452	92.3716	98.2319	97.8674	93.4162	91.6000	86.0907	88.6822	94.5864	85.3583	90.1495	92.2150	91.7886	99.3786	88.6885	89.0140	94.7999	105.2886	101.5278	103.4055
86.0391	78.3647	65.1773	65.4924	73.4725	73.5325	73.5882	91.3696	71.8953	86.5695	81.5359	85.2397	71.6379	71.7530	71.4398	70.9701	72.7836	59.3750	58.2023	66.8522	78.0286	113.2465	105.0432	85.5043
77.8264	75.4489	72.8270	65.4924	73.4725	69.2805	73.5882	87.3982	63.4778	78.1623	74.2551	78.5668	78.7264	84.4844	74.0152	78.1510	77.6110	73.0035	71.1566	70.7106	89.3900	101.6669	92.9532	91.5375
87.9501	87.8592	87.7759	96.1728	93.5340	96.6522	91.0129	96.6414	80.1082	91.0959	86.1934	84.3812	84.6529	81.8848	75.2033	78.8706	77.7794	84.4627	81.2364	82.5211	89.8895	103.9545	90.2334	84.1660
84.8553	81.1856	84.1070	83.9160	86.7538	86.8902	85.2742	94.2261	76.1909	88.6909	80.3174	84.1569	81.1461	81.3780	74.0874	80.5254	78.9535	75.1508	73.1430	73.3616	83.0520	100.6082	92.9254	81.5150
84.8553	81.1856	84.1070	83.9160	86.7538	86.8902	85.2742	94.2261	76.1909	88.6909	80.3174	84.1569	81.1461	81.3780	74.0874	80.5254	78.9535	75.1508	73.1430	73.3616	83.0520	100.6082	92.9254	81.5150

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R003	833125.78	822324.11	833177.37	822330.25	20	0	1
R003	833177.37	822330.25	833231.06	822345.76	20	0	1
R003	833231.06	822345.76	833434.80	822408.45	20	0	1
R003	833434.80	822408.45	833960.46	822643.00	20	0	1
R003	833960.46	822643.00	833995.46	822646.78	20	0	1
R004	833118.28	822308.10	833188.93	822315.62	19	0	1
R004	833188.93	822315.62	833425.15	822386.41	19	0	1
R004	833425.15	822386.41	833518.28	822421.55	19	0	1
R005	833518.28	822421.55	833673.75	822496.58	19	0	1
R005	833673.75	822496.58	833933.67	822614.65	19	0	1
R005	833933.67	822614.65	833973.71	822626.09	19	0	1
R005	833973.71	822626.09	834046.15	822626.54	19	0	1
R006+R007	833527.80	822410.61	833627.55	822455.21	14	0	1
R006+R007	833627.55	822455.21	833732.07	822494.47	14	0	1
R006+R007	833732.07	822494.47	833782.11	822441.65	14	0	1
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1
R008+R009	833661.17	822368.31	833693.59	822397.15	13	0	1
R008+R009	833693.59	822397.15	833841.86	822450.34	13	0	1
R010+R011	833978.15	822463.30	833896.64	822432.88	12	0	1
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1
R012+R013	833387.26	822567.47	833423.69	822656.02	10	0	1
R012+R013	833423.69	822656.02	833416.08	822482.07	10	0	1
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1
R012+R013	833544.64	822390.48	833587.66	822354.80	10	0	1
R014+R015	833488.77	822318.11	833587.66	822354.80	14	0	1
R016+R017	833587.66	822354.80	833633.17	822374.91	15	0	1
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1
R019	833082.67	822192.93	833209.07	822239.78	16	0	1
R021	833209.07	822239.78	833365.00	822293.72	16	0	1
R022	833365.00	822293.72	833480.61	822340.13	16	0	1
R022	833480.61	822340.13	833489.66	822315.75	16	0	1
R023	833073.42	822119.68	833100.53	822129.44	14	0	1
R024	833100.53	822129.44	833232.06	822178.07	14	0	1
R025	833232.06	822178.07	833377.80	822232.03	14	0	1
R026	833377.80	822232.03	833503.34	822278.92	14	0	1
R027	833503.51	822278.46	833673.82	822341.72	13	0	1
R028	833673.82	822341.72	833768.11	822376.93	13	0	1
R029	833768.03	822376.15	833848.76	822405.79	13	0	1
R030	833848.76	822405.79	833917.83	822431.11	14	0	1
R031	833917.83	822431.11	833990.58	822454.38	14	0	1
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1
R033	833121.79	822072.07	833253.39	822120.94	18	0	1
R034	833253.39	822120.94	833398.77	822175.17	18	0	1
R035	833398.77	822175.17	833524.35	822221.21	18	0	1
R036	833524.35	822221.21	833653.40	822269.00	18	0	1
R037	833653.40	822269.00	833694.86	822284.07	19	0	1
R038	833694.68	822284.56	833763.79	822309.61	18	0	1
R039	833761.98	822311.12	833798.46	822320.76	14	0	1
R040	833789.11	822318.98	833833.16	822335.17	18	0	1
R041	833833.16	822335.17	833902.96	822360.57	18	0	1
R042	833902.96	822360.57	833960.46	822320.45	18	0	1
R043	833960.46	822320.45	834034.90	822250.52	18	0	1
R044	834034.90	822250.62	834140.62	822162.67	18	0	1
R045	834140.62	822162.67	834231.76	822086.45	19	0	1
R046	834231.72	822086.65	834323.21	822011.22	18	0	1
R047	834322.77	822010.68	834384.01	821959.68	18	0	1
R048	833097.20	821955.43	833156.56	821977.96	17	0	1
R049	833156.96	821977.96	833414.10	822080.78	16	0	1
R050	833101.47	821942.33	833274.46	822007.07	21	0	1
R051	833274.56	822006.80	833438.70	822067.62	16	0	1
R052	833434.10	822080.21	833688.33	822174.73	16	0	1
R053	833786.86	822123.44	833736.66	822163.25	18	0	1
R053	833736.66	822163.25	833688.33	822174.73	18	0	1
R054	833438.83	822067.29	833586.71	822122.03	16	0	1
R054	833586.71	822122.03	833649.55	822144.40	16	0	1
R054	833649.55	822144.40	833683.68	822152.80	16	0	1
R054	833683.68	822152.80	833713.85	822149.82	16	0	1
R054	833713.85	822149.82	833757.83	822128.55	16	0	1
R054	833757.83	822128.55	833778.49	822113.30	16	0	1
R055	833786.63	822123.04	833872.14	822051.30	19	0	1
R056	833778.49	822113.30	833867.20	822039.12	16	0	1
R057	833873.20	822052.66	834159.21	821814.78	16	0	1
R058	834159.21	821814.78	834250.10	821738.42	16	0	1
R059	833867.29	822039.23	834058.34	821880.22	17	0	1
R060	834058.34	821880.22	834241.81	821727.45	16	0	1
R061	833116.37	821880.20	833139.75	821889.31	16	0	1
R062	833139.75	821889.31	833296.78	821947.78	16	0	1
R063	833296.86	821947.56	833460.51	822007.97	16	0	1
R064	833460.49	822008.03	833543.73	822038.72	15	0	1
R064	833543.73	822038.72	833563.70	821983.31	15	0	1
R064	833460.98	821952.82	833563.70	821983.31	15	0	1
R065	833160.17	821834.07	833315.56	821891.67	16	0	1
R066	833316.56	821891.68	833461.00	821952.75	16	0	1
R067	833164.01	821776.07	833178.47	821783.88	19	0	1
R068	833178.74	821783.16	833253.68	821813.88	18	0	1
R069	833166.60	821757.87	833260.16	821795.91	29	0	1
R070	833248.90	821820.73	833329.69	821853.67	13	0	1

NO_2 x 100 (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
2.7462	2.7414	2.7123	2.7141	2.7490	2.7482	2.7886	4.5162	4.6506	3.8774	3.5835	3.4776	3.0937	3.1808	3.2012	3.5664	3.8182	3.5955	3.6708	3.1078	2.7554	2.5448	2.6312	2.7806
2.7462	2.7414	2.7123	2.7141	2.7490	2.7482	2.7886	4.5162	4.6506	3.8774	3.5835	3.4776	3.0937	3.1808	3.2012	3.5664	3.8182	3.5955	3.6708	3.1078	2.7554	2.5448	2.6312	2.7806
2.7462	2.7414	2.7123	2.7141	2.7490	2.7482	2.7886	4.5162	4.6506	3.8774	3.5835	3.4776	3.0937	3.1808	3.2012	3.5664	3.8182	3.5955	3.6708	3.1078	2.7554	2.5448	2.6312	2.7806
2.7462	2.7414	2.7123	2.7141	2.7490	2.7482	2.7886	4.5162	4.6506	3.8774	3.5835	3.4776	3.0937	3.1808	3.2012	3.5664	3.8182	3.5955	3.6708	3.1078	2.7554	2.5448	2.6312	2.7806
2.7462	2.7414	2.7123	2.7141	2.7490	2.7482	2.7886	4.5162	4.6506	3.8774	3.5835	3.4776	3.0937	3.1808	3.2012	3.5664	3.8182	3.5955	3.6708	3.1078	2.7554	2.5448	2.6312	2.7806
2.7359	2.7248	2.7193	2.7325	2.7268	2.7196	2.7592	3.9895	4.2672	3.5161	3.3075	3.2744	2.9895	3.1059	3.1628	3.5774	3.9095	3.9830	4.0242	3.3441	2.6449	2.4591	2.5774	2.6542
2.7359	2.7248	2.7193	2.7325	2.7268	2.7196	2.7592	3.9895	4.2672	3.5161	3.3075	3.2744	2.9895	3.1059	3.1628	3.5774	3.9095	3.9830	4.0242	3.3441	2.6449	2.4591	2.5774	2.6542
2.7359	2.7248	2.7193	2.7325	2.7268	2.7196	2.7592	3.9895	4.2672	3.5161	3.3075	3.2744	2.9895	3.1059	3.1628	3.5774	3.9095	3.9830	4.0242	3.3441	2.6449	2.4591	2.5774	2.6542
2.7232	2.7052	2.7238	2.7389	2.7379	2.7268	2.7650	3.9892	4.2682	3.5156	3.3071	3.2726	2.9870	3.1026	3.1598	3.5739	3.9061	3.9740	4.0199	3.3398	2.6394	2.4534	2.5715	2.6552
2.7232	2.7052	2.7238	2.7389	2.7379	2.7268	2.7650	3.9892	4.2682	3.5156	3.3071	3.2726	2.9870	3.1026	3.1598	3.5739	3.9061	3.9740	4.0199	3.3398	2.6394	2.4534	2.5715	2.6552
2.7232	2.7052	2.7238	2.7389	2.7379	2.7268	2.7650	3.9892	4.2682	3.5156	3.3071	3.2726	2.9870	3.1026	3.1598	3.5739	3.9061	3.9740	4.0199	3.3398	2.6394	2.4534	2.5715	2.6552
2.7232	2.7052	2.7238	2.7389	2.7379	2.7268	2.7650	3.9892	4.2682	3.5156	3.3071	3.2726	2.9870	3.1026	3.1598	3.5739	3.9061	3.9740	4.0199	3.3398	2.6394	2.4534	2.5715	2.6552
3.2780	2.9460	4.1671	1.0933	1.0998	3.7724	3.1834	3.5803	2.7068	3.6183	3.3195	3.3513	3.6761	3.2042	2.4373	2.5493	1.4298	1.7338	1.0632	1.2307	1.3469	2.0847	1.9518	1.7821
3.2780	2.9460	4.1671	1.0933	1.0998	3.7724	3.1834	3.5803	2.7068	3.6183	3.3195	3.3513	3.6761	3.2042	2.4373	2.5493	1.4298	1.7338	1.0632	1.2307	1.3469	2.0847	1.9518	1.7821
3.2780	2.9460	4.1671	1.0933	1.0998	3.7724	3.1834	3.5803	2.7068	3.6183	3.3195	3.3513	3.6761	3.2042	2.4373	2.5493	1.4298	1.7338	1.0632	1.2307	1.3469	2.0847	1.9518	1.7821
3.2780	2.9460	4.1671	1.0933	1.0998	3.7724	3.1834	3.5803	2.7068	3.6183	3.3195	3.3513	3.6761	3.2042	2.4373	2.5493	1.4298	1.7338	1.0632	1.2307	1.3469	2.0847	1.9518	1.7821
2.1420	2.6291	2.3897	1.0933	1.0998	2.1649	2.1254	2.8304	2.0458	2.5237	2.3087	2.4245	2.2621	1.8198	1.7298	2.1411	1.5001	1.7348	1.1431	1.1403	1.3826	2.4188	2.3516	1.5403
2.1420	2.6291	2.3897	1.0933	1.0998	2.1649	2.1254	2.8304	2.0458	2.5237	2.3087	2.4245	2.2621	1.8198	1.7298	2.1411	1.5001	1.7348	1.1431	1.1403	1.3826	2.4188	2.3516	1.5403
4.4984	4.4620	3.9383	2.7108	4.7988	5.7116	4.5071	5.3843	4.5503	5.1549	4.8506	5.3041	5.0357	4.9161	4.3475	5.1084	4.5630	4.3599	4.1707	3.9337	4.7221	5.5346	5.0432	4.9908
4.4984	4.4620	3.9383	2.7108	4.7988	5.7116	4.5071	5.3843	4.5503	5.1549	4.8506	5.3041	5.0357	4.9161	4.3475	5.1084	4.5630	4.3599	4.1707	3.9337	4.7221	5.5346	5.0432	4.9908
4.4984	4.4620	3.9383	2.7108	4.7988	5.7116	4.5071	5.3843	4.5503	5.1549	4.8506	5.3041	5.0357	4.9161	4.3475	5.1084	4.5630	4.3599	4.1707	3.9337	4.7221	5.5346	5.0432	4.9908
11.4928	13.2568	1.3946	1.8271	1.8336	1.8340	11.5273	15.6059	9.7476	12.8818	10.8813	13.0422	12.2035	15.7472	11.6783	12.1712	11.8077	13.2549	15.1997	12.9495	20.2840	23.5114	18.4249	14.1592
11.4928	13.2568	1.3946	1.8271	1.8336	1.8340	11.5273	15.6059	9.7476	12.8818	10.8813	13.0422	12.2035	15.7472	11.6783	12.1712	11.8077	13.2549	15.1997	12.9495	20.2840	23.5114	18.4249	14.1592
11.4928	13.2568	1.3946	1.8271	1.8336	1.8340	11.5273	15.6059	9.7476	12.8818	10.8813	13.0422	12.2035	15.7472	11.6783	12.1712	11.8077	13.2549	15.1997	12.9495	20.2840	23.5114	18.4249	14.1592
11.4928	13.2568	1.3946	1.8271	1.8336	1.8340	11.5273	15.6059	9.7476	12.8818	10.8813	13.0422	12.2035	15.7472	11.6783	12.1712	11.8077	13.2549	15.1997	12.9495	20.2840	23.5114	18.4249	14.1592
11.4928	13.2568	1.3946	1.8271	1.8336	1.8340	11.5273	15.6059	9.7476	12.8818	10.8813	13.0422	12.2035	15.7472	11.6783	12.1712	11.8077	13.2549	15.1997	12.9495	20.2840	23.5114	18.4249	14.1592
5.4601	5.5646	6.0298	7.4388	7.0273	6.9012	5.7815	9.2137	4.9218	6.1777	6.3062	7.1657	6.7759	7.5558	6.1418	7.0187	6.7299	7.0718	6.8934	6.4628	8.6372	10.8930	9.9276	7.1555
5.5116	5.7087	6.0298	4.8880	4.6469	6.9012	5.3810	8.6738	4.6551	5.8917	5.7413	6.2477	5.8849	6.1701	5.2893	5.8611	4.8934	5.4150	5.0523	4.4827	6.5613	7.9404	6.5175	5.5561
5.5116	5.7087	6.0298	4.8880	4.6469	6.9012	5.3810	8.6738	4.6551	5.8917	5.7413	6.2477	5.8849	6.1701	5.2893	5.8611	4.8934	5.4150	5.0523	4.4827	6.5613	7.9404	6.5175	5.5561
13.5910	13.8360	12.6270	14.4766	15.1713	12.7439	12.9283	15.4881	12.4101	14.1005	12.6643	14.2399	13.1447	15.0635	11.9047	13.7658	14.6170	12.6295	12.3327	11.9210	15.9639	19.7101	14.3106	15.0994
13.5603	13.3304	12.1499	14.1710	12.6705	14.8854	13.3951	15.7267	12.6638	14.2800	12.7046	14.2794	13.0864	14.8953	12.0358	13.8367	13.5898	12.6747	12.7252	11.8226	15.8576	18.4258	15.1396	13.3797
16.6585	15.1412	16.4431	17.3214	16.5309	16.3808	16.6746	18.0797	15.3546	17.0773	15.7963	17.0703	16.0173	17.4949	14.6572	16.0461	16.8192	14.9922	14.7300	14.0475	17.3181	19.8654	16.7755	16.0700
16.6585	15.1412	16.4431	17.3214	16.5309	16.3808	16.6746	18.0797	15.3546	17.0773	15.7963	17.0703	16.0173	17.4949	14.6572	16.0461	16.8192	14.9922	14.7300	14.0475	17.3181	19.8654	16.7755	16.0700
15.2487	13.4580	15.3813	15.2468	15.5237	14.0910	14.8252	17.8181	15.2254	16.6275	15.2596	16.4119	15.4734	17.2570	14.1108	15.5165	15.7321	14.7837	14.8660	13.7019	16.9620	19.5583	15.9488	14.9369
15.7619	13.9945	14.8536	13.1344	15.5237	14.8678	15.2646	17.3990	14.9476	16.7461	15.3382	16.4375	14.9014	17.0829	14.0468	15.4706	15.9510	14.8203	14.5006	13.3348	17.0295	19.1650	16.0613	14.9049
15.3460	15.5718	14.5109	16.1799	16.7367	14.5956	14.7708	17.0449	14.5939	16.7155	15.3437	16.5401	15.1255	16.8330	14.1568	15.6423	15.5110	14.9530	14.6581	13.3441	16.6387	19.5582	15.7107	14.7995
16.7649	16.4142	16.9511	17.6051	16.8876	16.0116	16.8359	19.7432	18.5898	19.1112	17.2185	18.1489	16.1901	18.2421	14.8127	16.3949	17.7095	15.8506	14.8167	13.9680	17.4382	18.7409	15.5182	15.2954
16.3278	15.8842	15.7318	16.0173	16.5612	16.9976	16.2749	18.4841	17.0757	18.5906	17.3379	18.3139	17.1937	18.5395	16.2939	17.0300	17.3656	16.1684	15.6945	14.5888	17.4194	20.2653	16.4850	15.6082
13.3862	12.2745	13.3476	15.7415	14.5273	12.6782	13.4098	15.0191	12.7961	14.6039	13.1745	14.4914	13.4721	15.0912	12.6438	14.2232	14.2713	13.4403	13.5607	12.2511	15.8125	18.7979	15.3807	13.4927
11.8888	10.9012	13.1070	7.4388	10.2734	12.0648	11.5751	16.7978	14.1913	14.8085	12.6749	14.1412	12.3908	15.6207	12.1249	13.9894	15.8731	13.7165	13.0136	12.7344	16.7167	18.0416	14.9273	15.3995
11.6760	11.6652	12.1503	11.7913	10.7947	11.5702	11.6362	15.8149	13.0277	13.9522	11.9197	13.7218	13.1157	14.7056	11.7345	13.4993	13.9428	12.9236	12.7641	11.3599	15.1045	17.5713	13.7568	13.6511
10.9059	13.1141	8.5566	10.2447	10.2734	7.4642	11.8366	16.9810	15.2675	15.4746	13.4844	14.5305	12.6277	15.7082	11.9934	13.6776	15.0614	13.1817	12.7699	12.2755	16.1264	17.9383	14.5952	14.1402
15.0724	14.5533	11.2759	11.2385	10.9122	10.8450	11.3073	14.3874	11.8486	13.2873	12.1020	13.5701	12.5806	14.2537	11.6910	13.1100	13.2560	12.6726	12.5582	11.6039	14.9138	16.8771	13.8594	13.0145
12.0347	12.0429	12.0837	12.1720	12.2938	12.0771	12.1225	14.3694	11.6132	13.1633	11.8534	13.1596	12.1862	13.7826	11.4904	12.9675	13.0766	12.4576	12.3365	11.3693	14.3694	16.8192	13.8062	12.5914
10.8278	10.9487	10.8393	11.2426	11.1721	11.2481	11.1411	13.8126	11.5460	12.4800	11.2664	12.7604	11.7902	13.3736	11.1099	12.6678	12.8180	12.2565	12.0690	11.0444	14.0143	16.3605	13.4685	12.3490
13.5874	13.4437	13.3554	13.1000	13.2127	13.1504	13.3366	16.2639	14.0317	15.2407	13.9385	15.0304	14.2167	15.6891	12.9551	14.9800	14.9187	13.4325	13.1878	12.5248	15.3760	18.0827	14.8911	14.0502
12.5176	12.3462	12.3803	12.5044	12.3633	12.5618	12.4612	14.9999	12.8431	14.4444	12.8332	14.2170	13.1663	14.8641	12.2423	13.7333	13.8231	13.2169	13.1355	12.1342	15.1083	17.1491	14.1797	13.4184
16.6707	16.5519	16.5607	16.6992	16.5715	16.5636	16.6945	19.8237	16.9528	18.8714	16.2857	17.6982	15.9385	17.9069	14.1847	15.5647	15.4073	14.1888	13.7985	12.7656	15.9975	18.4929	15.1947	14.2025
16.8988	16.8101	16.8876	16.7946	16.9233	16.8421	16.8449	20.1462	17.1115	19.1610	16.2193	17.5524	15.5466	17.3366	13.4966	14.7415	14.7961	13.0774	12.2878	11.4662	14.2262	16.4322	13.5491	12.8000
19.9283	18.5914	18.7942	19.2481	19.2390	19.1013	18.9600	23.2057	22.4055	22.1751	19.5966	20.8767	18.6772	20.7075	16.2022	18.5992	18.6853	15.5451	13.9339	13.9006	16.5478	18.4947	14.7240	15.8028
19.5044	19.6422	19.5953	19.9375	19.6999	19.8657	19.7796	23.0119	21.5817	21.9076	19.2663	20.1301	18.0672	19.9971	15.5085	17.9748	18.1090	15.4741	13.8029	13.4081	16.1513	17.8846	14.4254	15.5359
19.9144	18.8785	19.2815	19.3868	19.1740	19.5231	19.2477	23.7272	22.3284	22.6796	19.5377	20.8158	18.6721	20.6541	16.1711	18.5474	18.6176	15.5604	13.9644	13.5996	16.5663	18.6217	14.7799	15.8259
19.9843	19.2518	19.2858	19.3734	19.3096	19.6119	19.4331	23.1951	21.7831	22.1491	19.0355	20.2911	18.1498	20.1762	15.6585	18.4787	18.5364	15.3527	13.6390	13.3118	16.3100	17.9250	14.4775	15.5757
22.4002	22.5358	22.5893	22.4991	22.7858	22.7100	22.6243	25.4264	24.3326	24.3290	21.6036	23.0882	20.7737	23.2574	18.1740	21.1060	21.4789	18.0938	16.2623	15.9838	18.8884	21.0073	16.9056	18.5744
19.5788	19.4921	19.5795	19.9032	19.6668	19.7084	19.7551	22.9628	21.5781	21.8751	18.7884	20.1381	18.0053	19.9678	15.5197	17.8985	18.4179	15.2971	13.5815	13.1824	16.0539	17.7260	14.2724	15.3309
19.9043	16.3657	16.5937	17.4302	17.7583	17.4935	19.8136	22.5648	21.1646	21.4942	19.0452	20.3336	18.2570	20.2768	15.9204	18.2362	18.4236	15.4133	13.8089	13.7852	16.3253	18.2135	14.8975	15.8813
20.1009	18.9950	19.0858	19.4255	19.2042	19.3935	20.2003	23.2765	21.9475	22.2599	19.2922	20.5017	18.4048	20.2951	15.9619	18.1906	18.6766	15.5941	13.9551	13.6040	16.5111	18.0368	14.6875	15.8100
20.1042	18.8729	19.1736	19.2805	19.4138	19.3053	20.2220	23.3084	21.4994	21.7970	19.3070	20.5821	18.4388	20.3545	16.0122	18.2773	18.3251	15.6507	13.9582	13.6201	16.5634	18.0820	14.7501	15.8417
14.5668	14.1149	14.1028	14.1170	14.1653	14.2022	14.5863	17.5227	17.0055	17.2048	14.7932	15.9874	14.4854	16.7299	13.1570	15.2283	15.6115	13.9143	13.3709	12.2780	15.3678	17.4891	14.0883	14.0252
14.5895	14.5254	14.5651	14.5385	14.5882	14.5518	14.6313	17.2713	16.3885	16.5952	14.2943	15.7444	14.2797	16.2258	12.7653	14.7931	15.1967	13.5644	12.8768	12.0568	15.4250	17.5259	14.1487	14.1512
15.5307	15.5326	15.5424	15.4891	15.5209	15.5755	15.5883	18.5715	17.5492	18.3490	15.5497	16.8654	15.0856	17.0706	13.5261	15.3251	15.4325	13.7831	12.7396	11.7402	14.1993	15.8372	12.6179	12.8952
16.7187	16.7462	16.7859	16.7535	16.7722	16.8120	16.8085	19.6433	18.4749	19.0233	16.3155	17.7640	15.9954	18.2856	14.3192	16.6133	17.3650	14.9557	13.6743	12.8961	15.6653	17.4340	13.9679	14.9188
17.2974	16.5389	16.5023	16.6561	16.6736	16.6732	17.1895	19.4198	19.0665	18.1811	16.0290	17.3290	15.6733	17.7149	14.0441	16.5078	16.8247	14.4153	13.4207	12.8211	16.0747	18.0943	14.6037	15.3193
17.8913	17.2561	17.2865	17.3122	17.3871	17.4056	17.8458	20.3333	19.8380	19.5231	16.8005	18.2433	16.4044	18.8614	14.9176	17.3115	17.7977	15.5490	14.5955	13.8254	16.9944	19.0344	15.2982	15.8253
17.8913	17.2561	17.2865	17.3122	17.3871	17.4056	17.8458	20.3333	19.8380	19.5231	16.8005	18.2433	16.4044	18.8614	14.9176	17.3115	17.7977	15.5490	14.5955	13.8254	16.9944	19.0344	15.2982	15.8253
18.3401	18.3160	18.2484	18.3537	18.4341	18.3582	18.3907	20.8266	19.8939	20.1118	17.7731	19.2382	17.7782	20.3976	16.3343	19.1812	20.4354	17.6271	16.5066	15.8450	19.2891	21.3268	17.0223	18.2000
18.3401	18.3160	18.2484	18.3537	18.4341	18.3582	18.3907	20.8266	19.8939	20.1118	17.7731	19.2382	17.7782	20.3976	16.3343	19.1812	20.4354	17.6271	16.5066	15.8450	19.2891	21.3268	17.0223	18.2000
18.3401	18.3160	18.2484	18.3537	18.4341	18.3582	18.3907	20.8266	19.8939	20.1118	17.7731	19.2382	17.7782	20.3976	16.3343	19.1812	20.4354	17.6271	16.5066	15.8450	19.2891	21.3268	17.0223	18.2000
18.3401	18.3160	18.2484	18.3537	18.4341	18.3582	18.3907	20.8266	19.8939	20.1118	17.7731	19.2382	17.7782	20.3976	16.3343	19.1812	20.4354	17.6271	16.5066	15.8450	19.2891	21.3268	17.0223	18.2000
18.3401	18.3160	18.2484	18.3537	18.4341	18.3582	18.3907	20.8266	19.8939	20.1118	17.7731	19.2382	17.7782	20.3976	16.3343	19.1812	20.4354	17.6271	16.5066	15.8450	19.2891	21.3268	17.0223	18.2000
18.3401	18.3160	18.2484	18.3537	18.4341	18.3582	18.3907	20.8266	19.8939	20.1118	17.7731	19.2382	17.7782	20.3976	16.3343	19.1812	20.4354	17.6271	16.5066	15.8450	19.2891	21.3268	17.0223	18.2000
16.9382	16.9247	16.9174	16.8874	16.9797	17.0190	16.9858	19.3164	18.0486	18.3214	16.0119	17.0890	15.3342	17.4699	13.6830	15.8261	16.0551	14.0240	13.2352	12.4632	15.7225	17.7541	14.3418	14.5114
20.8843	20.7362	20.8490	20.8535	20.9290	21.0133	20.9431	23.5686	23.0178	21.6889	19.5878	21.2334	19.2558	22.3051	17.5218	21.0728	22.3129	18.2916	16.4507	16.7070	20.4200	22.1279	17.5460	19.8946
13.7853	12.8101	12.9201	13.1524	13.1133	13.1553	13.7855	15.7565	16.3228	14.3956	12.9626	13.7119	12.5198	13.7084	11.0762	13.8063	14.4077	11.8768	9.6059	10.0884	11.6953	12.5039	10.0498	12.3598
19.1529	18.1557	18.1356	18.3775	18.3883	18.5368	19.2105	21.7233	21.0470	20.2503	17.6294	18.9322	16.8867	19.2451	14.8792	17.2902	17.6928	14.7613	13.5739	13.3508	16.7253	18.6541	14.9679	15.7271
16.1475	16.2059	16.1325	16.0694	16.3408	16.1868	16.2167	18.3336	19.1147	16.6331	15.2837	16.0736	14.6367	16.1241	12.9589	16.2265	17.0631	13.5088	10.8994	11.6129	13.4305	14.0896	11.2632	14.2261
19.7036	19.5742	20.0339	20.0146	19.9645	20.1097	19.9889	22.6184	21.7584	20.6966	18.6566	20.5079	18.6736	21.7564	16.8418	20.6900	22.0162	18.0901	16.2470	16.2744	20.1599	22.1811	17.1018	19.6703
23.0980	22.0706	22.2239	22.0924	20.5251	22.5778	22.7615	22.8349	22.1182	22.8946	22.4186	22.8944	22.5050	22.9221	22.2026	22.8097	22.9233	22.2226	22.3724	22.1775	22.9108	23.6401	23.0737	22.1549
12.8771	12.4674	12.6238	12.5034	13.3134	13.3169	12.7239	15.1333	13.1922	14.2743	13.1950	14.6495	13.7680	15.3005	12.4482	14.2439	14.5696	13.3935	13.0080	11.9226	15.1340	17.7450	14.2439	14.0039
13.4662	11.3376	13.5652	13.5465	13.6397	12.0989	12.9607	15.9896	12.9494	14.3419	13.0124	14.3457	13.2434	15.1561	12.3228	13.7844	14.2275	12.9396	13.0233	11.9723	15.5017	18.1219	14.9920	14.1999
12.7095	10.4595	12.2509	13.1087	12.0583	11.5685	12.2061	15.4599	12.3175	13.7698	12.2855	14.0701	12.8037	14.6605	11.6671	13.4653	13.6929	12.3284	12.3222	11.7534	15.3710	18.0543	14.8418	14.3246
12.7095	10.4595	12.2509	13.1087	12.0583	11.5685	12.2061	15.4599	12.3175	13.7698	12.2855	14.0701	12.8037	14.6605	11.6671	13.4653	13.6929	12.3284	12.3222	11.7534	15.3710	18.0543	14.8418	14.3246
12.7095	10.4595	12.2509	13.1087	12.0583	11.5685	12.2061	15.4599	12.3175	13.7698	12.2855	14.0701	12.8037	14.6605	11.6671	13.4653	13.6929	12.3284	12.3222	11.7534	15.3710	18.0543	14.8418	14.3246
14.5853	13.2493	13.9766	14.3368	13.6796	13.0767	14.7470	16.2157	13.7894	15.3721	14.0701	15.5627	14.5201	15.7800	13.0566	14.2993	14.8039	13.3891	12.6076	11.9040	15.0116	17.6695	14.6397	14.1546
13.7886	13.5731	13.2693	14.0847	13.5721	12.6056	13.7182	16.2322	13.2117	14.8840	13.5730	14.9839	13.7615	15.1563	12.7033	14.2345	13.9479	13.0797	12.6339	11.8124	14.9935	17.7673	14.3232	13.5334
9.7648	9.7426	9.7146	9.7083	9.7293	9.7606	9.7830	13.2317	10.4592	12.6008	10.9745	12.3327	11.0716	12.9223	10.0712	10.8539	10.7130	10.2960	10.7318	9.6767	11.5568	13.2558	10.7381	9.1763
9.6786	9.6745	9.6599	9.6783	9.6906	9.7174	9.7271	12.7254	10.3942	12.5495	10.9056	12.1387	11.0216	12.8798	10.0220	10.8085	10.6820	10.2684	10.7085	9.2271	11.3296	13.2414	10.7258	9.1565
7.2563	7.2785	7.2365	7.2322	7.2643	7.2733	7.2937	8.8500	7.0513	8.6199	7.3037	8.2569	7.6403	8.9840	7.3544	7.9698	7.9168	8.7702	9.6220	7.5489	10.1392	12.3333	10.0202	7.9781
12.6813	12.6056	12.6285	12.5525	12.6395	12.6515	12.6899	14.8994	12.1636	14.3944	12.3843	13.7150	12.4436	14.1986	11.4330	12.1764	12.1815	11.8308	12.1210	10.7688	13.8717	16.3131	13.4821	11.8552

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R071	833327.91	821859.29	833397.24	821875.22	18	0	1
R072	833397.24	821875.22	833591.76	821897.07	20	0	1
R073	833451.50	821880.54	833397.24	821875.22	17	0	1
R074	833261.04	821790.34	833451.50	821860.54	20	0	1
R075	833449.48	821861.09	833506.97	821883.08	16	0	1
R076	833501.48	821897.80	833548.66	821899.77	16	0	1
R076	833548.66	821899.77	833603.43	821886.99	16	0	1
R076	833603.43	821886.99	833684.92	821822.32	16	0	1
R077	833506.57	821884.14	833563.57	821884.35	17	0	1
R077	833563.57	821884.35	833600.48	821871.28	17	0	1
R077	833600.48	821871.28	833673.84	821812.08	17	0	1
R078	833682.38	821822.35	833875.32	821660.78	16	0	1
R079	833673.29	821811.43	833867.51	821651.48	16	0	1
R080	833876.67	821661.18	833999.54	821557.94	16	0	1
R081	833867.01	821650.86	833963.08	821552.08	20	0	1
R082	833458.18	821864.41	833510.75	821821.12	14	0	1
R082	833510.75	821821.12	833536.39	821785.93	14	0	1
R082	833526.39	821785.93	833570.13	821687.58	14	0	1
R083	833436.83	821865.11	833496.18	821813.12	14	0	1
R083	833496.18	821813.12	833524.36	821772.29	14	0	1
R083	833524.36	821772.29	833559.81	821652.62	14	0	1
R084	833567.54	821687.02	833582.69	821644.65	13	0	1
R084	833582.69	821644.65	833607.71	821603.87	13	0	1
R085	833609.34	821605.84	833640.24	821575.52	14	0	1
R085	833640.24	821575.52	833681.67	821545.20	14	0	1
R085	833681.67	821565.20	833720.62	821512.85	14	0	1
R086	833580.70	821649.89	833603.88	821583.58	17	0	1
R086	833603.88	821583.58	833646.83	821546.45	17	0	1
R087	833646.49	821548.43	833696.49	821508.30	13	0	1
R088	833254.24	821811.68	833365.50	821856.64	17	4	4
R088	833365.50	821856.64	833416.50	821865.51	17	7	4
R088	833416.50	821865.51	833487.63	821841.09	17	9	4
R088	833487.63	821841.09	833533.63	821786.07	17	10	4
R088	833533.63	821786.07	833574.80	821657.75	17	9	4
R088	833574.80	821657.75	833600.16	821605.82	17	7	4
R088	833600.16	821605.82	833712.08	821511.11	17	6	4
R089	833256.85	821801.44	833370.08	821846.87	16	4	4
R089	833370.08	821846.97	833427.36	821852.03	16	7	4
R089	833427.36	821852.03	833480.60	821829.25	16	9	4
R089	833480.60	821829.25	833522.46	821786.30	16	10	4
R089	833522.46	821786.30	833543.19	821725.47	16	9	4
R089	833543.19	821725.47	833562.07	821653.37	16	8	4
R089	833562.07	821653.37	833598.99	821594.44	16	6	4
R089	833596.99	821594.44	833659.91	821508.87	16	6	4
R090+R091	833269.78	821629.64	833337.84	821634.13	17	0	1
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1
R094	833337.84	821634.13	833341.81	821576.41	16	0	1
R095	833609.59	821501.72	833648.49	821548.43	17	0	1
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1
R100+R101	834127.62	822332.11	834218.31	822256.35	18	0	1
R102+R103	834218.31	822256.35	834309.95	822180.58	18	0	1
R104+R105	834309.95	822180.58	834407.46	822098.55	18	0	1
R106	833917.83	822431.11	833991.76	822369.39	18	0	1
R107	833991.55	822370.04	834080.35	822287.53	18	0	1
R108	834090.84	822288.06	834181.98	822212.22	18	0	1
R109	834181.98	822212.22	834273.08	822136.48	17	0	1
R110	834273.34	822136.83	834364.36	822060.84	17	0	1
R111	834363.46	822059.86	834400.74	822028.83	18	0	1
R112	833848.78	822405.79	833902.86	822380.57	19	0	1
R113	833833.16	822335.17	833909.66	822271.35	18	0	1
R114	833909.65	822271.35	833994.47	822301.23	18	0	1
R115	833994.06	822200.75	834077.01	822132.08	18	0	1
R116	834076.90	822131.94	834097.30	822115.02	18	0	1
R117	834097.30	822115.02	834190.89	822037.73	18	0	1
R118	834190.59	822037.73	834243.28	821983.08	19	0	1
R119	834242.04	821963.85	834282.16	821961.45	19	0	1
R120	834261.93	821961.17	834359.17	821896.80	18	0	1
R121	833768.03	822376.15	833790.11	822318.98	18	0	1
R122	833761.98	822311.12	833868.78	822222.16	18	0	1
R123	833868.78	822222.16	833964.75	822150.50	18	0	1
R124	833673.82	822341.72	833694.86	822284.07	18	0	1
R125	833694.86	822284.07	833827.77	822172.85	18	0	1
R126	833683.40	822269.00	833688.33	822174.73	13	0	1
R127	833486.65	822315.75	833503.51	822278.48	18	0	1
R128	833503.51	822278.46	833524.36	822221.21	18	0	1
R129	833377.80	822232.03	833355.00	822293.72	18	0	1
R130	833377.80	822232.03	833398.77	822175.17	18	0	1
R131	833398.42	822175.04	833434.10	822080.76	18	0	1
R132	833433.92	822080.79	833460.51	822007.97	16	0	1
R133	833460.45	822007.95	833481.00	821952.76	16	0	1
R134	833481.00	821952.76	833506.97	821883.08	16	0	1
R135	833209.07	822239.78	833232.06	822178.07	18	0	1
R136	833232.03	822178.06	833253.39	822120.94	18	0	1
R137	833080.91	822182.63	833100.83	822129.44	18	0	1
R138	833100.63	822129.44	833121.79	822072.07	18	0	1
R139	833121.68	822072.03	833156.56	821977.95	18	0	1
R140	833274.46	822007.07	833296.86	821947.56	17	0	1

NO_2 x 100 (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
12.3507	12.3847	12.4325	12.4494	12.3866	12.4983	12.4606	14.3443	11.5737	13.7160	11.9810	13.1141	11.8753	13.5959	11.0235	11.8197	11.6749	11.3003	11.6817	10.3914	13.6273	15.9771	13.2489	11.6568
10.8614	10.8057	10.7710	10.8577	11.0294	10.7497	10.7602	12.6313	10.3979	11.3954	10.0363	11.0657	10.0021	11.2495	8.8840	10.0798	10.0444	9.2293	8.8206	8.2799	10.9312	12.7706	10.4282	9.7310
11.2263	11.0753	11.2218	11.2623	11.2870	11.1212	11.2057	12.8316	9.9987	11.9466	10.7197	11.8056	10.9120	12.1484	10.1905	10.8353	10.6731	10.4596	10.7582	9.9630	12.5340	14.4801	12.3172	11.2346
11.4422	11.3452	11.5085	11.2908	11.4217	11.4131	11.4538	13.0287	10.3665	12.0233	10.8454	11.8342	10.7989	12.0385	9.8259	10.4430	10.1765	9.9689	10.1498	9.1955	12.2390	14.4684	12.0832	10.4706
10.3218	10.3430	10.2259	10.3598	10.2954	10.4791	10.4112	11.9470	9.3833	10.8867	9.7708	10.7540	9.8037	10.9049	8.8439	9.5529	9.2820	9.0499	9.2357	8.3759	11.2007	13.3340	11.1092	9.4818
11.5304	11.7832	11.5615	11.7570	11.7395	11.5874	11.6647	13.5650	11.3035	12.2269	10.8603	12.0242	10.8782	12.5647	9.9004	11.0387	10.9867	10.2687	10.4622	9.5404	13.0392	15.4026	12.5719	10.9896
11.5304	11.7832	11.5615	11.7570	11.7395	11.5874	11.6647	13.5650	11.3035	12.2269	10.8603	12.0242	10.8782	12.5647	9.9004	11.0387	10.9867	10.2687	10.4622	9.5404	13.0392	15.4026	12.5719	10.9896
11.5304	11.7832	11.5615	11.7570	11.7395	11.5874	11.6647	13.5650	11.3035	12.2269	10.8603	12.0242	10.8782	12.5647	9.9004	11.0387	10.9867	10.2687	10.4622	9.5404	13.0392	15.4026	12.5719	10.9896
10.5572	10.6212	10.5959	10.5895	10.6845	10.5991	10.6473	12.2904	9.7662	11.3464	10.0838	11.1739	10.1888	11.6033	9.3998	10.1380	9.9525	9.8861	10.2099	9.1977	12.4562	14.8406	12.2472	10.4624
10.5572	10.6212	10.5959	10.5895	10.6845	10.5991	10.6473	12.2904	9.7662	11.3464	10.0838	11.1739	10.1888	11.6033	9.3998	10.1380	9.9525	9.8861	10.2099	9.1977	12.4562	14.8406	12.2472	10.4624
10.5572	10.6212	10.5959	10.5895	10.6845	10.5991	10.6473	12.2904	9.7662	11.3464	10.0838	11.1739	10.1888	11.6033	9.3998	10.1380	9.9525	9.8861	10.2099	9.1977	12.4562	14.8406	12.2472	10.4624
13.1711	12.9829	13.0351	13.1078	13.1170	13.2567	13.2032	15.1468	13.0854	13.8471	12.3539	13.5057	12.1823	13.7933	11.0334	12.1213	12.0814	11.1289	11.2360	10.4004	13.5738	15.8871	13.1436	11.9090
9.6333	9.8118	9.6805	9.7396	9.7372	9.6414	9.7578	11.2278	8.4499	10.2446	9.3334	10.4434	9.6427	10.9946	9.0444	9.5725	9.3459	9.5236	10.3217	9.1536	12.5484	15.0309	12.4914	10.2455
12.2884	12.3632	12.3549	12.4131	12.3973	12.1618	12.3278	14.2334	10.8878	13.0158	11.4251	12.8019	11.4934	13.3274	10.3964	11.2833	11.0797	10.5160	10.9559	9.8263	13.4974	16.1187	13.1214	11.3549
10.3384	10.4832	10.3951	10.4013	10.4018	10.3297	10.4888	11.8534	9.2179	10.9628	10.1097	11.1568	10.3157	11.5744	9.7182	10.2176	9.9537	10.0488	10.8569	9.7222	12.9412	15.3462	12.9875	10.8385
15.0022	15.1746	14.9343	14.9505	15.0275	14.8736	15.0590	17.4113	13.6557	16.9995	14.9497	16.5381	15.1999	17.2160	14.2692	14.9256	14.7012	14.3274	14.9708	13.8307	17.2633	19.9477	16.8511	14.8342
15.0022	15.1746	14.9343	14.9505	15.0275	14.8736	15.0590	17.4113	13.6557	16.9995	14.9497	16.5381	15.1999	17.2160	14.2692	14.9256	14.7012	14.3274	14.9708	13.8307	17.2633	19.9477	16.8511	14.8342
15.0022	15.1746	14.9343	14.9505	15.0275	14.8736	15.0590	17.4113	13.6557	16.9995	14.9497	16.5381	15.1999	17.2160	14.2692	14.9256	14.7012	14.3274	14.9708	13.8307	17.2633	19.9477	16.8511	14.8342
6.5882	6.7962	6.8584	6.9287	7.0539	6.8763	6.7470	7.2713	6.5880	7.4718	6.9196	7.3177	7.0546	7.2190	6.6701	6.9272	6.5855	6.4803	6.6424	6.3138	7.3212	8.5986	7.7742	6.8057
6.5882	6.7962	6.8584	6.9287	7.0539	6.8763	6.7470	7.2713	6.5880	7.4718	6.9196	7.3177	7.0546	7.2190	6.6701	6.9272	6.5855	6.4803	6.6424	6.3138	7.3212	8.5986	7.7742	6.8057
6.5882	6.7962	6.8584	6.9287	7.0539	6.8763	6.7470	7.2713	6.5880	7.4718	6.9196	7.3177	7.0546	7.2190	6.6701	6.9272	6.5855	6.4803	6.6424	6.3138	7.3212	8.5986	7.7742	6.8057
15.0811	14.9285	14.9000	15.0089	14.9964	14.9090	15.0176	17.3667	13.3073	16.6013	14.9366	16.6629	15.3642	17.6232	14.6348	14.9890	14.7562	15.1578	16.2948	14.7501	18.7295	21.8010	18.5952	15.5093
15.0811	14.9285	14.9000	15.0089	14.9964	14.9090	15.0176	17.3667	13.3073	16.6013	14.9366	16.6629	15.3642	17.6232	14.6348	14.9890	14.7562	15.1578	16.2948	14.7501	18.7295	21.8010	18.5952	15.5093
15.9380	16.0420	15.9964	16.0230	16.0165	16.0562	16.1689	18.1668	14.6908	17.5619	16.0699	17.6376	16.3859	18.3153	15.5839	15.8460	15.5629	15.5633	16.8610	15.1048	19.0618	22.0443	18.5820	16.1228
15.9380	16.0420	15.9964	16.0230	16.0165	16.0562	16.1689	18.1668	14.6908	17.5619	16.0699	17.6376	16.3859	18.3153	15.5839	15.8460	15.5629	15.5633	16.8610	15.1048	19.0618	22.0443	18.5820	16.1228
15.9380	16.0420	15.9964	16.0230	16.0165	16.0562	16.1689	18.1668	14.6908	17.5619	16.0699	17.6376	16.3859	18.3153	15.5839	15.8460	15.5629	15.5633	16.8610	15.1048	19.0618	22.0443	18.5820	16.1228
15.3495	15.2331	15.3980	15.0689	15.2990	15.3333	15.3437	17.1114	13.1937	16.4858	14.5453	16.0477	14.6930	16.5578	13.8004	14.0285	13.5656	13.5581	14.5437	13.1667	16.8122	19.7048	17.0171	14.2038
15.3495	15.2331	15.3980	15.0689	15.2990	15.3333	15.3437	17.1114	13.1937	16.4858	14.5453	16.0477	14.6930	16.5578	13.8004	14.0285	13.5656	13.5581	14.5437	13.1667	16.8122	19.7048	17.0171	14.2038
21.7394	21.6880	21.7244	21.5357	21.5568	21.5421	21.6441	22.2582	21.2491	22.3543	21.9870	22.4352	21.9256	22.4580	21.7080	21.8004	21.6728	21.5163	21.9206	21.2120	22.1990	23.0111	22.1360	21.5047
2.4959	2.4716	2.4690	2.4742	2.4558	2.4952	2.5189	4.0261	4.1959	4.0832	3.8191	3.2429	2.9724	2.5945	2.7193	2.5550	2.3919	2.3575	2.0744	1.6925	1.7709	1.7587	1.8398	1.6432
2.4959	2.4716	2.4690	2.4742	2.4558	2.4952	2.5189	4.0261	4.1959	4.0832	3.8191	3.2429	2.9724	2.5945	2.7193	2.5550	2.3919	2.3575	2.0744	1.6925	1.7709	1.7587	1.8398	1.6432
2.4959	2.4716	2.4690	2.4742	2.4558	2.4952	2.5189	4.0261	4.1959	4.0832	3.8191	3.2429	2.9724	2.5945	2.7193	2.5550	2.3919	2.3575	2.0744	1.6925	1.7709	1.7587	1.8398	1.6432
2.4959	2.4716	2.4690	2.4742	2.4558	2.4952	2.5189	4.0261	4.1959	4.0832	3.8191	3.2429	2.9724	2.5945	2.7193	2.5550	2.3919	2.3575	2.0744	1.6925	1.7709	1.7587	1.8398	1.6432
2.4959	2.4716	2.4690	2.4742	2.4558	2.4952	2.5189	4.0261	4.1959	4.0832	3.8191	3.2429	2.9724	2.5945	2.7193	2.5550	2.3919	2.3575	2.0744	1.6925	1.7709	1.7587	1.8398	1.6432
2.4959	2.4716	2.4690	2.4742	2.4558	2.4952	2.5189	4.0261	4.1959	4.0832	3.8191	3.2429	2.9724	2.5945	2.7193	2.5550	2.3919	2.3575	2.0744	1.6925	1.7709	1.7587	1.8398	1.6432
2.4959	2.4716	2.4690	2.4742	2.4558	2.4952	2.5189	4.0261	4.1959	4.0832	3.8191	3.2429	2.9724	2.5945	2.7193	2.5550	2.3919	2.3575	2.0744	1.6925	1.7709	1.7587	1.8398	1.6432
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
2.4468	2.4250	2.4394	2.4395	2.4656	2.4540	2.4727	3.0832	3.1262	2.9630	2.8823	2.5394	2.4437	2.1913	2.3173	2.1737	2.1039	2.2297	2.0580	1.5703	1.7004	1.7230	1.7564	1.6149
9.4721	9.5548	9.3763	9.4337	9.5935	9.4124	9.4695	12.0154	9.4610	11.1916	9.7100	10.9435	10.1894	11.3218	9.3385	10.8669	10.7487	10.6401	10.2269	9.3775	11.9069	14.3703	11.2627	10.2487
9.2187	9.0352	9.7612	9.9096	9.7905	8.7712	9.3337	11.6699	9.1522	10.7437	9.7733	10.8670	10.1256	11.4211	9.1989	10.7188	10.7642	10.4285	10.0075	9.2080	11.8455	14.0586	11.3186	10.6557
9.2187	9.0352	9.7612	9.9096	9.7905	8.7712	9.3337	11.6699	9.1522	10.7437	9.7733	10.8670	10.1256	11.4211	9.1989	10.7188	10.7642	10.4285	10.0075	9.2080	11.8455	14.0586	11.3186	10.6557
5.8637	5.8379	5.8159	5.9299	5.9619	5.9685	5.7900	6.8159	4.7611	6.2958	5.3079	5.5836	4.9049	4.8857	3.8603	3.9290	3.4012	3.2973	2.8084	2.5544	3.3627	4.3166	3.8140	3.1430
23.8862	23.5953	23.7123	23.7731	23.7987	23.7984	23.9835	25.0031	24.1965	24.8092	24.5072	25.0260	24.5452	24.9379	24.1250	24.4481	24.3986	23.9126	24.2925	23.3025	24.4822	25.5463	24.5321	23.8487
12.7093	16.4867	11.0068	6.6371	6.6563	14.2274	12.1248	16.3052	15.0375	16.5244	14.6994	15.5799	14.2489	16.3802	13.3325	15.0013	14.5079	13.5898	12.8327	11.6055	14.7212	17.8307	14.7297	14.2489
21.1743	21.0470	21.4026	22.4207	21.0902	19.3820	20.7805	22.1302	23.8030	25.0617	21.9679	22.5691	20.1343	22.1427	18.3291	19.8969	17.8181	16.1998	15.4599	14.7716	17.7715	19.3678	15.6858	16.0923
16.8987	16.9039	19.4412	17.2067	18.4434	16.5980	19.2657	20.4336	19.3238	21.9222	19.1606	19.4756	18.7532	19.5149	16.3631	18.7276	17.2382	15.7881	14.7662	13.8590	16.7988	19.7948	15.8923	16.1839
16.6454	18.6513	15.8279	16.8847	16.9456	17.7542	16.8005	21.4145	18.4836	20.2046	17.0680	18.7764	16.0873	17.8971	13.7751	16.1809	15.4682	13.0951	12.0133	11.6285	15.7673	18.4423	14.3298	14.7332
14.7676	17.1669	14.7327	14.4766	14.5273	16.5420	14.3983	19.5161	17.3374	18.2444	16.2525	17.9024	15.4255	16.8843	13.3791	15.3724	14.5511	13.4193	12.3458	11.9202	15.6047	17.9544	14.7688	14.7334
11.3046	11.5597	11.8317	11.9926	12.1910	10.7642	11.1577	13.6949	11.1255	13.0401	11.6986	13.2084	12.2538	14.2572	11.5565	13.4278	13.4656	12.8797	12.4355	11.6333	14.8205	17.6434	13.8698	13.6394
12.1178	10.6655	12.1499	14.1710	12.6705	11.2562	12.0361	13.5049	10.7651	12.2378	11.0389	12.7085	11.8412	13.3942	10.8008	12.5489	13.1029	12.3762	11.7173	10.9194	14.1672	17.2056	14.1178	14.1235
11.9736	10.8405	12.0200	13.6188	12.9950	12.2410	11.9344	13.5023	10.9113	12.4279	11.5144	12.6473	11.9629	13.6548	11.1446	12.9232	13.6013	12.5109	12.0974	11.3009	14.7899	17.4255	13.8330	13.1594
11.6305	10.4361	11.6841	13.3503	12.6835	11.9030	11.5871	13.2121	10.5402	12.0919	11.1795	12.4176	11.4978	13.3608	10.8483	12.4891	13.1261	12.0867	11.6067	10.7050	14.1152	16.7940	14.1875	13.2095
11.1014	11.2443	10.7518	12.1657	11.7188	10.7341	11.7320	13.4871	10.3891	12.1297	10.9948	12.3328	11.4994	13.1733	10.6833	12.3623	12.6808	11.6748	11.5982	10.8025	13.8943	16.2255	13.7332	13.0453
11.4074	11.7723	10.7771	11.9471	11.4288	10.7410	11.3811	13.3203	10.8904	12.6065	11.1826	12.5740	11.5848	13.0920	10.7899	12.1648	12.7994	11.7778	11.2465	10.7546	14.1369	16.8656	13.4692	12.0041
22.0052	22.5571	24.4376	22.9219	22.2921	22.5173	22.6475	25.5210	24.4026	24.9634	22.0655	23.2363	21.5651	23.8012	18.3884	20.9755	19.6831	17.0886	16.1081	15.5413	18.6570	20.7192	16.5957	17.7769
11.0375	10.8486	11.9235	9.2238	8.4118	11.9297	10.5802	12.1177	9.8766	11.5479	10.2253	11.7191	10.6217	11.9837	9.9139	11.3867	12.0065	10.9810	10.5602	9.7414	13.2362	15.3862	12.7566	11.9226
13.1795	12.6548	12.9613	13.0223	12.8386	12.8219	13.0694	15.0909	13.4262	15.3931	14.0796	14.9520	14.0173	15.2293	13.4239	14.3984	14.9651	13.8219	13.3127	12.4039	14.9519	17.1379	14.1200	13.5425
18.2095	18.1360	18.2782	18.2760	17.7197	18.1327	18.1839	20.3576	18.4274	19.9629	17.6719	18.9465	17.2987	19.0772	15.5897	17.3173	17.4016	15.2581	14.3853	14.0262	16.7089	18.8983	15.6058	15.5587
12.2438	12.2540	12.8545	12.8951	12.6386	12.6277	12.4316	14.0866	11.7678	13.5712	12.3590	13.5403	12.7052	13.9933	11.9068	13.2676	14.0304	12.7187	12.2620	11.7375	14.2548	16.2554	13.6889	13.1166
12.3335	12.8077	12.4291	12.9755	12.9188	12.7007	12.5860	14.1265	11.9484	13.4353	12.5623	13.7009	12.8217	14.0905	12.0688	13.2932	14.2059	12.8675	12.3761	11.8486	14.2999	16.3515	13.8413	13.3978
12.8964	12.8553	12.5998	13.1248	13.0737	12.8635	12.6967	14.2750	12.1114	13.5704	12.7480	13.7839	12.9286	14.1719	12.2027	13.4329	14.3164	12.9722	12.7870	11.9410	14.7407	16.4137	13.9524	13.3101
12.3204	12.1099	12.4908	12.3707	12.0263	12.2317	12.3074	13.9773	12.0194	13.4659	12.6157	13.5096	12.7075	13.9750	12.2361	13.3127	14.2665	12.9090	12.7870	11.9410	14.7407	16.4137	13.9524	13.3101
12.6914	12.7342	12.7228	12.5452	12.2600	12.9462	12.5655	14.5686	12.3117	13.8119	12.9268	14.0714	13.2352	14.4583	12.4567	13.7863	14.3630	13.2796	12.8339	11.9879	14.7353	16.3892	13.8486	13.4841
13.5540	12.1917	14.4525	13.0505	13.0867	13.0943	12.6501	15.5520	10.1948	14.3192	12.4927	14.7601	14.1136	17.2308	13.8111	14.1990	14.8250	15.6158	17.8730	15.2805	21.9224	26.3985	21.4396	16.8294
14.6087	15.1518	15.3966	15.9174	15.9779	15.0495	14.7925	16.9356	11.9395	16.7938	13.8124	15.2299	13.3795	15.0750	11.9405	11.9083	10.4019	10.7046	11.5626	10.0422	13.2840	15.7625	13.2618	10.6372
6.5637	6.5028	6.4126	6.3165	5.8053	7.0328	6.7343	8.4876	5.5619	7.4392	6.6538	7.6165	7.2084	8.0393	6.6165	7.3950	7.1076	7.8402	8.3250	6.9988	9.7090	12.2692	10.1825	7.6913
16.5147	16.1096	16.0848	16.7631	16.1054	16.6951	16.2120	18.1145	14.4627	18.0306	16.2880	17.9849	17.1656	19.6433	16.6708	17.0049	17.9537	17.5615	19.2223	16.9940	22.4396	26.0107	22.5417	17.7590
15.1249	15.2822	14.6832	15.2063	15.7309	14.5821	15.0895	17.7610	12.0411	16.7349	13.6611	14.8759	12.6814	14.2533	10.6585	10.4656	8.3464	8.5816	8.5901	7.7064	10.2498	12.2665	10.7397	8.4837
13.5750	13.8489	13.0405	14.9202	14.2414	13.2099	14.0515	15.8804	13.3250	15.2180	13.6868	15.2340	13.9537	15.6878	13.1542	14.8622	14.6771	13.9038	14.0325	12.8669	16.0872	19.1886	15.4875	14.1824
12.9619	13.7772	13.0608	12.8525	12.2816	12.8684	13.2048	14.9906	11.4812	14.1308	13.1405	14.5872	13.5972	15.1685	13.3188	13.7943	14.1512	14.2987	15.4580	13.7099	17.7250	21.0093	17.3412	14.3698
11.8045	11.7150	12.2868	12.1732	11.7084	11.5821	11.6019	13.4758	9.7770	12.4188	11.3974	12.8795	12.0547	13.7450	11.8437	12.3589	12.6199	12.9950	14.1639	12.5388	16.4060	19.7846	16.7105	13.4514
9.6703	9.6244	9.4935	9.7166	9.5646	9.6893	9.7156	11.6606	8.1775	10.7134	9.7362	11.0200	10.4734	11.9773	10.1061	10.6498	10.4261	11.0253	12.4017	10.6276	14.7716	17.6165	14.6061	11.6246
9.2822	9.2575	9.1892	9.1692	9.3056	9.1973	9.2587	11.2840	7.7547	10.3358	9.3410	10.6191	9.8460	11.6128	9.4728	10.2266	9.9667	10.6450	12.0472	10.2332	14.6185	17.3716	14.2982	11.2036
10.2393	10.2129	10.2516	10.1840	10.3263	10.2171	10.2371	12.5015	9.7192	11.6025	9.8999	11.3271	10.4290	12.1340	9.5058	10.8011	11.0843	10.6552	11.2325	9.9720	13.6103	16.0924	12.9608	11.4724
7.3003	7.4346	7.5781	7.5116	7.4126	7.2473	6.8739	7.8355	7.1908	8.3007	7.3537	7.6860	7.2267	7.2615	6.1279	6.3561	5.9349	5.6791	5.6231	5.0881	5.9047	6.9407	5.8923	5.2669
14.7647	15.4919	16.1504	16.7899	16.2951	15.3544	14.3413	16.6674	14.1774	16.2978	13.9599	15.2787	13.5221	15.1121	11.7474	12.4994	11.3806	11.0034	11.0832	10.0565	13.2718	15.2665	12.2010	10.9708
11.0612	11.6503	12.5518	13.1611	12.5395	11.5847	10.5883	12.5850	10.3616	11.7231	10.5062	11.4941	10.6076	11.6767	9.6169	10.6340	10.6786	10.3670	10.1581	9.1528	11.4270	13.7158	11.2761	10.1340
13.0947	16.5888	19.3512	19.8706	18.6553	17.8681	13.3257	13.4549	8.6168	12.0241	11.1600	12.1873	11.7107	13.3673	11.2593	11.8492	11.1737	11.3798	12.2367	11.3048	16.4183	19.1437	16.9328	13.8078
7.4403	10.2468	13.0487	1.8271	1.8336	13.0943	11.4898	11.6497	7.7717	11.1140	9.2620	10.6424	10.2293	11.9622	9.7594	10.3227	9.8143	10.6030	11.7046	10.3027	14.0915	17.7254	15.3620	12.1950
9.2302	9.2250	11.7245	1.7143	1.7207	11.7641	8.4195	10.6910	6.5456	9.2986	7.9435	9.3645	9.1683	10.7067	8.3402	9.0747	9.5181	9.5430	10.7664	9.5125	13.2297	16.8117	14.5867	10.9629
9.2302	9.2250	11.7245	1.7143	1.7207	11.7641	8.4195	10.6910	6.5456	9.2986	7.9435	9.3645	9.1683	10.7067	8.3402	9.0747	9.5181	9.5430	10.7664	9.5125	13.2297	16.8117	14.5867	10.9629
8.3960	8.2694	8.5771	7.9722	8.4132	8.5014	8.4835	10.2860	6.6722	9.1380	8.0820	9.5721	8.8772	10.6121	8.5675	9.1480	9.3162	9.8368	11.2094	9.4247	13.7450	17.0094	13.9448	10.5473
16.2602	15.9624	15.7068	16.0711	15.8893	16.7350	16.1863	18.5890	13.9245	17.2817	14.6941	15.6677	13.6471	14.8521	11.3822	11.3978	9.4447	9.6309	9.8155	8.5701	11.4408	13.9335	11.7111	9.8904

Caline 4 input for 2049 Q1

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833295.36	821947.25	833315.58	821891.87	13	0	1
R142	833329.89	821853.87	833315.98	821891.84	13	0	1
R143	833129.79	821889.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833179.74	821783.15	13	0	1
R145+R146	833812.49	821976.50	834004.98	821816.03	17	0	1
R147+R148	833738.44	821888.36	833931.13	821727.74	16	0	1
R149	833728.61	821749.52	833807.73	821684.38	14	0	1
R149	833774.08	821643.52	833807.73	821684.38	13	0	1
R150	833736.67	821759.23	833667.71	821803.87	11	0	1
R151	833613.61	821610.98	833693.50	821543.70	13	0	1
R151	833693.50	821543.70	833776.28	821642.52	14	0	1
R152	833774.08	821643.52	833826.17	821600.56	20	0	1
R153	833991.31	822369.76	834028.77	822414.27	16	0	1
R154	833950.46	822320.45	833992.00	822369.87	18	0	1
R155	833909.65	822271.38	833950.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.35	18	0	1
R157	833868.56	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.86	833778.49	822113.39	18	0	1
R159	834075.91	822299.62	834112.90	822344.34	15	0	1
R160	834090.39	822287.53	834127.62	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.96	822201.68	834034.90	822260.02	16	0	1
R164	834007.86	822189.33	834049.42	822238.28	16	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.39	833954.75	822160.50	19	0	1
R167	833885.47	822042.45	834007.86	822189.33	19	0	1
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1
R170+R171	833738.44	821888.35	833812.49	821976.50	16	0	1
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1
R174+R175	833561.79	821677.86	833683.38	821823.55	16	0	1
R176	833498.77	821608.49	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.68	821668.47	20	0	1
R178	833440.44	821529.90	833403.00	821608.01	16	0	1
R179	833451.04	821526.21	833511.32	821600.38	17	0	1
R180	834218.31	822256.35	834335.06	822395.33	16	0	1
R181	834181.98	822212.22	834218.31	822256.35	16	0	1
R182	834140.62	822162.67	834181.78	822212.39	16	0	1
R183	834099.34	822113.33	834140.62	822162.67	16	0	1
R184	834077.01	822132.06	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.13	13	0	1
R184	834071.90	822084.18	834097.30	822118.02	14	0	1
R185	834309.95	822180.58	834383.86	822267.44	19	0	1
R186	834231.54	822086.63	834273.34	822136.83	19	0	1
R187	834190.69	822037.73	834231.76	822086.45	16	0	1
R188+R189	834004.98	821816.03	834058.34	821880.22	19	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	16	0	1
R192+R193	833875.32	821660.75	833930.85	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.45	20	0	1
R196+R202	833761.01	821523.36	833828.17	821600.56	20	0	1
R197	834364.36	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.94	16	0	1
R199	834281.93	821961.17	834323.00	822010.48	15	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R200	834239.17	821914.13	834327.89	821948.33	18	0	1

NO_2 x 100 (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
14.7698	14.4604	11.9257	11.4472	14.4933	15.8658	14.6535	18.2624	13.1301	16.7242	13.6895	14.8326	12.6845	13.9800	10.4841	10.4786	8.1327	8.4867	8.8256	7.7325	10.9124	13.6060	11.1664	8.7801
8.0653	6.5711	7.2544	6.1708	5.7399	7.2117	8.0202	8.9473	6.8779	8.5665	8.0518	8.8837	8.4806	8.9795	7.8954	8.6847	8.4275	7.8137	7.7785	7.5679	9.1442	11.2994	9.7317	8.7357
16.7845	16.7026	16.3356	16.5467	16.4482	17.2906	16.6440	18.9053	15.6426	18.7249	16.3635	17.2607	14.9297	16.1010	13.0830	12.6970	11.1526	10.7764	10.8419	9.8109	12.2754	14.6937	12.6021	10.6565
16.5622	16.4488	16.1294	16.6394	16.4679	17.1795	16.5055	18.7128	14.6253	17.9074	15.4709	16.4550	14.4502	15.7076	12.3530	12.3215	10.3021	10.3622	10.4042	9.1789	11.9571	14.4015	12.3597	10.3176
13.0615	12.1917	14.4525	8.5611	16.3018	11.9683	12.6484	14.7755	9.6988	13.7368	10.9417	12.1760	10.1914	11.0872	8.3033	8.0886	5.7418	6.3540	6.2941	5.4712	7.3041	9.1718	7.9571	6.2982
10.9693	11.1833	13.0487	14.4534	13.0867	12.2281	11.3248	13.4938	8.8284	12.2463	9.8396	10.6175	8.9281	9.5281	6.9252	6.7104	4.9422	5.4669	5.0709	4.4576	6.3893	7.3568	6.7366	5.4068
9.7549	9.3104	8.5566	10.2447	10.2734	11.4857	9.3444	11.8234	7.5755	10.3634	9.3207	10.6694	10.0917	12.0305	9.8773	10.1467	11.3243	11.6676	13.2083	11.1922	15.9959	19.4553	17.1823	13.0610
9.7549	9.3104	8.5566	10.2447	10.2734	11.4857	9.3444	11.8234	7.5755	10.3634	9.3207	10.6694	10.0917	12.0305	9.8773	10.1467	11.3243	11.6676	13.2083	11.1922	15.9959	19.4553	17.1823	13.0610
9.7549	9.3104	8.5566	10.2447	10.2734	11.4857	9.3444	11.8234	7.5755	10.3634	9.3207	10.6694	10.0917	12.0305	9.8773	10.1467	11.3243	11.6676	13.2083	11.1922	15.9959	19.4553	17.1823	13.0610
9.7549	9.3104	8.5566	10.2447	10.2734	11.4857	9.7861	11.8234	7.6579	10.4800	9.3207	10.6694	10.0917	12.0305	9.7017	10.1467	10.2757	11.3765	12.7838	10.7497	15.9959	19.4553	17.1823	11.9352
9.7549	9.3104	8.5566	10.2447	10.2734	11.4857	9.7861	11.8234	7.6579	10.4800	9.3207	10.6694	10.0917	12.0305	9.7017	10.1467	10.2757	11.3765	12.7838	10.7497	15.9959	19.4553	17.1823	11.9352
9.7549	9.3104	8.5566	10.2447	10.2734	11.4857	9.3444	11.8234	7.5755	10.3634	9.2042	10.5099	9.7879	11.5699	9.2160	10.0827	10.1066	10.9375	11.8443	10.1553	15.3968	18.6696	14.9735	11.0142
10.3995	10.6019	10.1917	10.1855	10.6728	10.6276	10.5316	12.8146	8.9350	11.6692	9.8146	10.4068	9.2686	10.5181	7.8431	8.4679	7.8688	7.7385	8.0118	7.0430	9.9625	12.4106	10.5266	8.4611
10.3306	10.6934	9.9657	10.3161	10.8395	10.3576	10.6144	12.8590	8.9083	11.5553	9.7216	10.5180	9.3391	10.3648	7.9263	8.4089	7.7686	7.8707	8.1560	7.1098	9.9819	12.3448	10.3383	8.2778
10.3334	10.7127	10.1889	10.1815	10.5307	10.5021	10.6275	13.1887	9.4473	11.9903	10.0678	10.6591	9.5333	10.8651	8.0232	8.6424	8.2340	8.1646	8.2945	7.2153	10.3207	12.9681	10.7542	8.5167
14.6625	14.1413	13.8868	13.8088	13.4791	13.5882	14.7200	19.1117	14.7562	17.8347	15.7758	16.8695	15.3411	16.3424	13.5647	13.8013	12.8512	12.9129	12.7696	11.2179	13.9240	15.9338	13.7788	11.2747
15.1521	14.7626	14.7850	14.3248	14.4721	14.4750	15.1813	19.5254	15.5019	18.2067	15.6671	16.3760	14.7156	16.4162	12.9316	13.0251	12.1615	12.1581	12.6010	11.0540	13.9858	16.1304	13.7977	11.3228
14.8987	14.9560	14.9176	14.8821	15.0827	14.9519	14.8897	17.3826	13.4034	16.6437	14.3892	15.1303	13.6138	15.1868	11.9833	12.0340	11.2394	11.2157	11.7671	10.5564	13.9015	16.2282	13.8152	11.4842
10.7141	10.9637	11.8572	11.8851	9.2482	11.9297	10.6173	12.5651	9.9533	12.0139	10.8648	12.3970	11.1238	12.7452	10.0216	11.1035	11.5566	11.1276	11.5387	10.3649	14.4204	16.8496	13.9950	12.6330
12.5299	12.4352	12.4206	12.7142	12.0778	12.8140	12.9595	15.0959	11.4523	13.8647	11.6494	12.9775	11.6534	13.4166	10.0866	10.6971	10.4393	9.9619	10.2984	9.0913	12.8647	15.6261	12.7040	10.4970
10.8998	10.8429	10.8708	10.5708	11.1811	10.7782	11.1161	13.3989	10.0860	12.1713	10.8563	12.3893	11.3700	13.1972	10.5264	11.5941	11.5692	11.3772	11.7684	10.6272	14.2909	17.2680	13.9939	12.0922
12.6350	12.5659	12.4457	12.4647	12.4129	12.5438	12.6569	15.0031	11.4792	13.7491	11.6857	13.0637	11.6394	13.2166	10.1602	10.9568	10.4383	9.9921	10.3256	9.0653	12.7240	15.6297	12.6856	10.5049
11.8770	12.0024	12.1297	11.7349	11.8656	12.0250	12.0239	14.4483	11.3258	13.2572	11.3756	12.5500	11.2514	12.7585	9.8208	10.9422	10.5041	10.0660	10.1635	8.9905	12.5166	15.3548	12.3345	10.5211
11.7738	11.7554	11.8198	11.4932	11.9925	11.7453	11.7296	13.8953	10.3350	12.8120	10.7299	12.0815	10.8389	12.8885	9.7907	10.3117	10.2757	10.2587	10.8161	9.4108	13.2142	16.0959	13.0775	10.7017
13.2109	13.0970	12.8507	12.9114	12.8008	13.1538	13.2701	15.1563	12.8812	13.9218	12.7745	13.7103	12.6954	13.8712	11.4561	12.3637	12.0992	11.6416	11.7102	10.8121	14.1978	16.2804	13.5772	12.2087
9.9668	9.6389	9.7632	9.7694	9.8177	9.8017	10.0139	11.4017	9.5285	10.5525	9.6884	9.9833	9.2494	9.0476	8.3123	8.7423	7.9866	8.0378	7.3349	6.8290	7.7971	8.9204	8.0750	7.5680
18.0383	18.0631	17.9353	18.0136	18.3048	18.1194	18.1501	21.4999	19.0151	19.9940	17.5060	18.9076	17.0728	19.1529	14.9708	16.7822	16.7490	14.6498	14.2639	13.6136	17.2915	20.0195	16.1193	15.5447
4.1796	4.1359	4.2484	4.3130	4.0451	4.1199	4.1298	5.0762	4.0759	4.5591	4.2765	4.4820	4.4104	4.2233	3.8646	4.3941	4.0922	4.1734	3.5682	3.3752	3.9712	5.0336	4.3417	3.8427
6.2348	6.2267	6.2400	6.0594	6.2583	6.2693	6.1774	7.4212	5.9114	7.2408	6.5760	6.9802	6.6747	6.8803	5.9328	6.1942	5.8937	5.9059	5.8064	5.3318	6.4883	7.7243	6.6971	5.8776
12.3353	12.1607	12.1580	12.1568	12.0039	12.2810	12.1840	14.6386	10.9881	13.5707	11.5442	12.8700	11.5348	13.2297	10.4674	11.1924	10.9614	10.6641	10.8408	9.7469	12.9493	15.4341	12.6968	10.9498
13.1319	13.1003	13.0802	13.1108	13.0169	13.1772	13.1749	16.1196	13.1745	15.0783	13.5652	14.7689	13.5188	15.5709	12.5770	13.4498	13.4392	13.2330	13.2078	12.0561	15.4089	17.8667	14.9603	12.8860
12.2769	12.2290	12.2993	12.3099	12.3948	12.2732	12.2693	14.5133	11.9408	13.4027	12.4074	13.6688	12.8324	14.3802	12.2045	13.4346	13.5331	13.2628	13.3226	12.2089	15.2461	17.6393	14.9012	13.7183
13.6094	13.6122	13.6538	13.5378	13.4119	13.6704	13.5535	15.5540	12.0579	14.3857	12.5147	13.6365	12.2766	13.8903	11.1503	11.8245	11.5141	10.9688	10.9159	9.9282	12.8475	15.2571	12.7325	11.3365
14.2564	14.1312	14.1392	14.2110	14.3968	14.1343	14.3923	16.4468	14.2286	15.3905	14.3863	15.7790	14.8473	16.7115	14.2237	15.3940	15.4266	15.2075	15.7543	14.3570	17.8777	20.4598	17.5530	15.7507
15.2638	15.1698	15.2281	15.2161	15.2487	15.2107	15.2876	17.7172	14.2446	16.3978	14.5711	16.0305	14.5580	16.5272	13.2481	14.6222	14.6287	13.4441	13.2456	12.5168	16.1098	18.2718	15.0395	14.2232
13.0183	13.1138	13.3483	13.2588	13.2925	12.9453	13.3102	15.7890	12.2979	14.9170	12.6755	14.3008	13.0186	15.0504	11.8130	12.9757	12.6525	12.3654	12.7506	11.4976	15.7740	19.2121	15.5024	13.3401
13.3629	10.2468	9.3053	10.2447	11.4791	10.2792	14.2347	14.3200	10.0163	12.7843	11.1982	12.6667	13.1660	14.8518	11.6999	13.0225	12.2929	13.1288	13.6092	11.6979	16.3258	19.9728	16.6920	13.2492
11.7994	11.8830	12.6327	12.5678	14.6457	13.2198	12.0456	13.8716	10.5692	12.2581	11.0646	12.6031	11.6504	14.4820	10.5008	11.7576	12.3612	12.0678	12.5540	10.6977	15.3569	19.7484	15.4889	12.7680
13.2307	13.7402	14.4668	14.7324	15.1713	15.6532	13.2921	15.5891	12.0239	14.2412	12.4639	13.8682	12.8222	14.5991	11.6937	11.1918	10.8673	10.8445	11.6893	10.8588	15.4122	19.0696	14.7177	13.9889
13.0632	12.6083	12.4576	12.3490	12.2210	13.0943	13.1006	15.3443	9.8194	14.0172	10.6483	11.6145	9.5608	10.3236	7.4498	7.5205	6.2716	6.3065	6.3184	5.3513	7.6077	9.5533	8.3456	6.0251
13.0632	12.6083	12.4576	12.3490	12.2210	13.0943	13.1006	15.3443	9.8194	14.0172	10.6483	11.6145	9.5608	10.3236	7.4498	7.5205	6.2716	6.3065	6.3184	5.3513	7.6077	9.5533	8.3456	6.0251
13.0632	12.6083	12.4576	12.3490	12.2210	13.0943	13.1006	15.3443	9.8194	14.0172	10.6483	11.6145	9.5608	10.3236	7.4498	7.5205	6.2716	6.3065	6.3184	5.3513	7.6077	9.5533	8.3456	6.0251
12.6742	12.5242	13.0851	12.5940	13.2925	12.6141	13.0559	14.8981	11.4356	13.6437	12.1364	13.8845	12.4312	14.8393	11.7742	12.8732	13.0382	12.4404	13.0128	11.4996	15.8013	18.7083	15.4076	13.0633
14.2891	14.4757	15.5937	16.2283	17.5963	16.2929	13.8940	16.4442	12.9733	14.5153	12.7781	14.7397	13.1223	14.8518	11.7070	10.8479	10.3077	10.5142	11.2133	10.4487	14.6774	18.0252	14.7177	13.9889
14.2119	14.8495	14.1824	14.8251	15.3132	14.8792	14.5483	16.9578	13.9885	15.6801	14.8214	16.4289	15.4249	16.9573	14.6528	15.9340	15.8010	15.6183	15.9444	14.9937	18.1854	20.8524	17.9967	16.2125
12.3354	11.6984	12.5588	13.2915	12.1535	11.9618	12.3359	14.1144	10.4278	12.7809	11.1658	12.4317	11.5781	12.8554	10.2356	10.8558	10.8342	10.5649	10.8499	9.5206	13.3287	15.5842	13.0130	11.4277
13.1202	13.8049	13.3079	13.7195	14.2796	13.6615	13.6311	15.7246	12.0630	14.1723	12.2796	13.7766	12.6531	14.5951	11.3153	12.3787	12.4207	11.7398	12.3942	11.0279	15.2595	18.1982	15.0095	12.6095
10.3961	10.1921	10.1145	10.8288	11.4158	10.2788	10.0688	11.4227	8.5030	10.2119	9.0985	10.5092	9.6803	11.4079	8.1696	9.0372	8.4672	7.9430	7.5559	7.5551	11.5443	10.8615	9.2441	10.6310
18.8035	17.6766	18.2031	19.2060	19.3392	18.4369	18.6462	19.3042	16.4119	18.7757	17.8404	19.9662	18.7254	19.5196	17.9725	18.6895	18.8449	18.8584	19.3924	18.6820	20.9216	22.0301	20.4160	20.0064
18.7728	19.1721	15.5896	17.2245	17.3757	17.4472	19.1372	18.5913	18.5747	17.4976	15.5841	16.5450	17.9827	16.7439	17.2836	17.7986	17.8296	20.2201	17.6119	17.0215	19.1370	20.7478	19.0466	21.0380
15.7622	11.4508	8.5566	8.5611	10.2734	10.2792	10.2830	15.6101	11.6882	14.8774	13.2754	15.0360	9.3277	11.5682	9.7577	9.4409	9.9744	8.1261	8.5731	9.0111	13.0003	20.9300	17.1752	13.0610
12.7078	10.8087	10.2411	8.5611	10.2734	9.3409	10.2830	13.9121	9.3472	12.3328	10.9349	12.5333	11.7187	16.1645	11.2785	12.3807	12.6773	12.2571	12.4321	11.3498	17.2678	18.6138	15.0624	17.3153
15.4956	15.6961	16.0061	18.1221	17.9702	18.1647	16.1149	17.3277	14.4037	16.4164	14.8745	14.6178	14.0153	15.2393	11.9923	12.8095	12.8746	14.8514	14.6674	14.3874	16.5931	19.3464	14.9468	14.4734
14.1447	13.0413	13.8032	13.8005	14.6020	14.4452	14.2139	16.0749	12.7597	15.4306	12.3681	14.0088	12.3420	14.7096	11.2498	12.9157	13.0521	12.3436	12.4589	11.2331	14.8303	17.7229	14.3306	13.1605
14.1447	13.0413	13.8032	13.8005	14.6020	14.4452	14.2139	16.0749	12.7597	15.4306	12.3681	14.0088	12.3420	14.7096	11.2498	12.9157	13.0521	12.3436	12.4589	11.2331	14.8303	17.7229	14.3306	13.1605

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	622324.11	833177.37	622330.25	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833177.37	622330.25	833231.06	622345.78	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833231.06	622345.78	833414.80	622406.85	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833434.00	622408.45	833900.46	622643.05	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833950.46	622643.06	833995.46	622646.76	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R004	833118.28	622306.10	833165.93	622315.62	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833165.93	622315.62	833425.10	622386.41	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833425.10	622386.41	833518.28	622421.55	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R005	833518.28	622421.55	833673.75	622498.53	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833673.75	622498.58	833933.67	622614.65	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833933.67	622614.65	833973.71	622620.01	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833973.71	622620.09	834040.15	622630.54	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R006+R007	833527.00	622410.61	833627.55	622455.21	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833627.55	622455.21	833732.07	622494.47	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833732.07	622494.47	833782.11	622441.05	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833782.11	622441.05	833840.01	622456.02	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R008+R009	833664.17	622398.31	833693.59	622397.15	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R008+R009	833693.59	622397.15	833841.35	622450.34	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R010+R011	833978.10	622463.30	833988.64	622432.88	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R010+R011	833898.84	622432.88	833983.54	622462.45	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R011	833983.54	622462.40	833840.51	622459.02	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R013	833387.28	622507.47	833423.59	622696.02	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833423.59	622658.02	833416.08	622482.07	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833416.08	622482.07	833447.62	622425.39	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833447.62	622425.39	833544.64	622390.48	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833544.64	622390.48	833587.66	622354.60	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R014+R016	833468.77	622318.11	833587.86	622354.80	14	0	1	66	27	16	12	13	20	68	100	200	200	150	150	150	150	150	150	100	100	150	100	100	100	100	72
R016+R017	833587.56	622354.80	833623.17	622374.91	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R016+R017	833623.17	622374.91	833661.17	622386.31	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R019	833082.67	622192.93	833209.07	622239.73	16	0	1	50	50	16	11	13	19	50	100	200	200	200	150	150	150	150	100	50	100	50	50	50	50	50	21
R021	833209.07	622239.78	833305.00	622293.72	16	0	1	50	50	20	14	16	24	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R022	833355.00	622293.72	833460.61	622340.13	16	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R022	833460.61	622340.13	833499.46	622315.75	16	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R023	833073.42	622119.68	833100.03	622129.44	14	0	1	50	23	14	11	11	17	50	100	200	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R024	833100.03	622129.44	833232.06	622178.07	14	0	1	50	22	12	9	11	16	50	100	150	200	200	200	200	250	300	300	250	350	400	300	250	200	150	150
R025	833232.06	622178.07	833377.80	622232.03	14	0	1	50	50	18	12	15	21	50	100	200	250	250	250	300	300	350	400	300	450	500	400	300	250	200	150
R026	833377.80	622232.03	833503.34	622278.92	14	0	1	50	50	17	12	14	20	50	100	250	250	250	250	250	250	300	300	250	350	350	300	200	150	150	100
R027	833503.91	622278.46	833673.82	622341.72	13	0	1	100	50	50	22	25	50	100	200	350	400	350	350	350	350	450	400	350	450	500	400	250	250	200	150
R028	833673.82	622341.72	833700.11	622370.93	13	0	1	50	23	15	10	11	16	50	100	150	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
R029	833766.03	622376.16	833848.76	622405.79	13	0	1	50	15	9	6	8	10	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R030	833848.76	622405.79	833917.83	622431.11	14	0	1	50	50	24	17	19	50	50	150	300	350	300	300	350	350	400	400	300	450	500	400	300	250	200	150
R031	833917.83	622431.11	833990.69	622454.38	14	0	1	15	9	5	4	4	6	17	50	100	100	100	100	100	100	100	100	100	150	150	100	100	50	50	50
R032+R301	833078.99	622085.71	833121.79	622072.07	18	0	1	106	105	54	54	54	55	108	320	450	450	373	371	421	419	469	468	519	619	618	463	359	308	258	205
R033	833121.79	622072.07	833253.39	622120.94	18	0	1	200	150	100	100	100	150	200	550	800	750	700	650	750	750	850	900	950	1150	1200	900	650	550	500	350
R034	833253.39	622120.94	833398.77	622175.17	18	0	1	200	150	100	100	100	150	200	550	850	800	700	700	750	750	850	950	1000	1200	1200	950	650	550	500	350
R035	833398.77	622175.17	833524.36	622221.21	18	0	1	300	250	200	200	200	250	400	900	1400	1350	1150	1050	1100	1050	1100	1150	1150	1300	1300	1000	700	600	550	400
R036	833524.35	622221.21	833653.40	622280.00	18	0	1	350	300	250	250	250	250	450	1050	1650	1550	1350	1250	1300	1300	1400	1450	1450	1700	1700	1300	900	750	700	500
R037	833653.40	622280.00	833694.88	622284.07	19	0	1	300	250	200	200	200	200	350	890	1350	1250	1100	1000	1050	1000	1050	1100	1100	1250	1200	950	650	550	500	350
R038	833694.88	622284.56	833763.79	622309.51	18	0	1	300	250	200	200	200	200	350	900	1350	1250	1100	1000	1050	1000	1100	1100	1150	1300	1300	1000	700	600	550	350
R039	833784.99	622311.12	833798.46	622320.76	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	950	900	700	500	400	350	250
R040	833789.11	622318.09	833833.19	622335.17	18	0	1	200	150	150	150	100	150	250	550	900	850	700	650	650	650	650	650	650	750	700	550	400	350	300	200
R041	833833.16	622335.17	833902.96	622360.57	18	0	1	200	150	150	150	150	150	250	700	1050	1000	850	750	800	750	800	800	800	900	850	650	450	400	350	250
R042	833902.96	622360.57	833950.46	622320.45	18	0	1	250	200	200	150	150	200	350	800	1250	1150	1000	950	1000	1000	1050	1100	1150	1350	1350	1050	700	600	550	400
R043	833950.46	622320.46	834034.00	622250.52	18	0	1	150	150	100	100	100	100	200	450	700	700	600	550	600	600	650	700	700	850	850	650	450	400	350	250
R044	834034.00	622250.52	834140.62	622162.67	18	0	1	200	150	150	150	100	150	250	550	900	850	750	700	750	700	750	800	850	950	950	750	500	450	400	300
R045	834140.62	622162.67	834231.76	622086.65	19	0	1	150	100	100	100	100	100	150	400	650	600	500	500	550	550	600	600	650	750	750	600	400	350	300	200
R046	834231.72	622086.65	834323.21	622011.22	18	0	1	200	150	150	150	100	150	250	600	900	850	750	700	750	700	800	800	850	950	950	750	500	450	400	300
R047	834322.77	622010.68	834304.01	621959.68	18	0	1	200	150	100	100	100	150	200	550	800	750	650	650	700	650	700	750	800	900	900	700	500	400	350	250
R048	833097.20	621980.43	833156.99	621977.36	17	0	1	650	500	450	450	400	500	850	2000	3100	2900	2450	2200	2250	2150	2250	2250	2200	2500	2350	1800	1250	1050	950	700
R049	833155.06	621977.96	833434.10	622080.21	18	0	1	550	450	400	400	350	450	700	1700	2650	2500	2050	1850	1900	1750	1800	1750	1700	1900	1750	1350	950	800	700	500
R050	833101.47	621942.33	833274.46	622007.07	21	0	1	650	500	450	450	450	500	800	1950	3000	2850	2450	2300	2450	2350	2550	2650	2700	3150	3100	2400	1650	1400	1300	900
R051	833274.98	622006.60	833418.76	622087.62	18	0	1	550	450	350	350	350	400	700	1650	2500	2350	2050	1850	1950	1900	2000	2050	2100	2450	2350	1800	1250	1100	950	700
R052	833434.10	622080.21	833688.33	622174.73	18	0	1	350	300	250	250	250	250	450	1100	1700	1600	1350	1250	1350	1300	1400	1450	1500	1750	1700	1300	900	800	700	500
R053	833786.86	622123.44	833736.66	622163.25	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R053	833736.66	622163.25	833698.23	622174.73	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R054	833439.63	622067.29	833586.71	622122.03	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833586.71	622122.03	833649.55	622144.40	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833649.55	622144.40	833663.68	622152.80	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833663.68	622152.80	833713.65	622149.82	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833713.85	622140.82	833757.83	622128.58	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833757.83	622128.58	833778.48	622113.30	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R055	833786.53	622123.04	833872.14	622081.39	19	0	1	500	400	350	350	350	400	650	1500	2350	2200	1900	1750	1850	1750	1850	1900	1950	2250	2200	1700	1150	1000	900	650
R056	833776.49	622113.30	833867.20	622039.12	18	0	1	250	200	150	150	150	200	300	750	1200	1100	950	900	950	950	1000	1050	1050	1250	1250	950	650	550	500	350
R057	833873.20	622062.68	834159.21	621814.78	18	0	1	350	250	250	250	250	250	450	1100	1650	1550	1300	1200	1250	1200	1250	1250	1250	1400	1350	1050	700	600	550	400
R058	834159.21	621814.78	834250.10	621738.42	18	0	1	300	250	200	200	200	250	400	950	1500	1400	1200	1050	1100	1050	1100	1100	1100	1200	1150	900	600	550	500	350
R059	833867.20	622039.23	834058.34	621880.22	17	0	1	200	150	150	150	150	150	250	600	950	900	800	750	800	800	900	950	1000	1200	1200	900	650	550	500	350
R060	834058.34	621880.22	834241.61	621727.45	16	0	1	200	150	150	150	150	150	250	600	900	850	750	700	800	750	850	900	900	1100	1100	850	600	500	450	300
R061	833116.37	621880.28	833139.76	621889.31	16	0	1	50	22	14	9	11	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
R062	833139.76	621889.31	833296.78	621947.78	18	0	1	50	50	50	18	20	50	100	150	300	350	300	300	300	300	350	300	250	350	350	300	200	150	150	100
R063	833296.88	621947.56	833460.51	622007.97	18	0	1	50	20	13	10	10	15	50	100	150	150	150	150	200	200	200	200	200	250	300	200	150	150	100	100
R064	833460.49	622008.03	833543.73	622038.72	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833543.73	622038.72	833563.70	621983.31	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833460.98	621952.82	833543.70	621982.31	18	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R065	833160.17	621834.07	833315.56	621891.01	16	0	1	50	50	17	12	14	20	50	100	200	250	200	200	200	150	200	150	150	150	150	150	100	50	50	50
R066	833315.96	621891.68	833491.00	621952.75	16	0	1	50	50	21	15	17	24	50	100	250	250	250	250	250	250	300	300	250	350	400	300	200	200	150	100
R067	833154.01	621773.07	833178.47	621783.88	18	0	1	1500	1200	1000	1000	950	1150	1900	4450	4750	4750	4730	4750	4750	4750	4750	4750	4750	4750	4750	4750	3350	2850	2600	1800
R068	833178.74	621783.16	833253.68	621813.88	18	0	1	1350	1100	950	900	900	1050	1750	4100	4750	4750	4750	4700	4750	4750	4750	4750	4750	4750	4750	4500	3150	2650	2400	1700
R069	833166.60	621757.87	833260.16	621795.91	29	0	1	950	750	650	600	600	700	1200	2850	4350	4100	3600	3400	3600	3550	3900	4050	4200	4750	4750	3800	2650	2250	2050	1450
R070	833249.90	621820.73	833329.69	621853.67	13	0	1	400	300	250	250	250	300	500	1200	1800	1700	1450	1350	1400	1350	1450	1450	1500	1700	1650	1250	900	750	700	500

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	450	350	300	300	300	350	550	1300	2000	1900	1650	1500	1600	1500	1650	1650	1700	1950	1900	1450	1000	850	800	550
R072	833397.24	821875.22	833491.75	821897.07	20	0	1	200	150	150	150	150	150	250	600	900	850	750	700	750	750	800	850	850	1000	1000	800	550	450	400	300
R073	833451.50	821880.54	833397.24	821875.22	17	0	1	250	200	150	150	150	200	300	750	1100	1050	900	800	850	800	850	850	850	950	900	700	500	400	350	250
R074	833261.04	821790.34	833451.50	821880.64	20	0	1	250	200	150	150	150	150	300	700	1050	1000	850	800	850	800	900	900	950	1100	1050	800	550	500	450	300
R075	833449.48	821951.09	833596.97	821583.08	18	0	1	150	150	100	100	100	100	200	450	750	700	600	550	550	550	550	550	600	650	650	500	350	300	250	200
R076	833501.48	821897.00	833548.66	821899.77	18	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	833548.66	821899.77	833603.43	821886.09	18	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	833603.43	821886.99	833689.92	821822.32	18	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R077	833564.57	821884.14	833563.57	821684.35	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	833563.57	821884.36	833660.48	821871.28	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	833600.48	821871.28	833673.64	821812.09	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R078	833683.38	821822.35	833875.32	821560.75	18	0	1	150	150	100	100	100	100	200	500	750	700	600	550	550	500	550	550	550	600	600	450	300	250	250	150
R079	833673.29	821911.43	833867.51	821651.46	18	0	1	250	200	150	150	150	200	300	750	1150	1100	950	850	900	850	900	900	950	1050	1050	800	550	450	400	300
R080	833875.67	821661.18	833999.54	821557.94	18	0	1	150	100	100	100	100	100	200	450	650	650	550	500	550	550	600	600	650	750	750	550	400	350	300	200
R081	833807.01	821690.86	833983.08	821852.08	20	0	1	250	200	200	200	200	200	350	800	1250	1200	1050	950	1000	1000	1050	1100	1150	1300	1300	1000	700	600	550	400
R082	833458.18	821884.41	833510.75	821821.12	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R082	833510.75	821821.12	833538.36	821785.93	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R082	833536.39	821785.93	833570.13	821697.58	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R083	833426.83	821858.11	833486.18	821813.12	18	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	833486.18	821813.12	833524.36	821772.29	14	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	833524.36	821772.29	833519.81	821652.62	14	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R084	833587.54	821687.02	833582.69	821644.65	13	0	1	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R084	833582.69	821644.65	833607.71	821603.07	13	0	1	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	833640.24	821575.52	833691.67	821545.20	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	833681.67	821565.20	833720.52	821812.65	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R086	833580.70	821640.89	833603.88	821583.58	17	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R087	833648.49	821548.43	833699.49	821538.30	13	0	1	100	100	100	100	100	100	150	350	500	500	450	400	400	400	400	400	400	400	450	350	200	200	150	150
R088	833254.24	821811.68	833365.50	821850.66	17	4	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833365.50	821850.04	833416.50	821866.81	17	7	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833416.50	821866.51	833487.63	821841.09	17	5	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833574.80	821657.75	833660.19	821605.82	17	7	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833660.16	821605.82	833712.08	821511.11	17	6	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R089	833256.85	821801.44	833370.08	821846.87	18	4	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833370.08	821846.87	833427.36	821852.03	18	7	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833427.36	821852.03	833485.60	821829.25	18	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833485.60	821829.25	833522.46	821786.30	18	10	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833522.46	821786.30	833543.19	821725.47	18	9	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833543.19	821725.47	833562.07	821663.37	18	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833563.07	821663.37	833598.89	821594.44	18	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833598.89	821594.44	833693.63	821508.81	18	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R090+R091	833260.78	821629.66	833317.84	821634.13	17	0	1	350	250	250	250	250	250	450	1050	1600	1500	1250	1100	1200	1100	1150	1150	1150	1300	1200	950	650	550	500	350
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R092+R093	833449.56	821640.31	833613.09	821599.26	20	0	1	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R094	833337.84	821634.53	833341.81	821676.41	18	0	1	50	50	50	50	50	50	100	200	300	300	250	200	200	200	200	200	200	250	250	150	100	100	100	50
R095	833606.59	821501.72	833648.49	821548.43	17	0	1	100	100	100	50	50	100	150	350	500	500	450	400	400	350	400	400	400	400	400	300	200	200	150	100
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1	57	19	11	7	7	14	57	64	150	150	150	150	150	150	150	150	70	150	150	121	64	63	62	58
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	62	56	25	17	20	28	63	150	300	300	300	250	250	250	300	250	200	250	300	250	200	150	150	73
R100+R101	834127.62	822332.11	834218.31	822258.35	18	0	1	100	100	73	34	40	100	150	300	600	650	550	500	550	500	550	550	350	500	500	450	250	250	250	150
R102+R103	834218.31	822258.35	834309.95	822180.58	18	0	1	100	36	22	16	16	26	100	150	250	300	250	250	300	300	300	300	250	350	350	250	200	200	150	100
R104+R105	834309.95	822180.58	834407.46	822098.58	18	0	1	71	27	16	11	11	19	72	100	200	200	200	200	250	250	250	250	200	300	300	200	150	150	150	100
R106	833917.83	822431.11	833991.76	822309.38	18	0	1	50	50	24	17	20	50	50	150	300	300	300	250	250	250	300	250	200	300	300	250	150	150	100	100
R107	833991.55	822370.04	834090.35	822287.53	18	0	1	50	50	20	14	16	22	50	100	250	250	200	200	200	150	150	150	100	100	100	100	50	50	50	50
R108	834090.84	822285.06	834181.98	822212.22	18	0	1	50	50	22	16	17	50	50	150	250	300	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R109	834181.98	822212.22	834273.06	822136.68	17	0	1	50	50	21	15	16	24	50	100	250	250	250	200	200	200	200	150	100	150	100	100	50	50	50	50
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	100	50	50	20	21	50	100	150	850	350	300	250	250	250	250	200	150	150	150	150	100	100	50	50
R111	834363.40	822059.86	834460.74	822028.83	18	0	1	50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
R112	833846.78	822405.79	833902.96	822380.57	19	0	1	50	22	14	10	12	17	50	100	150	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R113	833833.46	822335.17	833909.60	822271.35	18	0	1	50	20	12	8	9	15	50	50	150	150	150	150	150	100	150	100	100	100	100	100	50	50	50	50
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	200	100	50	50	50	100	200	450	850	950	850	750	750	700	800	750	550	700	750	550	400	350	300	250
R115	833994.06	822200.75	834077.01	822132.08	18	0	1	200	100	50	50	50	50	200	400	750	850	750	700	700	650	750	700	550	700	750	600	400	350	300	250
R116	834076.90	822131.84	834097.30	822115.02	18	0	1	200	100	50	50	50	100	200	400	800	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
R117	834097.30	822115.02	834190.89	822037.73	18	0	1	200	100	50	50	50	50	200	350	700	800	700	650	650	650	700	650	500	650	700	550	400	350	300	250
R118	834190.89	822037.73	834243.25	821992.98	19	0	1	200	100	50	50	50	50	200	350	750	800	750	700	700	700	800	750	600	800	850	700	500	400	350	300
R119	834242.04	821993.65	834282.16	821961.49	18	0	1	200	100	50	50	50	100	250	450	900	950	850	800	800	800	850	800	650	800	850	700	500	400	350	300
R120	834281.93	821961.17	834389.17	821898.80	18	0	1	250	150	100	50	50	100	250	500	950	1050	950	900	900	850	950	900	700	900	950	750	500	450	400	300
R121	833758.03	822376.16	833799.11	822318.98	18	0	1	23	13	8	6	6	9	50	50	100	100	100	100	100	100	150	150	100	150	200	150	100	100	100	50
R122	833791.88	822311.12	833868.78	822222.18	18	0	1	100	50	50	50	50	50	100	200	400	450	400	400	400	400	500	450	350	500	550	450	300	250	250	200
R123	833868.78	822222.16	833964.75	822150.80	18	0	1	50	50	22	15	17	50	50	150	250	300	250	250	250	250	300	300	200	300	350	250	200	150	150	100
R124	833873.92	822341.72	833894.66	822294.07	18	0	1	50	50	20	14	16	23	50	100	250	250	200	200	200	200	200	200	150	150	150	100	100	50	50	50
R125	833894.80	822294.07	833927.77	822172.65	18	0	1	50	50	20	14	16	23	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R126	833893.40	822289.00	833988.37	822174.73	13	0	1	50	50	22	15	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
R127	833459.65	822315.75	833503.51	822278.45	18	0	1	50	23	15	10	12	16	50	100	150	200	200	200	200	200	250	250	200	250	300	250	150	150	100	100
R128	833503.51	822278.46	833524.36	822221.24	18	0	1	50	50	18	14	15	21	50	100	200	250	250	250	250	250	300	300	250	350	400	300	200	200	150	150
R129	833377.80	822232.03	833355.09	822203.72	18	0	1	150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	600	550	450	300	250	250	150
R130	833377.80	822232.03	833396.77	822175.17	18	0	1	200	150	100	100	100	150	250	550	850	800	700	600	650	650	650	700	700	800	800	600	400	350	300	250
R131	833396.42	822175.04	833434.10	822080.75	18	0	1	300	250	200	200	200	250	400	900	1400	1300	1050	950	950	900	900	850	850	900	800	650	450	350	350	350
R132	833433.92	822080.79	833469.51	822007.87	18	0	1	200	150	150	150	150	150	250	550	850	800	700	700	750	700	800	800	850	1000	1000	750	550	450	400	300
R133	833460.45	822007.99	833481.00	821952.76	18	0	1	200	100	50	50	50	100	200	350	750	800	750	700	700	700	600	750	600	800	850	700	500	400	350	300
R134	833481.00	821952.78	833500.07	821883.08	18	0	1	200	100	100	50	50	100	200	400	800	900	850	800	850	850	950	950	750	1000	1100	900	600	500	450	350
R135	833209.07	822239.78	833232.06	822178.07	18	0	1	8	6	5	3	2	4	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	20	19	14
R136	833232.03	822178.08	833253.39	822120.94	18	0	1	6	4	3	1	1	3	7	13	50	50	50	50	50	50	50	50	50	50	50	50	22	18	17	13
R137	833080.91	822182.63	833100.03	822126.44	18	0	1	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R138	833100.63	822129.44	833121.79	822072.07	18	0	1	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R139	833121.88	822072.03	833138.56	821977.88	18	0	1	100	50	50	24	50	50	100	200	400	450	400	400	450	450	550	550	400	600	650	500	350	300	250	200
R140	833274.46	822007.07	833298.88	821947.38	17	0	1	100	50	50	50	50	50	100	200	450	450	450	450	500	500	600	600	500	650	750	600	400	350	300	250

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R141	833256.35	821947.25	833315.56	821691.07	13	0	1
R142	833329.89	821863.87	833315.98	821691.84	13	0	1
R143	833139.75	821885.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821783.15	13	0	1
R145+R146	833812.48	821976.55	834004.58	821516.03	17	0	1
R147+R148	833738.44	821888.38	833931.13	821727.74	16	0	1
R148	833728.61	821749.82	833807.73	821684.38	14	0	1
R149	833774.08	821643.52	833807.73	821684.38	13	0	1
R150	833736.87	821756.23	833687.71	821603.87	11	0	1
R151	833613.61	821610.98	833693.50	821643.70	13	0	1
R151	833693.00	821543.70	833776.28	821642.63	14	0	1
R152	833774.08	821643.52	833828.17	821500.58	20	0	1
R153	833991.31	822388.76	834028.77	822434.27	18	0	1
R154	833960.48	822320.45	833992.08	822389.67	18	0	1
R155	833909.60	822271.38	833960.48	822320.45	18	0	1
R156	833888.78	822222.16	833909.65	822271.38	18	0	1
R157	833866.58	822222.34	833827.77	822173.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834070.81	822289.62	834113.80	822384.34	18	0	1
R160	834090.38	822287.53	834137.63	822332.11	15	0	1
R161	834034.80	822250.52	834075.91	822289.62	15	0	1
R162	834049.42	822236.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.68	834034.00	822250.02	18	0	1
R164	834007.86	822196.33	834049.42	822238.28	15	0	1
R165	833963.31	822151.78	833994.47	822221.23	16	0	1
R166	833872.14	822051.39	833984.76	822190.50	18	0	1
R167	833883.47	822042.45	834007.88	822180.33	18	0	1
R168+R169	833815.72	821975.47	833876.38	822050.03	21	0	1
R170+R171	833724.44	821888.38	833812.49	821978.50	18	0	1
R172+R173	833684.92	821822.32	833719.28	821687.65	20	0	1
R174+R175	833561.78	821677.56	833683.38	821823.58	18	0	1
R176	833496.77	821508.49	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.66	821688.47	20	0	1
R178	833440.48	821529.99	833488.60	821608.61	16	0	1
R179	833451.86	821526.31	833511.33	821600.38	17	0	1
R180	834218.31	822258.35	834305.99	822385.39	18	0	1
R181	834181.98	822212.22	834218.31	822258.38	18	0	1
R182	834140.62	822162.67	834181.76	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.87	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822094.18	13	0	1
R184	834071.90	822086.18	834007.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.88	822287.44	19	0	1
R186	834231.54	822068.63	834273.34	822139.83	19	0	1
R187	834190.59	822037.73	834231.76	822088.45	18	0	1
R188+R189	834004.98	821815.03	834085.34	821930.22	19	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1
R192+R193	833878.32	821660.78	833930.65	821727.98	20	0	1
R194+R195	833825.79	821600.86	833887.51	821651.48	20	0	1
R196+R202	833781.01	821523.38	833826.17	821600.58	20	0	1
R197	834364.38	822060.94	834400.18	822104.71	17	0	1
R198	834322.77	822010.68	834364.38	822060.94	18	0	1
R199	834281.93	821961.17	834323.00	822010.48	19	0	1
R200	834239.17	821914.13	834290.06	821963.18	14	0	1
R300	834239.17	821914.13	834327.89	821840.33	16	0	1

Vehicle count for each road

Road Pair	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	50	16	10	7	8	12	50	50	100	150	150	150	150	200	250	250	200	300	350	250	200	150	150	100
R142	50	22	14	10	11	17	50	100	200	200	200	150	200	200	200	200	150	250	250	200	150	100	100	100
R143	150	50	50	50	50	50	150	250	550	600	500	500	450	450	500	450	350	450	450	350	250	200	200	150
R144	100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
R145+R146	24	13	8	5	7	10	25	63	100	150	124	122	123	122	174	172	117	222	224	168	113	111	110	58
R147+R148	57	18	12	8	9	13	58	65	150	150	150	150	150	150	150	150	100	200	200	100	100	100	100	100
R148	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
R149	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
R150	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
R151	17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
R151	17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
R152	17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	50	20	17	14	11
R153	100	100	100	50	50	50	100	250	300	250	250	200	200	250	200	200	200	200	200	150	150	150	100	100
R154	100	100	100	50	50	50	100	250	300	250	250	250	250	300	300	300	350	350	350	300	250	200	200	150
R155	100	100	50	50	50	50	100	250	300	250	250	200	200	250	200	200	250	250	200	200	150	150	150	100
R156	500	400	350	300	250	250	450	800	800	800	800	800	800	800	800	800	800	800	750	650	550	450	450	350
R157	600	500	400	300	250	300	550	1200	1500	1300	1200	1100	1100	1150	1100	1050	1050	1050	1000	850	750	650	600	450
R158	500	400	350	300	250	250	450	1000	1300	1100	1050	950	1000	1050	950	950	1000	1000	950	800	700	600	550	450
R159	50	23	18	15	12	15	24	50	50	50	50	50	50	50	50	50	100	100	100	50	50	50	50	50
R160	100	100	50	50	50	50	100	200	250	250	200	200	200	200	150	150	150	150	150	150	100	100	100	50
R161	150	150	100	100	50	100	150	350	400	350	350	350	350	400	350	350	400	400	400	350	300	250	250	200
R162	200	150	150	100	100	100	200	400	550	450	450	400	400	450	400	400	450	450	450	350	300	250	250	200
R163	250	200	150	150	100	100	200	450	600	550	500	500	550	600	600	600	650	700	700	550	500	450	400	300
R164	150	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	400	300	300	250	250	200
R165	150	150	100	100	100	100	150	350	450	400	350	350	350	400	400	400	400	450	400	350	300	250	250	200
R166	300	250	200	200	150	150	300	650	850	750	700	650	700	750	750	750	800	850	800	650	550	500	450	350
R167	250	200	150	150	100	150	250	550	650	600	550	550	550	600	600	600	650	650	650	550	450	400	350	300
R168+R169	500	350	300	300	200	200	450	950	1200	1050	1050	1050	1100	1200	1200	1250	1350	1450	1350	1150	1000	850	800	600
R170+R171	450	350	300	250	200	200	400	900	1100	1050	950	950	1000	1150	1100	1150	1250	1300	1250	1050	900	750	750	550
R172+R173	500	400	350	250	250	250	450	1000	1300	1150	1100	1050	1100	1200	1200	1200	1300	1350	1350	1100	950	800	800	600
R174+R175	550	450	350	300	250	250	450	1050	1350	1200	1100	1050	1100	1200	1150	1150	1250	1300	1200	1050	900	750	750	550
R176	350	300	250	200	150	200	300	750	900	800	700	650	700	700	650	650	650	650	650	500	450	400	350	300
R177	250	200	200	150	100	150	250	550	700	600	600	550	600	650	650	650	700	700	700	600	500	450	400	300
R178	350	250	200	200	150	150	300	700	850	750	700	650	650	700	650	650	850	650	650	550	450	400	400	300
R179	350	250	200	200	150	150	300	650	850	750	700	700	750	800	800	800	900	950	900	750	650	550	550	400
R180	200	150	150	100	100	100	200	400	500	450	400	400	400	400	400	400	400	400	400	300	300	250	250	200
R181	15	12	9	8	7	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24
R182	50	50	22	19	16	18	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R183	50	23	19	16	13	15	24	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24	22	17
R184	50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R184	50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R184	50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R185	100	100	50	50	50	50	100	200	250	200	200	200	200	250	250	250	250	250	250	200	200	150	150	100
R186	22	19	15	12	11	12	20	50	50	50	50	50	50	50	50	50	50	50	50	50	50	22	22	17
R187	100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	150	150	150	150	150	100	100	100	50
R188+R189	68	63	61	59	58	59	64	200	200	200	200	200	200	200	200	200	250	250	250	200	200	150	150	122
R190+R191	100	70	66	64	36	63	72	150	200	200	200	200	200	200	200	250	250	300	250	250	200	200	200	122
R192+R193	42	35	29	24	22	23	38	100	100	100	100	100	100	100	73	73	70	68	68	66	66	62	62	31
R194+R195	64	60	58	57	55	56	63	200	200	200	200	172	172	171	119	117	116	115	114	112	111	58	58	57
R196+R202	100	100	70	40	33	38	100	150	200	150	150	150	100	150	100	100	100	150	100	100	100	100	100	24
R197	10	7	5	5	4	4	8	18	24	20	17	14	13	12	11	8	7	5	5	4	4	3	3	3
R198	19	15	12	10	8	9	16	50	50	50	50	50	50	50	50	22	21	18	18	15	13	11	11	9
R199	22	18	15	13	10	12	21	50	50	50	50	50	50	50	50	50	50	23	20	18	15	13	12	10
R200	50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
R300	50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m) X1	Coordinate (m) Y1	Coordinate (m) X2	Coordinate (m) Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R003	833125.78	822324.11	833177.37	822330.25	20	0	1
R003	833177.37	822330.25	833231.06	822345.76	20	0	1
R003	833231.06	822345.76	833434.80	822408.45	20	0	1
R003	833434.80	822408.45	833960.46	822643.00	20	0	1
R003	833960.46	822643.00	833995.46	822646.78	20	0	1
R004	833116.28	822308.10	833185.93	822315.62	19	0	1
R004	833185.93	822315.62	833425.15	822386.41	19	0	1
R004	833425.15	822386.41	833518.28	822421.55	19	0	1
R005	833518.28	822421.55	833673.75	822496.58	19	0	1
R005	833673.75	822496.58	833933.47	822614.65	19	0	1
R005	833933.47	822614.65	833973.71	822626.09	19	0	1
R005	833973.71	822626.09	834046.15	822626.54	19	0	1
R006+R007	833527.80	822410.61	833627.55	822455.21	14	0	1
R006+R007	833627.55	822455.21	833732.07	822494.47	14	0	1
R006+R007	833732.07	822494.47	833782.11	822441.65	14	0	1
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1
R008+R009	833661.17	822368.31	833693.59	822397.15	13	0	1
R008+R009	833693.59	822397.15	833841.86	822450.34	13	0	1
R010+R011	833978.15	822463.30	833896.64	822432.88	12	0	1
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1
R012+R013	833387.26	822567.47	833423.69	822656.02	10	0	1
R012+R013	833423.69	822656.02	833416.08	822482.07	10	0	1
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1
R012+R013	833544.64	822390.48	833587.56	822354.80	10	0	1
R014+R015	833488.77	822318.11	833587.56	822354.80	14	0	1
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1
R019	833082.67	822192.93	833209.07	822239.78	16	0	1
R021	833209.07	822239.78	833355.00	822293.72	16	0	1
R022	833355.00	822293.72	833480.61	822340.13	16	0	1
R022	833480.61	822340.13	833489.65	822315.75	16	0	1
R023	833073.42	822119.68	833100.53	822129.44	14	0	1
R024	833100.53	822129.44	833232.06	822178.07	14	0	1
R025	833232.06	822178.07	833377.80	822232.03	14	0	1
R026	833377.80	822232.03	833503.34	822278.92	14	0	1
R027	833503.51	822278.46	833673.82	822341.72	13	0	1
R028	833673.82	822341.72	833768.11	822376.93	13	0	1
R029	833768.03	822376.15	833848.76	822405.79	13	0	1
R030	833848.76	822405.79	833917.83	822431.11	14	0	1
R031	833917.83	822431.11	833990.58	822454.38	14	0	1
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1
R033	833121.79	822072.07	833253.39	822120.94	18	0	1
R034	833253.39	822120.94	833398.77	822175.17	18	0	1
R035	833398.77	822175.17	833524.35	822221.21	18	0	1
R036	833524.35	822221.21	833653.40	822269.00	18	0	1
R037	833653.40	822269.00	833694.88	822284.07	19	0	1
R038	833694.68	822284.56	833763.79	822309.61	18	0	1
R039	833761.99	822311.12	833798.46	822320.76	14	0	1
R040	833789.11	822318.98	833813.16	822335.17	18	0	1
R041	833833.16	822335.17	833902.96	822360.57	18	0	1
R042	833902.96	822360.57	833960.46	822320.45	18	0	1
R043	833960.46	822320.46	834034.90	822250.52	18	0	1
R044	834034.90	822250.62	834140.62	822162.67	18	0	1
R045	834140.62	822182.67	834231.76	822086.45	19	0	1
R046	834231.72	822086.65	834323.21	822011.22	18	0	1
R047	834322.77	822010.68	834384.01	821959.68	18	0	1
R048	833097.20	821955.43	833156.56	821977.96	17	0	1
R049	833156.56	821977.96	833434.10	822080.78	16	0	1
R050	833101.47	821942.33	833274.46	822007.07	21	0	1
R051	833274.56	822006.80	833438.70	822067.62	16	0	1
R052	833434.10	822080.21	833688.33	822174.73	16	0	1
R053	833786.86	822123.44	833736.66	822163.25	18	0	1
R053	833736.66	822163.25	833688.33	822174.73	18	0	1
R054	833438.83	822067.29	833586.71	822122.03	16	0	1
R054	833586.71	822122.03	833649.55	822144.40	16	0	1
R054	833649.55	822144.40	833683.68	822152.80	16	0	1
R054	833683.68	822152.80	833713.85	822149.82	16	0	1
R054	833713.85	822149.82	833757.83	822128.55	16	0	1
R054	833757.83	822128.55	833778.49	822113.30	16	0	1
R055	833786.53	822123.04	833872.14	822051.39	19	0	1
R056	833778.49	822113.30	833867.20	822039.12	16	0	1
R057	833873.20	822052.66	834159.21	821814.78	16	0	1
R058	834159.21	821814.78	834250.10	821738.42	16	0	1
R059	833867.29	822039.23	834058.34	821880.22	17	0	1
R060	834058.34	821880.22	834241.81	821727.45	16	0	1
R061	833116.37	821880.20	833139.76	821889.31	16	0	1
R062	833139.76	821889.31	833296.78	821947.78	16	0	1
R063	833296.86	821947.56	833460.51	822007.97	16	0	1
R064	833460.49	822008.03	833543.73	822038.72	15	0	1
R064	833543.73	822038.72	833563.70	821983.31	15	0	1
R064	833480.98	821962.82	833563.70	821983.31	15	0	1
R065	833160.17	821834.07	833315.56	821891.67	16	0	1
R066	833316.56	821891.68	833481.00	821952.76	16	0	1
R067	833164.01	821776.07	833178.47	821783.88	19	0	1
R068	833178.74	821783.15	833253.68	821813.88	18	0	1
R069	833166.50	821757.87	833260.16	821795.91	29	0	1
R070	833249.90	821820.73	833329.69	821853.67	13	0	1

NOx x 100 (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
19.5494	19.4771	19.2052	19.3962	19.5347	19.3311	19.8130	29.2122	31.5659	28.1980	25.8342	24.8197	22.8104	23.2580	22.9113	24.2346	26.5566	25.8228	26.3571	21.9808	19.5433	21.1212	21.4902	20.4022
19.5494	19.4771	19.2052	19.3962	19.5347	19.3311	19.8130	29.2122	31.5659	28.1980	25.8342	24.8197	22.8104	23.2580	22.9113	24.2346	26.5566	25.8228	26.3571	21.9808	19.5433	21.1212	21.4902	20.4022
19.5494	19.4771	19.2052	19.3962	19.5347	19.3311	19.8130	29.2122	31.5659	28.1980	25.8342	24.8197	22.8104	23.2580	22.9113	24.2346	26.5566	25.8228	26.3571	21.9808	19.5433	21.1212	21.4902	20.4022
19.5494	19.4771	19.2052	19.3962	19.5347	19.3311	19.8130	29.2122	31.5659	28.1980	25.8342	24.8197	22.8104	23.2580	22.9113	24.2346	26.5566	25.8228	26.3571	21.9808	19.5433	21.1212	21.4902	20.4022
19.5494	19.4771	19.2052	19.3962	19.5347	19.3311	19.8130	29.2122	31.5659	28.1980	25.8342	24.8197	22.8104	23.2580	22.9113	24.2346	26.5566	25.8228	26.3571	21.9808	19.5433	21.1212	21.4902	20.4022
19.4103	19.3203	19.2188	19.4475	19.4644	19.2535	19.6109	26.3457	29.3148	25.9047	24.1629	23.5913	22.0365	22.7058	22.5276	24.1654	26.9612	27.4013	27.9686	23.0232	18.6610	20.1856	20.9439	19.4901
19.4103	19.3203	19.2188	19.4475	19.4644	19.2535	19.6109	26.3457	29.3148	25.9047	24.1629	23.5913	22.0365	22.7058	22.5276	24.1654	26.9612	27.4013	27.9686	23.0232	18.6610	20.1856	20.9439	19.4901
19.4103	19.3203	19.2188	19.4475	19.4644	19.2535	19.6109	26.3457	29.3148	25.9047	24.1629	23.5913	22.0365	22.7058	22.5276	24.1654	26.9612	27.4013	27.9686	23.0232	18.6610	20.1856	20.9439	19.4901
19.3732	19.2675	19.2283	19.4611	19.5036	19.2735	19.6271	26.3429	29.3142	25.9014	24.1621	23.5855	22.0289	22.6957	22.5194	24.1552	26.9528	27.3767	27.9581	23.0128	18.6463	20.1708	20.9284	19.4937
19.3732	19.2675	19.2283	19.4611	19.5036	19.2735	19.6271	26.3429	29.3142	25.9014	24.1621	23.5855	22.0289	22.6957	22.5194	24.1552	26.9528	27.3767	27.9581	23.0128	18.6463	20.1708	20.9284	19.4937
19.3732	19.2675	19.2283	19.4611	19.5036	19.2735	19.6271	26.3429	29.3142	25.9014	24.1621	23.5855	22.0289	22.6957	22.5194	24.1552	26.9528	27.3767	27.9581	23.0128	18.6463	20.1708	20.9284	19.4937
19.3732	19.2675	19.2283	19.4611	19.5036	19.2735	19.6271	26.3429	29.3142	25.9014	24.1621	23.5855	22.0289	22.6957	22.5194	24.1552	26.9528	27.3767	27.9581	23.0128	18.6463	20.1708	20.9284	19.4937
33.9045	31.9241	39.4086	20.5578	20.6808	36.9402	33.3409	35.8747	27.1722	37.1358	36.2884	36.0657	41.2314	32.0238	30.5259	30.7412	21.0885	19.9648	16.0990	20.4284	23.8594	36.8327	36.8607	24.8741
33.9045	31.9241	39.4086	20.5578	20.6808	36.9402	33.3409	35.8747	27.1722	37.1358	36.2884	36.0657	41.2314	32.0238	30.5259	30.7412	21.0885	19.9648	16.0990	20.4284	23.8594	36.8327	36.8607	24.8741
33.9045	31.9241	39.4086	20.5578	20.6808	36.9402	33.3409	35.8747	27.1722	37.1358	36.2884	36.0657	41.2314	32.0238	30.5259	30.7412	21.0885	19.9648	16.0990	20.4284	23.8594	36.8327	36.8607	24.8741
33.9045	31.9241	39.4086	20.5578	20.6808	36.9402	33.3409	35.8747	27.1722	37.1358	36.2884	36.0657	41.2314	32.0238	30.5259	30.7412	21.0885	19.9648	16.0990	20.4284	23.8594	36.8327	36.8607	24.8741
26.8163	29.9420	28.3149	20.5578	20.6808	26.9276	26.7445	31.6731	21.7255	30.9137	29.6552	30.7539	32.4058	24.4742	25.9647	28.0925	21.5916	19.9722	16.5836	19.8330	24.0367	38.1623	38.6791	23.3591
26.8163	29.9420	28.3149	20.5578	20.6808	26.9276	26.7445	31.6731	21.7255	30.9137	29.6552	30.7539	32.4058	24.4742	25.9647	28.0925	21.5916	19.9722	16.5836	19.8330	24.0367	38.1623	38.6791	23.3591
35.2146	34.4827	32.0860	30.6634	36.1030	39.5935	35.6809	40.2425	30.7164	40.0192	38.9096	41.1550	43.0446	36.2797	37.0436	40.3528	35.5992	32.8621	30.7360	33.0903	37.3396	48.7535	48.3601	37.8957
35.2146	34.4827	32.0860	30.6634	36.1030	39.5935	35.6809	40.2425	30.7164	40.0192	38.9096	41.1550	43.0446	36.2797	37.0436	40.3528	35.5992	32.8621	30.7360	33.0903	37.3396	48.7535	48.3601	37.8957
35.2146	34.4827	32.0860	30.6634	36.1030	39.5935	35.6809	40.2425	30.7164	40.0192	38.9096	41.1550	43.0446	36.2797	37.0436	40.3528	35.5992	32.8621	30.7360	33.0903	37.3396	48.7535	48.3601	37.8957
73.5522	81.7155	27.0902	30.0411	30.1640	29.6258	73.7733	91.1754	68.0728	80.0829	74.4184	81.4143	82.6046	87.4262	78.4954	81.9052	78.3466	82.1180	84.4488	81.1125	102.7666	116.4097	104.3759	86.1635
73.5522	81.7155	27.0902	30.0411	30.1640	29.6258	73.7733	91.1754	68.0728	80.0829	74.4184	81.4143	82.6046	87.4262	78.4954	81.9052	78.3466	82.1180	84.4488	81.1125	102.7666	116.4097	104.3759	86.1635
73.5522	81.7155	27.0902	30.0411	30.1640	29.6258	73.7733	91.1754	68.0728	80.0829	74.4184	81.4143	82.6046	87.4262	78.4954	81.9052	78.3466	82.1180	84.4488	81.1125	102.7666	116.4097	104.3759	86.1635
73.5522	81.7155	27.0902	30.0411	30.1640	29.6258	73.7733	91.1754	68.0728	80.0829	74.4184	81.4143	82.6046	87.4262	78.4954	81.9052	78.3466	82.1180	84.4488	81.1125	102.7666	116.4097	104.3759	86.1635
73.5522	81.7155	27.0902	30.0411	30.1640	29.6258	73.7733	91.1754	68.0728	80.0829	74.4184	81.4143	82.6046	87.4262	78.4954	81.9052	78.3466	82.1180	84.4488	81.1125	102.7666	116.4097	104.3759	86.1635
46.1206	46.6844	48.6569	55.5418	53.7497	52.6549	47.6396	64.8075	40.1863	51.6040	52.4614	55.8943	57.7004	53.2020	51.9129	56.6202	52.4593	50.5332	47.6379	50.1390	57.5428	73.7092	73.5067	54.2156
46.3548	47.3405	48.6569	43.9506	42.9396	52.6549	45.8180	62.5803	38.6106	50.3438	49.6952	51.8361	53.5264	47.3265	47.7428	50.8169	43.0996	42.0708	39.1630	40.6846	49.4816	63.7171	61.1175	46.9230
46.3548	47.3405	48.6569	43.9506	42.9396	52.6549	45.8180	62.5803	38.6106	50.3438	49.6952	51.8361	53.5264	47.3265	47.7428	50.8169	43.0996	42.0708	39.1630	40.6846	49.4816	63.7171	61.1175	46.9230
75.3328	75.0022	71.0747	76.5385	81.3832	72.7908	72.8099	84.2258	67.7910	78.5946	74.4968	79.3433	78.4272	77.3607	70.9450	77.1473	76.1846	68.0813	65.3730	67.4942	80.2735	99.2047	85.6235	78.8434
74.7111	74.6824	70.4207	77.5037	71.7796	78.7795	74.5060	84.8217	68.3911	79.1044	74.3307	79.3480	78.4135	77.0590	71.5159	77.9185	73.6938	69.0680	67.1874	67.1931	80.1425	95.9959	88.3841	74.0504
83.4457	79.4268	82.5373	84.6443	81.6938	83.5395	83.9986	91.2595	76.4690	86.8886	83.2086	87.1579	86.6152	84.9603	79.0309	84.1199	83.0935	75.9108	73.2232	73.9387	84.3666	99.3899	92.5212	81.8140
83.4457	79.4268	82.5373	84.6443	81.6938	83.5395	83.9986	91.2595	76.4690	86.8886	83.2086	87.1579	86.6152	84.9603	79.0309	84.1199	83.0935	75.9108	73.2232	73.9387	84.3666	99.3899	92.5212	81.8140
80.1886	74.6269	81.6429	80.2971	81.1757	76.4023	78.5313	90.5559	77.2466	86.9681	82.9207	86.5740	87.4580	86.1941	79.7476	84.7357	82.0381	78.1148	77.0555	75.6183	85.2877	99.8833	91.5230	79.6499
81.4500	76.7009	77.7118	76.1867	81.1757	79.3668	79.5390	89.1575	76.5849	87.1410	82.8832	86.4127	84.5133	85.6543	79.4216	84.6308	82.7708	78.2093	75.0712	73.5757	85.4758	98.7318	91.9033	79.8105
80.3075	80.0579	76.5809	81.5751	85.7069	78.0493	78.1135	88.2823	75.5267	88.2891	84.3531	88.0592	86.5369	84.8400	80.9302	86.3209	81.2918	79.6805	76.4050	74.5239	84.2631	101.0790	90.9509	79.3749
84.3382	84.5675	85.4368	87.2904	84.4475	81.5623	85.0380	94.0582	87.2525	93.9079	88.4126	91.6363	88.6754	88.3424	81.0161	86.5133	86.9728	80.8718	75.8060	74.8068	85.0265	96.3518	88.9753	79.1412
83.1077	81.7508	82.0469	82.1429	85.2170	84.7011	83.1736	93.4866	85.8423	95.4484	91.7208	94.7512	93.6937	91.7908	88.6981	90.5237	88.3182	83.8033	80.1432	78.5180	86.9563	102.7287	92.5301	81.8013
73.4780	71.9590	73.8457	81.1883	76.7588	71.2888	74.1851	82.6079	69.5741	81.0363	76.9347	80.9774	80.5860	78.4162	75.3978	81.1041	76.5887	72.8717	71.9168	70.1810	80.8649	97.9473	90.2309	74.2568
70.5242	66.6285	73.7104	55.5418	68.4908	69.6586	69.3093	85.4797	72.1522	79.6173	72.5849	77.3653	74.9799	77.3949	70.1591	76.4172	78.4275	70.5147	66.6267	68.2059	80.1939	91.1722	84.0577	78.6350
69.6584	69.3252	70.8586	71.4835	67.4035	69.2035	69.7742	85.3436	70.7846	80.8232	73.9301	79.5134	81.8086	78.7401	73.3880	79.7150	76.2147	73.1956	70.3405	68.3740	79.2045	95.0644	85.1684	73.9698
66.5289	73.9213	60.1454	68.2922	68.4908	55.2137	71.3096	84.8930	73.4280	79.9684	74.1815	78.0123	75.1045	77.4189	69.9023	75.8379	76.4978	70.3938	67.0728	67.5112	79.1038	92.0679	84.0522	75.2050
74.5167	73.4801	64.8029	64.8904	64.2762	63.3359	65.1192	76.8050	63.6039	73.1995	69.2569	73.9646	73.1506	72.2820	67.0966	72.2236	69.7054	66.8580	64.7578	63.5423	74.3446	86.3961	79.4408	69.1024
66.2572	66.4057	66.3326	66.9647	67.4649	66.1411	66.5230	77.3274	62.2774	72.1860	68.2085	72.3698	71.7585	70.5595	67.1629	72.4656	69.7444	66.7873	64.5110	63.4114	72.5381	87.0422	80.1326	67.6773
63.0642	63.4978	62.7955	64.5938	64.2551	64.0410	63.8967	75.5645	62.6391	70.0046	66.3810	71.0937	70.4856	69.2122	65.9167	71.5255	68.9444	66.1716	63.6657	62.4012	71.3896	85.5749	79.0830	66.9410
70.2643	70.0212	69.5244	69.3056	69.6483	69.1001	69.6051	83.0379	70.5344	79.5657	75.5791	78.1028	77.8234	76.3257	70.6889	78.1712	74.9385	68.6722	66.1458	65.8439	74.8003	89.6416	82.4407	70.9609
67.4878	67.0957	66.9789	67.8198	67.4990	67.6364	67.3522	79.7972	68.3577	78.6327	72.8334	77.2089	76.3976	75.3654	70.1838	75.5249	72.7781	69.8775	67.6895	66.4637	75.4281	87.7905	81.0056	70.8662
82.3226	82.1616	81.9705	82.8290	82.5583	82.0096	82.4262	96.1501	84.0594	93.8340	85.1091	88.9965	85.8234	85.6005	76.9064	81.4392	77.8356	72.9647	69.6194	68.1570	77.7810	91.8210	84.1558	72.8439
83.2997	83.1624	83.2040	83.3700	83.7655	83.0770	83.2300	97.4354	84.8813	95.0275	85.1111	88.4863	84.4464	83.2922	74.0597	78.0867	75.6038	67.9891	63.3871	62.6431	71.3504	85.2080	78.6306	67.3681
89.5797	86.5960	86.8454	88.3624	88.6176	87.6623	87.4540	102.6678	97.1827	100.2397	92.4531	95.8234	91.2767	91.1141	79.6874	86.9212	83.5962	72.2305	65.6973	67.6640	76.4481	89.7414	79.4290	74.1813
88.5719	89.1959	88.9262	90.1738	89.4304	89.4885	89.4398	102.3125	93.8875	99.5581	91.5758	92.7996	88.6088	88.2855	77.0178	84.3856	81.3776	72.1717	65.5202	65.8483	75.4647	87.3431	78.8550	73.7441
89.5875	87.2752	88.0572	88.8000	88.1500	88.7093	88.0416	105.0913	96.9231	102.7087	92.2794	95.6723	91.2886	90.9326	79.6249	86.7971	83.4680	72.3042	65.8362	66.1959	76.4869	90.1348	79.6100	74.3376
89.7955	88.2363	87.8996	88.5887	88.4337	88.8306	88.4875	102.6431	94.3746	100.1681	89.8183	93.1641	88.7339	88.6925	77.2201	86.5198	83.0843	71.5337	64.6664	65.2119	75.6192	87.3613	78.7727	73.4622
96.9933	97.5150	97.5677	97.7416	98.6860	97.8801	97.7967	108.1918	101.6135	105.8781	97.7790	101.7165	96.7396	98.2090	85.0579	93.6983	91.3825	80.1338	73.0768	73.5005	82.8037	95.9864	85.5038	82.4904
88.7865	88.7478	88.7812	90.1266	89.3877	89.0199	89.3390	102.1293	93.8947	99.4590	89.2170	92.8282	88.3794	88.1968	76.9686	84.1506	82.8832	71.5195	64.6692	64.9654	75.0528	86.8578	78.4070	72.9872
89.5662	80.6696	81.2916	83.8314	84.9420	83.5535	89.3701	100.0030	91.9118	97.3883	90.0009	93.4158	89.1074	89.2149	78.1055	85.1476	82.1959	71.2601	64.8496	66.7697	75.2093	88.1390	79.9003	74.6007
90.2689	87.9494	88.0318	89.3187	88.6196	88.7333	90.7061	102.9589	95.1681	100.6545	90.7318	93.9920	89.6132	89.3715	78.3556	85.0881	83.7838	72.5537	65.9515	66.3024	76.4800	87.6874	79.3876	74.4632
90.1996	87.4997	87.9984	88.9786	89.1926	88.3564	90.7391	103.0448	92.9466	98.2785	90.7332	94.1817	89.6863	89.4844	78.4463	85.2840	81.9949	72.6280	65.8691	66.2888	76.5715	87.8153	79.5369	74.3827
66.6564	65.6518	65.5120	65.9062	66.0677	65.7804	66.7536	79.6861	75.2317	79.9475	71.4731	74.7406	72.1599	74.0872	65.5353	72.3320	70.9990	65.1662	62.2878	59.3883	68.5845	80.4817	71.9819	65.4268
66.7253	66.6587	66.5915	66.9077	67.0671	66.5934	66.3853	78.4791	72.2070	76.8742	68.8519	73.4602	70.9549	71.6482	63.3375	70.0138	68.8270	63.1604	59.5445	57.9235	68.7898	80.5705	72.1385	65.8376
70.6840	70.7937	70.6902	70.8730	70.9937	70.7911	70.8891	83.7149	79.1945	84.8430	74.9481	78.7906	75.1450	76.0741	67.9406	73.6497	71.0641	65.4786	60.7627	58.2053	65.3405	75.9857	67.4546	61.3715
73.6842	73.8636	73.8331	74.0902	74.1401	73.9076	73.9740	85.7404	79.2693	84.8693	75.4799	79.7588	76.1047	78.2658	68.1548	75.2670	75.2788	67.0564	61.9245	59.9926	68.5738	79.6654	70.8419	66.9679
73.6897	71.7944	71.5059	72.3319	72.3614	72.0198	73.4342	82.7780	77.0276	78.4336	71.4458	75.6873	72.4709	74.4028	65.7568	73.5080	72.1719	64.2621	60.3219	59.3225	70.0345	81.5245	72.9162	68.4407
76.0696	74.6637	74.6130	75.0408	75.2855	74.9317	75.9684	85.8335	80.8219	84.0820	74.9507	79.5094	75.7927	78.8598	69.4467	77.0474	76.1488	69.2701	65.3132	63.7257	73.1084	84.4929	74.9618	70.4244
76.0696	74.6637	74.6130	75.0408	75.2855	74.9317	75.9684	85.8335	80.8219	84.0820	74.9507	79.5094	75.7927	78.8598	69.4467	77.0474	76.1488	69.2701	65.3132	63.7257	73.1084	84.4929	74.9618	70.4244
78.3615	78.4308	78.0480	78.7105	78.9837	78.3977	78.5569	87.9865	82.5295	86.8492	79.3175	83.1545	80.9400	83.9957	74.0917	82.7737	84.5458	75.5355	71.0326	69.5974	79.6821	90.6648	79.4489	77.2430
78.3615	78.4308	78.0480	78.7105	78.9837	78.3977	78.5569	87.9865	82.5295	86.8492	79.3175	83.1545	80.9400	83.9957	74.0917	82.7737	84.5458	75.5355	71.0326	69.5974	79.6821	90.6648	79.4489	77.2430
78.3615	78.4308	78.0480	78.7105	78.9837	78.3977	78.5569	87.9865	82.5295	86.8492	79.3175	83.1545	80.9400	83.9957	74.0917	82.7737	84.5458	75.5355	71.0326	69.5974	79.6821	90.6648	79.4489	77.2430
78.3615	78.4308	78.0480	78.7105	78.9837	78.3977	78.5569	87.9865	82.5295	86.8492	79.3175	83.1545	80.9400	83.9957	74.0917	82.7737	84.5458	75.5355	71.0326	69.5974	79.6821	90.6648	79.4489	77.2430
78.3615	78.4308	78.0480	78.7105	78.9837	78.3977	78.5569	87.9865	82.5295	86.8492	79.3175	83.1545	80.9400	83.9957	74.0917	82.7737	84.5458	75.5355	71.0326	69.5974	79.6821	90.6648	79.4489	77.2430
78.3615	78.4308	78.0480	78.7105	78.9837	78.3977	78.5569	87.9865	82.5295	86.8492	79.3175	83.1545	80.9400	83.9957	74.0917	82.7737	84.5458	75.5355	71.0326	69.5974	79.6821	90.6648	79.4489	77.2430
74.0649	74.1312	73.9662	74.2445	74.5676	74.2456	74.2078	83.5520	76.0328	80.7328	71.2759	76.1805	72.5737	74.7850	65.2714	72.5508	70.9271	64.0491	60.5820	59.0383	69.6196	81.0169	72.5347	66.8092
84.2389	84.0384	84.1398	84.4941	84.6833	84.6056	84.4669	94.4303	88.5142	88.4624	82.1222	87.1726	82.8923	87.9935	75.3171	85.9624	87.2932	74.4371	68.1603	70.1222	82.0535	92.1790	80.0215	81.0725
61.0022	58.4670	58.6195	59.6998	59.5517	59.2738	61.0618	70.4679	65.1698	65.0328	59.8675	62.7930	60.9036	59.9967	53.6489	62.3740	61.3859	52.7218	45.0814	48.0144	54.8176	64.5651	58.3830	56.8144
79.2858	76.8661	76.7515	77.7379	77.7733	77.7789	79.5042	89.3746	83.0692	84.7834	76.5204	80.6722	76.3079	79.2341	68.0057	75.6163	74.5680	64.7759	60.3184	61.1161	72.0680	83.2309	73.8084	69.8249
67.4327	67.8338	67.3472	67.5962	68.3858	67.5427	67.7154	77.2768	72.6190	70.9005	66.2885	69.3325	66.6418	66.7950	58.7475	68.9009	68.6299	56.8265	48.4727	51.9814	59.4374	68.6008	61.2878	61.7639
81.4293	81.1089	82.2204	82.5121	82.4637	82.4061	82.2353	92.2726	85.2206	85.9681	79.8284	85.4250	81.5568	86.7099	73.8784	85.2668	86.9173	74.3018	68.0267	69.4185	81.7997	92.6509	79.4467	80.9517
103.8301	101.3730	102.6034	100.1331	94.7418	103.5435	102.6636	104.1567	100.9298	105.4147	103.6333	105.3693	104.9201	104.6087	102.2564	104.2117	103.4120	100.6916	100.7686	99.8966	103.3811	107.2129	106.1065	101.1955
73.2248	71.8609	73.2184	71.9467	76.1021	74.1722	72.8656	83.1254	71.6483	80.5364	77.3102	81.8264	81.5453	79.9047	74.3298	80.2786	77.2863	72.8964	69.8686	69.2678	78.7752	93.7508	86.0193	76.7368
75.0483	68.4405	76.5465	75.3473	75.6954	70.6063	73.0922	85.3735	68.9773	79.1052	75.1048	79.3701	78.8018	77.7683	72.2560	77.4383	75.5357	69.7228	68.7556	67.6831	79.0107	94.7250	87.9152	76.2413
72.6851	65.3627	71.9463	74.2019	70.1500	69.1997	70.7471	83.9596	67.0823	77.5645	73.2025	78.8648	77.7463	76.3311	70.5116	76.8532	73.9132	67.8480	65.8272	67.1459	78.8448	94.7838	87.2816	77.1631
72.6851	65.3627	71.9463	74.2019	70.1500	69.1997	70.7471	83.9596	67.0823	77.5645	73.2025	78.8648	77.7463	76.3311	70.5116	76.8532	73.9132	67.8480	65.8272	67.1459	78.8448	94.7838	87.2816	77.1631
72.6851	65.3627	71.9463	74.2019	70.1500	69.1997	70.7471	83.9596	67.0823	77.5645	73.2025	78.8648	77.7463	76.3311	70.5116	76.8532	73.9132	67.8480	65.8272	67.1459	78.8448	94.7838	87.2816	77.1631
78.1714	74.5960	76.1951	76.9166	74.3431	72.4993	78.2043	86.1462	72.4195	82.3755	78.5235	83.2043	82.5162	80.2138	74.9386	79.3480	77.8239	71.9750	67.6402	68.4519	78.5317	93.3509	87.0086	76.8595
75.9757	75.1998	74.6064	77.7251	75.5978	71.7452	76.0103	86.3811	70.8975	81.0746	77.0981	81.6415	80.4271	78.2527	74.8236	80.1511	74.9798	71.3115	67.9678	68.4259	77.9107	93.7120	86.1439	74.7602
47.3651	47.2373	46.9527	47.2120	47.2854	47.2270	47.6099	65.6662	53.9132	63.9979	59.0536	63.3376	61.2100	62.2924	55.7946	58.9550	56.3127	53.6061	53.5443	52.2000	53.5032	62.0581	55.7206	45.7373
46.9968	47.0383	46.7929	47.1156	47.1617	47.0963	47.2910	62.7800	53.7060	63.8522	58.8596	62.2805	61.0767	62.1538	55.6514	58.8226	56.2114	53.5115	53.4606	49.2568	52.2080	62.0258	55.6957	45.6726
39.6835	39.7856	39.6015	39.7690	39.9049	39.6980	39.9177	48.3530	40.4896	48.5559	42.6715	45.6054	45.5863	45.8813	43.7718	46.9245	45.4183	49.2269	50.4713	42.3961	48.4426	59.6078	53.9152	42.4321
63.4661	63.3039	63.2292	63.4158	63.7350	63.4064	63.5220	73.7586	62.5451	72.9049	65.6361	69.7415	67.6323	68.3812	62.1346	65.1193	63.4957	61.4932	60.2858	57.0269	65.8966	78.2421	71.5227	60.9801

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_X x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	62.4276	62.6529	62.6637	63.0234	62.9436	62.8665	62.8080	71.0848	59.4957	69.5973	63.7584	66.7519	64.6759	65.4096	60.2010	63.3266	60.6229	58.4980	58.1843	55.1747	64.9734	77.2123	70.7849	60.1872
R072	833397.24	821875.22	833501.75	821897.07	20	0	1	55.8734	55.7496	55.5948	56.1777	56.7894	55.5674	55.6780	64.5123	51.3515	59.0398	54.6454	58.1609	56.6806	55.7276	50.5821	54.9898	52.3492	48.3227	45.8945	46.1458	55.2759	67.3583	61.9402	52.4432
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	58.8650	58.5838	58.8569	59.3597	59.4599	58.6043	58.9079	66.5862	53.3044	63.0256	58.6266	62.1539	60.9464	60.5102	56.3254	58.9772	56.2929	54.1246	53.8707	53.0527	61.6484	72.7723	67.7820	58.5692
R074	833281.64	821790.34	833451.80	821860.54	20	0	1	59.2277	59.0628	59.2880	59.1009	59.6063	59.1256	59.3160	66.8431	53.5147	62.4613	58.7041	62.0247	60.4777	60.0021	55.1885	57.8642	54.8531	53.1447	51.9894	50.9113	60.7906	73.0296	67.5541	56.5060
R075	833449.48	821861.09	833506.97	821883.08	16	0	1	55.2221	55.3412	54.8749	55.7312	55.4814	55.6593	55.4935	63.2899	49.5111	58.4386	54.8302	58.2069	57.0263	55.9027	51.6483	54.7158	51.5705	49.3083	48.6246	47.9202	57.2563	69.6847	64.6999	53.0821
R076	833501.46	821897.80	833548.66	821899.77	16	0	1	57.8143	58.6203	57.8011	58.8234	58.6768	57.9811	58.1606	67.0905	54.0359	61.3989	57.1946	61.2365	59.6733	60.2546	54.4664	58.8509	56.5056	53.0948	52.4599	51.6002	62.7250	75.4765	68.8332	57.7046
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	57.8143	58.6203	57.8011	58.8234	58.6768	57.9811	58.1606	67.0905	54.0359	61.3989	57.1946	61.2365	59.6733	60.2546	54.4664	58.8509	56.5056	53.0948	52.4599	51.6002	62.7250	75.4765	68.8332	57.7046
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	57.8143	58.6203	57.8011	58.8234	58.6768	57.9811	58.1606	67.0905	54.0359	61.3989	57.1946	61.2365	59.6733	60.2546	54.4664	58.8509	56.5056	53.0948	52.4599	51.6002	62.7250	75.4765	68.8332	57.7046
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	55.8180	56.0421	55.9134	56.1991	56.5753	55.9443	56.1246	64.1364	51.0285	60.1227	55.7214	59.4522	58.2482	58.1451	53.5883	56.7628	54.0552	52.9165	52.1802	51.0012	61.3993	74.0759	68.0753	56.5391
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	55.8180	56.0421	55.9134	56.1991	56.5753	55.9443	56.1246	64.1364	51.0285	60.1227	55.7214	59.4522	58.2482	58.1451	53.5883	56.7628	54.0552	52.9165	52.1802	51.0012	61.3993	74.0759	68.0753	56.5391
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	55.8180	56.0421	55.9134	56.1991	56.5753	55.9443	56.1246	64.1364	51.0285	60.1227	55.7214	59.4522	58.2482	58.1451	53.5883	56.7628	54.0552	52.9165	52.1802	51.0012	61.3993	74.0759	68.0753	56.5391
R078	833682.38	821822.35	833875.32	821680.75	16	0	1	62.7070	62.3215	62.4617	62.9601	62.8975	62.9987	62.9556	71.6820	59.8071	66.4112	61.8566	65.7647	63.6065	64.1884	57.9390	62.0537	59.8250	55.7456	54.9752	54.1892	64.3752	76.6907	70.1303	60.4008
R079	833673.29	821811.43	833867.51	821651.46	16	0	1	53.5156	54.0883	53.5967	54.1686	54.1833	53.5453	53.8778	61.4334	47.1060	56.7783	53.8630	57.7165	57.0405	56.8432	53.0418	55.6551	52.9422	52.0744	53.1947	51.5636	62.2211	74.9615	69.1752	56.5298
R080	833875.67	821661.18	833989.54	821587.94	16	0	1	62.1644	62.3870	62.3180	62.8133	62.7204	61.8312	62.3008	70.7153	55.7655	65.7532	60.9383	65.1991	62.9806	64.0517	57.3867	60.7437	57.9629	54.8866	54.8062	53.3060	64.7583	77.7263	70.7289	59.4424
R081	833867.01	821650.88	833983.08	821582.98	20	0	1	55.8743	56.3427	55.9937	56.3898	56.4150	55.8403	56.3547	63.3810	49.9961	59.2481	56.4914	60.1169	59.2244	58.9772	55.2964	57.7332	54.9837	53.9163	55.1101	53.4507	63.6322	75.8612	70.5079	58.4699
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	80.3672	80.9811	80.0700	80.5745	80.8886	79.9367	80.6080	90.8124	78.3167	91.3096	84.1667	88.4357	86.3647	86.6927	80.2771	82.7297	79.3684	76.1688	75.8341	74.6722	84.2571	97.4965	90.5503	77.6369
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	80.3672	80.9811	80.0700	80.5745	80.8886	79.9367	80.6080	90.8124	78.3167	91.3096	84.1667	88.4357	86.3647	86.6927	80.2771	82.7297	79.3684	76.1688	75.8341	74.6722	84.2571	97.4965	90.5503	77.6369
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	80.3672	80.9811	80.0700	80.5745	80.8886	79.9367	80.6080	90.8124	78.3167	91.3096	84.1667	88.4357	86.3647	86.6927	80.2771	82.7297	79.3684	76.1688	75.8341	74.6722	84.2571	97.4965	90.5503	77.6369
R083	833436.83	821855.11	833496.18	821813.12	14	0	1	44.2236	44.8821	44.5636	45.2909	45.8903	45.1399	44.6660	47.3968	42.9863	49.4142	47.2988	48.4990	49.7646	45.8947	46.0901	47.3956	44.5519	42.8718	41.6897	42.8660	46.5677	55.2779	54.2369	45.9837
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	44.2236	44.8821	44.5636	45.2909	45.8903	45.1399	44.6660	47.3968	42.9863	49.4142	47.2988	48.4990	49.7646	45.8947	46.0901	47.3956	44.5519	42.8718	41.6897	42.8660	46.5677	55.2779	54.2369	45.9837
R083	833524.36	821772.29	833558.81	821652.62	14	0	1	44.2236	44.8821	44.5636	45.2909	45.8903	45.1399	44.6660	47.3968	42.9863	49.4142	47.2988	48.4990	49.7646	45.8947	46.0901	47.3956	44.5519	42.8718	41.6897	42.8660	46.5677	55.2779	54.2369	45.9837
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	81.2472	81.0245	80.6439	81.5358	81.5084	80.7299	81.1727	91.3202	78.3016	89.6969	85.1196	89.9537	88.2733	89.5940	83.3902	85.2131	82.3186	82.9617	82.9249	80.5748	90.9731	104.3470	97.2909	82.2967
R084	833582.69	821644.65	833607.71	821603.87	13	0	1	81.2472	81.0245	80.6439	81.5358	81.5084	80.7299	81.1727	91.3202	78.3016	89.6969	85.1196	89.9537	88.2733	89.5940	83.3902	85.2131	82.3186	82.9617	82.9249	80.5748	90.9731	104.3470	97.2909	82.2967
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	83.4624	83.9394	83.4739	84.0433	84.0213	83.8062	84.2461	93.0369	82.1408	92.1033	87.9977	92.4306	90.6783	91.6333	85.8505	87.3232	84.4162	82.8821	84.5769	80.3776	91.9069	104.7509	95.8155	84.0236
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	83.4624	83.9394	83.4739	84.0433	84.0213	83.8062	84.2461	93.0369	82.1408	92.1033	87.9977	92.4306	90.6783	91.6333	85.8505	87.3232	84.4162	82.8821	84.5769	80.3776	91.9069	104.7509	95.8155	84.0236
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	83.4624	83.9394	83.4739	84.0433	84.0213	83.8062	84.2461	93.0369	82.1408	92.1033	87.9977	92.4306	90.6783	91.6333	85.8505	87.3232	84.4162	82.8821	84.5769	80.3776	91.9069	104.7509	95.8155	84.0236
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	82.0721	81.7383	82.2042	81.2716	82.2844	81.9577	82.0508	89.2592	75.7873	88.0984	81.4408	85.6345	83.3749	84.0933	77.9821	79.2725	75.7232	74.0234	74.8859	72.7115	83.5842	96.6303	90.8935	77.3820
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	82.0721	81.7383	82.2042	81.2716	82.2844	81.9577	82.0508	89.2592	75.7873	88.0984	81.4408	85.6345	83.3749	84.0933	77.9821	79.2725	75.7232	74.0234	74.8859	72.7115	83.5842	96.6303	90.8935	77.3820
R087	833648.49	821548.42	833696.49	821508.39	13	0	1	99.1577	99.1317	99.1025	98.7688	98.8970	98.2349	98.7580	101.4002	98.8819	103.6822	102.2455	103.7315	102.8723	102.9145	100.7536	100.9566	99.5251	98.4952	99.0243	96.1250	100.1450	103.6257	101.6050	98.2928
R088	833254.24	821811.68	833365.50	821856.64	17	4	4	19.1771	19.0760	18.8967	19.0171	19.0100	18.9725	19.4063	26.7931	29.1467	28.8936	27.7735	27.2461	25.1090	21.6203	23.8889	20.3290	21.7375	21.1841	18.6852	15.4003	17.0242	19.0914	19.5830	16.4112
R088	833365.50	821856.64	833416.50	821865.51	17	7	4	19.1771	19.0760	18.8967	19.0171	19.0100	18.9725	19.4063	26.7931	29.1467	28.8936	27.7735	27.2461	25.1090	21.6203	23.8889	20.3290	21.7375	21.1841	18.6852	15.4003	17.0242	19.0914	19.5830	16.4112
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	19.1771	19.0760	18.8967	19.0171	19.0100	18.9725	19.4063	26.7931	29.1467	28.8936	27.7735	27.2461	25.1090	21.6203	23.8889	20.3290	21.7375	21.1841	18.6852	15.4003	17.0242	19.0914	19.5830	16.4112
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	19.1771	19.0760	18.8967	19.0171	19.0100	18.9725	19.4063	26.7931	29.1467	28.8936	27.7735	27.2461	25.1090	21.6203	23.8889	20.3290	21.7375	21.1841	18.6852	15.4003	17.0242	19.0914	19.5830	16.4112
R088	833533.63	821786.07	833574.80	821687.75	17	9	4	19.1771	19.0760	18.8967	19.0171	19.0100	18.9725	19.4063	26.7931	29.1467	28.8936	27.7735	27.2461	25.1090	21.6203	23.8889	20.3290	21.7375	21.1841	18.6852	15.4003	17.0242	19.0914	19.5830	16.4112
R088	833574.80	821687.75	833600.16	821605.82	17	7	4	19.1771	19.0760	18.8967	19.0171	19.0100	18.9725	19.4063	26.7931	29.1467	28.8936	27.7735	27.2461	25.1090	21.6203	23.8889	20.3290	21.7375	21.1841	18.6852	15.4003	17.0242	19.0914	19.5830	16.4112
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	19.1771	19.0760	18.8967	19.0171	19.0100	18.9725	19.4063	26.7931	29.1467	28.8936	27.7735	27.2461	25.1090	21.6203	23.8889	20.3290	21.7375	21.1841	18.6852	15.4003	17.0242	19.0914	19.5830	16.4112
R089	833256.86	821891.44	833370.08	821846.87	16	4	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R089	833598.99	821594.44	833669.93	821508.87	16	6	4	18.9650	18.8546	18.7114	18.9304	19.0385	18.7909	19.0630	21.8313	22.8230	22.1421	22.2468	22.4596	21.5314	19.0331	21.1528	17.8849	19.5877	20.3702	18.6231	14.6062	16.6683	18.8936	19.0392	16.2407
R090+R091	833259.78	821829.64	833317.84	821634.13	17	0	1	60.5918	60.5517	59.9578	60.5860	61.2954	60.0485	60.6975	74.5792	59.2408	72.1134	65.9315	69.6293	70.6746	66.0393	63.1860	69.0447	64.9665	62.9720	59.1686	59.1030	67.4522	83.9350	76.1536	62.6777
R092+R093	833337.92	821632.03	833449.56	821640.31	20	0	1	59.4215	59.0579	61.0444	62.1198	61.4815	58.0516	60.0968	72.6377	56.6172	68.7031	65.2206	68.9892	69.5910	65.7171	62.3617	68.1794	64.6671	61.2070	57.7403	57.7889	67.0189	82.2740	76.2454	63.6978
R092+R093	833449.06	821640.31	833513.09	821599.24	20	0	1	59.4215	59.0579	61.0444	62.1198	61.4815	58.0516	60.0968	72.6377	56.6172	68.7031	65.2206	68.9892	69.5910	65.7171	62.3617	68.1794	64.6671	61.2070	57.7403	57.7889	67.0189	82.2740	76.2454	63.6978
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	50.0332	50.0083	49.6958	50.7710	50.9804	50.6146	49.5880	53.9976	44.3345	53.0018	49.7672	49.3982	49.1525	41.4717	40.1867	40.4228	35.1856	31.1864	26.6853	29.1473	33.8545	45.7212	45.3357	33.4011
R095	833609.59	821501.72	833648.49	821548.43	17	0	1	107.0857	106.5536	106.9021	107.3316	107.4569	107.0716	107.8075	112.5579	109.0691	113.3904	112.1332	114.1812	113.6501	113.3375	111.1277	112.1640	110.9348	108.9241	109.5222	105.6962	110.5252	115.2225	113.0745	108.8294
R096+R097	833980.59	822454.38	834028.77	822414.27	18	0	1	72.6846	83.6343	71.2857	51.8989	52.0650	77.2407	70.3738	86.0230	76.2142	86.0075	80.6350	82.9925	81.7476	81.3946	74.8782	80.7958	74.7144	70.3508	66.0027	65.4693	75.3252	92.8561	86.4699	75.1962
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	97.0268	96.8475	99.1534	102.3003	99.3800	91.9568	94.4369	104.1723	106.2562	115.6697	106.6125	106.4522	101.6773	99.9390	92.2461	96.0602	83.7725	77.8695	74.5479	74.6295	84.1867	97.5430	88.4028	79.2289
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1	84.6680	84.4911	92.0008	85.7141	90.3991	83.9504	92.6804	99.3806	91.7086	106.6958	97.6066	97.2850	98.8280	92.3284	86.5520	93.9792	82.8040	77.7094	72.7282	72.4877	81.4813	99.3658	89.8909	80.1304
R102+R103	834216.31	822256.35	834309.95	822180.58	16	0	1	84.2464	90.4019	82.6977	84.0078	84.2461	88.5212	84.6362	101.5328	86.2070	97.1758	87.5066	92.4868	86.7332	85.1731	75.6082	83.0263	76.7779	68.0742	63.1848	64.9442	78.1265	94.1875	85.2753	75.8452
R104+R105	834309.96	822180.68	834407.46	822098.55	18	0	1	78.3029	86.4179	80.6484	76.5385	76.7588	83.6343	76.8972	95.6145	82.7796	91.0086	85.0610	89.7544	84.9598	82.1517	74.2240	80.9952	74.5156	68.9815	63.9963	65.9401	77.8744	93.3114	86.0263	75.8912
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	67.4091	67.7512	69.9846	69.1279	71.1218	65.6912	67.1342	79.4404	64.7215	76.9351	72.9209	77.5996	77.4665	76.1385	71.1296	77.8203	73.1843	70.2085	66.7245	67.4266	77.0546	94.1861	84.0988	72.1663
R107	833991.55	822370.04	834090.39	822287.63	18	0	1	69.9945	65.9906	70.4207	77.5037	71.7796	66.9047	70.0741	77.9648	61.9608	72.4492	68.7247	73.9760	74.0378	71.8888	66.8198	73.2167	71.1250	66.7872	62.7234	63.1966	74.1997	91.3320	85.1445	75.2416
R108	834090.84	822288.08	834181.98	822212.22	18	0	1	69.3608	66.4761	69.8098	75.3933	73.0411	71.4838	69.5730	77.9589	62.7740	73.3369	70.4274	74.0066	74.3515	72.8421	68.1721	74.3703	72.9157	67.5251	64.2116	64.5018	76.2323	92.0773	83.5399	72.3008
R109	834181.98	822212.22	834273.00	822136.48	17	0	1	68.2308	65.1721	68.7175	74.5111	72.0029	70.4237	68.4401	77.1338	61.3921	72.2368	69.3579	73.2432	73.0434	71.8263	67.2072	73.0201	71.4132	65.8926	62.7746	62.5333	73.8595	90.5610	84.9594	72.8732
R110	834273.34	822136.83	834364.38	822060.94	17	0	1	67.1833	67.1180	65.7152	71.0804	69.3717	66.2156	68.9816	78.0099	60.8824	72.2277	68.6496	72.9355	73.1427	71.0924	66.6841	72.6945	69.9180	64.8034	62.7801	63.3481	73.6069	88.8271	83.6148	72.0202
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	68.0377	68.8136	65.2113	69.1910	67.2665	65.8104	68.2479	77.4085	63.2603	74.5956	69.2213	73.7988	73.2509	71.0465	66.8975	72.1231	70.5962	65.1883	61.6888	63.2974	74.0736	90.6952	83.0660	68.8778
R112	833849.76	822405.79	833902.96	822360.57	19	0	1	100.0845	101.9776	106.3705	101.7346	102.8121	102.1073	102.1303	113.1942	105.9343	112.6287	104.0052	106.7474	105.4937	104.4740	90.8095	98.3726	88.8789	80.1969	76.4097	76.6776	86.7414	100.9759	90.6854	84.0301
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	62.7194	62.5378	63.9436	60.4248	56.9800	65.5052	61.0422	69.8390	56.1679	66.7630	62.6668	67.5134	66.4372	63.6298	60.8484	65.4374	63.5997	58.9077	56.1923	55.9483	67.8493	81.8767	75.9180	64.9427
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	69.8191	67.6022	68.1504	69.0503	68.6432	68.0019	69.5671	79.5198	70.5582	82.7792	77.7579	79.7550	79.1123	76.9757	74.7976	77.6259	75.4893	71.0048	67.7477	66.6104	74.5750	88.0496	80.1749	70.6721
R115	833994.06	822200.75	834077.01	822132.08	16	0	1	85.4325	85.3400	85.5256	85.8265	84.3519	85.0495	85.5092	94.2529	84.8816	94.5071	86.6244	90.2298	87.1451	87.0073	78.5271	83.9317	80.5230	72.5996	68.5639	69.4543	77.8816	90.9192	82.8625	76.5625
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	66.4391	66.4941	68.2690	69.1106	68.4588	67.8354	67.0342	75.3049	62.6233	73.9177	69.2707	73.1297	72.6202	71.0307	66.9571	71.8443	71.2044	65.4554	62.4943	63.1078	71.1017	83.9020	78.0506	68.6570
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	66.7490	68.3405	67.2270	68.9632	69.1087	67.5659	67.5708	75.3763	63.2086	72.7391	69.8885	73.6088	72.9618	71.4082	67.4733	71.9233	71.7314	65.9377	62.9220	63.4986	71.2791	84.1422	78.4851	69.5659
R118	834190.59	822037.73	834243.25	821993.98	19	0	1	68.6453	68.5328	67.8565	69.5411	69.6974	68.1867	67.9899	75.9115	63.9546	73.2877	70.6045	73.9859	73.3841	71.8341	67.9999	72.4604	72.2177	66.4114	64.8991	63.8337	73.3505	84.4415	78.9001	69.3678
R119	834242.94	821993.86	834282.16	821961.45	19	0	1	66.7425	66.2969	67.2252	67.1929	66.1962	66.5971	66.9306	75.0321	64.2658	73.7231	70.9321	73.1025	72.7006	71.1317	68.8622	72.0714	72.0346	66.1696	64.8991	63.8337	73.3505	84.4415	78.9001	69.3678
R120	834281.93	821961.17	834309.17	821886.80	18	0	1	67.9269	68.2673	68.1238	67.9885	67.1514	68.6502	67.6016	77.4928	65.1834	74.8052	71.9409	75.6772	75.2130	73.4109	69.5833	74.3168	72.3733	68.0844	65.1533	64.0393	73.4135	84.3160	78.5202	69.9198
R121	833768.03	822376.18	833789.11	822316.98	18	0	1	82.9163	76.8650	86.9518	81.0426	81.2664	80.8016	78.8760	90.9465	70.6920	86.3547	82.2660	88.9717	90.4380	92.8308	88.9477	91.7600	90.4548	92.4323	95.8324	91.5923	107.8199	125.6629	114.6720	96.3363
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	84.2566	85.6484	84.9796	86.5520	87.8487	85.2933	83.8840	95.6959	79.9844	99.2124	88.6409	91.7370	88.2641	85.4506	80.2289	80.4809	68.8274	68.7367	69.6318	67.3289	75.3698	90.5553	85.4724	68.1252
R123	833868.78	822222.16	833964.75	822150.69	16	0	1	51.1348	50.9529	50.3976	50.4417	48.2001	53.2492	51.9688	62.4337	44.2854	57.5975	55.0720	58.8113	60.7283	56.0215	55.1981	59.3818	54.9132	55.4105	55.2260	53.8297	62.3727	79.2978	75.3771	56.6603
R124	833673.82	822341.72	833694.86	822284.07	18	0	1	89.6899	88.2123	87.9301	91.7140	88.6012	90.5712	88.4600	96.3823	84.7917	98.4822	92.8710	97.8425	98.0988	100.3357	94.8410	97.1836	98.7334	96.3481	98.4411	93.1668	108.0558	121.8368	114.8140	96.8238
R125	833694.86	822284.07	833827.77	822172.98	19	0	1	88.6988	89.5843	86.6314	89.4563	91.9168	86.1836	88.5887	98.9067	79.8992	96.6137	86.9367	88.8891	83.8275	80.4033	71.6507	70.9098	56.5565	55.7811	53.7751	53.3752	62.5337	76.9550	74.4936	58.4381
R126	833653.40	822269.00	833685.33	822174.73	13	0	1	75.2761	75.2977	73.1239	79.7516	77.1492	74.6026	76.0042	85.1222	71.6166	82.8833	78.3448	83.1785	82.0476	80.5634	76.9155	82.9900	78.1212	74.5159	73.7518	72.1669	81.8584	98.9905	90.2444	76.6885
R127	833409.66	822315.75	833503.51	822278.46	16	0	1	73.9751	77.8020	74.6176	74.0876	71.4598	73.3268	75.1996	83.7087	67.7625	80.6150	78.1368	83.0542	83.0021	81.6069	80.7645	83.9820	81.8938	81.7670	82.4677	80.3129	90.9689	106.9039	97.5684	82.0100
R128	833503.61	822278.46	833524.35	822221.21	16	0	1	71.3642	71.0628	73.4631	73.6369	71.4560	70.1546	70.4192	79.4850	61.9397	74.9442	72.2033	77.2704	77.6339	76.7473	75.5035	78.7496	76.6408	76.9825	77.7749	76.0039	86.1717	102.4017	96.0990	79.5516
R129	833377.80	822332.03	833388.00	822293.72	18	0	1	60.1579	60.0698	59.3506	60.7417	60.1343	60.2224	60.4037	70.5431	53.9139	66.6772	64.0883	67.6249	69.7306	67.3850	66.0664	69.2561	66.2948	66.4838	68.5300	65.0929	77.4051	90.9846	84.5695	69.1515
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	59.0811	59.0790	58.6354	58.9756	59.6269	58.6905	59.0279	69.5495	52.6594	65.6583	63.0932	66.5584	66.9669	66.3788	63.3039	68.2168	65.0492	65.4525	67.5655	64.0606	76.8889	90.4804	83.8969	67.9787
R131	833398.42	822175.04	833434.10	822080.75	16	0	1	61.5342	61.5753	61.5839	61.6773	62.3197	61.3780	61.6186	72.5929	58.0038	68.9983	63.2715	67.9385	67.7709	67.0101	62.2488	67.2694	65.4167	62.6411	62.4769	61.3682	71.6667	85.6303	78.9022	66.9140
R132	833433.92	822080.70	833460.51	822007.87	18	0	1	46.7781	46.9552	47.0956	47.3397	47.1892	46.9653	46.4432	50.4405	46.7168	53.6538	51.0925	51.6156	52.4086	46.7975	45.5723	46.4140	42.6438	39.8916	37.5121	38.5557	40.8000	50.2338	48.5617	39.7219
R133	833460.45	822007.98	833481.00	821952.75	19	0	1	75.9546	77.5845	78.5278	79.7666	79.5478	76.9817	75.3796	85.1078	74.5457	85.0504	78.0687	81.7274	78.6824	77.1057	69.6024	72.5676	64.4969	62.3618	60.6556	60.2092	69.5413	82.8232	74.9743	63.4814
R134	833481.06	821952.76	833506.97	821883.08	16	0	1	61.5220	63.1948	65.0343	66.8669	65.6101	63.0009	60.7130	70.9025	57.7119	67.4884	63.5913	67.0425	66.6890	63.9198	60.3427	64.4780	61.6920	59.4667	56.9199	55.8968	63.1469	77.6795	72.4278	59.6381
R135	833209.07	822239.78	833232.06	822178.07	16	0	1	67.9315	80.4323	90.3864	78.6745	75.3897	88.2081	77.7976	78.0300	58.4126	74.0864	70.3124	73.8332	76.0296	74.3178	72.0013	75.3921	70.7962	70.1032	69.9487	70.4031	82.9210	98.2115	94.8680	79.9306
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	55.1249	68.0077	80.5693	30.0411	30.1640	80.8016	73.6031	74.8569	56.4881	72.3597	66.5234	70.8457	73.3875	71.4465	69.1427	72.6843	68.1801	68.5719	68.8513	68.4756	78.7202	96.8293	93.2484	77.2043
R137	833080.91	822182.63	833100.63	822129.44	18	0	1	60.0707	60.1532	70.8222	27.9576	28.0682	71.0160	56.6168	67.5444	47.1459	61.1191	56.9495	61.8249	64.5896	62.9646	58.8545	63.0193	63.2674	60.2955	61.8031	61.3640	71.8212	89.0474	85.4428	67.9571
R138	833100.63	822129.44	833121.79	822072.07	18	0	1	60.0707	60.1532	70.8222	27.9576	28.0682	71.0160	56.6168	67.5444	47.1459	61.1191	56.9495	61.8249	64.5896	62.9646	58.8545	63.0193	63.2674	60.2955	61.8031	61.3640	71.8212	89.0474	85.4428	67.9571
R139	833121.68	822072.03	833166.58	821977.95	18	0	1	56.4570	56.0087	57.1974	55.0136	56.9831	56.8975	56.8909	65.9509	47.8454	60.4505	57.5898	62.6953	63.3040	62.5805	59.7296	63.1233	61.9414	61.5389	64.1543	60.7997	73.6063	89.5837	83.0636	66.1499
R140	833274.40	822007.07	833296.88	821947.59	17	0	1	88.5092	87.7209	87.2305	87.7417	87.4958	89.4161	88.4642	97.9119	79.9269	93.5046	85.7374	87.8784	83.7903	80.1817	72.2016	72.6979	61.6651	60.7310	59.0125	57.5332	67.2259	82.9015	78.5920	63.8097

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833295.56	821947.25	833315.58	821891.87	13	0	1
R142	833329.89	821853.87	833315.98	821891.84	13	0	1
R143	833129.75	821889.31	833169.17	821834.07	13	0	1
R144	833169.17	821834.07	833179.74	821783.15	13	0	1
R145+R146	833812.49	821976.50	834004.98	821816.03	17	0	1
R147+R148	833738.44	821888.36	833931.13	821727.74	16	0	1
R149	833728.61	821749.52	833807.73	821684.36	14	0	1
R149	833774.08	821643.52	833807.73	821684.36	13	0	1
R150	833736.67	821759.23	833667.71	821803.87	11	0	1
R151	833613.61	821610.98	833693.50	821543.70	13	0	1
R151	833693.50	821543.70	833775.28	821642.53	14	0	1
R152	833774.08	821643.52	833826.17	821600.56	20	0	1
R153	833991.31	822369.76	834026.77	822414.27	16	0	1
R154	833950.46	822320.45	833992.00	822369.87	18	0	1
R155	833909.65	822271.38	833950.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.35	18	0	1
R157	833868.56	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.91	822299.62	834112.00	822344.34	15	0	1
R160	834090.39	822287.53	834127.62	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.96	822201.48	834034.90	822250.52	16	0	1
R164	834007.86	822189.33	834049.42	822238.28	16	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.39	833964.75	822160.50	19	0	1
R167	833865.47	822042.45	834007.86	822189.33	19	0	1
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1
R170+R171	833738.44	821888.35	833812.49	821976.50	16	0	1
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1
R174+R175	833581.78	821677.98	833683.38	821823.65	18	0	1
R176	833498.77	821608.49	833560.47	821680.73	20	0	1
R177	833513.09	821599.34	833573.68	821668.47	20	0	1
R178	833440.44	821529.90	833480.00	821608.61	16	0	1
R179	833451.64	821526.21	833511.32	821600.38	17	0	1
R180	834218.31	822256.35	834335.06	822395.33	18	0	1
R181	834181.98	822212.22	834218.31	822256.35	18	0	1
R182	834140.62	822162.67	834181.78	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.06	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.18	13	0	1
R184	834071.90	822084.18	834097.30	822118.02	14	0	1
R185	834309.95	822180.58	834363.66	822267.44	19	0	1
R186	834231.54	822086.63	834273.34	822136.83	19	0	1
R187	834190.69	822037.73	834231.76	822086.45	18	0	1
R188+R189	834004.98	821816.03	834068.34	821890.22	19	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	18	0	1
R192+R193	833875.32	821660.75	833930.85	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.45	20	0	1
R196+R202	833761.01	821523.36	833828.17	821600.56	20	0	1
R197	834364.36	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.94	16	0	1
R199	834281.93	821961.17	834323.00	822010.48	19	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R200	834239.17	821914.13	834327.09	821848.33	18	0	1

NO_X x 100 (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
84.2591	83.1039	75.4633	73.7567	87.6542	87.9770	84.1696	97.0728	77.5426	91.9705	83.1719	85.5725	81.3087	77.2777	69.5445	70.0460	57.7520	56.3838	55.0758	54.9867	65.6659	82.3356	77.2933	60.5382
55.2810	51.2575	53.4963	52.2793	49.6010	54.0577	55.5359	59.1554	49.8048	59.0373	57.9511	59.6202	60.5398	55.1340	54.2321	56.5409	51.2160	47.6944	45.6632	47.9811	53.7623	67.5440	64.6085	53.1517
89.6926	89.7990	88.6409	88.9618	88.8962	91.1777	89.3120	98.3258	87.3479	99.9874	92.8035	94.6841	88.3506	85.1578	79.5202	77.5838	68.0561	64.6331	62.6829	62.3655	70.0307	84.9434	80.7764	66.4328
89.1399	89.1894	88.1455	89.9422	89.6182	90.9267	89.1353	97.8501	83.0381	96.2932	88.8940	91.1564	87.0785	83.7970	76.1355	76.3923	64.2774	63.1689	61.0052	59.4658	68.8764	84.1167	80.2239	65.3873
80.6854	76.8650	86.9518	60.6420	95.8671	75.6840	78.8726	87.7449	67.7869	83.8121	74.7091	77.5947	73.2114	67.7519	62.6723	62.1422	47.4226	47.2233	45.0535	45.8377	52.3662	67.8845	66.3474	50.3044
71.1682	72.2723	80.5693	87.4178	81.2664	76.8650	72.8490	82.4608	62.6815	77.3031	69.3380	70.7360	67.3161	61.1714	55.3375	54.6766	43.3482	42.3348	39.2461	40.5649	48.8150	61.7428	61.9135	46.2402
65.6498	63.7430	60.1454	68.2922	68.4908	73.4908	63.8449	75.5702	55.3378	69.0821	66.8094	70.9646	72.7452	71.7366	69.7172	71.8067	75.8775	74.0109	75.5585	72.7280	86.1131	102.6816	99.8596	81.1541
65.6498	63.7430	60.1454	68.2922	68.4908	73.4908	63.8449	75.5702	55.3378	69.0821	66.8094	70.9646	72.7452	71.7366	69.7172	71.8067	75.8775	74.0109	75.5585	72.7280	86.1131	102.6816	99.8596	81.1541
65.6498	63.7430	60.1454	68.2922	68.4908	73.4908	63.8449	75.5702	55.3378	69.0821	66.8094	70.9646	72.7452	71.7366	69.7172	71.8067	75.8775	74.0109	75.5585	72.7280	86.1131	102.6816	99.8596	81.1541
65.6498	63.7430	60.1454	68.2922	68.4908	73.4908	65.8539	75.5702	55.8211	69.5909	66.8094	70.9646	72.7452	71.7366	68.8614	71.8067	70.5321	72.5237	73.6681	70.6145	86.1131	102.6816	99.8596	76.0194
65.6498	63.7430	60.1454	68.2922	68.4908	73.4908	65.8539	75.5702	55.8211	69.5909	66.8094	70.9646	72.7452	71.7366	68.8614	71.8067	70.5321	72.5237	73.6681	70.6145	86.1131	102.6816	99.8596	76.0194
65.6498	63.7430	60.1454	68.2922	68.4908	73.4908	63.8449	75.5702	55.3378	69.0821	66.2419	70.2622	71.3273	69.7920	66.4953	71.4875	69.6699	70.2808	69.4749	67.7715	83.7882	100.0244	91.8351	71.8183
66.5344	67.1155	66.0007	66.1607	68.0496	67.6201	66.9349	78.6045	59.4549	73.3478	67.5200	68.2801	67.2535	64.6318	58.6740	61.8271	56.4850	53.2854	51.9729	52.2522	62.2213	78.4857	75.2608	58.8467
66.1683	67.5059	64.9313	66.7250	68.7643	66.3277	67.2896	78.7506	59.2080	72.9042	67.2445	69.6096	68.5947	64.2788	60.0265	62.6556	57.0994	54.6614	53.2155	53.3643	62.4817	78.4053	74.7414	58.5328
66.1061	67.4840	65.9017	66.0207	67.2719	66.9497	67.2568	80.7297	62.8668	75.3249	69.3309	70.0112	69.2049	66.6896	60.2162	63.3905	59.5114	56.4327	53.7094	53.6583	64.3137	81.3339	77.0617	59.3095
84.2368	81.5934	79.5685	79.7476	77.8662	77.5519	84.5382	106.5650	86.2993	102.0689	95.5651	98.8026	97.3384	91.7344	86.7047	88.5337	81.6357	78.6228	74.0527	71.9840	80.2547	94.0915	90.0700	70.4515
86.7541	84.5060	84.3829	82.3492	82.7990	82.4482	86.9965	108.3701	94.3399	103.9411	95.7419	95.6825	93.2391	91.6592	82.8044	83.7941	77.3296	74.1617	72.7350	70.4697	79.1863	92.6353	88.0732	70.5372
82.8878	83.2774	82.8912	83.3824	84.0614	83.1335	82.9820	94.2073	78.7702	92.5169	85.4612	86.0732	83.8104	82.8246	74.9175	75.8620	70.2443	67.5760	66.8845	66.2447	76.9120	90.2095	85.4109	70.3419
63.0412	63.6436	66.2365	65.7669	60.5939	65.5052	62.2319	72.0166	57.5384	68.5232	65.4365	70.3982	69.0274	68.0277	62.7567	67.4223	65.9456	63.1253	62.1858	61.6111	73.6849	87.8527	81.8385	70.4183
69.8754	69.6851	69.7344	70.7303	68.8595	70.4604	71.3428	81.7427	64.9632	76.7148	70.0400	73.9493	72.3045	71.2871	63.1907	66.0119	62.3751	58.9462	57.7631	56.7498	68.5367	84.0635	77.5860	63.2280
63.8470	63.6645	63.6198	63.1290	65.1722	63.4115	64.4419	76.5012	59.6722	71.1012	67.5813	72.3876	71.9331	71.0904	66.2677	70.7659	67.7547	65.3418	64.3292	63.8331	74.2107	89.8093	82.5721	69.2637
70.3130	70.2192	69.7550	70.3456	70.3021	70.0363	70.4083	81.4757	64.9682	76.2576	70.1204	74.1894	72.2336	70.6952	64.5247	67.7816	63.2455	59.9359	58.8833	57.0814	68.5102	84.0229	77.7214	63.3245
66.6385	67.1765	67.4084	66.5407	66.9738	67.1175	67.1876	78.6014	62.5545	73.3918	67.6982	71.3968	69.8588	58.0901	62.2364	66.4819	62.2063	59.7814	58.0474	56.5138	67.7858	83.5852	77.1055	62.3954
67.8477	67.8459	67.9593	67.3265	68.9068	67.8209	67.9380	77.4343	61.6696	73.6146	66.6591	70.7820	69.3967	70.2327	63.0241	65.6968	63.6343	61.5464	61.0293	58.7712	70.4397	85.8384	79.3296	64.6883
68.7987	68.5560	67.5665	68.4197	68.0347	68.6608	69.0155	78.5165	65.2609	73.5641	70.2403	73.6383	72.9402	70.9299	66.3090	70.2455	66.8714	63.7606	62.0795	61.8914	72.8238	85.0742	79.2406	67.3282
57.6724	56.2388	56.3561	56.9739	57.0917	56.6105	57.8353	66.4567	53.4183	62.7063	58.6110	60.2105	59.7588	54.2090	53.7980	56.1184	50.5944	48.3676	44.8200	45.2423	50.5128	62.0906	60.9036	49.5277
84.9667	85.2715	84.5914	85.2047	86.2827	85.0707	85.3238	99.6194	87.2748	94.6821	87.3906	91.4736	88.3316	88.4496	78.6578	84.6299	81.4733	73.4369	70.4507	70.9226	81.6956	96.4073	87.0774	77.8738
33.4172	32.9176	33.4957	34.0949	32.5515	32.5304	33.2715	39.5956	28.7498	36.6869	35.4143	36.7358	39.0661	32.9319	33.7870	36.1558	32.5906	30.6615	27.1833	29.0962	33.0765	45.6083	44.0817	31.9641
45.2713	45.6316	45.3389	44.8061	46.2046	45.7186	45.0268	51.5980	44.2358	51.9065	49.7119	50.4297	51.8042	46.4123	45.7645	46.8551	43.5737	41.9168	39.0295	40.1726	44.2673	53.7881	52.2770	42.7314
69.9446	69.3403	68.9400	69.4977	69.0488	69.4449	69.3468	80.8667	64.9670	77.0791	69.9908	73.9007	72.0275	71.2853	65.6510	68.6417	65.1063	61.8079	60.3071	59.4624	69.3397	83.7491	77.7899	64.4302
72.2137	71.7743	71.5178	72.4052	71.3117	71.2626	71.9489	86.4633	73.1780	82.8410	78.4497	81.6953	80.4840	81.2510	74.8045	78.4231	75.8274	73.6757	70.4503	69.2191	79.3562	92.5404	86.2336	71.6029
66.5767	66.5630	66.6692	67.1941	67.5409	66.7160	66.5728	77.3255	62.9704	72.5938	69.8040	74.0568	73.8821	73.1704	69.1820	73.8872	71.6516	69.3938	67.8563	65.9204	75.7301	88.9022	82.6941	72.3483
74.1750	74.3747	74.2675	74.3441	74.0161	74.3437	74.0895	82.7163	68.3477	78.2179	72.1349	75.2710	73.0253	72.7575	66.7394	69.4128	65.2645	61.2553	59.3165	58.1166	67.7580	82.0539	76.5107	64.4577
72.6657	72.5451	72.4692	73.0873	73.7710	72.3862	73.1962	82.9963	70.4382	78.8406	76.5857	81.3747	80.9713	81.8470	77.0838	81.6650	79.8610	78.0947	77.9672	74.8804	85.5801	98.0279	91.4717	80.7279
78.4521	78.3052	78.2531	78.6660	78.8352	78.3903	78.5420	89.3307	74.2263	84.6078	78.9021	82.9724	80.6567	80.5601	73.1453	77.7632	74.6929	69.1394	66.7998	66.9362	78.3641	90.6088	83.0960	73.2927
75.5252	75.7771	76.2442	76.3915	76.7953	75.3383	76.3556	88.1128	72.2028	85.4235	77.8767	82.7953	81.6770	80.6022	74.3271	78.9147	74.8916	71.7868	70.4063	69.8560	82.9711	100.7479	92.5008	75.5707
73.9549	68.0077	63.5494	68.2922	73.9661	68.0077	77.3595	82.3867	62.8877	76.4195	71.9304	76.4759	80.6892	78.8608	72.7835	78.5646	73.0780	73.9823	72.7130	70.0910	83.6862	101.7167	94.8693	76.9340
71.5629	71.1954	73.4556	72.8193	81.1339	74.9431	72.2724	81.1363	64.0286	74.4236	71.3381	76.0445	76.3880	77.8389	69.4098	74.7069	73.1906	71.0589	69.8488	67.1462	81.1567	101.5898	91.6494	76.0950
76.9501	78.6341	80.6359	81.1337	81.3832	84.3015	76.7092	87.4382	70.7152	82.3507	77.0539	80.4930	80.4192	78.4780	73.1408	72.9496	68.9244	66.1905	66.6098	67.6611	81.3977	99.5100	88.5715	78.2167
80.6892	78.7584	77.8819	77.8550	77.3355	80.8016	80.9253	90.0897	68.4908	85.0338	73.2786	75.1250	70.2678	64.5301	57.8914	58.7174	50.1254	46.6258	44.8117	44.8328	53.5450	69.1765	67.7585	49.0624
80.6892	78.7584	77.8819	77.8550	77.3355	80.8016	80.9253	90.0897	68.4908	85.0338	73.2786	75.1250	70.2678	64.5301	57.8914	58.7174	50.1254	46.6258	44.8117	44.8328	53.5450	69.1765	67.7585	49.0624
80.6892	78.7584	77.8819	77.8550	77.3355	80.8016	80.9253	90.0897	68.4908	85.0338	73.2786	75.1250	70.2678	64.5301	57.8914	58.7174	50.1254	46.6258	44.8117	44.8328	53.5450	69.1765	67.7585	49.0624
73.9603	73.8183	75.0475	74.4891	76.7953	73.8331	75.2301	84.0738	68.0560	78.9885	74.7173	80.2205	78.5719	79.8705	74.2235	78.7609	76.0165	72.1248	71.3606	69.0273	82.0568	98.1685	91.0646	75.9070
80.7438	80.8712	84.0577	85.4141	90.6958	85.1765	78.4282	89.9881	73.4645	82.5339	77.4321	83.3056	80.9539	78.8608	72.3711	70.6704	65.5723	64.3018	64.3614	65.4712	78.3556	95.8052	88.5715	78.2167
78.3388	80.5774	77.9938	80.9128	82.2361	80.2992	79.4284	90.6719	76.7063	85.9501	83.7603	88.6220	88.3385	86.6015	82.6951	87.5517	84.4068	82.1313	80.7207	80.6043	89.5261	103.7361	97.7763	85.5128
72.0590	71.1127	73.9364	76.6386	73.6763	72.5775	72.7114	80.4065	64.0384	75.8628	71.2106	74.6415	74.9349	71.8586	67.2815	69.8662	67.2622	64.0034	62.5285	61.4978	73.2508	86.5212	81.3767	69.6717
76.2251	78.4359	77.2062	78.9367	79.9313	77.8559	78.1066	87.0160	70.1008	81.4802	75.8507	80.2875	79.7056	78.4240	71.7419	76.8998	73.7932	69.4148	68.9892	67.9261	80.3965	96.4632	89.6449	74.1748
61.4009	61.7290	59.9267	62.0953	65.1269	60.8741	62.0816	69.4094	55.9053	65.2949	61.3657	65.9330	66.1471	64.9765	56.5761	59.9619	55.1422	52.0417	48.1589	50.9443	62.0564	65.8199	63.1975	62.1234
92.8042	89.8575	91.1983	95.8736	95.6610	91.4293	92.9322	96.8065	84.0716	95.0177	92.3900	98.7095	96.5373	94.8446	92.0218	94.0744	92.6363	91.3769	91.8950	90.6990	98.5654	105.6433	102.4124	96.3229
91.2764	92.2136	80.8078	85.9125	86.3868	86.3337	92.0211	91.9228	89.0641	88.2181	82.4884	85.6506	92.0534	83.2237	87.5505	89.2279	87.3606	94.6054	84.3316	83.6956	90.9424	99.9455	96.5466	98.1535
80.8139	73.4908	60.1454	60.6420	68.4908	68.0077	68.1141	85.3901	68.7467	83.3000	78.0290	82.2228	69.1841	69.7882	69.1389	68.2921	69.0010	55.9224	54.8790	62.3114	74.4889	107.6798	99.8437	81.1541
72.6813	70.5665	67.8044	60.6420	68.4908	63.7430	68.1141	81.4371	60.3734	74.8625	70.7626	75.5713	76.2831	82.4883	71.6609	75.3692	73.7531	69.3951	67.6354	66.0770	85.7800	95.7618	87.4920	87.0161
82.6158	82.7023	82.4412	91.0821	88.2057	90.8094	85.2674	90.5807	76.6046	87.7087	82.5330	81.2501	82.1406	79.6929	72.7135	75.9594	73.4044	79.9884	76.7397	77.0801	85.9464	98.5573	85.0476	79.1336
79.6509	76.1622	78.9405	78.9675	81.6210	81.2191	79.6458	88.2372	72.8489	85.3683	76.7818	81.1262	78.6885	79.3156	71.6960	77.7075	74.9266	71.3005	69.3631	68.5300	79.3762	94.9053	87.6052	76.9329
79.6509	76.1622	78.9405	78.9675	81.6210	81.2191	79.6458	88.2372	72.8489	85.3683	76.7818	81.1262	78.6885	79.3156	71.6960	77.7075	74.9266	71.3005	69.3631	68.5300	79.3762	94.9053	87.6052	76.9329

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_2 x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	2.6027	2.6089	2.5734	2.5859	2.6148	2.5977	2.6327	4.3008	4.4813	3.7775	3.4742	3.3921	3.0371	3.1163	3.1131	3.4558	3.6620	3.4434	3.5093	2.9440	2.6662	2.4512	2.5367	2.6627
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	2.6027	2.6089	2.5734	2.5859	2.6148	2.5977	2.6327	4.3008	4.4813	3.7775	3.4742	3.3921	3.0371	3.1163	3.1131	3.4558	3.6620	3.4434	3.5093	2.9440	2.6662	2.4512	2.5367	2.6627
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	2.6027	2.6089	2.5734	2.5859	2.6148	2.5977	2.6327	4.3008	4.4813	3.7775	3.4742	3.3921	3.0371	3.1163	3.1131	3.4558	3.6620	3.4434	3.5093	2.9440	2.6662	2.4512	2.5367	2.6627
R003	833434.80	822408.45	833960.46	822643.00	20	0	1	2.6027	2.6089	2.5734	2.5859	2.6148	2.5977	2.6327	4.3008	4.4813	3.7775	3.4742	3.3921	3.0371	3.1163	3.1131	3.4558	3.6620	3.4434	3.5093	2.9440	2.6662	2.4512	2.5367	2.6627
R003	833960.46	822643.00	833995.46	822646.78	20	0	1	2.6027	2.6089	2.5734	2.5859	2.6148	2.5977	2.6327	4.3008	4.4813	3.7775	3.4742	3.3921	3.0371	3.1163	3.1131	3.4558	3.6620	3.4434	3.5093	2.9440	2.6662	2.4512	2.5367	2.6627
R004	833116.28	822306.10	833185.93	822315.62	19	0	1	2.5981	2.5939	2.5801	2.6038	2.5932	2.5701	2.6087	3.7990	4.1144	3.4203	3.2046	3.1907	2.9307	3.0412	3.0759	3.4682	3.7458	3.8124	3.8436	3.1718	2.5509	2.3642	2.4780	2.5365
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	2.5981	2.5939	2.5801	2.6038	2.5932	2.5701	2.6087	3.7990	4.1144	3.4203	3.2046	3.1907	2.9307	3.0412	3.0759	3.4682	3.7458	3.8124	3.8436	3.1718	2.5509	2.3642	2.4780	2.5365
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	2.5981	2.5939	2.5801	2.6038	2.5932	2.5701	2.6087	3.7990	4.1144	3.4203	3.2046	3.1907	2.9307	3.0412	3.0759	3.4682	3.7458	3.8124	3.8436	3.1718	2.5509	2.3642	2.4780	2.5365
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	2.5858	2.5750	2.5845	2.6100	2.6040	2.5770	2.6142	3.7987	4.1153	3.4198	3.2042	3.1889	2.9281	3.0380	3.0730	3.4648	3.7425	3.8038	3.8395	3.1678	2.5456	2.3586	2.4722	2.5375
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	2.5858	2.5750	2.5845	2.6100	2.6040	2.5770	2.6142	3.7987	4.1153	3.4198	3.2042	3.1889	2.9281	3.0380	3.0730	3.4648	3.7425	3.8038	3.8395	3.1678	2.5456	2.3586	2.4722	2.5375
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	2.5858	2.5750	2.5845	2.6100	2.6040	2.5770	2.6142	3.7987	4.1153	3.4198	3.2042	3.1889	2.9281	3.0380	3.0730	3.4648	3.7425	3.8038	3.8395	3.1678	2.5456	2.3586	2.4722	2.5375
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	2.5858	2.5750	2.5845	2.6100	2.6040	2.5770	2.6142	3.7987	4.1153	3.4198	3.2042	3.1889	2.9281	3.0380	3.0730	3.4648	3.7425	3.8038	3.8395	3.1678	2.5456	2.3586	2.4722	2.5375
R006+R007	833527.80	822410.61	833627.55	822455.21	14	0	1	3.0680	2.7529	3.9274	0.9658	0.9680	3.5316	2.9739	3.3561	2.5871	3.4916	3.1881	3.2446	3.5896	3.1281	2.3507	2.4417	1.3276	1.6277	0.9814	1.1041	1.2545	1.9162	1.7987	1.6479
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	3.0680	2.7529	3.9274	0.9658	0.9680	3.5316	2.9739	3.3561	2.5871	3.4916	3.1881	3.2446	3.5896	3.1281	2.3507	2.4417	1.3276	1.6277	0.9814	1.1041	1.2545	1.9162	1.7987	1.6479
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	3.0680	2.7529	3.9274	0.9658	0.9680	3.5316	2.9739	3.3561	2.5871	3.4916	3.1881	3.2446	3.5896	3.1281	2.3507	2.4417	1.3276	1.6277	0.9814	1.1041	1.2545	1.9162	1.7987	1.6479
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	3.0680	2.7529	3.9274	0.9658	0.9680	3.5316	2.9739	3.3561	2.5871	3.4916	3.1881	3.2446	3.5896	3.1281	2.3507	2.4417	1.3276	1.6277	0.9814	1.1041	1.2545	1.9162	1.7987	1.6479
R008+R009	833661.17	822398.31	833693.59	822397.15	13	0	1	1.9682	2.4451	2.2050	0.9658	0.9680	1.9772	1.9502	2.6277	1.9401	2.4103	2.1905	2.3222	2.1848	1.7578	1.6570	2.0435	1.3959	1.6287	1.0585	1.0171	1.2894	2.2440	2.1905	1.4127
R008+R009	833693.59	822397.15	833841.85	822450.34	13	0	1	1.9682	2.4451	2.2050	0.9658	0.9680	1.9772	1.9502	2.6277	1.9401	2.4103	2.1905	2.3222	2.1848	1.7578	1.6570	2.0435	1.3959	1.6287	1.0585	1.0171	1.2894	2.2440	2.1905	1.4127
R010+R011	833978.15	822463.30	833896.64	822432.88	12	0	1	4.2429	4.2174	3.6982	2.5373	4.5466	5.3953	4.2472	5.1000	4.3826	5.0009	4.6822	5.1533	4.9276	4.8193	4.2213	4.9362	4.3589	4.1606	3.9695	3.6968	4.5458	5.2969	4.8235	4.7632
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	4.2429	4.2174	3.6982	2.5373	4.5466	5.3953	4.2472	5.1000	4.3826	5.0009	4.6822	5.1533	4.9276	4.8193	4.2213	4.9362	4.3589	4.1606	3.9695	3.6968	4.5458	5.2969	4.8235	4.7632
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	4.2429	4.2174	3.6982	2.5373	4.5466	5.3953	4.2472	5.1000	4.3826	5.0009	4.6822	5.1533	4.9276	4.8193	4.2213	4.9362	4.3589	4.1606	3.9695	3.6968	4.5458	5.2969	4.8235	4.7632
R012+R013	833387.26	822567.47	833423.69	822656.02	10	0	1	11.1591	12.9149	1.2117	1.6557	1.6579	1.6283	11.1871	15.2106	9.5363	12.6931	10.6819	12.8648	12.0725	15.6037	11.5046	11.9538	11.5388	12.9543	14.8600	12.5893	19.9663	23.1409	18.0981	13.8457
R012+R013	833423.69	822656.02	833416.08	822482.07	10	0	1	11.1591	12.9149	1.2117	1.6557	1.6579	1.6283	11.1871	15.2106	9.5363	12.6931	10.6819	12.8648	12.0725	15.6037	11.5046	11.9538	11.5388	12.9543	14.8600	12.5893	19.9663	23.1409	18.0981	13.8457
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	11.1591	12.9149	1.2117	1.6557	1.6579	1.6283	11.1871	15.2106	9.5363	12.6931	10.6819	12.8648	12.0725	15.6037	11.5046	11.9538	11.5388	12.9543	14.8600	12.5893	19.9663	23.1409	18.0981	13.8457
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	11.1591	12.9149	1.2117	1.6557	1.6579	1.6283	11.1871	15.2106	9.5363	12.6931	10.6819	12.8648	12.0725	15.6037	11.5046	11.9538	11.5388	12.9543	14.8600	12.5893	19.9663	23.1409	18.0981	13.8457
R012+R013	833544.64	822390.48	833587.56	822354.80	10	0	1	11.1591	12.9149	1.2117	1.6557	1.6579	1.6283	11.1871	15.2106	9.5363	12.6931	10.6819	12.8648	12.0725	15.6037	11.5046	11.9538	11.5388	12.9543	14.8600	12.5893	19.9663	23.1409	18.0981	13.8457
R014+R015	833488.77	822318.11	833587.56	822354.80	14	0	1	5.2151	5.3245	5.7743	7.1936	6.7790	6.6182	5.5273	8.8976	4.7559	6.0286	6.1358	7.0168	6.6613	7.4475	6.0198	6.8623	6.5314	6.8682	6.6814	6.2187	8.4476	10.6237	9.6745	6.9304
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	5.2658	5.4667	5.7743	4.6764	4.4318	6.6182	5.1328	8.3643	4.4920	5.7443	5.5751	6.1045	5.7737	6.0681	5.1755	5.7187	4.7203	5.2374	4.8787	4.2741	6.3945	7.6948	6.2941	5.3511
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	5.2658	5.4667	5.7743	4.6764	4.4318	6.6182	5.1328	8.3643	4.4920	5.7443	5.5751	6.1045	5.7737	6.0681	5.1755	5.7187	4.7203	5.2374	4.8787	4.2741	6.3945	7.6948	6.2941	5.3511
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	13.1769	13.4304	12.2284	14.0753	14.7501	12.3285	12.5179	15.0515	12.1428	13.8749	12.4111	14.0254	12.9830	14.9012	11.6930	13.4885	14.2660	12.2983	11.9876	11.5222	15.6533	19.3037	13.9692	14.7120
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	13.1436	12.9434	11.7679	13.7873	12.2953	14.4121	12.9748	15.2846	12.3923	14.0521	12.4495	14.0640	12.9257	14.7350	11.8226	13.5598	13.2603	12.3456	12.3743	11.4266	15.5502	18.0471	14.7878	13.6304
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	16.1990	14.7436	15.9884	16.8868	16.0894	15.9088	16.2069	17.6154	15.0559	16.8345	15.5212	16.8402	15.8462	17.3231	14.4255	15.7514	16.4465	14.6308	14.3518	13.6179	16.9986	19.4797	16.4187	15.6846
R022	833480.61	822340.13	833489.65	822315.75	16	0	1	16.1990	14.7436	15.9884	16.8868	16.0894	15.9088	16.2069	17.6154	15.0559	16.8345	15.5212	16.8402	15.8462	17.3231	14.4255	15.7514	16.4465	14.6308	14.3518	13.6179	16.9986	19.4797	16.4187	15.6846
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	14.8192	13.1016	14.9755	14.8814	15.1365	13.6828	14.3940	17.3521	14.9175	16.3819	14.9776	16.1701	15.2876	17.0715	13.8688	15.2122	15.3468	14.3888	14.4389	13.2444	16.6202	19.1543	15.5803	14.5574
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	15.3208	13.6304	14.4525	12.8095	15.1365	14.4468	14.8228	16.9425	14.6451	16.4998	15.0555	16.1954	14.7279	16.8992	13.8065	15.1681	15.5621	14.4251	14.0911	12.8944	16.6867	18.7679	15.6923	14.5279
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	14.9082	15.1455	14.0865	15.7598	16.2962	14.1526	14.3339	16.5905	14.2946	16.4683	15.0544	16.2910	14.9415	16.6502	13.9110	15.3303	15.1286	14.5480	14.2352	12.8956	16.3015	19.1454	15.3460	14.4223
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	16.3334	16.0138	16.5182	17.2044	16.4781	15.5692	16.3944	19.2705	18.2477	18.8661	16.9423	17.9092	16.0202	18.0656	14.5940	16.1102	17.3129	15.4663	14.4443	13.5581	17.1317	18.3902	15.2005	14.9524
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	15.8761	15.4654	15.2996	15.6157	16.1356	16.5008	15.8148	18.0008	16.7208	18.3272	17.0358	18.0587	17.0037	18.3484	16.0201	16.7033	16.9476	15.7425	15.2535	14.1157	17.0735	19.8500	16.1163	15.2214
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	12.9692	11.9139	12.9355	15.3172	14.1044	12.2557	12.9867	14.5904	12.5174	14.3687	12.9068	14.2611	13.3017	14.9269	12.4141	13.9332	13.9142	13.0753	13.1656	11.8304	15.5006	18.3991	15.0139	13.1403
R029	833768.63	822376.15	833848.76	822405.79	13	0	1	11.5377	10.5804	12.7328	7.1936	9.9797	11.6866	11.2224	16.3649	13.9104	14.5961	12.4535	13.9496	12.2542	15.4711	11.9392	13.7384	15.5229	13.3941	12.6965	12.3596	16.4212	17.7093	14.6253	15.0526
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	11.3283	11.3326	11.7936	11.4805	10.4853	11.2042	11.2830	15.3872	12.7575	13.7446	11.6888	13.5107	12.9551	14.5510	11.5333	13.2380	13.6033	12.5842	12.4076	10.9922	14.8108	17.2069	13.4429	12.7282
R031	833917.83	822431.11	833990.58	822454.38	14	0	1	10.5707	12.7577	8.2653	9.9625	9.9797	7.1726	11.4819	16.5463	14.9783	15.2608	13.2556	14.3359	12.4897	15.5582	11.8093	13.4311	14.7251	12.8585	12.4467	11.9111	15.8396	17.6081	14.2969	13.8125
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1	14.6031	14.1377	10.9713	10.9582	10.6274	10.5295	10.9890	14.0055	11.6071	13.0831	11.8711	13.3669	12.4321	14.1107	11.5008	12.8706	12.9486	12.3532	12.2251	11.2430	14.6430	16.5520	13.5562	12.7015
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	11.6983	11.7204	11.7409	11.8547	11.9616	11.7141	11.7634	13.9805	11.3755	12.9586	11.6231	12.9580	12.0390	13.6426	11.2971	12.7214	12.7648	12.1364	11.9996	11.0110	14.1053	16.4823	13.4972	12.2834
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	10.5304	10.6659	10.5369	10.9546	10.8736	10.9154	10.8193	13.4504	11.3152	12.2920	11.0542	12.5697	11.6495	13.2415	10.9284	12.4338	12.5195	11.9470	11.7473	10.7067	13.7662	16.0386	13.1745	12.0555
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	13.1899	13.0781	12.9714	12.7555	12.8503	12.7536	12.9366	15.8142	13.7388	15.0118	13.6727	14.8058	14.0510	15.5244	12.7281	14.6872	14.5562	13.0789	12.8082	12.1083	15.0752	17.7066	14.5406	13.6948
R036	833524.35	822221.21	833653.40	822260.00	18	0	1	12.1653	12.0201	12.0337	12.1835	12.0328	12.1926	12.0976	14.5949	12.5749	14.2301	12.5924	14.0114	13.0120	14.7111	12.0398	13.4764	13.4957	12.8772	12.7787	11.7535	14.8243	16.8106	13.8692	13.0948
R037	833653.40	822260.00	833694.86	822284.07	19	0	1	16.2426	16.1551	16.1382	16.3100	16.1673	16.1180	16.2509	19.3437	16.6355	18.6207	16.0039	17.4619	15.7712	17.7383	13.9589	15.2811	15.0590	13.8356	13.4321	12.3772	15.7123	18.1377	14.8701	13.8692
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	16.4646	16.4065	16.4564	16.4025	16.5094	16.3884	16.3973	19.6596	16.7922	18.9068	15.9363	17.3156	15.3800	17.1700	13.2757	14.4668	14.4488	12.7409	11.9457	11.1004	13.9592	16.0922	13.2377	12.4838
R039	833761.99	822311.12	833798.46	822320.76	14	0	1	19.3999	18.1488	18.3132	18.7953	18.7651	18.5828	18.4568	22.6486	22.0005	21.8804	19.2427	20.5879	18.4731	20.5063	15.9232	18.2462	18.2641	15.1470	13.5324	13.4495	16.2285	18.0991	14.3669	15.4148
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	18.9925	19.1611	19.0845	19.4619	19.2041	19.3166	19.2424	22.4627	21.2014	21.6183	18.9200	19.8495	17.8671	19.8086	15.2454	17.6434	17.7111	15.0827	13.4109	12.9781	15.8454	17.5152	14.0783	15.1606
R041	833833.16	822335.17	833902.96	822360.57	18	0	1	19.3867	18.4239	18.7837	18.9295	18.6974	18.9894	18.7305	23.1501	21.9245	22.3711	19.1847	20.5279	18.4681	20.4532	15.8927	18.1955	18.1980	15.1622	13.5631	13.1573	16.2468	18.2254	14.4230	15.4385
R042	833902.96	822360.57	833960.46	822320.45	18	0	1	19.4549	18.7864	18.7851	18.9141	18.8280	19.0737	18.9092	22.6381	21.3956	21.8547	18.6932	20.0062	17.9473	19.9842	15.3893	18.1263	18.1170	14.9568	13.2416	12.8727	15.9928	17.5460	14.1217	15.1899
R043	833960.46	822320.45	834034.90	822250.52	18	0	1	21.8160	21.9889	22.0050	21.9694	22.2212	22.0907	22.0167	24.8368	23.9173	24.0050	21.2242	22.7738	20.5503	23.0434	17.8668	20.7172	21.0164	17.6404	15.8015	15.4758	18.5358	20.5846	16.5101	18.1335
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	19.0632	19.0134	19.0659	19.4281	19.1714	19.1623	19.2165	22.4128	21.1961	21.5851	18.4519	19.8566	17.8051	19.7789	15.2551	17.5669	18.0051	14.9071	13.1908	12.7533	15.7465	17.3551	13.9249	14.9559
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	19.3762	16.0064	16.2024	17.0431	17.3451	17.0405	19.2706	22.0279	20.7928	21.1999	18.7042	20.0493	18.0548	20.0847	15.6501	17.8977	18.0154	15.0257	13.4177	13.3389	16.0139	17.8339	14.5393	15.4942
R046	834231.72	822086.65	834323.21	822011.22	18	0	1	19.5716	18.5409	18.5984	18.9700	18.7293	18.8661	19.6520	22.7195	21.5574	21.9656	18.9495	20.2167	18.2022	20.1028	15.6919	17.8530	18.2559	15.1954	13.5537	13.1611	16.1926	17.6592	14.3328	15.4231
R047	834322.77	822010.68	834384.01	821959.68	18	0	1	19.5756	18.4239	18.6851	18.8314	18.9366	18.7821	19.6744	22.7519	21.1238	21.5014	18.9649	20.2967	18.2362	20.1620	15.7415	17.9381	17.9185	15.2505	13.5561	13.1761	16.2438	17.7030	14.3928	15.4529
R048	833097.20	821955.43	833156.56	821977.96	17	0	1	14.2130	13.7899	13.7643	13.8061	13.8389	13.8347	14.2149	17.1245	16.7141	16.9791	14.5318	15.7810	14.3293	16.5810	12.9507	14.9715	15.3087	13.6081	13.0467	11.9358	15.1266	17.1880	13.8034	13.7324
R049	833156.56	821977.96	833434.10	822080.78	16	0	1	14.2354	14.1900	14.2133	14.2176	14.2509	14.1752	14.2592	16.8847	16.1074	16.3717	14.0521	15.5408	14.1298	16.0846	12.5756	14.5597	14.9029	13.2723	12.5689	11.7262	15.1835	17.2251	13.8642	13.8575
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	15.1756	15.1950	15.1894	15.1674	15.1831	15.1961	15.2147	18.1717	17.2560	18.1229	15.2901	16.6553	14.9262	16.9195	13.3125	15.0619	15.1122	13.4509	12.3972	11.3955	13.9541	15.5354	12.3413	12.6120
R051	833274.56	822006.80	833438.70	822067.62	16	0	1	16.3332	16.3800	16.4014	16.4029	16.4033	16.3995	16.4032	19.2279	18.1742	18.7826	16.0515	17.5428	15.8334	18.1273	14.0949	16.3358	17.0300	14.6192	13.3215	12.5206	15.4058	17.1117	13.6614	14.5972
R052	833434.10	822080.21	833668.33	822174.73	16	0	1	16.8576	16.1543	16.0996	16.2857	16.2839	16.2392	16.7403	18.9919	18.7664	17.9513	15.7491	17.1055	15.5125	17.5579	13.8146	16.2298	16.4934	14.0866	13.0737	12.4451	15.8031	17.7636	14.2818	14.5802
R053	833786.86	822123.44	833736.66	822163.25	18	0	1	17.4681	16.8729	16.8838	16.9428	16.9977	16.9696	17.4050	19.9058	19.5137	19.2829	16.5239	18.0226	16.2436	18.7113	14.6931	17.0369	17.4639	15.2097	14.2405	13.4420	16.7276	18.7077	14.9881	15.4998
R053	833736.66	822161.25	833688.33	822174.73	18	0	1	17.4681	16.8729	16.8838	16.9428	16.9977	16.9696	17.4050	19.9058	19.5137	19.2829	16.5239	18.0226	16.2436	18.7113	14.6931	17.0369	17.4639	15.2097	14.2405	13.4420	16.7276	18.7077	14.9881	15.4998
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	17.9222	17.9213	17.8346	17.9743	18.0339	17.9136	17.9533	20.4031	19.5931	19.8746	17.4948	19.0142	17.6054	20.2399	16.0918	18.8789	20.0611	17.2454	16.1009	15.4068	18.9879	20.9651	16.6785	17.8317
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	17.9222	17.9213	17.8346	17.9743	18.0339	17.9136	17.9533	20.4031	19.5931	19.8746	17.4948	19.0142	17.6054	20.2399	16.0918	18.8789	20.0611	17.2454	16.1009	15.4068	18.9879	20.9651	16.6785	17.8317
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	17.9222	17.9213	17.8346	17.9743	18.0339	17.9136	17.9533	20.4031	19.5931	19.8746	17.4948	19.0142	17.6054	20.2399	16.0918	18.8789	20.0611	17.2454	16.1009	15.4068	18.9879	20.9651	16.6785	17.8317
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	17.9222	17.9213	17.8346	17.9743	18.0339	17.9136	17.9533	20.4031	19.5931	19.8746	17.4948	19.0142	17.6054	20.2399	16.0918	18.8789	20.0611	17.2454	16.1009	15.4068	18.9879	20.9651	16.6785	17.8317
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	17.9222	17.9213	17.8346	17.9743	18.0339	17.9136	17.9533	20.4031	19.5931	19.8746	17.4948	19.0142	17.6054	20.2399	16.0918	18.8789	20.0611	17.2454	16.1009	15.4068	18.9879	20.9651	16.6785	17.8317
R054	833757.83	822128.65	833778.49	822113.30	16	0	1	17.9222	17.9213	17.8346	17.9743	18.0339	17.9136	17.9533	20.4031	19.5931	19.8746	17.4948	19.0142	17.6054	20.2399	16.0918	18.8789	20.0611	17.2454	16.1009	15.4068	18.9879	20.9651	16.6785	17.8317
R055	833786.53	822123.04	833872.14	822051.30	19	0	1	16.5471	16.5541	16.5292	16.5337	16.6070	16.6010	16.5754	18.9149	17.7738	18.1032	15.7569	16.8836	15.1879	17.3237	13.4797	15.5742	15.7500	13.7196	12.9182	12.1232	15.4757	17.4492	14.0526	14.2113
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	20.3916	20.2787	20.3605	20.4076	20.4573	20.4886	20.4295	23.0824	22.6762	21.4279	19.2627	20.9736	19.0674	22.1194	17.2446	20.7292	21.9147	17.8956	16.0300	16.2353	20.0887	21.7323	17.1689	19.4837
R057	833873.20	822052.66	834159.21	821814.78	16	0	1	13.3998	12.4755	12.5656	12.8212	12.7669	12.7677	13.3824	15.3606	16.0491	14.1826	12.7009	13.5058	12.3688	13.5630	10.8716	13.5559	14.1071	11.5773	9.3056	9.7464	11.4579	12.1967	9.7546	12.0504
R058	834159.21	821814.78	834250.10	821738.42	16	0	1	18.6983	17.7720	17.7249	17.9945	17.9857	18.0831	18.7359	21.2694	20.7273	20.0061	17.3345	18.6987	16.7203	19.0823	14.6477	17.0101	17.3670	14.4412	13.2394	12.9793	16.4580	18.3260	14.6568	15.3997
R059	833867.29	822039.23	834058.34	821880.22	17	0	1	15.7064	15.7894	15.6941	15.6693	15.9154	15.7179	15.7556	17.8897	18.7994	16.3930	14.9844	15.8395	14.4651	15.9598	12.7208	15.9348	16.7205	13.1746	10.5576	11.2230	13.1620	13.7488	10.9349	13.8778
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	19.2561	19.1508	19.5750	19.5962	19.5264	19.6166	19.5110	22.1607	21.4438	20.4536	18.3541	20.2628	18.4942	21.5808	16.5816	20.3641	21.6379	17.7114	15.8448	15.8319	19.8513	21.8002	16.7412	19.2793
R061	833116.37	821880.28	833139.75	821889.31	16	0	1	22.5421	21.5760	21.7000	21.6177	20.0507	22.0165	22.1962	22.3146	21.7256	22.6146	22.0952	22.6305	22.3119	22.7212	21.9134	22.4542	22.4683	21.7531	21.8784	21.6137	22.5353	23.2595	22.6888	21.7104
R062	833139.75	821889.31	833296.78	821947.78	16	0	1	12.5089	12.1227	12.2622	12.1783	12.9634	12.9180	12.3509	14.7264	12.9203	14.0575	12.9463	14.4323	13.6060	15.1447	12.2481	13.9824	14.2451	13.0642	12.6698	11.5510	14.8634	17.4024	13.9378	13.6716
R063	833296.86	821947.56	833460.51	822007.97	16	0	1	13.0631	11.0134	13.1894	13.2061	13.2823	11.7252	12.5584	15.5471	12.6756	14.1165	12.7576	14.1329	13.0846	14.9951	12.1090	13.5118	13.8892	12.6076	12.6583	11.5775	15.2026	17.7482	14.6494	13.8359
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	12.3170	10.1467	11.8944	12.7736	11.7241	11.2025	11.8147	15.0227	12.0508	13.5479	12.0377	13.8578	12.6461	14.5021	11.4606	13.1954	13.3611	12.0068	11.9815	11.3605	15.0732	17.6793	14.4922	13.9570
R064	833543.73	822038.72	833563.70	821983.31	16	0	1	12.3170	10.1467	11.8944	12.7736	11.7241	11.2025	11.8147	15.0227	12.0508	13.5479	12.0377	13.8578	12.6461	14.5021	11.4606	13.1954	13.3611	12.0068	11.9815	11.3605	15.0732	17.6793	14.4922	13.9570
R064	833460.98	821962.82	833563.70	821983.31	15	0	1	12.3170	10.1467	11.8944	12.7736	11.7241	11.2025	11.8147	15.0227	12.0508	13.5479	12.0377	13.8578	12.6461	14.5021	11.4606	13.1954	13.3611	12.0068	11.9815	11.3605	15.0732	17.6793	14.4922	13.9570
R065	833160.17	821834.07	833315.56	821891.67	16	0	1	14.1786	12.8943	13.5897	13.9822	13.3184	12.6822	14.3170	15.7892	13.5148	15.1462	13.8167	15.3474	14.3594	15.6206	12.8480	14.0390	14.4753	13.0697	12.2865	11.5419	14.7424	17.3238	14.3215	13.8179
R066	833316.56	821891.68	833481.00	821952.78	16	0	1	13.3977	13.2114	12.8960	13.7371	13.2161	12.2214	13.3210	15.8055	12.9460	14.6626	13.3235	14.7723	13.6040	14.9997	12.4909	13.9620	13.6257	12.7422	12.2869	11.4209	14.7114	17.4054	13.9963	13.1922
R067	833164.01	821776.07	833178.47	821783.88	19	0	1	9.5846	9.5740	9.5429	9.5499	9.5555	9.5700	9.5956	12.9709	10.2801	12.4458	10.8004	12.1911	10.9616	12.8157	9.9371	10.6937	10.5106	10.0933	10.5191	9.4407	11.4175	13.0899	10.5814	9.0305
R068	833178.74	821783.16	833253.68	821813.88	18	0	1	9.5008	9.5064	9.4886	9.5197	9.5166	9.5268	9.5362	12.4771	10.2157	12.3946	10.7318	12.0021	10.9116	12.7733	9.8881	10.6485	10.4797	10.0659	10.4959	9.0003	11.2021	13.0755	10.5690	9.0106
R069	833166.60	821757.87	833260.16	821795.91	29	0	1	7.1064	7.1311	7.0866	7.0938	7.1223	7.1020	7.1288	8.6644	6.9182	8.5087	7.1868	8.1622	7.5666	8.9148	7.2613	7.8570	7.7701	8.5965	9.4394	7.3777	10.0294	12.1828	9.8821	7.8503
R070	833249.90	821820.73	833329.69	821853.67	13	0	1	12.4001	12.3366	12.3494	12.2986	12.3735	12.3511	12.3919	14.5791	11.9476	14.2134	12.1967	13.5529	12.3246	14.0790	11.2800	11.9908	11.9450	11.5855	11.8636	10.4954	13.6720	16.0622	13.2468	11.6213

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_2 x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	12.0747	12.1193	12.1570	12.1959	12.1244	12.1993	12.1663	14.0386	11.3800	13.5552	11.8027	12.9657	11.7674	13.4911	10.8816	11.6497	11.4439	11.0689	11.4357	10.1258	13.4283	15.7262	13.0126	11.4234
R072	833397.24	821875.22	833591.76	821697.07	20	0	1	10.5826	10.5384	10.4960	10.6031	10.7619	10.4538	10.4684	12.3256	10.2045	11.2403	9.8516	10.9138	9.8927	11.1392	8.7436	9.9097	9.8284	9.0124	8.5951	8.0310	10.7447	12.5229	10.1942	9.5040
R073	833451.50	821860.54	833397.24	821875.22	17	0	1	10.9670	10.8290	10.9648	11.0253	11.0398	10.8453	10.9312	12.5428	9.8142	11.8017	10.5505	11.6626	10.8099	12.0414	10.0566	10.6740	10.4589	10.2399	10.5246	9.7079	12.3436	14.2410	12.0899	11.0046
R074	833261.64	821790.34	833451.50	821860.54	20	0	1	11.1731	11.0883	11.2383	11.0470	11.1667	11.1244	11.1678	12.7310	10.1769	11.8736	10.6696	11.6877	10.6949	11.9310	9.6921	10.2831	9.9683	9.7538	9.9264	8.9535	12.0545	14.2305	11.8584	10.2518
R075	833449.48	821861.09	833506.97	821683.08	16	0	1	10.0655	10.0951	9.9726	10.1254	10.0516	10.2001	10.1366	11.6593	9.2031	10.7427	9.6013	10.6128	9.7030	10.8018	8.7172	9.4012	9.0836	8.8483	9.0238	8.1454	11.0244	13.1018	10.8907	9.2733
R076	833501.48	821897.80	833548.66	821899.77	16	0	1	11.2394	11.4995	11.2708	11.4880	11.4573	11.2751	11.3537	13.2455	11.1003	12.0642	10.6665	11.8663	10.7656	12.4504	9.7537	10.8622	10.7659	10.0468	10.2274	9.2857	12.8437	15.1503	12.3357	10.7606
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	11.2394	11.4995	11.2708	11.4880	11.4573	11.2751	11.3537	13.2455	11.1003	12.0642	10.6665	11.8663	10.7656	12.4504	9.7537	10.8622	10.7659	10.0468	10.2274	9.2857	12.8437	15.1503	12.3357	10.7606
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	11.2394	11.4995	11.2708	11.4880	11.4573	11.2751	11.3537	13.2455	11.1003	12.0642	10.6665	11.8663	10.7656	12.4504	9.7537	10.8622	10.7659	10.0468	10.2274	9.2857	12.8437	15.1503	12.3357	10.7606
R077	833506.57	821884.14	833563.57	821884.35	17	0	1	10.2999	10.3714	10.3397	10.3531	10.4377	10.3220	10.3724	12.0014	9.5824	11.2005	9.9131	11.0318	10.0879	11.4987	9.2700	9.9821	9.7500	9.6750	9.9896	8.9596	12.2729	14.6036	12.0248	10.2476
R077	833563.57	821884.35	833600.48	821871.28	17	0	1	10.2999	10.3714	10.3397	10.3531	10.4377	10.3220	10.3724	12.0014	9.5824	11.2005	9.9131	11.0318	10.0879	11.4987	9.2700	9.9821	9.7500	9.6750	9.9896	8.9596	12.2729	14.6036	12.0248	10.2476
R077	833600.48	821871.28	833673.84	821812.08	17	0	1	10.2999	10.3714	10.3397	10.3531	10.4377	10.3220	10.3724	12.0014	9.5824	11.2005	9.9131	11.0318	10.0879	11.4987	9.2700	9.9821	9.7500	9.6750	9.9896	8.9596	12.2729	14.6036	12.0248	10.2476
R078	833682.38	821822.35	833875.32	821660.75	16	0	1	12.8502	12.6809	12.7216	12.8181	12.8123	12.9130	12.8665	14.8060	12.8629	13.6717	12.1445	13.3357	12.0619	13.6719	10.8745	11.9321	11.8455	10.8927	10.9863	10.1284	13.3700	15.6292	12.8988	11.6659
R079	833673.29	821911.43	833867.51	821651.48	16	0	1	9.3978	9.5801	9.4452	9.5221	9.5114	9.3877	9.5035	10.9571	8.2828	10.1106	9.1760	10.3109	9.5485	10.8959	8.9248	9.4292	9.1551	9.3264	10.1100	8.9266	12.3706	14.8027	12.2781	10.0411
R080	833676.67	821661.18	833909.54	821557.94	16	0	1	12.0142	12.0972	12.0810	12.1608	12.1334	11.8711	12.0365	13.9307	10.7010	12.8653	11.2483	12.6523	11.3882	13.2170	10.2577	11.1143	10.8644	10.2977	10.7220	9.5757	13.3026	15.8694	12.8877	11.1274
R081	833867.01	821650.86	833963.08	821552.08	20	0	1	10.0917	10.2417	10.1487	10.1739	10.1655	10.0641	10.2226	11.5740	9.0611	10.8234	9.9459	11.0191	10.2184	11.4722	9.5932	10.0678	9.7544	9.8440	10.6366	9.4854	12.7586	15.1155	12.7695	10.6263
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	14.6402	14.8319	14.5758	14.6210	14.6828	14.4969	14.6822	17.0060	13.3927	16.7853	14.7130	16.3320	15.0534	17.0625	14.0659	14.6720	14.3772	13.9929	14.6131	13.4448	16.9785	19.6048	16.5357	14.5109
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	14.6402	14.8319	14.5758	14.6210	14.6828	14.4969	14.6822	17.0060	13.3927	16.7853	14.7130	16.3320	15.0534	17.0625	14.0659	14.6720	14.3772	13.9929	14.6131	13.4448	16.9785	19.6048	16.5357	14.5109
R082	833526.39	821785.93	833570.13	821687.58	14	0	1	14.6402	14.8319	14.5758	14.6210	14.6828	14.4969	14.6822	17.0060	13.3927	16.7853	14.7130	16.3320	15.0534	17.0625	14.0659	14.6720	14.3772	13.9929	14.6131	13.4448	16.9785	19.6048	16.5357	14.5109
R083	833426.83	821865.11	833496.18	821813.12	14	0	1	6.2709	6.4947	6.5338	6.6264	6.7338	6.5338	6.4130	6.9369	6.3707	7.2876	6.7278	7.1518	6.9352	7.1008	6.4941	6.7158	6.3265	6.2159	6.3633	5.9929	7.0816	8.3172	7.5062	6.5304
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	6.2709	6.4947	6.5338	6.6264	6.7338	6.5338	6.4130	6.9369	6.3707	7.2876	6.7278	7.1518	6.9352	7.1008	6.4941	6.7158	6.3265	6.2159	6.3633	5.9929	7.0816	8.3172	7.5062	6.5304
R083	833524.36	821772.29	833559.81	821652.62	14	0	1	6.2709	6.4947	6.5338	6.6264	6.7338	6.5338	6.4130	6.9369	6.3707	7.2876	6.7278	7.1518	6.9352	7.1008	6.4941	6.7158	6.3265	6.2159	6.3633	5.9929	7.0816	8.3172	7.5062	6.5304
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	14.7211	14.5955	14.5463	14.6826	14.6564	14.5356	14.6460	16.9664	13.0505	16.4025	14.7047	16.4603	15.2211	17.4716	14.4355	14.7431	14.4389	14.8152	15.9303	14.3624	18.4391	21.4601	18.2796	15.1900
R084	833582.69	821644.65	833607.71	821603.87	13	0	1	14.7211	14.5955	14.5463	14.6826	14.6564	14.5356	14.6460	16.9664	13.0505	16.4025	14.7047	16.4603	15.2211	17.4716	14.4355	14.7431	14.4389	14.8152	15.9303	14.3624	18.4391	21.4601	18.2796	15.1900
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	15.5611	15.6875	15.6197	15.6767	15.6548	15.6578	15.7726	17.7505	14.4118	17.3525	15.8249	17.4253	16.2362	18.1579	15.3746	15.5894	15.2316	15.2171	16.4855	14.7094	18.7665	21.7003	18.2714	15.7945
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	15.5611	15.6875	15.6197	15.6767	15.6548	15.6578	15.7726	17.7505	14.4118	17.3525	15.8249	17.4253	16.2362	18.1579	15.3746	15.5894	15.2316	15.2171	16.4855	14.7094	18.7665	21.7003	18.2714	15.7945
R085	833681.67	821545.20	833720.62	821512.85	14	0	1	15.5611	15.6875	15.6197	15.6767	15.6548	15.6578	15.7726	17.7505	14.4118	17.3525	15.8249	17.4253	16.2362	18.1579	15.3746	15.5894	15.2316	15.2171	16.4855	14.7094	18.7665	21.7003	18.2714	15.7945
R086	833580.70	821649.89	833603.88	821583.58	17	0	1	14.9848	14.8933	15.0349	14.7389	14.9522	14.9506	14.9648	16.7223	12.9485	16.2786	14.3316	15.8603	14.5572	16.4169	13.6118	13.8068	13.2823	13.2657	14.2293	12.8166	16.5459	19.3915	16.7196	13.9015
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	14.9848	14.8933	15.0349	14.7389	14.9522	14.9506	14.9648	16.7223	12.9485	16.2786	14.3316	15.8603	14.5572	16.4169	13.6118	13.8068	13.2823	13.2657	14.2293	12.8166	16.5459	19.3915	16.7196	13.9015
R087	833646.49	821548.43	833696.49	821508.20	13	0	1	21.2453	21.2279	21.2337	21.0882	21.0861	21.0250	21.1326	21.7721	20.8808	22.0868	21.6765	22.1740	21.7378	22.2692	21.4364	21.4749	21.2404	21.0639	21.4444	20.6927	21.8494	22.6575	21.7804	21.0856
R088	833254.24	821811.68	833365.50	821856.64	17	4	4	2.3536	2.3421	2.3359	2.3483	2.3263	2.3406	2.3687	3.8283	4.0346	3.9726	3.6886	3.1486	2.9047	2.5412	2.6321	2.4637	2.2704	2.2197	1.9471	1.5720	1.6906	1.6629	1.7455	1.5482
R088	833365.50	821856.64	833416.50	821865.51	17	7	4	2.3536	2.3421	2.3359	2.3483	2.3263	2.3406	2.3687	3.8283	4.0346	3.9726	3.6886	3.1486	2.9047	2.5412	2.6321	2.4637	2.2704	2.2197	1.9471	1.5720	1.6906	1.6629	1.7455	1.5482
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	2.3536	2.3421	2.3359	2.3483	2.3263	2.3406	2.3687	3.8283	4.0346	3.9726	3.6886	3.1486	2.9047	2.5412	2.6321	2.4637	2.2704	2.2197	1.9471	1.5720	1.6906	1.6629	1.7455	1.5482
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	2.3536	2.3421	2.3359	2.3483	2.3263	2.3406	2.3687	3.8283	4.0346	3.9726	3.6886	3.1486	2.9047	2.5412	2.6321	2.4637	2.2704	2.2197	1.9471	1.5720	1.6906	1.6629	1.7455	1.5482
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	2.3536	2.3421	2.3359	2.3483	2.3263	2.3406	2.3687	3.8283	4.0346	3.9726	3.6886	3.1486	2.9047	2.5412	2.6321	2.4637	2.2704	2.2197	1.9471	1.5720	1.6906	1.6629	1.7455	1.5482
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	2.3536	2.3421	2.3359	2.3483	2.3263	2.3406	2.3687	3.8283	4.0346	3.9726	3.6886	3.1486	2.9047	2.5412	2.6321	2.4637	2.2704	2.2197	1.9471	1.5720	1.6906	1.6629	1.7455	1.5482
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	2.3536	2.3421	2.3359	2.3483	2.3263	2.3406	2.3687	3.8283	4.0346	3.9726	3.6886	3.1486	2.9047	2.5412	2.6321	2.4637	2.2704	2.2197	1.9471	1.5720	1.6906	1.6629	1.7455	1.5482
R089	833256.85	821801.44	833370.08	821846.87	16	4	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R089	833598.99	821594.44	833699.53	821508.87	16	6	4	2.3086	2.2978	2.3054	2.3147	2.3357	2.3087	2.3264	2.9233	3.0026	2.8796	2.7815	2.4605	2.3864	2.1364	2.2413	2.0956	1.9858	2.1088	1.9314	1.4677	1.6271	1.6283	1.6637	1.5109
R090+R091	833269.78	821629.64	833337.84	821634.13	17	0	1	9.1426	9.2361	9.0477	9.1390	9.2835	9.0640	9.1309	11.6107	9.2095	10.9803	9.4809	10.7446	10.0358	11.1738	9.1542	10.6321	10.4461	10.3257	9.9053	9.0267	11.6452	14.0238	10.9605	9.9514
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	8.8942	8.7286	9.4229	9.6050	9.4732	8.4388	8.9973	11.2822	8.9206	10.5436	9.5499	10.6714	9.9740	11.2710	9.0182	10.4865	10.4629	10.1241	9.6955	8.8630	11.5904	13.7230	11.0146	10.3518
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1	8.8942	8.7286	9.4229	9.6050	9.4732	8.4388	8.9973	11.2822	8.9206	10.5436	9.5499	10.6714	9.9740	11.2710	9.0182	10.4865	10.4629	10.1241	9.6955	8.8630	11.5904	13.7230	11.0146	10.3518
R094	833337.84	821634.13	833341.81	821576.41	16	0	1	5.5708	5.5610	5.5253	5.6649	5.6842	5.6551	5.4958	6.4988	4.5975	6.1359	5.1449	5.4453	4.8078	4.7924	3.7463	3.7883	3.2426	3.1408	2.6657	2.3787	3.2215	4.1059	3.6234	2.9717
R095	833609.59	821501.72	833648.49	821548.43	17	0	1	23.2870	23.0371	23.1194	23.2336	23.2293	23.1680	23.3639	24.3953	23.7418	24.4877	24.1288	24.7124	24.3186	24.7079	23.7965	24.0459	23.8757	23.3717	23.7214	22.6838	24.0686	25.1245	24.1110	23.3486
R096+R097	833980.59	822454.38	834028.77	822414.27	18	0	1	12.3168	16.0254	10.6809	6.4025	6.4132	13.7739	11.7346	15.8480	14.7272	16.2668	14.4069	15.3370	14.0712	16.2048	13.0916	14.6980	14.1561	13.2248	12.4558	11.1954	14.4235	17.4395	14.3759	13.8736
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	20.5676	20.4801	20.8023	21.8551	20.5302	18.7911	19.6805	21.5497	23.3350	24.6935	21.5468	22.2422	19.9007	21.9125	17.9883	19.4882	17.3784	15.7529	14.9811	14.2504	17.3951	18.9384	15.2865	15.6704
R100+R101	834127.62	822332.11	834218.31	822258.35	18	0	1	16.3997	16.4308	18.8803	16.7508	17.9396	16.0810	18.6901	19.8785	18.9268	21.5842	18.7840	19.1795	18.5274	19.3047	16.0592	18.3390	16.8112	15.3506	14.3151	13.3710	16.4457	19.3543	15.4895	15.7561
R102+R103	834218.31	822258.35	834309.95	822180.58	18	0	1	16.1508	18.1392	15.3613	16.4274	16.4624	17.2103	16.2888	20.8533	18.1240	19.9099	16.7431	18.5055	15.8974	17.7099	13.5231	15.8547	15.0950	12.7412	11.6533	11.2159	15.4438	18.0350	13.9707	14.3399
R104+R105	834309.95	822180.58	834407.46	822098.55	18	0	1	14.3211	16.6922	14.3043	14.0753	14.1044	16.0254	13.9483	18.9951	16.9954	17.9710	15.9407	17.6416	15.2423	16.7053	13.1373	15.0623	14.1975	13.0641	11.9886	11.5112	15.2910	17.5628	14.4069	14.3439
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	10.9398	11.2029	11.4609	11.6464	11.8322	10.3918	10.7897	13.2842	10.8687	12.8243	11.4500	12.9879	12.0859	14.0894	11.3421	13.1502	13.1217	12.5246	12.0690	11.2260	14.5205	17.2567	13.5333	12.6926
R107	833991.55	822370.04	834090.35	822287.83	18	0	1	11.7340	10.3344	11.7679	13.7873	12.2953	10.8694	11.6480	13.1056	10.5212	12.0311	10.8076	12.5092	11.6897	13.2439	10.6047	12.2929	12.7799	12.0490	11.3832	10.5416	13.8828	16.8285	13.7811	13.7530
R108	834090.84	822288.06	834181.98	822212.22	16	0	1	11.5919	10.5049	11.6395	13.2440	12.6133	11.8394	11.5469	13.1027	10.6633	12.2195	11.2779	12.4499	11.8115	13.5021	10.9467	12.6629	13.2696	12.1831	11.7586	10.9171	14.4975	17.0551	13.5007	12.8118
R109	834181.98	822212.22	834273.06	822136.48	17	0	1	11.2550	10.1076	11.3097	12.9800	12.3072	11.5082	11.2064	12.8172	10.2983	11.8864	10.9457	12.2211	11.3487	13.2096	10.6515	12.2332	12.8010	11.7637	11.2745	10.3302	13.8279	16.4290	13.8440	12.8577
R110	834273.34	822136.83	834364.36	822060.84	17	0	1	10.7429	10.8952	10.3991	11.8226	11.3675	10.3651	11.3488	13.0875	10.1498	11.9236	10.7635	12.1375	11.3508	13.0235	10.4893	12.1092	12.3645	11.3627	11.2677	10.4291	13.6144	15.8681	13.3979	12.6956
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	11.0395	11.4107	10.4187	11.6004	11.0752	10.3676	11.0074	12.9223	10.6381	12.3908	10.9473	12.3755	11.4346	12.9428	10.5931	11.9150	12.4810	11.4630	10.9254	10.3830	13.8508	16.4986	13.1415	11.6759
R112	833848.78	822405.79	833902.86	822380.57	19	0	1	21.3817	21.9597	23.7511	22.3332	21.7025	21.8509	21.9914	24.8780	23.9452	24.6087	21.6560	22.8975	21.3135	23.5535	18.0507	20.5490	19.1988	16.6126	15.6017	14.9887	18.2566	20.2525	16.1666	17.3073
R113	833833.16	822335.17	833909.66	822271.35	18	0	1	10.7086	10.5463	11.5667	8.9799	8.1703	11.5658	10.2473	11.7732	9.6613	11.3563	10.0129	11.5289	10.4830	11.8548	9.7408	11.1705	11.7262	10.7050	10.2774	9.4181	12.9862	15.0702	12.4552	11.6191
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	12.8173	12.3294	12.6079	12.6985	12.5061	12.4547	12.6945	14.6882	13.1456	15.1578	13.8207	14.7417	13.8597	15.0729	13.2037	14.1303	14.6185	13.4698	12.9510	12.0169	14.6680	16.7908	13.8115	13.2161
R115	833994.06	822200.75	834077.01	822132.08	18	0	1	17.7419	17.7013	17.8117	17.8492	17.2850	17.6437	17.7018	19.8769	18.0997	19.7047	17.3705	18.6904	17.1156	18.9006	15.3420	17.0076	17.0192	14.8857	14.0014	13.5927	16.4049	18.5316	15.2601	15.5843
R116	834076.90	822131.84	834097.30	822115.02	19	0	1	11.9021	11.9331	12.5021	12.5726	12.3088	12.2633	12.0731	13.7145	11.5288	13.3768	12.1306	13.3397	12.5581	13.8526	11.7170	13.0278	13.7100	12.4038	11.9387	11.3720	13.9942	15.9358	13.3859	12.8008
R117	834097.30	822115.02	834190.89	822037.73	18	0	1	11.9914	12.4776	12.0895	12.6495	12.5825	12.3318	12.2257	13.7542	11.7071	13.2329	12.3321	13.4992	12.6744	13.9495	11.8779	13.0541	13.8829	12.5502	12.0516	11.4818	14.0392	16.0313	13.5376	13.0779
R118	834190.89	822037.73	834243.28	821993.08	19	0	1	12.5425	12.5240	12.2567	12.7961	12.7343	12.4911	12.3339	13.9005	11.8672	13.3668	12.5159	13.5816	12.7807	14.0302	12.0103	13.1919	13.9914	12.6531	12.4475	11.5718	14.4703	16.0925	13.6467	12.9918
R119	834242.04	821993.85	834282.16	821961.45	19	0	1	11.9761	11.7924	12.1455	12.0551	11.7051	11.8746	11.9525	13.6066	11.7707	13.2723	12.3817	13.3090	12.5604	13.8343	12.0395	13.0729	13.9421	12.5909	12.4475	11.5718	14.4703	16.0925	13.6467	12.9918
R120	834281.93	821961.17	834359.17	821895.80	18	0	1	12.3404	12.4053	12.3751	12.2289	11.9367	12.5725	12.2048	14.1805	12.0589	13.6151	12.6897	13.8685	13.0876	14.3100	12.2577	13.5335	14.0365	12.9477	12.4930	11.6174	14.4648	16.0682	13.5447	13.1620
R121	833768.03	822376.15	833799.11	822318.98	18	0	1	13.1893	11.8640	14.0777	12.7315	12.7537	12.7169	12.2932	15.1574	9.9791	14.1228	12.2818	14.5718	13.9721	17.0781	13.6108	13.9503	14.5058	15.2572	17.4666	14.8563	21.5774	25.9970	21.0778	16.4715
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	14.2247	14.7794	15.0009	15.5530	15.5959	14.6368	13.9080	16.5119	11.6799	16.5603	13.5798	15.0247	13.2310	14.9225	11.7449	11.6789	10.1223	10.4099	11.2397	9.7032	13.0178	15.4336	12.9587	10.3585
R123	833868.78	822222.16	833954.75	822150.80	18	0	1	6.3021	6.2503	6.1517	6.0860	5.5741	6.7478	6.4659	8.1734	5.3874	7.2810	6.4767	7.4562	7.0810	7.9185	6.5042	7.2305	6.8904	7.6077	8.0756	6.7344	9.5037	11.9773	9.9162	7.4594
R124	833673.82	822341.72	833694.86	822284.07	18	0	1	16.0967	15.7194	15.6750	16.3858	15.7194	16.2511	15.7896	17.6797	14.1765	17.7965	16.0292	17.7581	16.9995	19.4711	16.4412	16.7213	17.5708	17.1705	18.7908	16.5470	22.0867	25.6113	22.1671	17.3918
R125	833694.86	822284.07	833827.77	822172.85	18	0	1	14.7342	14.9106	14.3019	14.8560	15.3578	14.1787	14.6926	17.3365	11.7962	16.5165	13.4298	14.6733	12.5389	14.1103	10.4888	10.2629	8.1182	8.3368	8.3387	7.4318	10.0358	11.9799	10.4718	8.2384
R126	833653.40	822269.00	833688.33	822174.73	13	0	1	13.1697	13.4524	12.6452	14.5273	13.8414	12.7940	13.6199	15.4411	13.0404	14.9800	13.4180	14.9993	13.7834	15.5207	12.9224	14.5659	14.3166	13.5327	13.6317	12.4352	15.7734	18.7887	15.1238	13.8217
R127	833486.65	822315.75	833503.51	822278.48	18	0	1	12.6020	13.4234	12.6999	12.5318	11.9549	12.4889	12.8342	14.5976	11.2399	13.9248	12.9100	14.3847	13.4497	15.0221	13.1197	13.5504	13.8333	13.9617	15.0908	13.3168	17.4269	20.6447	17.0227	14.0515
R128	833503.51	822278.46	833524.36	822221.21	18	0	1	11.4623	11.3894	11.9379	11.8622	11.3904	11.2232	11.2561	13.1039	9.5587	12.2287	11.1896	12.7010	11.9216	13.6074	11.6653	12.1367	12.3361	12.6842	13.8253	12.1698	16.1285	19.4437	16.3973	13.1432
R129	833377.80	822232.03	833355.00	822393.72	18	0	1	9.3975	9.3683	9.2253	9.4661	9.3080	9.4037	9.4318	11.3378	7.9910	10.5569	9.5836	10.8559	10.3562	11.8621	9.9575	10.4643	10.1812	10.7654	12.1191	10.3328	14.5369	17.3311	14.3414	11.3701
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	9.0145	9.0061	8.9252	8.9251	9.0526	8.9185	8.9810	10.9656	7.5726	10.1817	9.1616	10.4574	9.7291	11.4994	9.3331	10.0454	9.7278	10.3904	11.7700	9.9446	14.3847	17.0876	14.0356	10.9538
R131	833396.42	822175.04	833434.10	822080.78	18	0	1	9.9536	9.9450	9.9685	9.9232	10.0550	9.9185	9.9408	12.1623	9.5103	11.4336	9.7123	11.1574	10.3057	12.0160	9.3643	10.6172	10.8298	10.4035	10.9662	9.6843	13.3867	15.8151	12.7079	11.2145
R132	833433.92	822080.79	833460.51	822007.87	16	0	1	6.9735	7.1274	7.2441	7.2067	7.0968	6.9062	6.5494	7.4941	6.9714	8.1121	7.1532	7.5083	7.1054	7.1474	5.9715	6.1610	5.6938	5.4385	5.3773	4.8191	5.7058	6.6956	5.6685	5.0424
R133	833460.45	822007.95	833481.00	821952.76	16	0	1	14.4106	15.1496	15.7737	16.4353	15.9345	14.9719	13.9827	16.2827	13.9129	16.0886	13.7227	15.0758	13.3791	14.9697	11.5658	12.2776	11.1185	10.7288	10.7953	9.7518	13.0442	14.9761	11.9449	10.7142
R134	833481.00	821952.76	833506.97	821883.08	16	0	1	10.7571	11.3569	12.2251	12.8527	12.2291	11.2581	10.2821	12.2402	10.1401	11.5470	10.3019	11.3182	10.4792	11.5502	9.4574	10.4340	10.4174	10.0947	9.8768	8.8591	11.2187	13.4280	11.0159	9.8784
R135	833209.07	822239.78	833232.06	822178.07	18	0	1	12.7208	16.1828	18.8840	19.4275	18.2020	17.3992	13.4424	13.0811	8.4146	11.8386	10.9551	12.0133	11.5798	13.2331	11.0863	11.6318	10.9089	11.1062	11.9434	10.9699	16.1346	18.8080	16.6159	13.4943
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	7.1661	9.9448	12.6938	1.6557	1.6579	12.7169	11.1503	11.3034	7.5800	10.9349	9.0741	10.4804	10.1056	11.8352	9.6038	10.1276	9.5731	10.3439	11.4221	9.9899	13.8419	17.4014	15.0617	11.9063
R137	833080.91	822182.63	833100.83	822129.44	18	0	1	8.9642	8.9749	11.4304	1.5525	1.5581	11.4532	8.1534	10.3876	6.3777	9.1449	7.7878	9.2253	9.0593	10.5989	8.2084	8.9163	9.3034	9.3249	10.5292	9.2445	13.0139	16.5320	14.3227	10.7165
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	8.9642	8.9749	11.4304	1.5525	1.5581	11.4532	8.1534	10.3876	6.3777	9.1449	7.7878	9.2253	9.0593	10.5989	8.2084	8.9163	9.3034	9.3249	10.5292	9.2445	13.0139	16.5320	14.3227	10.7165
R139	833121.68	822072.03	833156.56	821977.95	18	0	1	8.1401	8.0300	8.3216	7.7420	8.1717	8.2327	8.2166	9.9866	6.5034	8.9850	7.9255	9.4319	8.7691	10.5047	8.4328	8.9878	9.1028	9.6140	10.9513	9.1567	13.5232	16.7263	13.6830	10.3053
R140	833274.46	822007.07	833296.86	821947.56	17	0	1	15.8238	15.5565	15.2889	15.6812	15.4865	16.2595	15.7435	18.1286	13.6505	17.0489	14.4425	15.4590	13.4986	14.7034	11.1994	11.1795	9.2009	9.3684	9.5422	8.2790	11.2143	13.6322	11.4358	9.6208

Caline 4 input for 2049 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO$_2$ x 100 (g/VMT) Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.35	821947.25	833315.56	821891.67	13	0	1	14.3610	14.0933	11.5867	11.1492	14.1406	15.4324	14.2409	17.8008	12.8659	16.4930	13.4465	14.6289	12.5405	13.8360	10.3087	10.2706	7.9099	8.2558	8.5826	7.4578	10.6927	13.3065	10.8932	8.5287
R142	833329.69	821953.67	833315.96	821891.84	13	0	1	7.6933	6.2694	6.9131	5.8988	5.4689	6.8523	7.6437	8.5591	6.6613	8.3703	7.8348	8.6933	8.3446	8.8398	7.6981	8.4224	8.1109	7.5048	7.4588	7.1947	8.8569	10.9436	9.4090	8.3991
R143	833129.75	821889.31	833160.17	821834.07	13	0	1	16.3417	16.2872	15.9080	16.1524	16.0385	16.8101	16.1950	18.4426	15.3325	18.4738	16.0830	17.0220	14.7675	15.9419	12.8743	12.4611	10.8680	10.4938	10.5499	9.4830	12.0386	14.3876	12.3178	10.3780
R144	833160.17	821834.07	833178.74	821783.15	13	0	1	16.1220	16.0368	15.7046	16.2441	16.0584	16.6991	16.0582	18.2517	14.3352	17.6641	15.2037	16.2283	14.2905	15.5514	12.1584	12.0893	10.0449	10.0868	10.1199	8.8757	11.7241	14.0967	12.0765	10.0442
R145+R146	833812.49	821976.50	834004.98	821816.03	17	0	1	12.7047	11.8640	14.0777	8.3012	15.9239	11.6081	12.2915	14.3905	9.4880	13.5436	10.7418	12.0042	10.0679	10.9641	8.1601	7.9188	5.5570	6.1515	6.0892	5.2343	7.1291	8.9163	7.7212	6.0839
R147+R148	833738.44	821888.35	833931.13	821727.74	16	0	1	10.6430	10.8688	12.6938	14.1160	12.7537	11.8640	10.9878	13.1246	8.6262	12.0611	9.6476	10.4556	8.8092	9.4118	6.7964	6.5585	4.7683	5.2885	4.8970	4.2495	6.2244	7.1159	6.5112	5.2037
R149	833728.61	821749.52	833807.73	821684.30	14	0	1	9.4467	9.0207	8.2653	9.9625	9.9797	11.1328	9.0369	11.4750	7.3857	10.1884	9.1324	10.5072	9.9685	11.9032	9.7206	9.9536	11.0621	11.3918	12.9012	10.8634	15.7254	19.1174	16.8663	12.7613
R149	833774.08	821643.52	833807.73	821684.30	13	0	1	9.4467	9.0207	8.2653	9.9625	9.9797	11.1328	9.0369	11.4750	7.3857	10.1884	9.1324	10.5072	9.9685	11.9032	9.7206	9.9536	11.0621	11.3918	12.9012	10.8634	15.7254	19.1174	16.8663	12.7613
R150	833736.87	821759.23	833807.71	821603.87	11	0	1	9.4467	9.0207	8.2653	9.9625	9.9797	11.1328	9.0369	11.4750	7.3857	10.1884	9.1324	10.5072	9.9685	11.9032	9.7206	9.9536	11.0621	11.3918	12.9012	10.8634	15.7254	19.1174	16.8663	12.7613
R151	833613.61	821610.98	833693.50	821543.70	13	0	1	9.4467	9.0207	8.2653	9.9625	9.9797	11.1328	9.4720	11.4750	7.4674	10.3043	9.1324	10.5072	9.9685	11.9032	9.5466	9.9536	10.0281	11.1053	12.4837	10.4288	15.7254	19.1174	16.8663	11.6497
R151	833693.50	821543.70	833775.28	821642.63	14	0	1	9.4467	9.0207	8.2653	9.9625	9.9797	11.1328	9.4720	11.4750	7.4674	10.3043	9.1324	10.5072	9.9685	11.9032	9.5466	9.9536	10.0281	11.1053	12.4837	10.4288	15.7254	19.1174	16.8663	11.6497
R152	833774.08	821643.52	833826.17	821600.58	20	0	1	9.4467	9.0207	8.2653	9.9625	9.9797	11.1328	9.0369	11.4750	7.3857	10.1884	9.0168	10.3486	9.6658	11.4446	9.0655	9.8904	9.8613	10.6732	11.5595	9.8451	15.1328	18.3380	14.6766	10.7403
R153	833991.31	822369.76	834028.77	822414.27	18	0	1	10.0685	10.2801	9.8669	9.8935	10.3593	10.2746	10.1909	12.4331	8.7192	11.4732	9.6042	10.2401	9.1432	10.3917	7.7008	8.2897	7.6498	7.5220	7.7865	6.7842	9.7550	12.1236	10.2628	8.2125
R154	833950.46	822320.45	833992.00	822369.67	18	0	1	10.0003	10.3703	9.6439	10.0222	10.5235	10.0083	10.2723	12.4767	8.6926	11.3602	9.5128	10.3384	9.2074	10.2400	7.7831	8.2312	7.5389	7.6417	7.9172	6.8396	9.7755	12.0606	10.0782	8.0342
R155	833909.65	822271.35	833950.46	822320.45	18	0	1	10.0026	10.3887	9.8636	9.8888	10.2184	10.1503	10.2845	12.7843	9.2088	11.7932	9.8521	10.4777	9.4000	10.7276	7.8778	8.4606	7.9903	7.9245	8.0524	6.9418	10.1054	12.6654	10.4775	8.2877
R156	833868.78	822222.16	833909.65	822271.35	18	0	1	14.2069	13.7313	13.4770	13.4255	13.0994	13.1595	14.2560	18.5262	14.4135	17.5390	15.4553	16.5951	15.1481	16.1509	13.3184	13.5080	12.4821	12.5337	12.3906	10.8208	13.6187	15.5692	13.4391	10.9642
R157	833866.58	822222.34	833827.77	822172.95	18	0	1	14.7245	14.3770	14.3756	13.9693	14.0901	14.0563	14.7301	18.9684	15.1545	17.9279	15.3788	16.1287	14.5380	16.2372	12.7121	12.7635	11.8312	11.8192	12.2434	10.6731	13.6935	15.7857	13.4732	11.0203
R158	833827.77	822172.95	833778.49	822113.35	18	0	1	14.4950	14.5722	14.5149	14.5215	14.7007	14.5250	14.4782	16.9354	13.1264	16.4134	14.1352	14.9174	13.4614	15.0268	11.7975	11.8095	10.9549	10.9273	11.4612	10.2161	13.6408	15.9110	13.5223	11.1956
R159	834075.91	822299.62	834112.90	822344.34	15	0	1	10.4028	10.6646	11.5213	11.5688	8.9968	11.5658	10.2922	12.2195	9.7386	11.8272	10.6627	12.2212	10.9926	12.6182	9.8563	10.9037	11.2955	10.8660	11.2609	10.0548	14.1714	16.5455	13.7106	12.3378
R160	834090.39	822287.53	834127.63	822332.11	15	0	1	12.1884	12.1172	12.0861	12.3986	11.7632	12.4479	12.5966	14.7086	11.2241	13.6637	11.4323	12.7862	11.5164	13.2854	9.9213	10.5034	10.1971	9.7225	10.0468	8.8080	12.6360	15.3341	12.4324	10.2378
R161	834034.90	822250.52	834075.91	822299.62	15	0	1	10.5862	10.5491	10.5599	10.2903	10.8785	10.4527	10.7851	13.0276	9.8673	11.9917	10.6451	12.2051	11.2365	13.0627	10.3540	11.3767	11.2906	11.0909	11.4675	10.3037	14.0425	16.9454	13.7034	11.8019
R162	834049.42	822238.28	834090.39	822287.53	15	0	1	12.2916	12.2457	12.1098	12.1562	12.0938	12.1867	12.3003	14.6174	11.2503	13.5493	11.4687	12.8718	11.5028	13.0868	9.9964	10.7555	10.1835	9.7373	10.0600	8.7819	12.4988	15.3365	12.4133	10.2445
R163	833993.96	822201.65	834034.90	822250.52	16	0	1	11.5384	11.6829	11.7886	11.4287	11.5444	11.6678	11.5701	14.0621	11.0947	13.0550	11.1543	12.3573	11.1131	12.6280	9.6558	10.7363	10.2447	9.7998	9.8876	8.6949	12.2857	15.0467	12.0568	10.2545
R164	834007.88	822189.33	834049.42	822238.28	15	0	1	11.4499	11.4518	11.4978	11.2027	11.6806	11.4077	11.3962	13.5366	10.1216	12.6217	10.5387	11.9154	10.7146	12.7627	9.6338	10.1278	10.0269	10.0043	10.5490	9.1272	12.9872	15.8051	12.8105	10.4441
R165	833953.31	822151.70	833994.47	822201.23	16	0	1	12.8422	12.7544	12.4925	12.5827	12.4599	12.7700	12.8871	14.7522	12.6248	13.7099	12.5365	13.5067	12.5480	13.7325	11.2735	12.1404	11.8154	11.3550	11.4125	10.4800	13.9458	15.9735	13.2905	11.5169
R166	833872.14	822051.39	833954.76	822150.60	19	0	1	9.6661	9.3644	9.4715	9.4998	9.5369	9.4925	9.6966	11.0558	9.3070	10.3774	9.4912	9.8168	9.1288	8.9312	8.1708	8.5685	7.7573	7.8047	7.1087	6.5839	7.6093	8.6756	7.8461	7.3406
R167	833885.47	822042.45	834007.88	822189.33	16	0	1	17.5642	17.6210	17.4666	17.5838	17.8484	17.6202	17.6573	20.9740	18.6699	19.7296	17.1940	18.6492	16.8895	18.9702	14.7229	16.4695	16.3716	14.2835	13.8815	13.1923	16.9822	19.6358	15.7700	15.1761
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1	3.9662	3.9356	4.0370	4.1140	3.8429	3.8958	3.9097	4.8234	3.9274	4.4330	4.1335	4.3592	4.3155	4.1404	3.7612	4.2598	3.9133	3.9944	3.4025	3.1865	3.8237	4.8208	4.1454	3.6649
R170+R171	833738.44	821888.35	833812.49	821976.50	18	0	1	5.9408	5.9541	5.9484	5.7943	5.9766	5.9608	5.8751	7.0867	5.7206	7.0789	6.3895	6.8162	6.5622	6.7676	5.7784	5.9993	5.6510	5.6543	5.5507	5.0571	6.2682	7.4531	6.4528	5.6330
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1	12.0024	11.8541	11.8315	11.8575	11.6961	11.9347	11.8392	14.2599	10.7591	13.3854	11.3310	12.6829	11.4011	13.0957	10.2979	10.9821	10.6900	10.3885	10.5535	9.4405	12.7107	15.1288	12.4187	10.6755
R174+R175	833561.78	821677.56	833683.38	821823.55	16	0	1	12.7722	12.7635	12.7229	12.7879	12.6795	12.7995	12.8014	15.6870	12.8976	14.8580	13.3183	14.5640	13.3682	15.4128	12.3752	13.1991	13.1236	12.9022	12.8701	11.6888	15.1224	17.5296	14.6438	12.5810
R176	833496.77	821606.49	833560.47	821680.73	20	0	1	11.9275	11.9016	11.9512	11.9900	12.0608	11.9075	11.9073	14.1211	11.6973	13.1957	12.1738	13.4655	12.6846	14.2385	12.0146	13.1977	13.2256	12.9469	12.9934	11.8559	14.9823	17.3198	14.6003	13.4040
R177	833513.09	821599.24	833573.68	821668.47	20	0	1	13.2614	13.2859	13.3065	13.2209	13.0849	13.3034	13.1941	15.1768	11.8248	14.1916	12.3073	13.4579	12.1435	13.7560	10.9765	11.6113	11.2391	10.6916	10.6306	9.6196	12.6132	14.9592	12.4519	11.8567
R178	833440.44	821529.90	833498.60	821608.61	16	0	1	13.8658	13.7676	13.7538	13.8555	14.0219	13.7270	13.9853	16.0205	13.9529	15.1645	14.1311	15.5589	14.6890	16.5574	14.0151	15.1351	15.0941	14.8647	15.3909	13.9703	17.5890	20.1249	17.2348	15.4151
R179	833481.64	821526.21	833511.33	821600.33	17	0	1	14.8712	14.8048	14.8388	14.8597	14.8758	14.8017	14.8803	17.2867	13.9790	16.1747	14.3180	15.8088	14.3994	16.3724	13.0382	14.3591	14.2983	13.1141	12.9009	12.1306	15.8220	17.9285	14.7176	13.8880
R180	834218.31	822258.35	834325.96	822385.39	18	0	1	12.6304	12.7421	12.9519	12.9048	12.9226	12.5379	12.9062	15.3511	12.0293	14.6898	12.4268	14.0828	12.8595	14.8935	11.6126	12.7211	12.3353	12.0436	12.4087	11.1185	15.4780	18.8305	15.1582	12.8099
R181	834181.98	822212.22	834218.31	822258.35	18	0	1	12.9503	9.9448	9.0034	9.9625	11.1686	9.9448	13.7953	13.9176	9.7897	12.5817	10.9773	12.4785	13.0110	14.6977	11.5019	12.7705	11.9970	12.8022	13.2569	11.3270	16.0254	19.5891	16.3378	12.9200
R182	834140.62	822162.67	834181.78	822212.39	18	0	1	11.4384	11.5325	12.2478	12.2185	14.2432	12.7950	11.6705	13.4779	10.3333	12.0597	10.8450	12.4147	11.5099	14.3311	10.3232	11.5287	12.0635	11.7647	12.2289	10.3531	15.0740	19.3761	15.1545	12.4512
R183	834099.34	822113.33	834140.62	822162.67	18	0	1	12.8425	13.3603	14.0500	14.3476	14.7501	15.1819	12.8913	15.1698	11.7701	14.0289	12.2290	13.6672	12.6729	14.4482	11.4974	10.9731	10.5993	10.5683	11.3889	10.5133	15.1308	18.7062	14.3922	13.6392
R184	834077.01	822132.08	834051.51	822100.94	13	0	1	12.7061	12.2751	12.1111	12.0393	11.9002	12.7169	12.7370	14.9522	9.6074	13.8224	10.4505	11.4462	9.4396	10.2039	7.3160	7.3589	6.0794	6.1149	6.1241	5.1271	7.4294	9.2948	8.1062	5.8142
R184	834051.51	822100.94	834071.90	822084.18	13	0	1	12.7061	12.2751	12.1111	12.0393	11.9002	12.7169	12.7370	14.9522	9.6074	13.8224	10.4505	11.4462	9.4396	10.2039	7.3160	7.3589	6.0794	6.1149	6.1241	5.1271	7.4294	9.2948	8.1062	5.8142
R184	834071.90	822084.18	834097.30	822115.02	14	0	1	12.7061	12.2751	12.1111	12.0393	11.9002	12.7169	12.7370	14.9522	9.6074	13.8224	10.4505	11.4462	9.4396	10.2039	7.3160	7.3589	6.0794	6.1149	6.1241	5.1271	7.4294	9.2948	8.1062	5.8142
R185	834309.96	822180.58	834382.66	822267.44	19	0	1	12.2913	12.1647	12.6925	12.2551	12.9226	12.2118	12.6560	14.4839	11.1826	13.4312	11.9003	13.6820	12.2832	14.6838	11.5746	12.6210	12.7134	12.1172	12.6647	11.1315	15.5095	18.3460	15.0760	12.7356
R186	834231.54	822088.63	834273.34	822136.83	19	0	1	13.8792	14.0793	15.1497	15.8092	17.1305	15.7981	13.4773	16.0078	12.7048	14.2970	12.5355	14.5291	12.9690	14.6977	11.5071	10.6315	10.0462	10.2424	10.9197	10.1090	14.4028	17.6676	14.3922	13.6392
R187	834190.59	822037.73	834231.76	822086.45	18	0	1	13.8025	14.4473	13.7730	14.4457	14.9027	14.4290	14.1209	16.4980	13.6920	15.4454	14.5501	16.1917	15.2522	16.7868	14.4225	15.6408	15.4299	15.2365	15.5388	14.5378	17.8615	20.4694	17.6383	15.8351
R188+R189	834004.98	821816.03	834059.34	821880.22	19	0	1	11.9403	11.3512	12.1733	12.9337	11.8067	11.5767	11.9468	13.7027	10.1916	12.5741	10.9390	12.2387	11.4338	12.7114	10.0490	10.6226	10.5507	10.2750	10.5440	9.1820	13.0521	15.2345	12.6932	11.1187
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1	12.7322	13.4211	12.9196	13.3620	13.8873	13.2382	13.2243	15.2971	11.8072	13.9578	12.0446	13.5771	12.5046	14.4441	11.1243	12.1355	12.1104	11.4332	12.0628	10.6627	14.9769	17.8403	14.6817	12.2893
R192+R193	833878.32	821660.75	833930.85	821727.98	20	0	1	10.0252	9.8434	9.7450	10.4855	11.0407	9.8864	9.6977	11.0445	8.2848	10.0243	8.9007	10.3345	9.5556	11.2748	8.0013	8.8166	8.2043	7.6826	7.2975	7.2374	11.2586	10.5608	8.9706	10.3133
R194+R195	833825.79	821600.86	833867.51	821651.46	20	0	1	18.3023	17.2317	17.7220	18.7562	18.8597	17.9183	18.1392	18.8163	16.0883	18.5182	17.5476	19.7128	18.5440	19.3345	17.7177	18.3727	18.4371	18.4320	19.9404	18.1701	20.5624	21.6447	20.0414	19.5700
R196+R202	833761.01	821523.35	833826.17	821600.55	20	0	1	18.3087	18.7271	15.1979	16.8290	16.9593	16.9858	18.6477	18.1450	18.2274	17.2660	15.3401	16.3406	17.8155	16.5898	17.0467	17.5105	17.4531	19.7769	17.2116	16.5637	18.8156	20.3989	18.7071	20.5983
R197	834364.36	822060.94	834400.15	822104.71	17	0	1	15.2885	11.1328	8.2653	8.3012	9.9797	9.9448	9.9615	15.1763	11.4377	14.6535	13.0205	14.8139	9.2074	11.4429	9.6021	9.2562	9.7309	7.9060	8.3418	8.7214	12.7626	20.5802	16.8592	12.7613
R198	834322.77	822010.68	834364.36	822060.94	18	0	1	12.3156	10.4992	9.9260	8.3012	9.9797	9.0207	9.9615	13.5196	9.1299	12.1345	10.7165	12.3447	11.5766	15.9989	11.0884	12.1364	12.3727	11.9437	12.1005	10.9697	16.9460	18.2202	14.7031	16.8897
R199	834281.93	821961.17	834323.00	822010.48	19	0	1	15.0564	15.2711	15.5439	17.6700	17.4824	17.6322	15.6537	16.8699	14.1090	16.1796	14.6056	14.4107	13.8605	15.0804	11.8065	12.5739	12.5655	14.4951	14.2995	13.7684	16.2936	19.0036	14.6405	14.1271
R200	834239.17	821914.13	834259.06	821963.18	14	0	1	13.7559	12.6898	13.4226	13.4576	14.2296	14.0303	13.8151	15.6570	12.4990	15.2096	12.1489	13.8183	12.2054	14.5633	11.0748	12.6817	12.7491	12.0442	12.1448	10.8900	14.5621	17.3937	14.0366	12.8468
R200	834239.17	821914.13	834327.69	821840.33	18	0	1	13.7559	12.6898	13.4226	13.4576	14.2296	14.0303	13.8151	15.6570	12.4990	15.2096	12.1489	13.8183	12.2054	14.5633	11.0748	12.6817	12.7491	12.0442	12.1448	10.8900	14.5621	17.3937	14.0366	12.8468

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833126.78	822324.11	833177.37	822330.25	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833177.37	822330.25	833231.06	822345.78	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833231.06	822345.78	833434.80	822408.45	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833434.80	822408.45	833560.48	822643.05	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833560.48	822643.05	833595.46	822646.76	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R004	833118.28	822306.19	833165.93	822315.62	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833165.93	822315.62	833425.18	822386.41	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833425.18	822386.41	833518.28	822421.55	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R005	833518.28	822421.55	833673.75	822486.58	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833673.75	822486.58	833933.67	822614.65	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833933.67	822614.65	833973.71	822626.01	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833973.71	822626.09	834040.15	822638.54	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833627.55	822455.21	833732.07	822494.47	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833732.07	822494.47	833782.11	822441.05	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833782.11	822441.05	833840.81	822456.02	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R008+R009	833664.17	822398.31	833693.59	822397.15	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R008+R009	833693.59	822397.15	833841.85	822450.34	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R010+R011	833978.10	822463.30	833898.84	822432.88	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R010+R011	833898.84	822432.88	833883.54	822462.45	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R011	833883.54	822462.45	833849.51	822458.02	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R013	833387.28	822507.47	833423.59	822596.02	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833423.59	822558.02	833416.08	822482.07	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833544.64	822390.48	833587.56	822354.80	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R014+R016	833468.77	822318.11	833587.56	822354.80	14	0	1	66	27	16	12	13	20	68	100	200	200	150	150	150	150	150	150	100	100	150	100	100	100	100	72
R016+R017	833587.56	822354.80	833613.17	822374.91	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R016+R017	833613.17	822374.91	833661.17	822398.31	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	50	50	16	11	13	19	50	100	200	200	200	150	150	150	150	100	50	100	50	50	50	50	50	21
R021	833209.07	822239.78	833305.00	822293.72	16	0	1	50	50	20	14	16	24	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R022	833355.00	822293.72	833460.61	822340.13	16	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R022	833460.61	822340.13	833499.65	822315.75	16	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R023	833073.42	822119.68	833100.83	822129.44	14	0	1	50	23	14	11	11	17	50	100	200	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R024	833100.83	822129.44	833232.08	822178.07	14	0	1	50	22	12	9	11	16	50	100	150	200	200	200	200	250	300	300	250	350	400	300	250	200	150	150
R025	833232.08	822178.07	833377.80	822232.03	14	0	1	50	50	18	12	15	21	50	100	200	250	250	250	300	300	350	400	300	450	500	400	300	250	200	150
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	50	50	17	12	14	20	50	100	250	250	250	250	250	250	300	300	250	350	350	300	200	150	150	100
R027	833503.91	822278.46	833673.82	822341.72	13	0	1	100	50	50	22	25	50	100	200	350	400	350	350	350	350	450	400	350	450	500	400	250	250	200	150
R028	833673.82	822341.72	833708.11	822370.93	13	0	1	50	23	15	10	11	16	50	100	150	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
R029	833766.03	822376.16	833848.76	822405.79	13	0	1	50	15	9	6	8	10	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R030	833848.76	822408.79	833917.83	822431.11	14	0	1	50	50	24	17	19	50	50	150	300	350	300	300	350	350	400	400	300	450	500	400	300	250	200	150
R031	833917.83	822431.11	833960.69	822454.38	14	0	1	15	9	5	4	4	6	17	50	100	100	100	100	100	100	100	100	100	150	150	100	100	50	50	50
R032+R301	833078.99	822055.71	833121.79	822072.07	18	0	1	106	105	54	54	54	55	108	320	450	450	373	371	421	419	469	468	519	619	618	463	359	308	258	205
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	200	150	100	100	100	150	200	550	800	750	700	650	750	750	850	900	950	1150	1200	900	650	550	500	350
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	200	150	100	100	100	150	200	550	850	800	700	700	750	750	850	950	1000	1200	1200	950	650	550	500	350
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	300	250	200	200	200	250	400	900	1400	1350	1150	1050	1100	1050	1100	1150	1150	1300	1300	1000	700	600	550	400
R036	833524.35	822221.21	833653.40	822265.00	18	0	1	350	300	250	250	250	250	450	1050	1650	1550	1150	1250	1300	1300	1400	1450	1450	1700	1700	1300	900	750	700	500
R037	833653.40	822265.00	833694.88	822284.07	19	0	1	300	250	200	200	200	200	350	890	1350	1250	1100	1000	1050	1000	1050	1100	1100	1250	1200	950	650	550	500	350
R038	833694.08	822284.56	833763.79	822309.51	18	0	1	300	250	200	200	200	200	350	900	1350	1250	1100	1000	1050	1000	1100	1100	1150	1300	1300	1000	700	600	550	350
R039	833781.99	822311.12	833798.45	822320.75	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	950	900	700	500	400	350	250
R040	833789.11	822318.09	833833.19	822335.17	18	0	1	200	150	150	150	100	150	250	550	900	850	700	650	650	650	650	650	650	750	700	550	400	350	300	200
R041	833833.19	822335.17	833902.95	822360.57	18	0	1	200	150	150	150	150	150	250	700	1050	1000	850	750	800	750	800	800	800	900	850	650	450	400	350	230
R042	833902.96	822360.57	833950.46	822320.45	18	0	1	250	200	200	150	150	200	350	800	1250	1150	1000	950	1000	1000	1050	1100	1150	1350	1350	1050	700	600	550	400
R043	833950.46	822320.46	834034.00	822250.52	18	0	1	150	150	100	100	100	100	200	450	700	700	600	550	600	600	650	700	700	850	850	650	450	400	350	250
R044	834034.00	822250.52	834140.62	822162.67	18	0	1	200	150	150	150	100	150	250	550	900	850	750	700	750	700	750	800	850	950	950	750	500	450	400	300
R045	834140.62	822162.67	834231.76	822080.45	19	0	1	150	100	100	100	100	100	150	400	650	600	500	500	550	550	600	600	650	750	750	600	400	350	300	200
R046	834231.72	822086.65	834323.21	822011.22	18	0	1	200	150	150	150	100	150	250	600	900	850	750	700	750	700	800	800	850	950	950	750	500	450	400	300
R047	834322.77	822010.68	834394.01	821959.68	18	0	1	200	150	100	100	100	150	200	550	800	750	650	650	700	650	700	750	800	900	900	700	500	400	350	250
R048	833097.20	821958.43	833156.99	821977.36	17	0	1	650	500	450	450	400	500	850	2000	3100	2900	2450	2200	2250	2150	2250	2250	2200	2500	2350	1800	1250	1050	950	700
R049	833155.96	821977.96	833434.15	822080.28	18	0	1	550	450	400	400	350	450	700	1700	2650	2500	2050	1850	1900	1750	1800	1750	1700	1900	1750	1350	950	800	700	500
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	650	500	450	450	450	500	800	1950	3000	2850	2450	2300	2450	2350	2550	2650	2700	3150	3100	2400	1650	1400	1300	900
R051	833274.56	822006.60	833438.76	822087.62	18	0	1	550	450	350	350	350	400	700	1650	2500	2350	2050	1850	1950	1900	2000	2050	2100	2450	2350	1800	1250	1100	950	700
R052	833434.10	822080.21	833688.33	822174.73	18	0	1	350	300	250	250	250	250	450	1100	1700	1600	1350	1250	1350	1300	1400	1450	1500	1750	1700	1300	900	800	700	500
R053	833786.86	822123.44	833736.66	822163.25	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R053	833736.66	822165.25	833698.23	822174.73	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R054	833438.63	822067.29	833588.71	822122.03	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833588.71	822122.03	833649.55	822144.45	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833649.55	822144.45	833683.68	822152.80	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833683.68	822152.80	833713.65	822149.82	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833713.85	822140.82	833757.83	822128.55	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833757.83	822128.55	833778.48	822113.30	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R055	833786.53	822123.04	833872.14	822081.39	19	0	1	500	400	350	350	350	400	650	1500	2350	2200	1900	1750	1850	1750	1850	1900	1950	2250	2200	1700	1150	1000	900	650
R056	833778.49	822113.30	833867.20	822039.12	18	0	1	250	200	150	150	150	200	300	750	1200	1100	950	900	950	950	1000	1050	1050	1250	1250	950	650	550	500	350
R057	833873.20	822062.68	834159.21	821814.78	18	0	1	350	250	250	250	250	250	450	1100	1650	1550	1300	1200	1250	1200	1250	1250	1250	1400	1350	1050	700	600	550	400
R058	834159.21	821814.78	834250.10	821738.42	18	0	1	300	250	200	200	200	250	400	950	1500	1400	1200	1050	1100	1050	1100	1100	1100	1200	1150	900	600	550	500	350
R059	833867.29	822039.23	834058.34	821880.22	17	0	1	200	150	150	150	150	150	250	600	950	900	800	750	800	800	900	950	1000	1200	1200	900	650	550	500	350
R060	834058.34	821880.22	834241.61	821727.45	16	0	1	200	150	150	150	150	150	250	600	900	850	750	700	800	750	850	900	900	1100	1100	850	600	500	450	300
R061	833116.37	821880.28	833139.76	821889.31	16	0	1	50	22	14	9	11	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
R062	833139.76	821889.31	833296.78	821947.28	18	0	1	50	50	50	18	20	50	100	150	300	350	300	300	300	300	350	300	250	350	350	300	200	150	150	100
R063	833296.86	821947.56	833460.51	822007.95	18	0	1	50	20	13	10	10	15	50	100	150	150	150	150	200	200	200	200	200	250	300	200	150	150	100	100
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833480.98	821952.82	833563.70	821982.31	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R065	833160.17	821834.07	833315.56	821891.57	16	0	1	50	50	17	12	14	20	50	100	200	250	200	200	200	150	200	150	150	150	150	150	100	50	50	50
R066	833315.56	821891.68	833481.00	821952.75	16	0	1	50	50	21	15	17	24	50	100	250	250	250	250	250	250	300	300	250	350	400	300	200	200	150	100
R067	833154.01	821773.07	833178.47	821783.88	18	0	1	1500	1200	1000	1000	950	1150	1900	4450	4750	4750	4730	4750	4750	4750	4750	4750	4750	4750	4750	4750	3350	2850	2000	1800
R068	833178.74	821783.16	833293.68	821813.88	18	0	1	1350	1100	950	900	900	1050	1750	4100	4750	4750	4750	4700	4750	4750	4750	4750	4750	4750	4750	4500	3150	2650	2400	1200
R069	833166.60	821757.87	833250.16	821795.91	29	0	1	950	750	650	600	600	700	1200	2850	4350	4100	3600	3400	3600	3550	3900	4050	4200	4750	4750	3800	2650	2250	2050	1450
R070	833248.90	821820.73	833329.69	821853.87	13	0	1	400	300	250	250	250	300	500	1200	1800	1700	1450	1350	1400	1350	1450	1450	1500	1700	1650	1250	900	750	700	500

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833527.91	821859.29	833597.24	821875.22	18	0	1	450	350	300	300	300	350	550	1300	2000	1900	1650	1500	1600	1500	1650	1650	1700	1950	1900	1450	1000	850	800	550
R072	833597.24	821875.22	833691.75	821897.07	20	0	1	200	150	150	150	150	150	250	600	900	850	750	700	750	750	800	850	850	1000	1000	800	550	450	400	300
R073	833451.50	821860.54	833397.24	821875.22	17	0	1	250	200	150	150	150	200	300	750	1100	1050	900	800	850	800	850	850	850	950	900	700	500	400	350	250
R074	833261.04	821790.34	833451.50	821860.54	20	0	1	250	200	150	150	150	150	300	700	1050	1000	850	800	850	800	900	900	950	1100	1050	800	550	500	450	300
R075	833449.48	821951.09	833506.97	821583.08	16	0	1	150	150	100	100	100	100	200	450	750	700	600	550	550	550	550	550	600	650	650	500	350	300	250	200
R076	833501.48	821897.00	833548.66	821899.77	16	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	833548.66	821899.77	833603.43	821886.09	16	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	833603.43	821885.99	833694.92	821822.32	16	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R077	833504.57	821884.14	833563.57	821884.38	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	833563.57	821884.38	833660.48	821871.25	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	833600.48	821871.28	833673.64	821812.09	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R078	833683.38	821822.35	833675.32	821560.75	16	0	1	150	150	100	100	100	100	200	500	750	700	600	550	550	500	550	550	550	600	600	450	300	250	250	150
R079	833673.29	821911.43	833667.51	821651.46	16	0	1	250	200	150	150	150	200	300	750	1150	1100	950	850	900	850	900	900	950	1050	1050	800	550	450	400	300
R080	833675.67	821661.18	833999.54	821557.94	16	0	1	150	100	100	100	100	100	200	450	650	650	550	500	550	550	600	600	650	750	750	550	400	350	300	200
R081	833607.01	821650.86	833983.08	821853.09	20	0	1	250	200	200	200	200	200	350	800	1250	1200	1050	950	1000	1000	1050	1100	1150	1300	1300	1000	700	600	550	400
R082	833458.18	821884.41	833510.75	821821.12	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	350
R082	833510.75	821821.12	833536.36	821785.93	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	350
R082	833536.39	821785.93	833570.13	821697.55	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	350
R083	833426.83	821850.11	833486.18	821813.13	18	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	833480.18	821813.12	833524.36	821772.29	14	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	833524.36	821772.29	833519.61	821652.62	14	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R084	833607.54	821697.02	833582.69	821644.65	13	0	1	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R084	833582.69	821644.65	833607.71	821603.07	13	0	1	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	833640.24	821575.52	833691.67	821545.20	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	833681.67	821545.20	833720.52	821512.65	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R086	833580.70	821640.09	833603.89	821583.58	17	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R086	833605.88	821583.58	833646.83	821546.45	17	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R087	833648.49	821548.43	833696.49	821508.30	13	0	1	100	100	100	100	100	100	150	350	500	500	450	400	400	400	400	400	400	400	450	350	200	200	150	150
R088	833254.24	821811.68	833365.50	821850.64	17	4	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833365.50	821850.64	833416.50	821860.81	17	7	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833416.50	821865.51	833487.63	821841.09	17	5	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833533.63	821786.07	833574.80	821657.75	17	7	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R089	833256.85	821801.44	833370.00	821846.87	16	4	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833427.36	821852.03	833489.60	821829.25	16	9	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833485.60	821829.25	833522.46	821786.30	16	10	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833563.07	821653.37	833598.89	821584.44	16	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833598.89	821584.44	833609.53	821508.87	16	6	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R090+R091	833269.78	821629.64	833317.84	821634.13	17	0	1	350	250	250	250	250	250	450	1050	1600	1500	1250	1100	1200	1100	1150	1150	1150	1300	1200	950	650	550	500	150
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R092+R093	833449.56	821640.31	833813.09	821599.24	20	0	1	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R094	833337.84	821634.53	833341.51	821870.41	16	0	1	50	50	50	50	50	50	100	200	300	300	250	200	200	200	200	200	200	250	250	150	100	100	100	50
R095	833606.59	821501.72	833548.49	821548.43	17	0	1	100	100	100	50	50	100	150	350	500	500	450	400	400	350	400	400	400	400	400	300	200	200	150	100
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1	57	19	11	7	7	14	57	64	150	150	150	150	150	150	150	150	70	150	150	121	64	63	62	58
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	62	56	25	17	20	28	63	150	300	300	300	250	250	250	300	250	200	250	300	250	200	150	150	73
R100+R101	834127.62	822332.11	834218.21	822258.35	18	0	1	100	100	73	34	40	100	150	300	600	650	550	500	550	500	550	550	350	500	500	450	250	250	250	150
R102+R103	834218.31	822258.35	834309.95	822180.58	18	0	1	100	36	22	16	16	26	100	150	250	300	250	250	300	300	300	300	250	350	350	250	200	200	150	100
R104+R105	834309.95	822180.58	834407.46	822098.58	18	0	1	71	27	16	11	11	19	72	100	200	200	200	200	250	250	250	250	200	300	300	200	150	150	150	100
R106	833917.63	822431.11	833991.76	822309.38	18	0	1	50	50	24	17	20	50	50	150	300	300	300	250	250	250	300	250	200	300	300	250	150	150	100	100
R107	833991.55	822370.04	834090.39	822287.53	18	0	1	50	50	20	14	16	22	50	100	250	250	200	200	200	150	150	150	100	100	100	100	50	50	50	50
R108	834090.84	822288.06	834181.98	822212.22	18	0	1	50	50	22	16	17	50	50	150	250	300	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R109	834181.98	822212.22	834273.08	822135.88	17	0	1	50	50	21	15	16	24	50	100	250	250	250	200	200	200	200	150	100	150	100	100	50	50	50	50
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	100	50	50	20	21	50	100	150	350	350	300	250	250	250	250	200	150	150	150	150	100	100	50	50
R111	834363.46	822059.85	834400.74	822028.83	18	0	1	50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
R112	833846.78	822405.79	833992.98	822380.57	19	0	1	50	22	14	10	12	17	50	100	150	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R113	833833.46	822335.17	833909.66	822271.35	18	0	1	50	20	12	8	9	15	50	50	150	150	150	150	150	100	150	100	100	100	100	100	50	50	50	50
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	200	100	50	50	50	100	200	450	850	950	850	750	750	700	800	750	550	700	750	550	400	350	300	250
R115	833994.06	822200.75	834077.01	822132.08	18	0	1	200	100	50	50	50	50	200	400	750	850	750	700	700	650	750	700	550	700	750	600	400	350	300	250
R116	834076.80	822131.84	834097.30	822115.02	18	0	1	200	100	50	50	50	100	200	400	800	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
R117	834097.30	822115.02	834190.89	822037.73	18	0	1	200	100	50	50	50	50	200	350	700	800	700	650	650	650	700	650	500	650	700	550	400	350	300	250
R118	834190.89	822037.73	834243.29	821993.88	19	0	1	200	100	50	50	50	50	200	350	750	800	750	700	700	700	800	750	600	800	850	700	500	400	350	300
R119	834242.94	821993.85	834282.16	821961.48	19	0	1	200	100	50	50	50	100	250	450	900	950	850	800	800	800	850	900	650	800	850	700	500	400	350	300
R120	834281.93	821961.17	834359.17	821898.80	18	0	1	250	150	100	50	50	100	250	500	950	1050	950	900	900	850	950	900	700	900	950	750	500	450	400	300
R121	833758.03	822376.16	833799.11	822318.98	18	0	1	23	13	8	6	6	9	50	50	100	100	100	100	100	100	150	150	100	150	200	150	100	100	100	50
R122	833791.88	822311.12	833868.78	822222.18	18	0	1	100	50	50	50	50	50	100	200	400	450	400	400	400	400	500	450	350	500	550	450	300	250	250	200
R123	833868.78	822222.16	833964.75	822150.80	18	0	1	50	50	22	15	17	50	50	150	250	300	250	250	250	250	300	300	200	300	350	250	200	150	150	100
R124	833873.82	822341.72	833964.66	822284.07	18	0	1	50	50	20	14	16	23	50	100	250	250	200	200	200	200	200	200	150	150	150	100	100	50	50	50
R125	833086.80	822284.07	833627.77	822172.65	18	0	1	50	50	20	14	16	23	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R126	833093.40	822269.00	833088.33	822174.73	13	0	1	50	50	22	15	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
R127	833459.65	822315.75	833593.51	822278.48	18	0	1	50	23	15	10	12	16	50	100	150	200	200	200	200	200	250	250	200	250	300	250	150	150	100	100
R128	833503.51	822278.46	833524.36	822221.24	18	0	1	50	50	18	14	15	21	50	100	200	250	250	250	250	250	300	300	250	350	400	300	200	200	150	150
R129	833377.80	822232.03	833355.00	822283.72	18	0	1	150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	600	550	450	300	250	250	150
R130	833377.80	822232.03	833394.77	822175.17	18	0	1	200	150	100	100	100	150	250	550	850	800	700	600	650	650	650	700	700	800	800	600	400	350	300	250
R131	833396.42	822175.04	833414.16	822080.75	18	0	1	300	250	200	200	200	250	400	900	1400	1300	1050	950	950	900	900	850	850	900	800	650	450	350	350	250
R132	833423.92	822080.70	833469.51	822007.87	18	0	1	200	150	150	150	150	150	250	550	850	800	700	700	750	700	800	800	850	1000	1000	750	550	450	400	300
R133	833460.45	822007.09	833481.00	821952.76	18	0	1	200	100	50	50	50	100	200	350	750	800	750	700	700	700	800	750	600	800	850	700	500	400	350	300
R134	833481.00	821952.78	833506.07	821883.08	18	0	1	200	100	100	50	50	100	200	400	800	900	850	800	850	850	950	950	750	1000	1100	900	600	500	450	350
R135	833209.07	822239.78	833232.06	822178.07	18	0	1	8	6	5	3	2	4	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	20	19	14
R136	833232.01	822178.08	833253.36	822120.04	18	0	1	6	4	3	1	1	3	7	13	50	50	50	50	50	50	50	50	50	50	50	50	22	18	17	13
R137	833080.91	822182.63	833100.03	822120.44	18	0	1	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R138	833100.63	822129.44	833121.79	822072.07	18	0	1	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R139	833121.68	822072.03	833158.56	821977.08	18	0	1	100	50	50	24	50	50	100	200	400	450	400	400	450	450	550	550	400	600	650	500	350	300	250	200
R140	833274.46	822007.07	833296.60	821947.38	17	0	1	100	50	50	50	50	50	100	200	450	450	450	450	500	500	600	600	500	650	750	600	400	350	300	250

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R141	833295.35	821947.25	833315.56	821691.07	13	0	1
R142	833329.89	821953.87	833315.98	821891.84	13	0	1
R143	833139.75	821889.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821783.15	13	0	1
R145+R146	833812.48	821976.55	834604.98	821516.03	17	0	1
R147+R148	833735.44	821888.35	833931.13	821727.74	16	0	1
R148	833728.61	821749.62	833807.73	821694.38	14	0	1
R149	833774.08	821643.52	833807.73	821694.38	13	0	1
R150	833736.87	821756.23	833687.71	821603.87	11	0	1
R151	833613.61	821610.98	833693.60	821643.70	13	0	1
R151	833683.80	821543.70	833776.28	821642.63	14	0	1
R152	833774.08	821643.52	833828.17	821600.88	20	0	1
R153	833991.31	822389.76	834028.77	822434.27	18	0	1
R154	833960.46	822320.49	833992.00	822389.67	18	0	1
R155	833909.46	822271.35	833960.46	822320.45	18	0	1
R156	833888.78	822222.16	833909.65	822271.38	18	0	1
R157	833866.58	822222.34	833827.77	822173.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.81	822259.62	834113.80	822384.34	18	0	1
R160	834095.38	822287.53	834137.63	822332.11	15	0	1
R161	834034.80	822250.52	834075.81	822259.62	15	0	1
R162	834049.42	822236.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.68	834034.00	822250.02	18	0	1
R164	834007.86	822194.33	834049.42	822330.28	15	0	1
R165	833963.31	822151.70	833994.47	822221.23	16	0	1
R166	833872.14	822051.39	833904.76	822190.50	18	0	1
R167	833883.47	822042.45	834007.88	822180.33	18	0	1
R168+R169	833815.72	821975.47	833878.36	822050.03	21	0	1
R170+R171	833734.44	821888.35	833812.49	821978.50	18	0	1
R172+R173	833884.92	821822.32	833739.28	821687.65	20	0	1
R174+R175	833561.78	821677.56	833883.38	821823.58	18	0	1
R176	833496.77	821508.49	833560.47	821680.73	20	0	1
R177	833513.09	821509.24	833573.66	821688.47	20	0	1
R178	833440.44	821529.99	833488.60	821908.61	16	0	1
R179	833481.84	821526.31	833511.33	821900.38	17	0	1
R180	834218.31	822298.35	834305.96	822385.39	18	0	1
R181	834181.98	822212.72	834218.31	822298.38	18	0	1
R182	834140.62	822162.67	834181.76	822212.38	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.18	13	0	1
R184	834071.90	822086.18	834097.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.68	822307.44	18	0	1
R186	834231.54	822088.63	834273.34	822138.83	18	0	1
R187	834190.59	822037.73	834231.76	822088.45	18	0	1
R188+R189	834004.98	821815.03	834065.34	821880.22	16	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1
R192+R193	833878.32	821660.78	833930.65	821727.99	20	0	1
R194+R195	833825.79	821600.86	833867.51	821631.48	20	0	1
R196+R202	833781.01	821523.38	833826.17	821600.58	20	0	1
R197	834364.38	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.35	822060.94	18	0	1
R199	834281.93	821961.17	834322.00	822010.48	18	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R300	834239.17	821914.13	834327.69	821840.33	18	0	1

Vehicle count for each road

Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
50	16	10	7	8	12	50	50	100	150	150	150	150	200	250	250	200	300	350	250	200	150	150	100
50	22	14	10	11	17	50	100	200	200	200	150	200	200	200	200	150	250	250	200	150	100	100	100
150	50	50	50	50	50	150	250	550	600	500	500	450	450	500	450	350	450	450	350	250	200	200	150
100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
24	13	8	5	7	10	25	63	100	150	124	122	123	112	174	172	117	222	224	168	113	111	110	58
57	18	12	8	9	13	58	65	150	150	150	150	150	150	150	150	100	200	200	100	100	100	100	100
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	50	20	17	14	11
100	100	100	50	50	50	100	250	300	250	250	200	200	250	200	200	200	200	200	150	150	150	100	100
100	100	100	50	50	50	100	250	300	250	250	250	250	300	300	300	350	350	350	300	250	200	200	150
100	100	50	50	50	50	100	250	300	250	250	200	200	250	200	200	250	250	200	200	150	150	150	100
500	400	350	300	250	250	450	800	800	800	800	800	800	800	800	800	800	800	750	650	550	450	450	350
600	500	400	300	250	300	550	1200	1500	1300	1200	1100	1100	1150	1100	1050	1050	1050	1000	850	750	650	600	450
500	400	350	300	250	250	450	1000	1300	1100	1050	950	1000	1050	950	950	1000	1000	950	800	700	600	550	450
50	23	18	15	12	15	24	50	50	50	50	50	50	50	50	50	100	100	100	50	50	50	50	50
100	100	50	50	50	50	100	200	250	250	200	200	200	200	150	150	150	150	150	150	100	100	100	50
150	150	100	100	50	100	150	350	400	350	350	350	350	400	350	350	400	400	400	350	300	250	250	200
200	150	150	100	100	100	200	400	550	450	450	400	400	450	400	400	450	450	450	350	300	250	250	200
250	200	150	150	100	100	200	450	600	550	500	500	550	600	600	600	650	700	700	550	500	450	400	300
150	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	400	300	300	250	250	200
150	150	100	100	100	100	150	350	450	400	350	350	350	400	400	400	400	450	400	350	300	250	250	200
300	250	200	200	150	150	300	650	850	750	700	650	700	750	750	750	800	850	800	650	550	500	450	350
250	200	150	150	100	150	250	550	650	600	550	550	550	600	600	600	650	650	650	550	450	400	350	300
500	350	300	300	200	200	450	950	1200	1050	1050	1050	1100	1200	1200	1250	1350	1450	1350	1150	1000	850	800	600
450	350	300	250	200	200	400	900	1100	1050	950	950	1000	1150	1100	1150	1250	1300	1250	1050	900	750	750	550
500	400	350	250	250	250	450	1000	1300	1150	1100	1050	1100	1200	1200	1200	1300	1350	1350	1100	950	800	800	600
550	450	350	300	250	250	450	1050	1150	1200	1100	1050	1100	1200	1150	1150	1250	1300	1200	1050	900	750	750	550
350	300	250	200	150	200	300	750	900	800	700	650	700	700	650	650	650	650	650	500	450	400	350	300
250	200	200	150	100	150	250	550	700	600	600	550	600	650	650	650	700	700	700	600	500	450	400	300
350	250	200	200	150	150	300	700	850	750	700	650	650	700	650	650	850	650	650	550	450	400	400	300
350	250	200	200	150	150	300	650	850	750	700	700	750	800	800	800	900	950	900	750	650	550	550	400
200	150	150	100	100	100	200	400	500	450	400	400	400	400	400	400	400	400	400	300	300	250	250	200
15	12	9	8	7	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24
50	50	22	19	16	18	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	23	19	16	13	15	24	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24	22	17
50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
100	100	50	50	50	50	100	200	250	200	200	200	200	250	250	250	250	250	250	200	200	150	150	100
22	19	15	12	11	12	20	50	50	50	50	50	50	50	50	50	50	50	50	50	50	22	22	17
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	150	150	150	150	150	100	100	100	50
68	63	61	59	58	59	64	200	200	200	200	200	200	200	200	200	250	250	250	200	200	150	150	122
100	70	66	64	36	63	72	150	200	200	200	200	200	200	200	250	250	300	250	250	200	200	200	122
42	35	29	24	22	23	38	100	100	100	100	100	100	100	73	73	70	68	68	66	66	62	62	31
64	60	58	57	55	56	63	200	200	200	200	172	172	171	119	117	116	115	114	112	111	58	58	57
100	100	70	40	33	38	100	150	200	150	150	150	100	150	100	100	100	150	100	100	100	100	100	24
10	7	5	5	4	4	8	18	24	20	17	14	13	12	11	8	7	5	5	4	4	3	3	3
19	15	12	10	8	9	16	50	50	50	50	50	50	50	50	22	21	18	18	15	13	11	11	9
22	18	15	13	10	12	21	50	50	50	50	50	50	50	50	50	50	23	20	18	15	13	12	10
50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R003	833125.78	822324.11	833177.37	822330.25	20	0	1
R003	833177.37	822330.25	833231.06	822345.76	20	0	1
R003	833231.06	822345.76	833434.80	822408.45	20	0	1
R003	833434.80	822408.45	833960.46	822643.00	20	0	1
R003	833960.46	822643.00	833995.46	822646.78	20	0	1
R004	833116.28	822308.10	833185.93	822315.62	19	0	1
R004	833185.93	822315.62	833425.15	822386.41	19	0	1
R004	833425.15	822386.41	833518.28	822421.55	19	0	1
R005	833518.28	822421.55	833673.75	822496.58	19	0	1
R005	833673.75	822496.58	833933.67	822614.65	19	0	1
R005	833933.67	822614.65	833973.71	822626.09	19	0	1
R005	833973.71	822626.09	834046.15	822626.54	19	0	1
R006+R007	833527.80	822410.61	833627.55	822455.21	14	0	1
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1
R008+R009	833661.17	822398.31	833693.59	822397.15	13	0	1
R008+R009	833693.59	822397.15	833841.85	822450.34	13	0	1
R010+R011	833978.15	822463.30	833896.64	822432.88	12	0	1
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1
R012+R013	833387.26	822567.47	833423.69	822556.02	10	0	1
R012+R013	833423.69	822556.02	833416.08	822482.07	10	0	1
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1
R012+R013	833544.64	822390.48	833587.56	822354.80	10	0	1
R014+R015	833488.77	822318.11	833587.56	822354.80	14	0	1
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1
R019	833082.67	822192.93	833209.07	822239.78	16	0	1
R021	833209.07	822239.78	833355.00	822293.72	16	0	1
R022	833355.00	822293.72	833480.61	822340.13	16	0	1
R022	833480.61	822340.13	833489.65	822315.75	16	0	1
R023	833073.42	822119.68	833100.53	822129.44	14	0	1
R024	833100.53	822129.44	833232.06	822178.07	14	0	1
R025	833232.06	822178.07	833377.80	822232.03	14	0	1
R026	833377.80	822232.03	833503.34	822278.92	14	0	1
R027	833503.51	822278.46	833673.82	822341.72	13	0	1
R028	833673.82	822341.72	833768.11	822379.93	13	0	1
R029	833768.03	822376.15	833848.76	822405.79	13	0	1
R030	833848.76	822405.79	833917.83	822431.11	14	0	1
R031	833917.83	822431.11	833960.58	822454.38	14	0	1
R032+R201	833076.99	822065.71	833121.79	822072.07	18	0	1
R033	833121.79	822072.07	833253.39	822120.94	18	0	1
R034	833253.39	822120.94	833398.77	822175.17	18	0	1
R035	833398.77	822175.17	833524.35	822221.21	18	0	1
R036	833524.35	822221.21	833653.40	822269.00	18	0	1
R037	833653.40	822269.00	833694.86	822284.07	19	0	1
R038	833694.68	822284.56	833763.79	822309.61	18	0	1
R039	833761.99	822311.12	833798.45	822320.76	14	0	1
R040	833789.11	822318.98	833833.16	822335.17	18	0	1
R041	833833.16	822335.17	833902.96	822360.57	18	0	1
R042	833902.96	822360.57	833950.46	822320.45	18	0	1
R043	833950.46	822320.45	834034.90	822250.52	18	0	1
R044	834034.90	822250.52	834140.62	822162.67	18	0	1
R045	834140.62	822162.67	834211.76	822086.45	19	0	1
R046	834231.72	822086.65	834323.21	822011.22	18	0	1
R047	834322.77	822010.68	834384.01	821959.68	18	0	1
R048	833097.20	821955.43	833156.56	821977.06	17	0	1
R049	833155.66	821977.96	833434.10	822080.78	16	0	1
R050	833101.47	821942.33	833274.46	822007.07	21	0	1
R051	833274.56	822006.80	833438.70	822067.62	16	0	1
R052	833434.10	822080.21	833668.33	822174.73	16	0	1
R053	833786.86	822123.44	833736.66	822163.25	16	0	1
R053	833736.66	822163.25	833688.33	822174.73	16	0	1
R054	833438.83	822067.29	833586.71	822122.03	16	0	1
R054	833586.71	822122.03	833649.55	822144.40	16	0	1
R054	833649.55	822144.40	833683.68	822152.80	16	0	1
R054	833683.68	822152.80	833713.85	822149.82	16	0	1
R054	833713.85	822149.82	833757.83	822128.55	16	0	1
R054	833757.83	822128.55	833778.49	822113.30	16	0	1
R055	833786.63	822123.04	833872.14	822051.30	19	0	1
R056	833778.49	822113.30	833867.20	822039.12	16	0	1
R057	833873.20	822052.66	834159.21	821814.78	16	0	1
R058	834159.21	821814.78	834250.10	821736.42	16	0	1
R059	833867.29	822039.23	834058.34	821880.22	17	0	1
R060	834058.34	821880.22	834241.81	821727.45	16	0	1
R061	833116.37	821880.20	833139.75	821889.31	16	0	1
R062	833139.75	821889.31	833296.78	821947.78	16	0	1
R063	833296.86	821947.56	833460.51	822007.97	16	0	1
R064	833460.49	822008.03	833543.73	822038.72	15	0	1
R064	833543.73	822038.72	833563.70	821983.31	15	0	1
R064	833480.96	821962.82	833563.70	821983.31	15	0	1
R065	833166.17	821834.07	833315.56	821891.67	16	0	1
R066	833316.56	821891.68	833481.00	821952.78	16	0	1
R067	833164.01	821776.07	833178.47	821783.88	19	0	1
R068	833178.74	821783.15	833253.68	821813.88	18	0	1
R069	833164.60	821757.87	833260.16	821795.91	29	0	1
R070	833248.90	821820.73	833329.69	821853.67	13	0	1

NO_x x 100 (g/VMT)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
15.1090	15.0973	15.7296	15.3672	14.9956	15.4356	15.6532	23.2742	25.1823	22.4099	20.9956	19.9406	18.4733	19.1157	18.7562	19.9913	21.8053	21.2257	21.0759	17.5127	15.0869	16.4832	16.5546	15.6712
15.1090	15.0973	15.7296	15.3672	14.9956	15.4356	15.6532	23.2742	25.1823	22.4099	20.9956	19.9406	18.4733	19.1157	18.7562	19.9913	21.8053	21.2257	21.0759	17.5127	15.0869	16.4832	16.5546	15.6712
15.1090	15.0973	15.7296	15.3672	14.9956	15.4356	15.6532	23.2742	25.1823	22.4099	20.9956	19.9406	18.4733	19.1157	18.7562	19.9913	21.8053	21.2257	21.0759	17.5127	15.0869	16.4832	16.5546	15.6712
15.1090	15.0973	15.7296	15.3672	14.9956	15.4356	15.6532	23.2742	25.1823	22.4099	20.9956	19.9406	18.4733	19.1157	18.7562	19.9913	21.8053	21.2257	21.0759	17.5127	15.0869	16.4832	16.5546	15.6712
15.1090	15.0973	15.7296	15.3672	14.9956	15.4356	15.6532	23.2742	25.1823	22.4099	20.9956	19.9406	18.4733	19.1157	18.7562	19.9913	21.8053	21.2257	21.0759	17.5127	15.0869	16.4832	16.5546	15.6712
15.0006	14.9683	15.7408	15.4122	14.9336	15.3678	15.4896	20.9354	23.3399	20.5132	19.5722	18.8839	17.7783	18.5841	18.3553	19.8333	22.0189	22.4108	22.2287	18.2195	14.2595	15.5972	15.9632	14.8088
15.0006	14.9683	15.7408	15.4122	14.9336	15.3678	15.4896	20.9354	23.3399	20.5132	19.5722	18.8839	17.7783	18.5841	18.3553	19.8333	22.0189	22.4108	22.2287	18.2195	14.2595	15.5972	15.9632	14.8088
15.0006	14.9683	15.7408	15.4122	14.9336	15.3678	15.4896	20.9354	23.3399	20.5132	19.5722	18.8839	17.7783	18.5841	18.3553	19.8333	22.0189	22.4108	22.2287	18.2195	14.2595	15.5972	15.9632	14.8088
14.9685	14.9232	15.7488	15.4234	14.9689	15.3854	15.5037	20.9327	23.3392	20.5100	19.5716	18.8787	17.7716	18.5750	18.3481	19.8242	22.0116	22.3894	22.2198	18.2106	14.2473	15.5847	15.9501	14.8121
14.9685	14.9232	15.7488	15.4234	14.9689	15.3854	15.5037	20.9327	23.3392	20.5100	19.5716	18.8787	17.7716	18.5750	18.3481	19.8242	22.0116	22.3894	22.2198	18.2106	14.2473	15.5847	15.9501	14.8121
14.9685	14.9232	15.7488	15.4234	14.9689	15.3854	15.5037	20.9327	23.3392	20.5100	19.5716	18.8787	17.7716	18.5750	18.3481	19.8242	22.0116	22.3894	22.2198	18.2106	14.2473	15.5847	15.9501	14.8121
14.9685	14.9232	15.7488	15.4234	14.9689	15.3854	15.5037	20.9327	23.3392	20.5100	19.5716	18.8787	17.7716	18.5750	18.3481	19.8242	22.0116	22.3894	22.2198	18.2106	14.2473	15.5847	15.9501	14.8121
25.7896	24.1503	32.3286	14.7174	14.1789	29.3339	25.8782	27.6991	21.5453	28.9363	29.0531	28.3454	32.7216	25.8749	24.1391	24.3081	16.1371	15.3607	11.7557	14.9700	16.6354	26.4273	25.9174	17.7227
25.7896	24.1503	32.3286	14.7174	14.1789	29.3339	25.8782	27.6991	21.5453	28.9363	29.0531	28.3454	32.7216	25.8749	24.1391	24.3081	16.1371	15.3607	11.7557	14.9700	16.6354	26.4273	25.9174	17.7227
25.7896	24.1503	32.3286	14.7174	14.1789	29.3339	25.8782	27.6991	21.5453	28.9363	29.0531	28.3454	32.7216	25.8749	24.1391	24.3081	16.1371	15.3607	11.7557	14.9700	16.6354	26.4273	25.9174	17.7227
25.7896	24.1503	32.3286	14.7174	14.1789	29.3339	25.8782	27.6991	21.5453	28.9363	29.0531	28.3454	32.7216	25.8749	24.1391	24.3081	16.1371	15.3607	11.7557	14.9700	16.6354	26.4273	25.9174	17.7227
19.7219	22.4506	22.4294	14.7174	14.1789	20.5613	20.1438	24.0167	16.8557	23.4172	23.1387	23.6334	24.8434	19.1496	20.0732	21.9043	16.5813	15.3671	12.1694	14.4618	16.7853	27.5852	27.5088	16.4383
19.7219	22.4506	22.4294	14.7174	14.1789	20.5613	20.1438	24.0167	16.8557	23.4172	23.1387	23.6334	24.8434	19.1496	20.0732	21.9043	16.5813	15.3671	12.1694	14.4618	16.7853	27.5852	27.5088	16.4383
26.8695	26.2983	25.7596	23.5853	27.3556	31.5995	27.8746	31.4821	24.5117	31.2972	31.2244	32.6410	34.1369	29.5349	29.7757	32.7123	28.8756	26.5712	24.1932	25.7262	28.0130	36.7414	35.9209	28.7134
26.8695	26.2983	25.7596	23.5853	27.3556	31.5995	27.8746	31.4821	24.5117	31.2972	31.2244	32.6410	34.1369	29.5349	29.7757	32.7123	28.8756	26.5712	24.1932	25.7262	28.0130	36.7414	35.9209	28.7134
26.8695	26.2983	25.7596	23.5853	27.3556	31.5995	27.8746	31.4821	24.5117	31.2972	31.2244	32.6410	34.1369	29.5349	29.7757	32.7123	28.8756	26.5712	24.1932	25.7262	28.0130	36.7414	35.9209	28.7134
62.3569	69.8442	21.4067	23.1071	22.5685	23.2148	63.4030	79.2996	58.7719	68.9398	64.5650	70.4799	71.3567	77.6952	68.4358	71.7410	68.7151	72.1948	73.6985	69.8028	88.4546	100.6917	88.6003	73.1435
62.3569	69.8442	21.4067	23.1071	22.5685	23.2148	63.4030	79.2996	58.7719	68.9398	64.5650	70.4799	71.3567	77.6952	68.4358	71.7410	68.7151	72.1948	73.6985	69.8028	88.4546	100.6917	88.6003	73.1435
62.3569	69.8442	21.4067	23.1071	22.5685	23.2148	63.4030	79.2996	58.7719	68.9398	64.5650	70.4799	71.3567	77.6952	68.4358	71.7410	68.7151	72.1948	73.6985	69.8028	88.4546	100.6917	88.6003	73.1435
62.3569	69.8442	21.4067	23.1071	22.5685	23.2148	63.4030	79.2996	58.7719	68.9398	64.5650	70.4799	71.3567	77.6952	68.4358	71.7410	68.7151	72.1948	73.6985	69.8028	88.4546	100.6917	88.6003	73.1435
62.3569	69.8442	21.4067	23.1071	22.5685	23.2148	63.4030	79.2996	58.7719	68.9398	64.5650	70.4799	71.3567	77.6952	68.4358	71.7410	68.7151	72.1948	73.6985	69.8028	88.4546	100.6917	88.6003	73.1435
37.4873	38.0506	41.4649	46.6301	44.0053	44.4012	39.4851	54.9206	33.7651	42.4143	44.2231	46.8452	48.1973	45.7623	43.8572	48.2600	44.8990	43.3762	40.2658	41.8781	47.2344	60.7682	59.7918	44.3688
37.6996	38.6461	41.4649	35.9378	34.1801	44.4012	37.8180	52.8613	32.3595	41.2526	41.6728	43.1057	44.3365	40.2998	40.0173	42.8963	36.2881	35.6550	32.6551	33.3544	39.8867	51.4258	48.2296	37.8005
37.6996	38.6461	41.4649	35.9378	34.1801	44.4012	37.8180	52.8613	32.3595	41.2526	41.6728	43.1057	44.3365	40.2998	40.0173	42.8963	36.2881	35.6550	32.6551	33.3544	39.8867	51.4258	48.2296	37.8005
63.7745	63.5143	62.1833	65.7301	68.8703	62.7796	62.3485	72.7570	58.7489	67.1960	64.2491	68.1723	66.9755	68.0151	61.1342	67.1476	66.8563	59.3606	56.0856	57.3374	67.5943	83.5437	70.4121	66.2422
63.1987	63.2743	61.6058	66.6779	60.1888	68.2038	63.8908	73.3009	59.2978	67.6524	64.0794	68.1675	66.9784	67.7521	61.6577	67.8674	64.5430	60.2627	57.7332	57.0695	67.4926	80.8217	72.9431	62.0064
71.4554	67.9698	73.0900	73.4757	69.4605	72.9374	72.8808	79.5333	66.8371	75.1373	72.6275	75.6895	74.9131	75.2635	68.8776	73.8634	73.4419	66.7000	63.3723	63.4051	71.5165	84.2630	77.1765	69.2286
71.4554	67.9698	73.0900	73.4757	69.4605	72.9374	72.8808	79.5333	66.8371	75.1373	72.6275	75.6895	74.9131	75.2635	68.8776	73.8634	73.4419	66.7000	63.3723	63.4051	71.5165	84.2630	77.1765	69.2286
68.4234	63.6984	72.4107	69.7415	69.2896	66.5110	67.8028	78.7806	67.2459	74.8920	72.0362	74.7896	75.0961	75.9146	69.0194	73.9167	71.9742	68.1259	66.0391	64.2078	71.7223	84.1608	75.7053	66.9047
69.5721	65.5940	68.7864	65.8258	69.2896	69.2549	68.7294	77.5166	66.6502	75.0678	72.0195	74.6540	72.6465	75.4313	68.7375	73.8318	72.6530	68.2155	64.4312	62.5710	71.8939	83.1505	76.0743	67.0638
68.4635	68.2849	67.4332	70.5224	72.9677	67.7608	67.3604	76.6508	65.6692	75.8363	73.1144	75.9054	74.2197	74.6589	69.9023	75.1733	71.2773	69.3745	65.4527	63.2206	70.7939	84.9320	75.1779	66.6466
72.6327	72.8713	76.0421	76.3086	72.3856	71.3860	74.1437	82.6517	76.6595	81.8599	77.7412	80.0155	77.0966	78.5035	70.9159	76.1718	76.9538	71.1015	65.7117	64.3273	72.4479	82.0703	74.5320	67.3867
71.0789	69.9453	72.5863	71.1420	72.6301	73.8790	72.0535	81.2982	74.5529	82.2262	79.8179	81.9425	80.7632	80.8731	76.9234	79.1254	77.5632	73.1041	68.7796	66.8576	73.2505	86.6564	76.8623	68.8909
62.0695	60.8555	64.7532	69.9924	64.6217	61.3704	63.3879	71.2668	60.2312	69.2212	66.2999	69.4698	68.7629	68.8459	64.9023	70.4703	67.0552	63.4554	61.5454	59.4376	67.9275	82.2489	74.3480	62.1841
59.7573	56.2809	64.9455	46.6301	57.4032	60.2067	59.4432	74.5989	63.1059	68.8404	63.3701	67.1973	64.7397	68.7902	61.2549	67.2291	69.5355	62.1665	57.9812	58.7912	68.5338	77.8274	70.5733	67.0903
58.9693	58.7512	62.2583	61.4248	56.5124	59.7429	59.8637	74.0032	61.5169	69.2438	63.9108	68.4196	69.8961	69.2960	63.3028	69.3983	66.8480	63.8036	60.3766	58.1013	66.7534	80.0117	70.4383	62.2283
56.1210	62.9823	52.1635	58.3916	57.4032	46.7552	61.2522	74.2047	64.5553	69.5082	64.9698	67.8708	64.9097	68.8361	61.0026	66.6472	67.6760	61.8389	58.1849	58.0761	67.4340	78.5353	70.4207	63.8823
63.1142	62.4226	57.2135	56.0717	54.4662	54.9964	56.3128	66.7968	55.3967	62.9404	60.0675	63.9578	62.9193	63.8882	58.2296	63.2550	61.4155	58.6294	55.9684	54.4255	63.1051	73.3987	66.1945	58.5068
56.4297	56.6353	58.4826	57.8059	57.1865	57.4197	57.4051	67.1416	54.2483	62.0323	59.0849	62.4835	61.6101	62.3054	58.1409	63.3231	61.3236	58.4311	55.6150	54.1524	61.4615	73.7054	66.5269	57.2000
53.7939	54.2340	55.3193	55.7437	54.4046	55.5935	55.1703	65.7694	54.6880	60.3374	57.6538	61.5303	60.6034	61.2509	57.1550	62.5899	60.7054	57.9731	54.9891	53.4083	60.6749	72.6009	65.8126	56.7345
59.8157	59.7144	61.3161	59.8405	59.0242	60.0292	60.0686	72.0254	61.3518	68.3079	65.4313	67.4029	66.8049	67.3183	61.1169	68.3081	65.8951	60.0514	56.8071	56.0346	63.0972	75.6595	68.1327	59.8553
57.5856	57.3039	59.1130	58.6297	57.2627	58.8394	58.2031	69.2889	59.3916	67.4757	63.1078	66.6591	65.6151	66.5109	60.8332	66.0547	64.0265	61.1620	58.3901	56.8148	63.9441	74.4771	67.4317	59.9686
71.0904	71.0316	73.1162	72.5230	71.0059	72.1093	72.0475	84.4473	73.7056	81.5893	74.4776	77.6108	74.4014	76.1479	67.1076	71.6594	68.8527	64.1000	60.2274	58.4696	66.2604	78.1629	70.3119	61.9040
71.9575	71.9173	74.2525	73.0137	72.0804	73.0739	72.7708	85.6214	74.4588	82.6609	74.4394	77.1014	73.0768	73.9875	64.4480	68.5284	66.6386	59.5386	54.5637	53.4589	60.3433	71.9206	65.0966	56.9099
77.4377	75.0858	77.6285	77.5456	76.4343	77.2436	76.6375	90.5478	85.7473	87.2541	80.7455	83.4324	78.8743	80.9878	69.3054	76.5585	74.2587	63.5360	56.5399	57.8858	64.7543	75.5139	65.5088	62.8995
76.6015	77.2360	79.4601	79.1153	77.0409	78.8062	78.2996	90.2571	83.0031	86.6977	80.0017	80.9151	76.6580	78.5864	67.0410	74.4312	72.4044	63.5323	56.4427	56.4234	63.9864	73.7038	65.0763	62.6063
77.4471	75.6268	78.7066	77.9274	75.9713	78.1577	77.1036	92.5674	85.5124	89.2989	80.5886	83.2980	78.8867	80.8198	69.2521	76.4466	74.1389	63.6050	56.6720	56.6672	64.7912	75.8932	65.6947	63.0507
77.6343	76.4621	78.5405	77.7124	76.2059	78.2506	77.4880	90.5242	83.3762	87.1889	78.4871	81.1823	76.7083	78.8910	67.1717	76.1735	73.7804	62.8899	55.5930	55.7441	64.0008	73.5121	64.8528	62.2248
84.1298	84.6969	87.4303	86.0403	85.3899	86.4715	85.8762	95.8804	90.1625	92.5524	85.6849	88.9385	83.9461	87.7163	74.2959	82.9623	81.6783	70.7720	63.1115	63.2121	70.6780	81.3264	70.9390	70.3542
76.7642	76.8158	79.2920	79.0584	76.9879	78.3626	78.1811	90.0636	82.9692	86.5746	77.9772	80.9164	76.4264	78.4766	66.9722	74.1929	73.6324	62.9169	55.6467	55.5853	63.5674	73.1765	64.6092	61.8792
77.4091	70.2328	72.8523	73.7134	73.4652	73.7470	78.1771	88.2804	81.2775	84.8372	78.6665	81.4251	77.0853	79.3771	68.0141	75.0882	73.1145	62.7641	55.9049	57.1929	63.8318	74.3077	65.9729	63.3021
78.0716	76.2334	78.6869	78.3717	76.3660	78.1601	79.4216	90.8107	84.0528	87.6444	79.3609	81.9681	77.5691	79.5105	68.2438	75.0213	74.4094	63.8126	56.7512	56.7457	64.7701	73.8840	65.5077	63.1475
78.0322	75.8794	78.6844	78.1115	76.9288	77.8523	79.4756	90.9113	82.2363	85.6963	79.3875	82.1604	77.6520	79.6296	68.3342	75.2087	72.9158	63.8892	56.6811	56.7327	64.8545	73.9790	65.6070	63.0693
58.1320	57.2780	58.8130	58.1016	57.3166	58.2766	58.8677	70.6876	66.6785	69.6965	62.6434	65.5242	62.7424	66.4304	57.4771	64.2596	63.6979	57.9464	54.4966	51.7009	59.6373	69.6016	60.9122	56.5942
58.1967	58.1863	59.8145	59.0357	58.2349	59.0377	58.9905	69.6914	64.1599	67.1577	60.4449	64.4608	61.7553	64.3540	55.6433	62.3129	61.8749	56.2842	52.2799	50.5550	59.8343	69.7026	61.0850	56.9839
61.9834	62.1357	63.7868	62.8643	62.0009	63.0737	62.8350	74.5755	70.2477	74.3934	66.0073	69.2691	65.5027	68.2060	59.5224	65.2551	63.5019	57.8977	52.7061	50.2584	56.2528	65.0707	56.5306	52.7866
64.6731	64.8906	66.6666	65.8024	64.8245	65.9111	65.6298	76.5726	70.7627	74.6057	66.5879	70.2830	66.4678	70.3864	59.9108	67.0547	67.7148	59.6401	53.9535	52.1066	59.4095	68.4125	59.4414	57.8394
64.1806	62.7435	64.3072	63.9469	62.9494	63.9532	64.7741	73.8187	69.0196	68.8024	62.8125	66.5357	63.1259	66.9054	57.6535	65.5181	65.0135	57.2495	52.6647	51.5400	60.5751	70.1125	61.1489	58.9511
66.7377	65.5416	67.3437	66.5851	65.7672	66.7564	67.3629	76.8537	72.5167	73.9602	66.1235	70.1539	66.2762	71.1359	61.1809	68.8552	68.7956	61.8397	57.2628	55.6225	63.7476	73.1609	63.5129	61.1278
66.7377	65.5416	67.3437	66.5851	65.7672	66.7564	67.3629	76.8537	72.5167	73.9602	66.1235	70.1539	66.2762	71.1359	61.1809	68.8552	68.7956	61.8397	57.2628	55.6225	63.7476	73.1609	63.5129	61.1278
68.9590	69.0838	70.6397	70.1002	69.2791	70.0820	69.8665	78.9631	74.0414	76.6774	70.1850	73.6314	71.0056	75.9745	65.4754	74.2072	76.5940	67.6280	62.3531	60.9125	69.7430	78.6884	67.4599	67.3054
68.9590	69.0838	70.6397	70.1002	69.2791	70.0820	69.8665	78.9631	74.0414	76.6774	70.1850	73.6314	71.0056	75.9745	65.4754	74.2072	76.5940	67.6280	62.3531	60.9125	69.7430	78.6884	67.4599	67.3054
68.9590	69.0838	70.6397	70.1002	69.2791	70.0820	69.8665	78.9631	74.0414	76.6774	70.1850	73.6314	71.0056	75.9745	65.4754	74.2072	76.5940	67.6280	62.3531	60.9125	69.7430	78.6884	67.4599	67.3054
68.9590	69.0838	70.6397	70.1002	69.2791	70.0820	69.8665	78.9631	74.0414	76.6774	70.1850	73.6314	71.0056	75.9745	65.4754	74.2072	76.5940	67.6280	62.3531	60.9125	69.7430	78.6884	67.4599	67.3054
68.9590	69.0838	70.6397	70.1002	69.2791	70.0820	69.8665	78.9631	74.0414	76.6774	70.1850	73.6314	71.0056	75.9745	65.4754	74.2072	76.5940	67.6280	62.3531	60.9125	69.7430	78.6884	67.4599	67.3054
68.9590	69.0838	70.6397	70.1002	69.2791	70.0820	69.8665	78.9631	74.0414	76.6774	70.1850	73.6314	71.0056	75.9745	65.4754	74.2072	76.5940	67.6280	62.3531	60.9125	69.7430	78.6884	67.4599	67.3054
65.0262	65.1341	66.8077	65.9451	65.2273	66.2266	65.8464	74.7940	68.1833	71.1935	64.7966	67.3735	63.6363	67.5105	57.6257	64.8276	61.9631	57.2017	53.1954	51.5736	60.5715	70.1158	61.4234	57.8677
74.1160	74.0477	76.1783	75.2728	74.2723	75.6428	75.1183	84.8554	80.0020	78.1882	72.5952	77.1102	72.6212	79.5894	66.5080	77.2775	79.5370	66.9350	59.8772	61.4354	71.6955	79.5925	67.5072	70.6333
52.5125	50.4015	52.0793	52.0079	50.9809	51.9405	53.2057	62.0687	58.1885	56.0925	51.8659	54.3148	52.1121	53.1429	46.3118	55.0214	54.9458	46.5327	38.6388	41.0649	46.2723	53.6343	47.1966	48.2360
69.6300	67.8553	69.4685	69.2045	68.1803	69.5054	70.5823	80.1489	74.8652	74.7646	67.5597	71.2477	66.7484	71.5233	59.9507	67.6940	67.5066	58.0088	53.0015	53.3855	62.7214	71.8841	62.3535	60.5368
58.3068	58.7390	60.0830	59.1601	58.8814	59.4363	59.2641	68.3890	65.2582	61.4470	57.6063	60.1893	57.1980	59.3797	50.8644	61.0545	61.7904	50.3852	41.5859	44.5894	50.4092	57.0467	49.5616	52.6607
71.7838	71.5083	74.4873	73.5556	72.3995	73.7174	73.2165	82.9603	77.1370	76.1133	70.6905	75.7032	71.5640	78.6005	65.2971	76.7956	79.3388	66.9466	59.9120	60.9748	71.7997	80.3449	67.1233	70.7544
90.2510	88.2149	91.9818	88.0732	81.6860	91.6220	90.2121	91.7349	88.6250	92.4639	91.9545	92.9003	92.6671	93.4281	90.7852	92.9307	92.2507	89.3781	88.2744	87.3935	89.0833	93.1634	91.5947	87.3317
62.2388	61.0644	64.4236	61.8800	64.4638	64.3633	62.7196	72.0045	62.2376	69.1271	67.0078	70.6009	70.0406	70.4764	64.3927	70.1957	68.0583	63.8209	60.2492	59.1355	66.6779	79.4500	71.4767	64.8238
63.6137	57.9592	67.5918	65.1074	64.2084	61.0827	62.6928	73.8725	59.8644	67.7407	64.8792	68.2784	67.4452	68.4425	62.4006	67.4802	66.2838	60.8898	59.0444	57.5621	66.5258	79.7183	72.6684	63.9996
61.4086	55.1231	63.2580	64.0086	59.0931	59.7394	60.4893	72.5082	58.1182	66.2665	63.0794	67.7456	66.3998	67.0859	60.7634	66.8936	64.7473	59.1510	56.5231	57.0331	66.3468	79.6995	71.9104	64.7781
61.4086	55.1231	63.2580	64.0086	59.0931	59.7394	60.4893	72.5082	58.1182	66.2665	63.0794	67.7456	66.3998	67.0859	60.7634	66.8936	64.7473	59.1510	56.5231	57.0331	66.3468	79.6995	71.9104	64.7781
61.4086	55.1231	63.2580	64.0086	59.0931	59.7394	60.4893	72.5082	58.1182	66.2665	63.0794	67.7456	66.3998	67.0859	60.7634	66.8936	64.7473	59.1510	56.5231	57.0331	66.3468	79.6995	71.9104	64.7781
66.7112	63.5999	67.2807	66.5635	62.9879	62.8634	67.5030	74.8123	63.1207	70.9779	68.2940	72.0393	71.1430	70.8679	65.0788	69.5016	68.5687	63.1112	58.3569	58.5249	66.4450	79.0110	72.2614	64.9316
64.6954	64.1725	65.7689	67.2669	64.0801	62.1348	65.5691	75.0252	61.7397	69.7718	66.9399	70.5462	69.1297	69.0086	64.7122	69.9332	65.8596	62.2650	58.4063	58.1693	65.6720	78.9721	71.1647	62.7964
42.2420	42.1772	42.8654	42.4320	41.9875	42.6886	42.8324	58.5914	47.8797	56.3753	52.2340	55.9549	53.6835	56.1556	49.2729	52.4144	50.3375	47.8104	47.3472	45.6081	47.4513	55.2192	48.5705	40.4040
41.9122	41.9843	42.7092	42.3344	41.8626	42.5589	42.5381	56.2087	47.6856	56.2309	52.0434	55.0593	53.5476	56.0229	49.1328	52.2847	50.2403	47.7210	47.2693	43.1982	46.4312	55.1821	48.5404	40.3406
34.8686	34.9882	35.6631	35.1596	34.8336	35.3791	35.4060	43.0649	35.6764	42.4263	37.6955	40.3418	40.0002	41.4541	38.6794	41.6719	40.4691	43.7333	44.6212	37.3381	43.0771	53.0791	47.0470	37.3464
55.5023	55.3935	56.8722	56.0270	55.4626	56.3352	56.1446	65.4480	55.2372	63.9534	58.0050	61.5002	59.2879	61.4601	54.8483	57.8286	56.5884	54.5946	53.0754	49.7735	57.4440	68.2960	61.2709	52.7626

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_x x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	54.5390	54.7941	56.3433	55.6534	54.7290	55.8232	55.4786	63.1726	52.6431	61.1379	56.3474	58.9251	56.7313	58.8630	53.1242	56.2324	54.0929	52.0031	51.2186	48.1506	56.5617	67.2593	60.5091	52.0113
R072	833397.24	821875.22	833501.75	821897.07	20	0	1	48.2493	48.1682	49.4941	49.0390	48.7977	48.8018	48.6370	56.7922	45.4512	51.3155	47.7367	50.7096	49.0022	49.6468	44.0650	48.4229	46.4480	42.6993	39.9796	39.7415	47.3093	57.4416	51.6613	44.6752
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	51.1906	50.9816	52.6918	52.1539	51.4286	51.7888	51.7981	58.8539	47.0337	55.1939	51.7739	54.7184	53.3804	54.2600	49.6817	52.3102	50.1096	48.1193	47.4503	46.2711	53.3672	63.0943	57.7138	50.4749
R074	833281.64	821790.34	833451.80	821860.54	20	0	1	51.4599	51.3527	53.0306	51.8415	51.4984	52.2089	52.1108	59.0374	47.2912	54.6673	51.7518	54.5166	52.8507	53.7619	48.5663	51.2334	48.7642	47.1392	45.7601	44.2758	52.6287	63.2938	57.4323	48.5731
R075	833449.48	821861.09	833506.97	821883.08	16	0	1	47.7294	47.8729	48.8590	48.6803	47.6461	48.9442	48.5226	55.6677	43.6495	50.8805	48.0920	50.9113	49.5591	49.8991	45.2279	48.2518	45.6762	43.6442	42.6472	41.4973	49.3059	60.0415	54.6613	45.3934
R076	833501.46	821897.80	833548.66	821899.77	16	0	1	50.0554	50.8333	51.5790	51.5338	50.5383	51.0661	50.9408	59.2404	47.9681	53.5056	50.1070	53.6147	51.8505	53.9886	47.7781	52.1450	50.4224	47.2332	46.2168	44.9088	54.4653	65.4620	58.5145	49.6973
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	50.0554	50.8333	51.5790	51.5338	50.5383	51.0661	50.9408	59.2404	47.9681	53.5056	50.1070	53.6147	51.8505	53.9886	47.7781	52.1450	50.4224	47.2332	46.2168	44.9088	54.4653	65.4620	58.5145	49.6973
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	50.0554	50.8333	51.5790	51.5338	50.5383	51.0661	50.9408	59.2404	47.9681	53.5056	50.1070	53.6147	51.8505	53.9886	47.7781	52.1450	50.4224	47.2332	46.2168	44.9088	54.4653	65.4620	58.5145	49.6973
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	48.3393	48.5768	49.8938	49.1672	48.7283	49.2696	49.1696	56.5293	45.0322	52.4120	48.9742	52.1444	50.7781	52.0852	47.1133	50.2522	48.0828	46.9920	46.0235	44.4194	53.2936	64.3680	58.0095	48.6848
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	48.3393	48.5768	49.8938	49.1672	48.7283	49.2696	49.1696	56.5293	45.0322	52.4120	48.9742	52.1444	50.7781	52.0852	47.1133	50.2522	48.0828	46.9920	46.0235	44.4194	53.2936	64.3680	58.0095	48.6848
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	48.3393	48.5768	49.8938	49.1672	48.7283	49.2696	49.1696	56.5293	45.0322	52.4120	48.9742	52.1444	50.7781	52.0852	47.1133	50.2522	48.0828	46.9920	46.0235	44.4194	53.2936	64.3680	58.0095	48.6848
R078	833682.38	821822.35	833875.32	821680.75	16	0	1	54.5638	54.2628	55.9904	55.4036	54.4448	55.7474	55.4161	63.5830	53.3104	58.1715	54.4409	57.8220	55.5236	57.6574	51.0110	55.1596	53.5416	49.6818	48.4808	47.2904	55.9485	66.6269	59.7360	52.1652
R079	833673.29	821811.43	833867.51	821651.46	16	0	1	46.2376	46.7955	47.7180	47.2853	46.5316	47.0473	47.0940	53.9784	41.4095	49.4406	47.3210	50.5971	49.7565	50.8992	46.6796	49.2446	47.0088	46.2985	47.0337	44.9963	54.1312	65.4045	59.2480	48.7368
R080	833875.67	821661.18	833989.54	821587.94	16	0	1	54.3325	54.5694	56.0492	55.4986	54.5444	54.8988	55.0397	62.8638	49.5155	57.9374	53.9433	57.6137	55.2802	57.7305	50.6825	54.0338	51.7948	48.9050	48.4192	46.5119	56.4031	67.7947	60.4434	51.3511
R081	833867.01	821650.88	833983.08	821582.98	20	0	1	48.3929	48.8555	49.9506	49.3241	48.5599	49.1641	49.3783	55.7865	44.0183	51.7188	49.7734	52.8215	51.8159	52.8596	48.7817	51.1877	48.8979	47.9864	48.7618	46.7318	55.4101	66.2823	60.5330	50.5114
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	69.4937	70.1246	71.4579	70.5655	69.6391	70.3417	70.5380	79.7796	68.2668	79.5874	73.9983	77.4242	75.3383	77.2930	70.4605	72.9586	70.1591	67.1445	66.0883	64.4640	72.2900	83.9563	76.7375	66.3593
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	69.4937	70.1246	71.4579	70.5655	69.6391	70.3417	70.5380	79.7796	68.2668	79.5874	73.9983	77.4242	75.3383	77.2930	70.4605	72.9586	70.1591	67.1445	66.0883	64.4640	72.2900	83.9563	76.7375	66.3593
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	69.4937	70.1246	71.4579	70.5655	69.6391	70.3417	70.5380	79.7796	68.2668	79.5874	73.9983	77.4242	75.3383	77.2930	70.4605	72.9586	70.1591	67.1445	66.0883	64.4640	72.2900	83.9563	76.7375	66.3593
R083	833436.83	821855.11	833496.18	821813.12	14	0	1	34.6840	35.3228	36.9775	36.4775	35.8761	36.5821	35.7816	38.0071	34.7938	39.7090	38.8222	39.3286	40.4687	38.1373	37.9163	39.2075	36.8678	35.3189	33.5294	34.1737	36.0650	43.1716	41.8919	35.7599
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	34.6840	35.3228	36.9775	36.4775	35.8761	36.5821	35.7816	38.0071	34.7938	39.7090	38.8222	39.3286	40.4687	38.1373	37.9163	39.2075	36.8678	35.3189	33.5294	34.1737	36.0650	43.1716	41.8919	35.7599
R083	833524.36	821772.29	833559.81	821662.62	14	0	1	34.6840	35.3228	36.9775	36.4775	35.8761	36.5821	35.7816	38.0071	34.7938	39.7090	38.8222	39.3286	40.4687	38.1373	37.9163	39.2075	36.8678	35.3189	33.5294	34.1737	36.0650	43.1716	41.8919	35.7599
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	70.2941	70.1778	71.9962	71.4607	70.2092	71.0753	71.0603	80.2510	68.1961	78.3318	74.9125	78.8732	77.1907	80.0385	73.4040	75.2985	72.8403	73.1981	72.6061	69.8630	78.5367	90.6881	83.3072	70.6639
R084	833582.69	821644.68	833607.71	821603.87	13	0	1	70.2941	70.1778	71.9962	71.4607	70.2092	71.0753	71.0603	80.2510	68.1961	78.3318	74.9125	78.8732	77.1907	80.0385	73.4040	75.2985	72.8403	73.1981	72.6061	69.8630	78.5367	90.6881	83.3072	70.6639
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	72.3091	72.8221	74.6064	73.7333	72.4656	73.8948	73.8670	81.8223	71.6239	80.5024	77.5787	81.1452	79.4434	81.8758	75.6882	77.2694	74.7767	73.2795	74.0903	69.8748	79.3798	91.1050	82.2971	72.2517
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	72.3091	72.8221	74.6064	73.7333	72.4656	73.8948	73.8670	81.8223	71.6239	80.5024	77.5787	81.1452	79.4434	81.8758	75.6882	77.2694	74.7767	73.2795	74.0903	69.8748	79.3798	91.1050	82.2971	72.2517
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	72.3091	72.8221	74.6064	73.7333	72.4656	73.8948	73.8670	81.8223	71.6239	80.5024	77.5787	81.1452	79.4434	81.8758	75.6882	77.2694	74.7767	73.2795	74.0903	69.8748	79.3798	91.1050	82.2971	72.2517
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	71.0183	70.7903	73.4118	71.1508	70.8652	72.1695	71.8301	78.4947	66.1276	77.0078	71.8300	75.2257	73.0269	75.1566	68.6945	70.0674	66.9851	65.3786	65.5460	63.0073	71.9495	83.7382	77.6214	66.1617
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	71.0183	70.7903	73.4118	71.1508	70.8652	72.1695	71.8301	78.4947	66.1276	77.0078	71.8300	75.2257	73.0269	75.1566	68.6945	70.0674	66.9851	65.3786	65.5460	63.0073	71.9495	83.7382	77.6214	66.1617
R087	833648.49	821548.42	833696.49	821508.30	13	0	1	86.5753	86.6398	89.0693	87.1558	85.9059	87.1270	87.1392	89.6824	86.9121	91.1708	90.9251	91.6924	91.0772	92.0831	89.6173	90.0947	88.7658	87.4925	86.9041	84.3863	86.7299	90.6359	88.1869	85.1321
R088	833254.24	821811.68	833365.50	821896.64	17	4	4	14.6220	14.5795	15.2979	14.8653	14.3663	14.9613	15.1420	21.0952	23.0726	22.9995	22.3073	21.4802	19.8605	17.3645	18.9437	16.3209	17.2196	16.5366	14.1588	11.6796	12.3280	14.0960	14.2723	11.8662
R088	833365.50	821896.64	833416.50	821865.61	17	7	4	14.6220	14.5795	15.2979	14.8653	14.3663	14.9613	15.1420	21.0952	23.0726	22.9995	22.3073	21.4802	19.8605	17.3645	18.9437	16.3209	17.2196	16.5366	14.1588	11.6796	12.3280	14.0960	14.2723	11.8662
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	14.6220	14.5795	15.2979	14.8653	14.3663	14.9613	15.1420	21.0952	23.0726	22.9995	22.3073	21.4802	19.8605	17.3645	18.9437	16.3209	17.2196	16.5366	14.1588	11.6796	12.3280	14.0960	14.2723	11.8662
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	14.6220	14.5795	15.2979	14.8653	14.3663	14.9613	15.1420	21.0952	23.0726	22.9995	22.3073	21.4802	19.8605	17.3645	18.9437	16.3209	17.2196	16.5366	14.1588	11.6796	12.3280	14.0960	14.2723	11.8662
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	14.6220	14.5795	15.2979	14.8653	14.3663	14.9613	15.1420	21.0952	23.0726	22.9995	22.3073	21.4802	19.8605	17.3645	18.9437	16.3209	17.2196	16.5366	14.1588	11.6796	12.3280	14.0960	14.2723	11.8662
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	14.6220	14.5795	15.2979	14.8653	14.3663	14.9613	15.1420	21.0952	23.0726	22.9995	22.3073	21.4802	19.8605	17.3645	18.9437	16.3209	17.2196	16.5366	14.1588	11.6796	12.3280	14.0960	14.2723	11.8662
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	14.6220	14.5795	15.2979	14.8653	14.3663	14.9613	15.1420	21.0952	23.0726	22.9995	22.3073	21.4802	19.8605	17.3645	18.9437	16.3209	17.2196	16.5366	14.1588	11.6796	12.3280	14.0960	14.2723	11.8662
R089	833256.86	821891.44	833370.08	821846.87	16	4	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R089	833543.19	821725.47	833582.07	821653.37	16	8	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R089	833582.07	821653.37	833598.99	821594.44	16	8	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R089	833598.99	821594.44	833669.93	821506.87	16	6	4	14.4495	14.4059	15.1445	14.7908	14.3916	14.8110	14.8566	17.0613	17.9462	17.4854	17.7553	17.6075	16.9491	15.2187	16.7164	14.3137	15.4771	15.8847	14.1079	11.0476	12.0555	13.9382	13.8455	11.7365
R090+R091	833259.78	821829.64	833337.84	821634.13	17	0	1	50.4465	50.5272	51.9073	51.1849	50.7532	51.1116	51.2788	63.3593	50.5275	60.4421	56.0085	58.8866	59.4233	57.2034	53.7226	59.3121	56.1136	54.2527	50.1292	49.4979	55.7596	69.4327	61.7004	51.7733
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	49.4499	49.1936	52.9054	52.5844	50.9033	49.2954	50.7299	61.7748	48.3927	57.6992	55.4776	58.3665	58.5714	56.9993	53.0189	58.5677	55.8876	52.8222	48.9724	48.4680	55.4402	68.0898	61.7700	52.7370
R092+R093	833449.06	821640.31	833513.09	821599.24	20	0	1	49.4499	49.1936	52.9054	52.5844	50.9033	49.2954	50.7299	61.7748	48.3927	57.6992	55.4776	58.3665	58.5714	56.9993	53.0189	58.5677	55.8876	52.8222	48.9724	48.4680	55.4402	68.0898	61.7700	52.7370
R094	833337.84	821634.13	833341.51	821575.41	16	0	1	39.5962	39.6574	41.5084	41.2303	40.1774	41.3148	40.0021	43.5828	36.2472	42.8552	40.9671	40.0221	39.7308	34.2396	32.6575	32.9120	28.5821	25.1551	20.7941	22.4118	25.0883	34.1678	33.3345	24.9517
R095	833609.59	821591.72	833648.49	821548.43	17	0	1	92.6453	92.2826	95.4247	94.0016	92.5218	94.2717	94.3903	98.6279	95.2744	98.8840	98.9973	100.1504	99.8578	100.7619	98.1922	99.5050	98.4067	96.1770	95.4202	92.0798	94.9145	99.9137	97.2900	93.4860
R096+R097	833980.59	822454.38	834028.77	822414.27	18	0	1	61.4082	71.2617	62.5379	43.2696	42.4741	66.8212	60.1477	74.3901	66.3027	73.7219	69.6182	71.2658	69.7813	71.5817	64.5251	70.3734	65.5108	61.3389	56.4688	55.3707	63.0764	77.6106	71.0797	62.9636
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	83.1180	83.0622	88.0848	89.2414	84.9893	80.1613	81.8634	90.8731	92.8292	99.7706	92.4410	91.9614	87.2434	88.1373	79.6511	83.9564	73.6418	67.9063	63.5696	63.1869	70.5281	81.4963	72.2894	66.4795
R100+R101	834127.62	822332.11	834218.31	822256.35	16	0	1	72.0931	72.0127	81.4610	74.1151	76.9082	72.9015	80.1537	86.3742	79.7581	91.5640	84.3769	83.7245	84.5511	81.1897	74.5831	81.8833	72.6885	67.6351	62.0288	61.3250	68.2207	82.9730	73.5391	67.1539
R102+R103	834218.31	822256.36	834309.95	822180.58	16	0	1	71.6559	77.2534	72.8960	72.4543	71.2441	77.0212	72.9655	88.5609	75.4478	83.9315	75.8744	79.9260	74.3393	75.1064	65.1388	72.4941	67.4137	59.2295	53.8371	54.8351	65.3943	78.6747	69.7164	63.4287
R104+R106	834309.95	822180.68	834407.46	822098.55	18	0	1	66.4068	73.7308	71.0988	65.7301	64.6217	72.6092	66.0279	83.1919	72.3387	78.3614	73.6863	77.4660	72.7764	72.3487	64.0016	70.6450	65.3312	60.1741	54.7636	55.9028	65.3446	78.0452	70.5602	63.5494
R106	833917.63	822431.11	833991.76	822369.39	18	0	1	56.6536	57.0123	61.2208	58.9889	59.6316	56.2914	57.2101	68.1710	55.7227	65.3455	62.5437	66.2544	65.7910	66.5932	61.0240	67.4537	63.9233	61.0347	57.0290	56.9701	64.4677	78.7814	69.0030	60.3005
R107	833991.55	822370.04	834090.39	822287.63	18	0	1	58.9693	55.4730	61.6058	66.6779	60.1888	57.3844	59.8758	67.0030	53.4857	61.6242	59.0190	63.2961	63.0137	62.9419	57.3818	63.5431	62.1804	58.1798	53.6892	53.4732	62.1148	76.3305	70.0051	63.0209
R108	834090.84	822288.08	834181.98	822212.22	16	0	1	58.3559	55.8645	60.9944	64.6900	61.2771	61.5580	59.3753	66.9574	54.1268	62.3980	60.5579	63.3234	63.3259	63.8144	58.6304	64.6011	63.7942	58.8288	55.0305	54.6680	63.9609	77.2286	68.6099	60.4401
R109	834181.98	822212.22	834273.05	822136.48	17	0	1	57.3367	54.6890	59.9879	63.8878	60.3434	60.5919	58.3463	66.2003	52.9181	61.3949	59.5571	62.5976	62.0890	62.8726	57.6951	63.3155	62.3792	57.2995	53.6686	52.8196	61.7222	75.7437	69.7398	60.8649
R110	834273.34	822136.83	834364.38	822060.84	17	0	1	56.4317	56.4237	57.2271	60.7826	58.0113	56.7554	58.8493	67.0157	52.4691	61.3906	58.9225	62.3300	62.1963	62.2075	57.2364	63.0309	61.0136	56.3247	53.7011	53.5784	61.5501	74.1733	68.5436	60.1113
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	57.1625	57.9144	56.7170	58.9869	56.0417	56.3442	58.1684	66.4361	54.4608	63.3252	59.4038	63.0853	62.2555	62.1488	57.3992	62.4917	61.6205	56.6639	52.7292	53.5317	61.9399	75.8458	68.1045	57.3181
R112	833849.76	822405.79	833902.96	822360.57	19	0	1	85.8719	87.6741	94.6683	88.6501	88.0544	89.4063	88.8320	99.3152	93.1022	97.6258	90.5162	92.5120	90.7342	92.3620	78.5774	86.1516	78.2858	69.9364	65.0898	64.8913	72.6565	84.2437	74.0779	70.5022
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	53.1828	53.1011	56.1735	51.8985	47.7454	56.8086	52.3481	60.3535	48.7077	57.0376	53.9807	57.9965	56.6711	55.9856	52.4229	57.0402	55.8905	51.5366	48.3950	47.5880	57.3287	69.0301	62.6947	54.6606
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	59.6800	57.8964	60.2815	59.8587	58.4277	59.2869	60.2074	69.1201	61.2785	71.0537	67.5343	68.9815	68.1399	67.8941	64.8950	67.9270	66.5726	62.2088	58.4332	56.9870	63.1657	74.5380	66.7794	59.8269
R115	833994.06	822200.75	834077.01	822132.98	16	0	1	73.9198	73.9218	76.4111	75.2585	72.6305	74.8991	74.8788	83.1012	74.8459	82.3524	75.9956	78.8680	75.7323	77.5041	68.6816	74.1122	71.5556	64.0262	59.4028	59.7359	66.4277	77.3099	69.1258	65.2080
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	56.7156	56.8310	60.3587	59.8779	58.2138	59.0921	57.9795	65.5159	54.5713	63.5988	60.2507	63.3311	62.5978	62.7724	58.2009	62.9745	62.8604	57.4818	54.0501	54.0759	60.3617	71.1477	64.9817	58.1530
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	57.0129	58.5219	59.4127	59.7318	58.8039	58.8349	58.4856	65.5906	55.1037	62.6912	60.8350	63.7850	62.9381	63.1297	58.6910	63.0609	63.3537	57.9281	54.4453	54.4422	60.5328	71.3913	65.4162	58.9840
R118	834190.59	822037.73	834243.25	821993.98	19	0	1	58.7110	58.6747	59.9791	60.2420	59.3158	59.3874	58.8485	66.0699	55.7362	63.1746	61.4815	64.1177	63.3232	63.5001	59.1606	63.5424	63.7810	58.3470	56.0945	54.7346	62.2048	71.6517	65.7751	58.7927
R119	834242.94	821993.86	834282.16	821961.45	19	0	1	56.9620	56.6335	59.3651	58.0703	56.1115	57.9257	57.8678	65.2404	55.8961	63.3976	61.6287	63.2852	62.6647	62.8451	59.8170	63.1747	63.6107	58.1243	56.0945	54.7346	62.2048	71.6517	65.7751	58.7927
R120	834281.93	821961.17	834309.17	821886.80	18	0	1	58.0437	58.4265	60.2113	58.8150	56.9944	59.8086	58.4823	67.3514	56.7271	64.3894	62.5630	65.4984	64.8301	64.8213	60.4749	65.1064	63.9027	59.7478	56.2947	54.9040	62.2419	71.5391	65.4406	59.2672
R121	833768.03	822376.18	833709.11	822310.98	18	0	1	70.8465	65.4420	77.1268	70.1531	69.0148	70.2956	68.0731	79.0879	61.1118	74.7359	71.8073	77.4506	78.5438	82.6882	77.8462	80.6451	79.8803	81.4257	83.7409	79.0138	92.9786	109.2170	98.0902	82.2529
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	72.2688	73.7030	75.6136	75.6949	75.4324	74.6678	72.7818	83.3647	69.0538	85.6895	77.2069	79.4320	76.0611	75.3230	69.4175	69.8245	59.6140	59.4580	59.4627	56.7950	63.1167	76.1350	70.6385	56.8188
R123	833868.78	822222.16	833964.75	822150.60	16	0	1	42.0332	41.9243	43.0859	41.9255	38.9613	44.9479	43.4473	52.5648	37.3611	47.8290	46.4307	49.3096	50.7596	48.2020	46.7038	50.6266	47.0338	47.6054	46.8421	44.9392	51.4388	65.7024	61.2503	46.5707
R124	833673.82	822341.72	833694.86	822284.07	18	0	1	77.3569	75.9240	78.1437	80.1003	75.8312	79.4294	77.0071	84.2753	73.5852	85.5391	81.5793	85.5473	85.6781	89.4432	83.4594	85.8580	87.4704	85.0929	86.1257	80.8535	93.2892	105.9699	98.6247	82.9481
R125	833694.86	822284.07	833827.77	822172.99	19	0	1	76.1222	77.0172	76.8460	77.9306	78.7201	75.2717	76.9905	86.4812	69.2182	83.9872	75.9593	77.1815	72.3311	70.9427	61.9816	61.4430	48.7087	48.0500	45.7094	44.8269	51.7532	63.8489	60.7891	48.2191
R126	833653.40	822269.00	833669.33	822174.73	13	0	1	63.8191	63.8851	64.1592	68.7934	65.1130	64.5183	65.3116	73.6423	62.0632	70.9857	67.7007	71.5574	70.2390	70.8450	66.3654	72.2540	68.4787	64.9624	63.2110	61.2606	68.8511	83.3144	74.4916	64.4127
R127	833489.65	822315.75	833503.51	822278.46	16	0	1	63.0304	66.5784	65.8319	63.9504	60.3670	63.6668	64.9637	72.6219	58.7202	69.4249	68.0887	72.0217	71.7844	72.2261	70.4325	73.5541	72.1048	71.7952	71.7204	68.9881	77.5995	91.6666	82.5032	69.6740
R128	833503.61	822278.46	833524.36	822221.21	16	0	1	60.5034	60.3045	64.6485	63.4055	60.2110	60.6089	60.4489	68.6042	53.4145	64.2686	62.6466	66.7665	66.9081	67.7685	65.6339	68.7751	67.2775	67.4489	67.5157	65.1621	73.3856	87.7587	81.0710	67.3210
R129	833377.80	822332.03	833308.00	822293.72	16	0	1	51.1149	51.0961	52.1472	52.2718	50.7451	52.1756	52.0083	61.0073	46.5388	57.1579	55.5702	58.5141	60.0725	59.6708	57.5172	60.5831	58.1234	58.3935	59.7808	56.0730	66.3131	78.4940	71.6935	58.8590
R130	833377.80	822232.03	833398.77	822175.17	16	0	1	50.0944	50.1544	51.4530	50.6004	50.2480	50.7249	50.7064	60.0538	45.3715	56.1865	54.6139	57.4925	57.6285	58.7123	55.0594	59.5797	56.9362	57.4182	58.8795	55.0936	65.8405	77.9762	71.0106	57.7501
R131	833398.42	822175.04	833434.10	822080.76	16	0	1	52.3753	52.4749	54.2378	53.1328	52.7487	53.2459	53.1270	62.9177	50.2989	59.2043	54.8868	58.7641	58.3330	59.3072	54.0948	58.9049	57.5139	54.9979	54.3174	52.6912	61.2389	73.4300	66.3429	56.8548
R132	833433.92	822080.70	833460.51	822007.97	16	0	1	37.3151	37.5608	39.6572	38.7643	37.4936	38.5696	37.6853	40.9548	38.3700	43.7372	42.4046	42.2609	42.9566	39.1716	37.6644	38.5129	35.3853	32.9257	30.2064	30.6798	31.4678	38.8991	37.0765	30.7415
R133	833460.45	822007.90	833481.00	821952.76	16	0	1	65.9081	67.5893	70.6113	70.6510	69.1814	68.1041	66.0554	74.9460	65.3424	73.9825	68.3489	71.2437	68.1503	68.5278	60.6498	63.6671	56.7520	54.6372	52.4387	51.4767	59.1924	70.4544	62.6338	53.7910
R134	833481.00	821952.76	833500.97	821883.06	16	0	1	52.5749	54.2510	57.8175	58.4560	56.2072	54.9942	52.4116	61.4481	50.1134	57.7710	55.0159	57.7055	57.0797	56.1916	52.0906	56.1055	53.9732	51.8177	48.8899	47.5105	53.2480	65.4065	59.7910	50.1413
R135	833209.07	822233.78	833232.06	822178.07	16	0	1	58.1440	69.7971	81.3888	70.1673	65.9185	77.9893	67.4938	67.4657	50.2715	63.5614	61.0778	63.7447	65.5434	65.6858	62.6928	65.9722	61.9798	61.3491	60.6310	60.3143	70.8121	84.1283	80.2290	67.8588
R136	833232.03	822178.06	833253.39	822120.94	16	0	1	45.6506	57.4032	71.1832	23.1071	22.5685	70.2956	63.2473	64.2119	48.4230	61.8022	57.2788	60.7318	62.8239	62.8239	59.8158	63.2097	59.3620	59.8350	59.5622	58.4098	66.5368	82.3847	78.2156	65.0742
R137	833080.91	822182.03	833100.63	822129.44	16	0	1	50.9335	51.0724	62.8629	21.6076	21.1293	62.1276	48.4116	58.2952	40.5054	52.2272	49.0960	53.1818	55.5018	55.6158	50.9997	54.9592	55.4943	52.8668	53.8626	52.7240	61.3308	76.5793	72.4280	57.6761
R138	833100.63	822129.44	833121.79	822072.07	16	0	1	50.9335	51.0724	62.8629	21.6076	21.1293	62.1276	48.4116	58.2952	40.5054	52.2272	49.0960	53.1818	55.5018	55.6158	50.9997	54.9592	55.4943	52.8668	53.8626	52.7240	61.3308	76.5793	72.4280	57.6761
R139	833121.68	822072.03	833166.56	821977.95	16	0	1	47.6155	47.2643	50.0521	46.8501	47.7482	48.9986	48.6653	56.8037	41.1364	51.6021	49.6931	53.9937	54.2983	55.2548	51.8053	55.0513	54.2653	54.0116	55.8686	52.2043	62.9683	77.0539	70.1423	56.0267
R140	833274.48	822007.07	833296.88	821947.56	17	0	1	75.8737	75.2613	77.3624	76.2629	74.6254	78.1479	76.8097	85.5214	69.5568	81.1711	74.8726	76.3200	72.3355	70.8392	62.5777	63.2260	53.4284	52.5763	50.4558	48.5640	56.0274	69.3207	64.5485	53.0122

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_x x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.35	821947.25	833315.58	821891.87	13	0	1	71.9576	71.2257	66.4282	63.4322	74.8206	77.0331	72.8278	84.6604	67.3807	79.6616	72.4212	74.1140	69.9448	58.1328	60.0621	60.7172	49.7829	48.7110	47.0294	46.2224	54.5938	68.6981	63.1967	50.0346
R142	833329.89	821853.87	833315.98	821891.84	13	0	1	44.0323	40.7121	44.8762	42.5539	38.9941	44.3111	45.1219	48.0500	40.9027	48.0706	48.1190	48.8842	49.6812	46.2675	44.9648	47.1230	42.6548	39.5312	36.9712	38.4453	41.8634	52.9512	50.0213	41.5906
R143	833129.75	821889.31	833169.17	821834.07	13	0	1	77.0028	77.2006	78.7006	77.4200	75.9413	79.8160	77.6317	85.9512	75.8961	86.6877	81.0473	82.1869	76.4287	75.2591	69.0382	67.6325	59.1944	56.1373	53.7560	52.8194	58.5874	71.3392	66.6856	55.4281
R144	833169.17	821834.07	833179.74	821783.15	13	0	1	76.4820	76.6294	78.2335	78.3181	76.5855	79.5689	77.4547	85.4956	72.2034	83.5313	77.6342	79.1583	75.2247	74.0235	66.0791	66.5202	55.8694	54.8186	52.2650	50.3448	57.5500	70.5200	66.1156	54.4858
R145+R146	833812.49	821976.50	834004.98	821816.03	17	0	1	68.8239	65.4420	77.1268	51.3347	82.2851	65.5875	68.0699	76.1278	58.5166	72.3861	64.8332	66.9568	62.6609	59.3833	53.7293	53.3310	40.2653	40.2676	37.8990	37.8968	42.5160	55.3223	53.1103	40.8462
R147+R148	833738.44	821888.35	833931.13	821727.74	16	0	1	60.1956	61.2737	71.1832	76.0338	69.0148	66.6740	62.5571	71.2423	53.9557	66.3707	59.8764	60.6305	57.2034	53.2585	47.0923	46.5487	36.5168	35.8959	32.7305	33.2464	39.2792	49.5800	48.9724	37.1856
R149	833728.61	821749.52	833807.73	821684.38	14	0	1	55.1925	53.5327	52.1635	58.3916	57.4032	63.5698	54.3164	64.8714	47.3954	58.7730	57.5427	60.8414	62.2293	63.0921	60.3453	62.3976	66.4436	64.7977	65.6414	62.2435	73.2750	87.8563	84.3855	68.6316
R149	833774.08	821643.52	833807.73	821684.38	13	0	1	55.1925	53.5327	52.1635	58.3916	57.4032	63.5698	54.3164	64.8714	47.3954	58.7730	57.5427	60.8414	62.2293	63.0921	60.3453	62.3976	66.4436	64.7977	65.6414	62.2435	73.2750	87.8563	84.3855	68.6316
R150	833736.67	821759.23	833667.71	821803.87	11	0	1	55.1925	53.5327	52.1635	58.3916	57.4032	63.5698	54.3164	64.8714	47.3954	58.7730	57.5427	60.8414	62.2293	63.0921	60.3453	62.3976	66.4436	64.7977	65.6414	62.2435	73.2750	87.8563	84.3855	68.6316
R151	833613.61	821610.98	833693.50	821543.70	13	0	1	55.1925	53.5327	52.1635	58.3916	57.4032	63.5698	56.1551	64.8714	47.8272	59.2433	57.5427	60.8414	62.2293	63.0921	59.5565	62.3976	61.5258	63.4407	63.9277	60.3381	73.2750	87.8563	84.3855	64.0070
R151	833693.50	821543.70	833775.28	821642.53	14	0	1	55.1925	53.5327	52.1635	58.3916	57.4032	63.5698	56.1551	64.8714	47.8272	59.2433	57.5427	60.8414	62.2293	63.0921	59.5565	62.3976	61.5258	63.4407	63.9277	60.3381	73.2750	87.8563	84.3855	64.0070
R152	833774.08	821643.52	833826.17	821500.56	20	0	1	55.1925	53.5327	52.1635	58.3916	57.4032	63.5698	54.3164	64.8714	47.3954	58.7730	57.0190	60.1935	60.9167	61.2821	57.3758	62.1023	60.7326	61.3942	60.1274	57.7750	71.1562	85.3719	76.8966	60.2231
R153	833991.31	822369.76	834026.77	822414.27	16	0	1	55.9427	56.5297	57.5836	56.3799	56.9415	58.1240	57.0901	67.4487	51.0313	62.4031	57.9347	58.2826	57.0464	56.2765	50.1223	53.1401	48.6166	45.8858	44.2445	43.7692	51.4694	65.1463	61.3527	48.5048
R154	833950.46	822320.45	833992.00	822369.67	18	0	1	55.6095	56.8834	56.5869	56.8997	57.5900	56.9335	57.4142	67.5828	50.8124	61.9970	57.6888	59.3318	58.1147	55.9610	51.2431	53.7708	49.0507	47.0323	45.2567	44.6479	51.7183	65.1059	60.8976	48.2360
R155	833909.65	822271.38	833950.46	822320.45	18	0	1	55.5513	56.8607	57.4896	56.2478	56.2312	57.5050	57.3820	69.1981	53.8592	64.0164	59.4298	59.6899	58.6610	58.0363	51.4067	54.4431	51.1442	48.5333	45.6970	44.9079	53.1762	67.5200	62.7471	48.9247
R156	833868.78	822222.16	833909.65	822271.35	18	0	1	70.9826	68.9302	69.7470	68.3690	65.5278	66.9681	72.2553	91.0689	73.8644	86.6934	82.0720	84.2203	82.6982	79.7482	74.2539	76.1512	70.2525	67.6246	62.8955	60.4411	66.3796	78.2378	73.6960	58.4820
R157	833868.56	822222.34	833827.77	822172.95	18	0	1	73.7350	72.0221	74.4097	71.1928	70.2368	71.6750	74.9434	93.3542	80.9196	89.0791	82.7789	82.2517	79.8416	80.1715	71.3658	72.4784	66.9078	64.1076	62.0763	59.4576	65.9756	77.6140	72.5698	58.7673
R158	833827.77	822172.98	833778.49	822113.39	18	0	1	70.9151	71.3526	73.3909	72.3580	71.6210	72.5111	71.9120	81.9563	68.2504	79.9487	74.4285	74.5985	72.3304	73.0071	65.0386	66.0682	61.1954	58.8358	57.5980	56.3252	64.6522	76.2867	71.0312	58.9645
R159	834075.91	822299.62	834112.90	822344.34	15	0	1	53.5410	54.1384	58.4033	56.6754	51.0724	56.8086	53.4829	62.4029	50.0162	58.8745	56.7151	60.8865	59.3268	60.1937	54.4306	58.9655	58.0360	55.4447	54.0130	52.8388	62.8373	75.0491	68.6651	59.7460
R160	834090.39	822287.53	834127.62	822332.11	15	0	1	59.7776	59.6778	61.7226	61.3524	58.5356	61.4518	61.8838	71.2843	56.6245	66.3333	60.8821	64.0595	62.2438	53.1048	54.8416	57.6579	54.7054	51.6027	50.0195	48.4335	58.1366	71.5251	64.6935	53.2604
R161	834034.90	822250.52	834075.91	822299.62	15	0	1	54.2789	54.1765	55.9903	54.3166	55.1480	54.9518	55.5305	66.2258	51.7160	60.9749	58.4857	62.4515	61.7353	62.7855	57.4120	61.7883	59.4371	57.2469	55.7129	54.5803	63.1361	76.5494	69.0436	58.5269
R162	834049.42	822238.29	834090.39	822287.53	15	0	1	60.1581	60.1474	61.7215	60.9956	59.8429	61.0617	61.0105	71.0232	56.6187	65.9171	60.9654	64.2816	62.1902	62.5506	55.9241	59.1593	55.3640	52.3487	50.8686	48.6837	58.0969	71.4661	64.7679	53.3135
R163	833993.96	822201.68	834034.90	822250.52	16	0	1	56.7542	57.3171	59.4762	57.4141	56.7287	58.3150	58.0022	68.3118	54.4838	63.1829	58.6437	61.6347	59.9116	60.0789	53.7583	57.9334	54.4237	52.1072	49.9437	48.0171	57.1857	70.6930	63.8462	52.4404
R164	834007.86	822189.33	834049.42	822238.28	16	0	1	57.9291	57.9959	60.0498	58.2067	58.5597	59.0301	58.7646	67.4513	53.5818	63.4960	57.9403	61.3407	59.7846	62.1556	54.7390	57.3886	55.7297	53.8811	52.9190	50.2944	59.9443	73.2780	66.4448	54.6142
R165	833953.31	822151.70	833994.47	822201.23	16	0	1	58.8092	58.6613	59.6762	59.2059	57.7782	59.8091	59.7534	68.2960	57.0009	63.3522	61.0665	63.7629	62.8580	62.7103	57.6169	61.5039	58.8121	55.9548	53.8094	53.0181	61.8621	72.4024	66.2430	57.0053
R166	833872.14	822051.39	833964.75	822180.53	19	0	1	48.6887	47.5808	49.4904	48.7084	47.9101	48.8003	49.4832	57.0396	46.0726	53.2323	50.4904	51.4452	50.8124	46.9706	46.0319	48.2565	43.5095	41.6532	37.9730	37.9384	41.3262	50.9375	49.1327	40.8148
R167	833865.47	822042.45	834007.86	822189.33	19	0	1	73.3605	73.7265	75.4502	74.5879	74.2508	74.8032	74.5799	87.5612	76.8544	82.3451	76.3426	79.6640	76.4373	78.6629	68.5352	74.5029	72.2150	64.6310	60.9979	60.8410	69.7240	82.1125	72.7122	66.1413
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1	26.0588	25.7097	27.6443	27.2657	25.0390	26.0635	26.5273	31.7069	23.2987	29.0670	28.7144	29.4517	31.2237	27.0560	27.3822	29.5208	26.6079	25.0802	21.6247	22.8424	25.1217	35.0081	33.0466	24.4212
R170+R171	833738.44	821888.35	833812.49	821976.50	16	0	1	35.8700	36.2577	37.9284	36.3534	36.4702	37.3583	36.3737	41.7529	36.2113	42.1054	41.0989	41.1319	42.2918	38.7498	37.7309	38.7924	36.0953	34.5703	31.4203	31.9775	34.1686	41.7286	40.0199	33.1363
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1	59.8247	59.4140	60.9972	60.2536	58.7466	60.5651	60.0243	70.4259	56.4147	66.5683	60.8513	64.0099	61.9990	62.9792	56.8876	59.8478	56.9423	53.9713	52.0217	50.6580	58.5994	70.9505	64.6285	54.1809
R174+R175	833561.78	821677.58	833683.38	821823.55	16	0	1	61.6798	61.4356	63.2426	62.7593	60.6712	62.1230	62.3060	75.0522	63.4455	71.3215	68.1338	70.7064	69.3495	71.7359	64.9645	68.5500	66.4943	64.4343	60.9192	59.2225	67.2973	78.8050	72.1705	60.6201
R176	833498.77	821608.49	833560.47	821680.73	20	0	1	56.7245	56.7568	58.7642	57.9819	57.2334	57.9351	57.4532	67.1336	54.8553	62.4055	60.6087	64.0924	63.6916	64.7357	60.2338	64.8505	63.1894	61.0534	58.9492	56.7954	64.6423	76.0514	69.5448	61.5305
R177	833513.09	821599.24	833573.68	821668.47	20	0	1	63.8067	64.0494	65.9987	64.7600	63.3197	65.1247	64.5121	72.4371	59.6293	68.0149	63.0834	65.5303	63.1894	64.4475	58.0208	60.6931	57.2584	53.5849	51.2229	49.6591	57.3477	69.5469	63.6265	54.3354
R178	833440.44	821529.90	833483.60	821608.61	16	0	1	62.2339	62.1670	64.1402	63.3776	62.8537	63.1236	63.5024	72.3694	61.6087	68.0949	66.8437	70.8293	70.2702	72.7903	67.5616	72.0973	70.7772	69.0306	68.1635	64.9814	73.7201	84.8049	77.9432	69.1873
R179	833451.64	821526.21	833511.32	821600.38	17	0	1	67.6156	67.5626	69.6703	68.7005	67.6436	68.8089	68.5213	78.3419	65.0296	73.5899	69.0104	72.2994	69.8723	71.6100	63.7818	68.3735	66.0485	60.8161	57.8985	57.4439	66.7471	77.2170	69.4860	62.2534
R180	834218.31	822256.35	834335.96	822395.33	18	0	1	64.0199	64.3205	67.0371	65.7260	64.8059	65.1605	65.6362	76.1694	62.3762	73.1635	67.3142	71.2807	69.9560	70.9753	64.2160	68.6885	65.4457	62.6154	60.6319	59.3888	69.9775	85.1888	76.7769	63.8160
R181	834181.98	822212.22	834218.31	822256.35	18	0	1	62.5165	57.4032	55.3334	58.3916	62.3796	58.5254	66.4794	71.1107	54.2372	65.3791	62.0871	65.7473	69.1994	69.5152	62.9410	68.5360	63.9291	64.7530	62.8227	59.7574	70.8307	86.2893	79.1481	64.6959
R182	834140.62	822162.67	834181.78	822212.39	18	0	1	60.4482	60.1637	64.4247	62.3865	68.6569	64.7261	61.9179	69.9510	55.2866	63.5509	61.5431	65.3411	65.3838	68.5875	59.8996	65.0037	64.0275	62.0470	60.2326	57.0838	68.5479	86.3252	76.2070	63.9539
R183	834099.34	822113.33	834140.62	822162.67	18	0	1	65.3233	66.9137	71.1121	70.0526	68.8703	73.3303	65.9700	75.7778	61.2865	70.8373	66.7684	69.3837	69.0294	69.1886	63.2857	63.3939	60.0833	57.6532	57.4185	57.6007	68.8237	84.4339	73.4289	65.2956
R184	834077.01	822132.08	834051.51	822100.94	13	0	1	68.8274	67.1601	68.6806	67.2127	65.4420	70.2956	69.9485	78.2957	59.1454	73.5152	63.5130	64.6789	59.9359	56.3846	49.4460	50.2873	42.7518	39.8111	37.7748	37.0942	43.5905	56.5303	54.4273	39.7275
R184	834051.51	822100.94	834071.90	822084.13	13	0	1	68.8274	67.1601	68.6806	67.2127	65.4420	70.2956	69.9485	78.2957	59.1454	73.5152	63.5130	64.6789	59.9359	56.3846	49.4460	50.2873	42.7518	39.8111	37.7748	37.0942	43.5905	56.5303	54.4273	39.7275
R184	834071.90	822084.18	834097.30	822118.02	14	0	1	68.8274	67.1601	68.6806	67.2127	65.4420	70.2956	69.9485	78.2957	59.1454	73.5152	63.5130	64.6789	59.9359	56.3846	49.4460	50.2873	42.7518	39.8111	37.7748	37.0942	43.5905	56.5303	54.4273	39.7275
R185	834309.95	822180.58	834383.66	822267.44	19	0	1	62.6011	62.5612	65.9226	63.9985	64.8059	63.7758	64.6068	72.6579	58.7870	67.6893	64.5785	69.1136	67.3179	70.3025	64.1240	68.5516	66.4853	62.9231	61.4839	58.7959	69.3711	83.1507	75.7529	63.7663
R186	834231.54	822086.63	834273.34	822136.83	19	0	1	68.7368	68.9160	74.2631	73.9397	77.2889	74.0889	67.5192	78.1176	63.7831	70.9517	67.0654	71.9224	69.4726	69.5152	62.5433	61.2766	57.0032	55.9295	55.3744	55.6214	66.0390	80.9284	73.4289	65.7956
R187	834190.69	822037.73	834231.76	822086.45	16	0	1	66.6277	68.7195	68.6901	69.8967	69.7458	69.7296	68.4927	78.5491	66.4046	73.8965	72.8069	76.6764	76.2229	76.4844	71.9860	76.7381	74.2323	72.0707	69.9129	69.1713	76.1624	88.5177	82.2160	72.5062
R188+R189	834004.98	821816.03	834068.34	821890.22	19	0	1	60.4703	59.8920	64.7458	65.8490	61.8682	62.5188	62.1065	68.9482	54.9680	64.5964	61.1676	63.7675	63.7457	62.7756	57.7081	60.2780	58.3469	55.3900	53.3738	51.6772	60.9110	71.7923	66.3866	57.8936
R190+R191	833931.13	821727.74	834004.98	821816.03	18	0	1	64.6604	66.7212	67.9568	68.0849	67.6203	67.4599	67.2455	75.3696	60.7498	70.0020	65.6442	69.2048	68.3734	69.1368	62.0140	66.8768	64.4676	60.4801	59.3954	57.6937	67.8856	81.5613	74.4328	62.2150
R192+R193	833875.32	821660.75	833930.85	821727.98	20	0	1	50.7586	51.0689	51.6107	52.4334	53.8508	51.4859	52.0348	58.5835	47.2997	54.8002	52.2718	55.8508	55.9479	56.4326	47.8913	51.1203	46.9622	44.1098	39.9781	41.8207	50.4506	52.8085	49.9715	50.7249
R194+R195	833825.79	821600.86	833867.51	821651.45	20	0	1	79.6996	77.1900	80.9389	83.6241	81.9191	79.9588	80.8320	84.4180	73.2015	82.3967	80.9972	86.2084	84.2264	84.1625	80.8730	83.0382	81.9040	80.5645	80.0616	78.6167	84.2995	90.8021	87.1049	82.3183
R196+R202	833761.01	821523.36	833828.17	821600.56	20	0	1	78.9195	79.8759	71.8881	75.0013	74.1566	75.8364	80.5317	80.6103	77.9892	76.8316	72.5025	74.9337	80.6597	74.0335	77.1681	78.9664	77.3961	83.6932	73.5969	72.6488	77.9396	86.2663	82.3988	84.3535
R197	834364.36	822060.94	834405.15	822104.71	17	0	1	68.6322	62.3796	52.1635	51.3347	57.4032	58.5254	58.2237	73.8454	59.5280	71.6155	67.5338	70.7943	58.9327	61.2787	59.8123	59.1460	60.1173	48.2934	46.8986	52.8523	62.6808	92.5297	84.3710	68.6316
R198	834322.77	822010.68	834364.36	822060.94	16	0	1	61.4051	59.7255	59.2959	51.3347	57.4032	54.6020	58.2237	70.2460	51.9708	63.9626	61.0146	64.8957	65.2613	72.8084	61.9432	65.5796	64.5604	60.5672	58.2294	56.0878	72.6414	80.3892	71.9997	73.5518
R199	834281.93	821961.17	834323.00	822010.48	19	0	1	70.4308	70.5685	72.7293	79.1417	74.9797	79.2648	73.7706	78.6699	66.5413	75.6795	71.7562	70.1285	70.7751	70.1440	63.0568	66.2089	64.0288	69.9200	66.0751	66.0705	72.7432	84.4235	71.1649	66.6522
R200	834239.17	821914.13	834280.06	821963.18	14	0	1	67.9981	64.8709	69.7097	68.2931	69.4404	70.7589	68.8818	76.6532	63.2609	73.6909	66.7830	70.2459	67.7894	70.0859	62.1813	67.9390	65.6691	62.2991	59.7960	58.4745	67.0538	80.7168	73.1201	64.8483
R200	834239.17	821914.13	834317.89	821948.33	18	0	1	67.9981	64.8709	69.7097	68.2931	69.4404	70.7589	68.8818	76.6532	63.2609	73.6909	66.7830	70.2459	67.7894	70.0859	62.1813	67.9390	65.6691	62.2991	59.7960	58.4745	67.0538	80.7168	73.1201	64.8483

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_2 x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	2.1275	2.1350	2.2119	2.1609	2.1293	2.1757	2.1949	3.5983	3.7256	3.1645	2.9490	2.8578	2.5637	2.6687	2.6462	2.9612	3.1259	2.9184	2.9082	2.4298	2.1560	2.0025	2.0605	2.1501
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	2.1275	2.1350	2.2119	2.1609	2.1293	2.1757	2.1949	3.5983	3.7256	3.1645	2.9490	2.8578	2.5637	2.6687	2.6462	2.9612	3.1259	2.9184	2.9082	2.4298	2.1560	2.0025	2.0605	2.1501
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	2.1275	2.1350	2.2119	2.1609	2.1293	2.1757	2.1949	3.5983	3.7256	3.1645	2.9490	2.8578	2.5637	2.6687	2.6462	2.9612	3.1259	2.9184	2.9082	2.4298	2.1560	2.0025	2.0605	2.1501
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	2.1275	2.1350	2.2119	2.1609	2.1293	2.1757	2.1949	3.5983	3.7256	3.1645	2.9490	2.8578	2.5637	2.6687	2.6462	2.9612	3.1259	2.9184	2.9082	2.4298	2.1560	2.0025	2.0605	2.1501
R003	833960.46	822543.00	833985.46	822546.76	20	0	1	2.1275	2.1350	2.2119	2.1609	2.1293	2.1757	2.1949	3.5983	3.7256	3.1645	2.9490	2.8578	2.5637	2.6687	2.6462	2.9612	3.1259	2.9184	2.9082	2.4298	2.1560	2.0025	2.0605	2.1501
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	2.1202	2.1209	2.2176	2.1762	2.1113	2.1521	2.1746	3.1695	3.4206	2.8607	2.7264	2.6777	2.4742	2.6017	2.6105	2.9653	3.1937	3.2216	3.1767	2.6130	2.0573	1.9263	2.0124	2.0430
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	2.1202	2.1209	2.2176	2.1762	2.1113	2.1521	2.1746	3.1695	3.4206	2.8607	2.7264	2.6777	2.4742	2.6017	2.6105	2.9653	3.1937	3.2216	3.1767	2.6130	2.0573	1.9263	2.0124	2.0430
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	2.1202	2.1209	2.2176	2.1762	2.1113	2.1521	2.1746	3.1695	3.4206	2.8607	2.7264	2.6777	2.4742	2.6017	2.6105	2.9653	3.1937	3.2216	3.1767	2.6130	2.0573	1.9263	2.0124	2.0430
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	2.1100	2.1051	2.2214	2.1815	2.1203	2.1580	2.1793	3.1693	3.4213	2.8602	2.7260	2.6762	2.4720	2.5989	2.6080	2.9623	3.1908	3.2141	3.1732	2.6096	2.0529	1.9216	2.0076	2.0438
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	2.1100	2.1051	2.2214	2.1815	2.1203	2.1580	2.1793	3.1693	3.4213	2.8602	2.7260	2.6762	2.4720	2.5989	2.6080	2.9623	3.1908	3.2141	3.1732	2.6096	2.0529	1.9216	2.0076	2.0438
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	2.1100	2.1051	2.2214	2.1815	2.1203	2.1580	2.1793	3.1693	3.4213	2.8602	2.7260	2.6762	2.4720	2.5989	2.6080	2.9623	3.1908	3.2141	3.1732	2.6096	2.0529	1.9216	2.0076	2.0438
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	2.1100	2.1051	2.2214	2.1815	2.1203	2.1580	2.1793	3.1693	3.4213	2.8602	2.7260	2.6762	2.4720	2.5989	2.6080	2.9623	3.1908	3.2141	3.1732	2.6096	2.0529	1.9216	2.0076	2.0438
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	2.4736	2.2158	3.3598	0.7234	0.7046	2.9406	2.4318	2.7459	2.1223	2.8878	2.6740	2.6873	2.9953	2.6498	1.9543	2.0400	1.0792	1.3227	0.7528	0.8547	0.9315	1.4679	1.3449	1.2624
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	2.4736	2.2158	3.3598	0.7234	0.7046	2.9406	2.4318	2.7459	2.1223	2.8878	2.6740	2.6873	2.9953	2.6498	1.9543	2.0400	1.0792	1.3227	0.7528	0.8547	0.9315	1.4679	1.3449	1.2624
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	2.4736	2.2158	3.3598	0.7234	0.7046	2.9406	2.4318	2.7459	2.1223	2.8878	2.6740	2.6873	2.9953	2.6498	1.9543	2.0400	1.0792	1.3227	0.7528	0.8547	0.9315	1.4679	1.3449	1.2624
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	2.4736	2.2158	3.3598	0.7234	0.7046	2.9406	2.4318	2.7459	2.1223	2.8878	2.6740	2.6873	2.9953	2.6498	1.9543	2.0400	1.0792	1.3227	0.7528	0.8547	0.9315	1.4679	1.3449	1.2624
R008+R009	833681.17	822398.31	833693.59	822397.15	13	0	1	1.5538	1.9582	1.8543	0.7234	0.7046	1.6077	1.5611	2.1240	1.5815	1.9620	1.8094	1.8982	1.7829	1.4555	1.3529	1.6918	1.1385	1.3236	0.8178	0.7817	0.9602	1.7416	1.6717	1.0678
R008+R009	833693.59	822397.15	833841.85	822460.34	13	0	1	1.5538	1.9582	1.8543	0.7234	0.7046	1.6077	1.5611	2.1240	1.5815	1.9620	1.8094	1.8982	1.7829	1.4555	1.3529	1.6918	1.1385	1.3236	0.8178	0.7817	0.9602	1.7416	1.6717	1.0678
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	3.4488	3.4349	3.1546	2.0707	3.6868	4.5287	3.5084	4.2270	3.6472	4.1672	3.9570	4.3141	4.1362	4.1142	3.5640	4.2002	3.7021	3.5057	3.2648	3.0222	3.6394	4.2876	3.8637	3.8313
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	3.4488	3.4349	3.1546	2.0707	3.6868	4.5287	3.5084	4.2270	3.6472	4.1672	3.9570	4.3141	4.1362	4.1142	3.5640	4.2002	3.7021	3.5057	3.2648	3.0222	3.6394	4.2876	3.8637	3.8313
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	3.4488	3.4349	3.1546	2.0707	3.6868	4.5287	3.5084	4.2270	3.6472	4.1672	3.9570	4.3141	4.1362	4.1142	3.5640	4.2002	3.7021	3.5057	3.2648	3.0222	3.6394	4.2876	3.8637	3.8313
R012+R013	833387.26	822567.47	833423.89	822556.02	10	0	1	10.1161	11.7398	1.0182	1.3707	1.3518	1.3733	10.2163	13.9646	8.6625	11.6317	9.8172	11.8080	11.0766	14.5112	10.5899	11.0323	10.6439	11.9272	13.6105	11.4559	18.1597	21.1909	16.4594	12.5097
R012+R013	833423.89	822556.02	833416.08	822482.07	10	0	1	10.1161	11.7398	1.0182	1.3707	1.3518	1.3733	10.2163	13.9646	8.6625	11.6317	9.8172	11.8080	11.0766	14.5112	10.5899	11.0323	10.6439	11.9272	13.6105	11.4559	18.1597	21.1909	16.4594	12.5097
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	10.1161	11.7398	1.0182	1.3707	1.3518	1.3733	10.2163	13.9646	8.6625	11.6317	9.8172	11.8080	11.0766	14.5112	10.5899	11.0323	10.6439	11.9272	13.6105	11.4559	18.1597	21.1909	16.4594	12.5097
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	10.1161	11.7398	1.0182	1.3707	1.3518	1.3733	10.2163	13.9646	8.6625	11.6317	9.8172	11.8080	11.0766	14.5112	10.5899	11.0323	10.6439	11.9272	13.6105	11.4559	18.1597	21.1909	16.4594	12.5097
R012+R013	833544.64	822390.48	833587.56	822384.60	10	0	1	10.1161	11.7398	1.0182	1.3707	1.3518	1.3733	10.2163	13.9646	8.6625	11.6317	9.8172	11.8080	11.0766	14.5112	10.5899	11.0323	10.6439	11.9272	13.6105	11.4559	18.1597	21.1909	16.4594	12.5097
R014+R016	833488.77	822318.11	833587.56	822384.60	14	0	1	4.6476	4.7537	5.2959	6.5246	6.0621	6.0159	4.9700	8.0905	4.2706	5.4169	5.5751	6.3655	6.0326	6.8517	5.4715	6.2676	5.9734	6.2678	6.0445	5.5973	7.5835	9.6036	8.6791	6.1810
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	4.6943	4.8846	5.2959	4.1819	3.9032	6.0159	4.6043	7.5943	4.0285	5.1532	5.0530	5.5180	5.2071	5.5594	4.6852	5.2001	4.2840	4.7512	4.3876	3.8090	5.6985	6.8923	5.5567	4.7358
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	4.6943	4.8846	5.2959	4.1819	3.9032	6.0159	4.6043	7.5943	4.0285	5.1532	5.0530	5.5180	5.2071	5.5594	4.6852	5.2001	4.2840	4.7512	4.3876	3.8090	5.6985	6.8923	5.5567	4.7358
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	11.7842	11.9898	11.2130	12.6912	13.1660	11.1926	11.2871	13.6741	10.9623	12.5166	11.2097	12.6558	11.6564	13.6520	10.5494	12.2780	13.0596	11.1708	10.7349	10.2731	13.9448	17.1827	12.3164	13.0072
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	11.7418	11.5891	10.8090	12.4742	10.9508	13.0517	11.7012	13.8824	11.1863	12.6727	11.2362	12.6863	11.6111	13.5074	10.6685	12.3509	12.1429	11.2250	11.0943	10.1891	13.8628	16.1389	13.0507	11.5457
R022	833355.00	822293.72	833480.61	822346.13	16	0	1	14.6009	13.3425	14.7710	15.3549	14.4336	14.5543	14.7395	16.1053	13.6959	15.3134	14.1677	15.3264	14.3888	15.9676	13.1534	14.4515	15.1526	13.3851	12.9605	12.2520	15.2324	17.4985	14.6320	13.9957
R022	833480.61	822346.13	833489.65	822316.75	16	0	1	14.6009	13.3425	14.7710	15.3549	14.4336	14.5543	14.7395	16.1053	13.6959	15.3134	14.1677	15.3264	14.3888	15.9676	13.1534	14.4515	15.1526	13.3851	12.9605	12.2520	15.2324	17.4985	14.6320	13.9957
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	13.3613	11.9130	13.9263	13.6601	13.7333	12.5831	13.0831	15.8357	13.5322	14.8548	13.6107	14.6526	13.7828	15.6418	12.5484	13.8620	14.0512	13.0635	12.8938	11.7793	14.7869	17.1009	13.7797	12.9094
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	13.8102	12.3997	13.4342	11.7640	13.7333	13.2935	13.4703	15.4711	13.2962	14.9673	13.6866	14.6781	13.3144	15.4908	12.4976	13.8268	14.2511	13.0988	12.6101	11.4924	14.8468	16.7685	13.8867	12.8931
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	13.4105	13.6068	12.9829	14.2964	14.6257	12.9156	12.9999	15.1293	12.9576	14.8801	13.6417	14.7208	13.4595	15.2504	12.5566	13.9433	13.8448	13.1801	12.7080	11.4657	14.5001	17.0579	13.5739	12.7863
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	14.8769	14.6023	15.3813	15.8298	14.9787	14.3462	15.0433	17.6827	16.6243	17.2505	15.5889	16.4047	14.6867	16.7133	13.4171	14.8536	15.9638	14.1829	13.1202	12.2694	15.4479	16.6959	13.7224	13.4914
R027	833503.01	822278.46	833673.82	822341.72	13	0	1	14.3307	13.9777	14.1699	14.2461	14.5545	15.0715	14.3976	16.4221	15.1353	16.5885	15.4866	16.3532	15.3673	16.8149	14.5056	15.2451	15.5225	14.2996	13.6586	12.5983	15.2179	17.7228	14.3037	13.5406
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	11.5707	10.6917	11.8673	13.8233	12.5306	11.0993	11.7036	13.2520	11.2900	12.9353	11.6337	12.8487	11.9281	13.6593	11.1717	12.6541	12.7216	11.8562	11.7422	10.5029	13.7922	16.3954	13.2310	11.6385
R029	833768.03	822376.15	833848.76	822405.79	13	0	1	10.4389	9.5689	11.7989	6.5246	9.0061	10.7010	10.2257	14.9479	12.6265	13.3028	11.4225	12.7547	11.2024	14.3089	10.9487	12.6489	14.2930	12.2801	11.5395	11.1757	14.7709	16.0414	13.1597	13.5203
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	10.2467	10.2570	10.9234	10.4953	9.4528	10.2608	10.2828	14.0389	11.5619	12.4814	10.6548	12.2755	11.6772	13.3958	10.4628	12.1034	12.4884	11.4758	11.1588	9.8667	13.2933	15.4744	12.0147	11.3878
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	9.5516	11.5586	7.6342	9.1015	9.0061	6.5317	10.4705	15.1031	13.6073	13.9316	12.1591	13.1056	11.4165	14.3873	10.8292	12.3656	13.5563	11.7796	11.2949	10.7729	14.2562	15.9704	12.8710	12.4012
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	12.9090	12.5626	10.2292	10.1067	9.6842	9.7218	10.1181	12.8467	10.5720	11.9076	10.8233	12.1787	11.2838	13.0301	10.4797	11.8234	11.9495	11.3187	11.0646	10.1357	13.1937	14.9653	12.1348	11.4049
R033	833121.79	822072.07	833253.39	822120.94	16	0	1	10.5583	10.5925	10.8561	10.8298	10.7816	10.7133	10.7204	12.8016	10.3553	11.7754	10.5760	11.7886	10.9057	12.5885	10.2623	11.6554	11.7553	11.0912	10.8229	9.8933	12.6988	14.8609	12.0414	11.0111
R034	833253.39	822120.94	833398.77	822175.17	16	0	1	9.6164	9.7362	9.7980	10.0636	9.8604	10.0318	9.9321	12.3865	10.3499	11.2532	10.1255	11.4946	10.5956	12.2724	9.9690	11.4286	11.5635	10.9479	10.6338	9.6665	12.4639	14.5245	11.8163	10.8623
R035	833398.77	822175.17	833524.35	822221.21	16	0	1	11.8197	11.7437	11.9445	11.6123	11.5320	11.6265	11.7309	14.3810	12.4115	13.5361	12.3580	13.3699	12.6230	14.2330	11.4755	13.3752	13.3387	11.9060	11.4522	10.7708	13.4281	15.7870	12.8011	12.1580
R036	833524.35	822221.21	833653.40	822269.00	16	0	1	10.9987	10.8772	11.1372	11.1442	10.8641	11.1681	11.0381	13.3581	11.3984	12.8900	11.4509	12.7240	11.7775	13.5493	10.9432	12.3454	12.4230	11.7646	11.5241	10.5643	13.3377	15.1716	12.3977	11.7337
R037	833653.40	822269.00	833694.86	822284.07	16	0	1	14.6963	14.6307	14.9511	14.9359	14.6145	14.7771	14.8354	17.7270	15.1232	16.8996	14.5579	15.8781	14.2841	16.3737	12.7009	14.0199	13.8882	12.6554	12.1242	11.1369	14.1563	16.3575	13.2844	12.4454
R038	833694.68	822284.56	833763.79	822309.61	16	0	1	14.6827	14.8413	15.2329	15.0091	14.9035	15.0102	14.9583	18.0078	15.2543	17.1436	14.4758	15.7237	13.9044	15.8304	12.0521	13.2528	13.2893	11.6349	10.7509	9.9582	12.5382	14.4561	11.7713	11.1714
R039	833761.98	822311.12	833788.45	822320.76	14	0	1	17.3934	16.4028	16.9215	17.1360	16.8805	16.9655	16.8001	20.6683	19.9335	19.6912	17.3042	18.5236	16.5212	18.7801	14.3211	16.6353	16.7957	13.7895	12.0754	11.9720	14.4540	16.0475	12.5693	13.6940
R040	833789.11	822318.98	833833.16	822335.17	16	0	1	17.0632	17.2200	17.5844	17.6968	17.2131	17.5801	17.4419	20.5197	19.2686	19.4789	17.0336	17.9116	16.0200	18.1818	13.7441	16.1267	16.3320	13.7542	11.9974	11.6008	14.1646	15.6031	12.3562	13.5148
R041	833833.16	822335.17	833902.96	822360.57	16	0	1	17.3831	16.6174	17.3314	17.2487	16.8012	17.3127	17.0153	21.0963	19.8645	20.1052	17.2524	18.4709	16.5174	18.7312	14.2953	16.5905	16.7361	13.8052	12.1075	11.7296	14.4713	16.1666	12.6262	13.7209
R042	833902.96	822360.57	833950.46	822320.45	16	0	1	17.4432	16.9252	17.3229	17.2243	16.9068	17.3801	17.1656	20.6585	19.4178	19.6679	16.8319	18.0285	16.0688	18.3135	13.8463	16.5183	16.6548	13.6076	11.8007	11.4562	14.2315	15.5633	12.3349	13.4802
R043	833950.46	822320.46	834034.90	822250.52	16	0	1	19.5446	19.7139	20.2380	19.9525	19.8892	20.0782	19.9187	22.6920	21.7412	21.6176	19.0925	20.5063	18.3846	21.1101	16.0720	18.9054	19.3587	16.0521	14.0790	13.7822	16.5261	18.2434	14.4161	16.0994
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	17.1184	17.0870	17.5572	17.6664	17.1842	17.4394	17.4122	20.4676	19.2555	19.4425	16.6327	17.9124	15.9585	18.1464	13.7436	16.0492	16.5731	13.5832	11.7816	11.3783	14.0543	15.4341	12.1999	13.3104
R045	834140.62	822162.67	834231.72	822086.45	19	0	1	17.3741	14.6728	15.1300	15.6843	15.7572	15.6780	17.4491	20.1339	18.9029	19.1151	16.8540	18.0791	16.1824	18.4171	14.1012	16.3452	16.5932	13.7039	11.9991	11.8962	14.2950	15.8434	12.7322	13.7784
R046	834231.72	822086.65	834323.21	822011.22	18	0	1	17.5689	16.7460	17.1904	17.3072	16.8532	17.2244	17.8128	20.7457	19.5776	19.7916	17.0933	18.2440	16.3288	18.4381	14.1463	16.3060	16.7923	13.8377	12.0992	11.7328	14.4248	15.6847	12.5521	13.7090
R047	834322.77	822010.68	834384.01	821959.66	18	0	1	17.5754	16.6538	17.2732	17.1958	17.0475	17.1558	17.8369	20.7785	19.2167	19.4083	17.1116	18.3185	16.3619	18.4933	14.1902	16.3829	16.5031	13.8861	12.0976	11.7427	14.4683	15.7190	12.5939	13.7290
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	12.9581	12.6097	12.8445	12.7452	12.6214	12.7830	13.0702	15.8265	15.2884	15.4183	13.2114	14.3941	12.9834	15.3851	11.8033	13.8174	14.2571	12.5451	11.8513	10.8521	13.8375	15.6650	12.4126	12.4714
R049	833156.56	821977.96	833434.10	822086.76	16	0	1	12.9793	12.9520	13.2437	13.1081	12.9778	13.0840	13.1112	15.6290	14.7792	14.9071	12.7975	14.1946	12.8153	14.9519	11.4855	13.4674	13.9197	12.2682	11.4736	10.6887	13.8942	15.7034	12.4762	12.5915
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	13.9026	13.9332	14.2062	14.0418	13.8941	14.0829	14.0494	16.8476	15.8143	16.5380	13.9682	15.2362	13.5622	15.7017	12.1325	13.8820	14.0360	12.3525	11.1809	10.2877	12.6861	14.0876	11.0369	11.4222
R051	833274.06	822006.60	833438.70	822067.62	16	0	1	14.9196	14.9757	15.3054	15.1472	14.9653	15.1590	15.1060	17.8213	16.7140	17.1322	14.6349	16.0247	14.3489	16.8128	12.8261	15.0672	15.8460	13.4359	12.0056	11.3104	13.9967	15.4400	12.1282	13.1793
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	15.2140	14.6781	14.9524	14.9570	14.7622	14.9313	15.2776	17.5440	17.2524	16.3012	14.2743	15.5489	13.9884	16.2675	12.5290	14.9656	15.3754	12.9780	11.8143	11.2351	14.3172	16.0181	12.6440	13.4660
R053	833786.86	822123.44	833736.68	822163.25	16	0	1	15.8819	15.3937	15.7283	15.6094	15.4668	15.6463	15.9620	18.4420	17.9900	17.5428	15.0195	16.4368	14.7011	17.3678	13.3732	15.7360	16.3055	14.0219	12.9073	12.1917	15.2586	16.9737	13.4039	14.0453
R053	833736.06	822163.26	833688.33	822174.73	16	0	1	15.8819	15.3937	15.7283	15.6094	15.4668	15.6463	15.9620	18.4420	17.9900	17.5428	15.0195	16.4368	14.7011	17.3678	13.3732	15.7360	16.3055	14.0219	12.9073	12.1917	15.2586	16.9737	13.4039	14.0453
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	16.3530	16.3693	16.6313	16.5843	16.4390	16.5458	16.5180	18.9460	18.0684	18.1513	15.9474	17.3863	15.9552	18.8030	14.6523	17.4358	18.7052	15.8795	14.5387	13.9320	17.2741	18.9394	14.8303	16.1190
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	16.3530	16.3693	16.6313	16.5843	16.4390	16.5458	16.5180	18.9460	18.0684	18.1513	15.9474	17.3863	15.9552	18.8030	14.6523	17.4358	18.7052	15.8795	14.5387	13.9320	17.2741	18.9394	14.8303	16.1190
R054	833649.56	822144.40	833683.68	822152.80	16	0	1	16.3530	16.3693	16.6313	16.5843	16.4390	16.5458	16.5180	18.9460	18.0684	18.1513	15.9474	17.3863	15.9552	18.8030	14.6523	17.4358	18.7052	15.8795	14.5387	13.9320	17.2741	18.9394	14.8303	16.1190
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	16.3530	16.3693	16.6313	16.5843	16.4390	16.5458	16.5180	18.9460	18.0684	18.1513	15.9474	17.3863	15.9552	18.8030	14.6523	17.4358	18.7052	15.8795	14.5387	13.9320	17.2741	18.9394	14.8303	16.1190
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	16.3530	16.3693	16.6313	16.5843	16.4390	16.5458	16.5180	18.9460	18.0684	18.1513	15.9474	17.3863	15.9552	18.8030	14.6523	17.4358	18.7052	15.8795	14.5387	13.9320	17.2741	18.9394	14.8303	16.1190
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	16.3530	16.3693	16.6313	16.5843	16.4390	16.5458	16.5180	18.9460	18.0684	18.1513	15.9474	17.3863	15.9552	18.8030	14.6523	17.4358	18.7052	15.8795	14.5387	13.9320	17.2741	18.9394	14.8303	16.1190
R055	833786.53	822123.04	833872.14	822061.39	16	0	1	15.1123	15.1329	15.4238	15.2677	15.1534	15.3434	15.2620	17.5703	16.4180	16.5674	14.4042	15.4882	13.8387	16.1523	12.3553	14.4409	14.7394	12.7083	11.7867	11.0514	14.1530	15.8933	12.6323	12.9149
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	18.4855	18.4204	18.8961	18.7266	18.5268	18.8192	18.6857	21.3470	20.9603	19.4947	17.4579	19.0634	17.1734	20.4801	15.6312	19.1286	20.4768	16.5023	14.4378	14.6340	18.1703	19.4544	15.0877	17.5318
R057	833873.30	822052.66	834159.21	821814.78	16	0	1	12.0442	11.2925	11.6223	11.7128	11.5018	11.6774	12.1491	14.1116	14.7443	12.7673	11.4160	12.1665	11.0342	12.4628	9.7681	12.4468	13.1299	10.6123	8.2809	8.7012	10.2353	10.7299	8.3841	10.7527
R058	834159.21	821814.78	834256.10	821736.42	16	0	1	16.9676	16.2787	16.5400	16.5978	16.3889	16.6893	17.1526	19.6840	19.1392	18.2017	15.7401	17.0367	15.1112	17.7145	13.3376	15.7356	16.2436	13.3656	12.0362	11.7808	14.9899	16.5905	13.0740	13.9406
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	14.0975	14.1934	14.4519	14.2519	14.2687	14.3150	14.2854	16.4213	17.3250	14.7482	13.4409	14.2393	12.8687	14.6390	11.3970	14.6141	15.5608	12.0679	9.3464	9.9853	11.7213	12.0157	9.3167	12.3514
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	17.5630	17.4681	18.2170	18.0401	17.7582	18.0713	17.9178	20.5609	19.8976	18.6917	16.7056	18.4905	16.7149	20.0580	15.0813	18.8525	20.2838	16.3868	14.3337	14.3448	18.0909	19.6301	14.7852	17.4450
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	20.5436	19.7426	20.2642	19.9661	18.2961	20.3643	20.3830	20.5521	19.9479	20.8019	20.4578	20.8512	20.5953	21.1234	20.2959	20.8596	20.8836	20.1375	20.0635	19.7784	20.4277	21.1803	20.6051	19.7388
R062	833139.76	821889.31	833296.76	821947.78	16	0	1	11.3410	10.9968	11.3772	11.1463	11.7355	11.8573	11.2801	13.4843	11.7615	12.8057	11.8174	13.1447	12.3453	13.9851	11.1807	12.8468	13.1584	11.9917	11.4889	10.4505	13.4363	15.7501	12.5206	12.2931
R063	833296.86	821947.56	833460.51	822007.97	16	0	1	11.7202	9.9795	12.2404	12.0913	12.0142	10.7518	11.3590	14.1396	11.4602	12.7602	11.5464	12.7781	11.7897	13.7602	10.9513	12.3243	12.7350	11.4760	11.3461	10.3455	13.5727	15.8766	12.9738	12.2664
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	11.0261	9.1725	11.0206	11.6826	10.5763	10.2591	10.6624	13.6440	10.8769	12.2256	10.8757	12.5084	11.3713	13.2963	10.3510	12.0221	12.2346	10.9174	10.7469	10.1349	13.4512	15.8031	12.7760	12.3633
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	11.0261	9.1725	11.0206	11.6826	10.5763	10.2591	10.6624	13.6440	10.8769	12.2256	10.8757	12.5084	11.3713	13.2963	10.3510	12.0221	12.2346	10.9174	10.7469	10.1349	13.4512	15.8031	12.7760	12.3633
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	11.0261	9.1725	11.0206	11.6826	10.5763	10.2591	10.6624	13.6440	10.8769	12.2256	10.8757	12.5084	11.3713	13.2963	10.3510	12.0221	12.2346	10.9174	10.7469	10.1349	13.4512	15.8031	12.7760	12.3633
R065	833160.17	821834.07	833315.66	821891.67	16	0	1	12.8337	11.7157	12.6212	12.8195	12.0573	11.6469	13.0193	14.4587	12.3252	13.7995	12.6264	13.9820	13.0493	14.4252	11.7321	12.9164	13.3728	12.0011	11.1514	10.4502	13.3247	15.6501	12.8178	12.4158
R066	833315.06	821891.68	833481.00	821952.76	16	0	1	12.1244	11.9980	11.9722	12.5959	11.9667	11.2202	12.1503	14.4720	11.8047	13.3549	12.1583	13.4373	12.3326	13.8272	11.3421	12.7692	12.5455	11.6304	11.0596	10.2343	13.2013	15.6231	12.4400	11.7600
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	9.0746	9.0696	9.1534	9.0993	9.0402	9.1290	9.1280	12.1977	9.5752	11.5989	10.0583	11.3646	10.1777	12.0915	9.2581	10.0135	9.8837	9.4528	9.7793	8.7308	10.7876	12.4301	9.9690	8.5127
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	8.9990	9.0043	9.1002	9.0679	9.0003	9.0859	9.0725	11.7811	9.5129	11.5484	9.9913	11.1966	10.1279	12.0502	9.2101	9.9693	9.8535	9.4260	9.7567	8.3676	10.6098	12.4156	9.9562	8.4329
R069	833166.60	821757.87	833260.16	821795.91	29	0	1	6.7308	6.7580	6.7973	6.7475	6.7342	6.7775	6.7857	8.2494	6.4623	7.9974	6.7908	7.7437	7.1409	8.5273	6.8548	7.4283	7.3574	8.0759	8.8316	6.9468	9.5699	11.6528	9.3897	7.4392
R070	833249.00	821820.73	833329.89	821883.87	13	0	1	11.4813	11.4322	11.6399	11.4910	11.4448	11.5541	11.5549	13.6197	11.0463	13.1546	11.3286	12.5889	11.4087	13.2260	10.4766	11.1916	11.1745	10.7780	10.9719	9.6886	12.6744	14.9174	12.2071	10.7021

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_2 x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	11.1800	11.2321	11.4594	11.3894	11.2134	11.4076	11.3439	13.1442	10.5479	12.5770	10.9697	12.0645	10.9115	12.6936	10.1106	10.8763	10.7325	10.3164	10.5770	9.3445	12.4362	14.5872	11.9703	10.5085
R072	833397.24	821875.22	833501.75	821897.07	20	0	1	9.6934	9.6602	9.8140	9.8099	9.8436	9.6896	9.6723	11.4591	9.4545	10.3514	9.0654	10.0538	9.0574	10.4153	8.0457	9.2034	9.1912	8.3737	7.8861	7.3317	9.8521	11.4658	9.2202	8.6486
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	10.1720	10.0599	10.3492	10.3134	10.2249	10.1629	10.2140	11.7497	9.1374	11.0027	9.8719	10.8936	10.0735	11.3636	9.4027	10.0131	9.8342	9.5944	9.7889	8.9907	11.4314	13.2215	11.1400	10.1357
R074	833281.04	821790.34	833451.80	821860.54	20	0	1	10.3365	10.2702	10.5797	10.3108	10.3188	10.3966	10.4074	11.9027	9.4724	11.0491	9.9486	10.8856	9.9331	11.2431	9.0366	9.6278	9.3620	9.1190	9.2249	8.2765	11.1705	13.2152	10.9189	9.4328
R075	833449.48	821861.09	833506.97	821883.08	16	0	1	9.2892	9.3223	9.3750	9.4304	9.2593	9.5090	9.4225	10.8828	8.5533	9.9732	8.9276	9.8620	8.9861	10.1672	8.1100	8.7886	8.5214	8.2716	8.3752	7.5165	10.2006	12.1473	10.0112	8.5209
R076	833501.46	821897.80	833548.66	821899.77	16	0	1	10.2894	10.5329	10.5298	10.6239	10.4650	10.4430	10.4741	12.3100	10.2824	11.0964	9.8072	10.9373	9.8718	11.6639	9.0052	10.1182	10.0930	9.3742	9.4640	8.5458	11.8697	14.0077	11.2998	9.8664
R076	833548.66	821899.77	833603.43	821886.09	16	0	1	10.2894	10.5329	10.5298	10.6239	10.4650	10.4430	10.4741	12.3100	10.2824	11.0964	9.8072	10.9373	9.8718	11.6639	9.0052	10.1182	10.0930	9.3742	9.4640	8.5458	11.8697	14.0077	11.2998	9.8664
R076	833603.43	821886.09	833684.92	821822.32	16	0	1	10.2894	10.5329	10.5298	10.6239	10.4650	10.4430	10.4741	12.3100	10.2824	11.0964	9.8072	10.9373	9.8718	11.6639	9.0052	10.1182	10.0930	9.3742	9.4640	8.5458	11.8697	14.0077	11.2998	9.8664
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	9.5121	9.5823	9.7257	9.6440	9.6222	9.6321	9.6492	11.2094	8.9010	10.3871	9.2211	10.2605	9.3544	10.8339	8.6360	9.3446	9.1602	9.0504	9.2944	8.2894	11.3879	13.5802	11.0910	9.4399
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	9.5121	9.5823	9.7257	9.6440	9.6222	9.6321	9.6492	11.2094	8.9010	10.3871	9.2211	10.2605	9.3544	10.8339	8.6360	9.3446	9.1602	9.0504	9.2944	8.2894	11.3879	13.5802	11.0910	9.4399
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	9.5121	9.5823	9.7257	9.6440	9.6222	9.6321	9.6492	11.2094	8.9010	10.3871	9.2211	10.2605	9.3544	10.8339	8.6360	9.3446	9.1602	9.0504	9.2944	8.2894	11.3879	13.5802	11.0910	9.4399
R078	833682.38	821822.35	833875.32	821880.75	16	0	1	11.7614	11.6233	11.8967	11.8603	11.7112	11.9597	11.8783	13.7670	11.9244	12.5801	11.1737	12.2930	11.0693	12.8060	10.0478	11.1240	11.1125	10.1661	10.1630	9.3266	12.3457	14.4414	11.8001	10.6970
R079	833673.29	821811.43	833867.51	821851.46	16	0	1	8.7160	8.8861	8.9099	8.9018	8.8029	8.7926	8.8721	10.2549	7.7150	9.4317	8.5824	9.6355	8.9058	10.3018	8.3585	8.8563	8.6152	8.7592	9.4528	8.2995	11.5227	13.8389	11.4029	9.2923
R080	833875.67	821861.18	833989.54	821587.94	16	0	1	11.1214	11.2014	11.3843	11.3531	11.2083	11.1052	11.2202	13.0440	9.9633	11.9820	10.4805	11.7850	10.5713	12.4628	9.5576	10.4067	10.2122	9.6413	9.9662	8.8544	12.3369	14.7360	11.8651	10.2429
R081	833867.01	821850.88	833983.09	821582.98	20	0	1	9.3658	9.5064	9.5790	9.5169	9.4152	9.4311	9.5505	10.8366	8.4470	10.1048	9.3150	10.3036	9.5446	10.8475	8.9945	9.4634	9.1837	9.2499	9.9470	8.8253	11.8844	14.1328	11.8593	9.8382
R082	833458.18	821884.41	833510.75	821821.12	14	0	1	13.4089	13.5855	13.6246	13.5283	13.4289	13.4301	13.5529	15.7183	12.2450	15.4284	13.5846	15.0357	13.8382	15.8789	12.9580	13.5655	13.3123	12.8988	13.3466	12.2173	15.4260	17.8867	14.9896	13.1443
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	13.4089	13.5855	13.6246	13.5283	13.4289	13.4301	13.5529	15.7183	12.2450	15.4284	13.5846	15.0357	13.8382	15.8789	12.9580	13.5655	13.3123	12.8988	13.3466	12.2173	15.4260	17.8867	14.9896	13.1443
R082	833536.39	821785.93	833570.13	821687.58	14	0	1	13.4089	13.5855	13.6246	13.5283	13.4289	13.4301	13.5529	15.7183	12.2450	15.4284	13.5846	15.0357	13.8382	15.8789	12.9580	13.5655	13.3123	12.8988	13.3466	12.2173	15.4260	17.8867	14.9896	13.1443
R083	833436.83	821855.11	833498.18	821813.12	14	0	1	5.1387	5.3336	5.6230	5.5756	5.5147	5.5052	5.3595	5.8064	5.3189	6.1203	5.7265	6.0254	5.8671	6.0998	5.5314	5.7478	5.4042	5.2782	5.2865	4.9471	5.7344	6.8262	6.1210	5.2975
R083	833498.18	821813.12	833524.36	821772.29	14	0	1	5.1387	5.3336	5.6230	5.5756	5.5147	5.5052	5.3595	5.8064	5.3189	6.1203	5.7265	6.0254	5.8671	6.0998	5.5314	5.7478	5.4042	5.2782	5.2865	4.9471	5.7344	6.8262	6.1210	5.2975
R083	833524.36	821772.29	833559.81	821652.62	14	0	1	5.1387	5.3336	5.6230	5.5756	5.5147	5.5052	5.3595	5.8064	5.3189	6.1203	5.7265	6.0254	5.8671	6.0998	5.5314	5.7478	5.4042	5.2782	5.2865	4.9471	5.7344	6.8262	6.1210	5.2975
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	13.4949	13.3941	13.6094	13.6008	13.4219	13.4790	13.5352	15.6959	11.9388	15.1207	13.6030	15.1879	14.0385	16.2994	13.3486	13.6727	13.3946	13.6790	14.6278	13.1187	16.8370	19.7184	16.6991	13.8333
R084	833582.69	821644.68	833607.71	821603.87	13	0	1	13.4949	13.3941	13.6094	13.6008	13.4219	13.4790	13.5352	15.6959	11.9388	15.1207	13.6030	15.1879	14.0385	16.2994	13.3486	13.6727	13.3946	13.6790	14.6278	13.1187	16.8370	19.7184	16.6991	13.8333
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	14.2766	14.3986	14.6154	14.5224	14.3377	14.5221	14.5783	16.4212	13.1964	15.9990	14.6541	16.0831	14.9856	16.9406	14.2297	14.4689	14.1379	14.0791	15.1430	13.4677	17.1389	19.9378	16.7321	14.3946
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	14.2766	14.3986	14.6154	14.5224	14.3377	14.5221	14.5783	16.4212	13.1964	15.9990	14.6541	16.0831	14.9856	16.9406	14.2297	14.4689	14.1379	14.0791	15.1430	13.4677	17.1389	19.9378	16.7321	14.3946
R085	833681.67	821545.20	833720.52	821512.85	14	0	1	14.2766	14.3986	14.6154	14.5224	14.3377	14.5221	14.5783	16.4212	13.1964	15.9990	14.6541	16.0831	14.9856	16.9406	14.2297	14.4689	14.1379	14.0791	15.1430	13.4677	17.1389	19.9378	16.7321	14.3946
R086	833560.70	821649.89	833603.88	821583.58	17	0	1	13.7519	13.6740	14.0751	13.6577	13.7026	13.8713	13.8394	15.4965	11.8912	15.0485	13.3173	14.6918	13.4794	15.3507	12.6330	12.8325	12.3446	12.3002	13.1032	11.7431	15.1278	17.8300	15.2809	12.6527
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	13.7519	13.6740	14.0751	13.6577	13.7026	13.8713	13.8394	15.4965	11.8912	15.0485	13.3173	14.6918	13.4794	15.3507	12.6330	12.8325	12.3446	12.3002	13.1032	11.7431	15.1278	17.8300	15.2809	12.6527
R087	833648.49	821548.42	833695.49	821508.30	13	0	1	19.5204	19.5164	19.8981	19.5648	19.3499	19.5252	19.5602	20.1755	19.2473	20.4253	20.1641	20.5353	20.1681	20.7876	19.9307	20.0218	19.7890	19.5664	19.7464	19.0459	19.9539	20.8098	19.9508	19.2696
R088	833254.24	821811.68	833365.50	821886.64	17	4	4	1.9136	1.9072	2.0019	1.9549	1.8858	1.9654	1.9673	3.1963	3.3485	3.3308	3.1279	2.6324	2.4354	2.1593	2.2175	2.0898	1.9099	1.8544	1.5899	1.2734	1.3341	1.3301	1.3860	1.2230
R088	833365.50	821886.64	833416.50	821865.51	17	7	4	1.9136	1.9072	2.0019	1.9549	1.8858	1.9654	1.9673	3.1963	3.3485	3.3308	3.1279	2.6324	2.4354	2.1593	2.2175	2.0898	1.9099	1.8544	1.5899	1.2734	1.3341	1.3301	1.3860	1.2230
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	1.9136	1.9072	2.0019	1.9549	1.8858	1.9654	1.9673	3.1963	3.3485	3.3308	3.1279	2.6324	2.4354	2.1593	2.2175	2.0898	1.9099	1.8544	1.5899	1.2734	1.3341	1.3301	1.3860	1.2230
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	1.9136	1.9072	2.0019	1.9549	1.8858	1.9654	1.9673	3.1963	3.3485	3.3308	3.1279	2.6324	2.4354	2.1593	2.2175	2.0898	1.9099	1.8544	1.5899	1.2734	1.3341	1.3301	1.3860	1.2230
R088	833533.63	821786.07	833574.80	821697.75	17	9	4	1.9136	1.9072	2.0019	1.9549	1.8858	1.9654	1.9673	3.1963	3.3485	3.3308	3.1279	2.6324	2.4354	2.1593	2.2175	2.0898	1.9099	1.8544	1.5899	1.2734	1.3341	1.3301	1.3860	1.2230
R088	833574.80	821697.75	833600.16	821605.82	17	7	4	1.9136	1.9072	2.0019	1.9549	1.8858	1.9654	1.9673	3.1963	3.3485	3.3308	3.1279	2.6324	2.4354	2.1593	2.2175	2.0898	1.9099	1.8544	1.5899	1.2734	1.3341	1.3301	1.3860	1.2230
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	1.9136	1.9072	2.0019	1.9549	1.8858	1.9654	1.9673	3.1963	3.3485	3.3308	3.1279	2.6324	2.4354	2.1593	2.2175	2.0898	1.9099	1.8544	1.5899	1.2734	1.3341	1.3301	1.3860	1.2230
R089	833256.86	821891.44	833370.08	821846.87	16	4	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R089	833598.99	821594.44	833669.93	821508.87	16	6	4	1.8799	1.8730	1.9758	1.9262	1.8937	1.9261	1.9326	2.4335	2.4941	2.4069	2.3500	2.0471	1.9954	1.8130	1.8812	1.7828	1.6777	1.7554	1.5767	1.1863	1.2859	1.3015	1.3235	1.1913
R090+R091	833259.78	821829.64	833337.84	821634.13	17	0	1	8.1550	8.2506	8.2956	8.2479	8.2655	8.2063	8.2163	10.4875	8.2513	9.8184	8.5285	9.6467	8.9753	10.1874	8.2194	9.6307	9.5098	9.3303	8.8190	7.9896	10.3254	12.4618	9.6412	8.7904
R092+R093	833337.92	821632.03	833449.56	821640.31	20	0	1	7.9404	7.8044	8.6353	8.6681	8.4228	7.6440	8.0930	10.2026	8.0111	9.4508	8.5897	9.5847	8.9229	10.2816	8.1017	9.5057	9.5282	9.1683	8.6397	7.8624	10.2821	12.2082	9.6825	9.1472
R092+R093	833449.06	821640.31	833513.09	821599.24	20	0	1	7.9404	7.8044	8.6353	8.6681	8.4228	7.6440	8.0930	10.2026	8.0111	9.4508	8.5897	9.5847	8.9229	10.2816	8.1017	9.5057	9.5282	9.1683	8.6397	7.8624	10.2821	12.2082	9.6825	9.1472
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	4.5667	4.5665	4.7562	4.7517	4.6453	4.7616	4.5768	5.4293	3.8273	5.1472	4.3667	4.5715	4.0448	4.0985	3.1611	3.2122	2.7408	2.6260	2.1721	1.9230	2.5521	3.2970	2.8676	2.3572
R095	833609.59	821501.72	833648.49	821548.43	17	0	1	21.1505	20.9582	21.4919	21.3440	21.0808	21.3187	21.4000	22.3434	21.6776	22.4038	22.2235	22.6459	22.3275	22.8694	21.9322	22.2343	22.0714	21.5229	21.6273	20.6768	21.7533	22.8408	21.8540	21.1130
R096+R097	833980.59	822454.38	834028.77	822414.27	18	0	1	11.0259	14.2957	9.9017	5.7883	5.7257	12.4887	10.5881	14.3805	13.2884	14.6108	12.9506	13.7782	12.5842	14.8055	11.7557	13.3517	12.9500	11.9865	11.0857	9.9330	12.8101	15.4582	12.6334	12.2457
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	18.2730	18.2145	19.0407	19.7078	18.2660	16.9719	17.6647	19.5130	20.9119	21.9933	19.2224	19.8412	17.6631	19.8904	16.0216	17.6138	15.8444	14.2033	13.2024	12.5371	15.3093	16.6997	13.2705	13.7787
R100+R101	834127.62	822332.11	834216.31	822256.35	16	0	1	14.6106	14.6438	17.2693	15.1113	15.9573	14.5492	16.7724	17.9891	16.9589	19.2250	16.7732	17.1358	16.4533	17.5439	14.3307	16.5566	15.3201	13.8216	12.6362	11.7897	14.5057	17.0455	13.4590	13.8381
R102+R103	834216.31	822256.35	834309.95	822180.58	16	0	1	14.3865	16.1545	14.0911	14.7916	14.5994	15.5735	14.6422	18.9056	16.3552	17.8724	15.0317	16.6063	14.1995	16.1709	12.1188	14.3976	13.8023	11.5308	10.3460	9.9274	13.6623	15.9318	12.2091	12.6190
R104+R105	834309.95	822180.58	834407.46	822098.55	18	0	1	12.7790	14.8934	13.1616	12.6912	12.5306	14.4960	12.5555	17.2282	15.3379	16.1454	14.3228	15.8382	13.6308	15.2635	11.7980	13.6869	12.9855	11.8406	10.6851	10.2272	13.5675	15.5762	12.6114	12.6375
R106	833917.83	822431.11	833991.76	822369.39	18	0	1	9.7861	10.0144	10.5397	10.5148	10.5619	9.4312	9.7379	12.0459	9.7847	11.5346	10.3239	11.6915	10.8328	12.8707	10.2022	11.9357	11.9893	11.3494	10.7627	9.9546	12.8973	15.3573	11.9204	11.2282
R107	833991.55	822370.04	834090.39	822287.63	18	0	1	10.4897	9.2705	10.8090	12.4742	10.9508	9.8536	10.5101	11.9058	9.4952	10.8652	9.7699	11.2894	10.5056	12.1399	9.5665	11.1926	11.6942	10.9390	10.1798	9.3826	12.3594	14.9547	12.1618	12.1511
R108	834090.84	822288.08	834181.98	822212.22	16	0	1	10.3678	9.4287	10.6942	11.9839	11.2465	10.7658	10.4233	11.9073	9.6302	11.0493	10.2118	11.2561	10.6363	12.3811	9.8998	11.5424	12.1527	11.0756	10.5394	9.7380	12.9210	15.2211	11.9166	11.3478
R109	834181.98	822212.22	834273.03	822136.48	17	0	1	10.0574	9.0645	10.3845	11.7363	10.9629	10.4579	10.1074	11.6432	9.2942	10.7396	9.8956	11.0340	10.2048	12.1041	9.6102	11.1355	11.7117	10.6759	10.0847	9.1888	12.2907	14.6464	12.1798	11.3692
R110	834273.54	822136.83	834364.38	822060.84	17	0	1	9.6197	9.7485	9.5532	10.7021	10.1419	9.4185	10.2374	11.8897	9.1601	10.7698	9.7310	10.9595	10.2102	11.9329	9.4671	11.0249	11.3114	10.3181	10.0835	9.2898	12.1251	14.1480	11.7947	11.2203
R111	834363.46	822059.86	834400.74	822028.83	16	0	1	9.8764	10.2028	9.5574	10.4730	9.8503	9.4086	9.9371	11.7357	9.5936	11.1644	9.8902	11.1706	10.2762	11.8618	9.5537	10.8482	11.4197	10.4085	9.7830	9.2510	12.3198	14.7000	11.5933	10.3274
R112	833849.76	822405.79	833902.96	822360.57	19	0	1	19.0044	19.5344	21.6859	20.0912	19.2949	19.7318	19.7386	22.5435	21.5786	22.0104	19.3641	20.4677	18.9195	21.3899	16.1037	18.5770	17.4913	14.9573	13.7146	13.1557	16.0292	17.7511	13.9598	15.1565
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	9.6506	9.5204	10.6384	8.2788	7.4258	10.5587	9.3176	10.7904	8.7822	10.3064	9.0969	10.4712	9.4722	10.9364	8.8300	10.2314	10.7999	9.7963	9.2754	8.4495	11.6814	13.5675	11.0576	10.3744
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	11.6165	11.2044	11.6985	11.6563	11.3412	11.4507	11.6076	13.4700	11.9282	13.7462	12.6007	13.4158	12.5872	13.8844	12.0133	12.9549	13.4724	12.3159	11.6826	10.8093	13.1889	15.1171	12.3536	11.8478
R115	833994.06	822200.75	834077.01	822132.08	16	0	1	16.0305	16.0063	16.4808	16.3192	15.6053	16.1519	16.1426	18.2433	16.5112	17.8789	15.8093	16.9915	15.4943	17.4191	13.9415	15.6009	15.7085	13.6274	12.6117	12.1980	14.7317	16.6115	13.5209	13.9322
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	10.7977	10.8298	11.5930	11.5328	11.1530	11.2666	11.0464	12.6042	10.5285	12.1896	11.1104	12.1900	11.4391	12.6060	10.7024	11.9803	12.6634	11.3861	10.8179	10.2498	12.6227	14.3903	11.9663	11.4918
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	10.8858	11.3270	11.2268	11.5966	11.3975	11.3216	11.1924	12.6440	10.6949	12.0903	11.3010	12.3407	11.5539	12.9008	10.8559	12.0105	12.8263	11.5237	10.9262	10.3550	12.6682	14.4803	12.1115	11.7444
R118	834190.59	822037.73	834243.25	821993.98	19	0	1	11.3833	11.3708	11.3840	11.7339	11.5380	11.4707	11.2933	12.7804	10.8428	12.2159	11.4739	12.4200	11.6563	12.9773	10.9802	12.1397	12.9288	11.6212	11.2674	10.4388	13.0310	14.5388	12.2101	11.6721
R119	834242.94	821993.86	834282.16	821961.45	19	0	1	10.8613	10.7071	11.2638	11.0531	10.5990	10.9095	10.9413	12.5038	10.7323	12.0958	11.3214	12.1622	11.4451	12.7916	10.9900	12.0267	12.8814	11.5629	11.2674	10.4388	13.0310	14.5388	12.2101	11.6721
R120	834281.93	821961.17	834309.17	821886.80	18	0	1	11.1969	11.2646	11.4867	11.2247	10.8219	11.5460	11.1741	13.0163	10.9999	12.4130	11.6104	12.6542	11.9121	13.2248	11.1933	12.4381	12.9695	11.8732	11.3088	10.4811	13.0260	14.5151	12.1220	11.8224
R121	833768.03	822376.18	833789.11	822310.98	18	0	1	11.9842	10.7725	13.0904	11.6785	11.5575	11.6901	11.2413	13.9153	9.0693	12.9607	11.3083	13.3948	12.8112	15.8703	12.5068	12.8567	13.3860	14.0152	15.9337	13.4718	19.5808	23.7805	19.1549	14.8615
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	12.9217	13.4312	13.9273	14.2633	14.1323	13.4564	12.7319	15.1363	10.5796	15.0837	12.4395	13.7208	12.0713	13.7790	10.7238	10.6845	9.2671	9.4944	10.1378	8.7173	11.6979	13.9671	11.6446	9.2845
R123	833868.78	822222.16	833964.75	822150.80	16	0	1	5.6478	5.6056	5.6502	5.4938	4.9538	6.1366	5.8397	7.4001	4.8431	6.5635	5.8752	6.7519	6.4018	7.2728	5.9054	6.5941	6.2960	6.9385	7.2989	6.0328	8.5299	10.8267	8.8831	6.6652
R124	833673.82	822341.72	833694.88	822284.07	18	0	1	14.6696	14.3324	14.5971	15.0853	14.2953	14.9872	14.4917	16.2653	12.9177	16.3026	14.7891	16.3299	15.6248	18.0798	15.1596	15.4592	16.2460	15.8224	17.1765	15.0839	20.0554	23.3977	20.1430	15.7587
R125	833694.86	822284.07	833827.77	822172.89	19	0	1	13.4047	13.5757	13.2996	13.6545	13.9520	13.0496	13.4647	15.9412	10.7313	15.1507	12.3553	13.4613	11.4879	13.0646	9.6115	9.4244	7.4457	7.6195	7.5478	6.6976	9.0074	10.8048	9.3621	7.3762
R126	833653.40	822269.00	833688.33	822174.73	13	0	1	11.8238	12.0625	11.6421	13.1773	12.3774	11.6590	12.3081	14.0524	11.7913	13.5249	12.1445	13.5498	12.4137	14.2268	11.6692	13.2560	13.1136	12.2936	12.1888	11.0680	14.0550	16.7686	13.3610	12.2742
R127	833489.65	822315.75	833503.51	822278.46	16	0	1	11.4667	12.2314	11.8140	11.5103	10.8456	11.4980	11.7630	13.4078	10.2619	12.7644	11.8969	13.2129	12.3559	13.9457	12.0722	12.5015	12.7912	12.8460	13.7727	12.0854	15.7940	18.8347	15.4755	12.7203
R128	833503.61	822278.46	833524.35	822221.21	16	0	1	10.4062	10.3472	11.0902	10.8775	10.3146	10.3102	10.2901	12.0108	8.7064	11.2069	10.3038	11.6623	10.9473	12.6392	10.7302	11.1944	11.4023	11.6723	12.6267	11.0533	14.6337	17.7649	14.8898	11.8750
R129	833377.80	822232.03	833300.00	822293.72	16	0	1	8.5931	8.5695	8.6056	8.7420	8.4925	8.6965	8.6965	10.4588	7.3088	9.7028	8.8232	10.0298	9.5413	11.0810	9.2066	9.7004	9.4372	9.9632	11.1611	9.4669	13.3083	16.0019	13.1581	10.3768
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	8.2336	8.2291	8.3191	8.2312	8.2517	8.2381	8.2717	10.1077	6.9165	9.3495	8.4522	9.6538	8.9723	10.7372	8.6312	9.3033	9.0082	9.6093	10.8341	9.1030	13.1598	15.7735	12.8709	9.9878
R131	833398.42	822175.04	833434.10	822080.76	18	0	1	9.0945	9.0909	9.2971	9.1568	9.1710	9.1658	9.1585	11.2123	8.6931	10.4685	8.9645	10.2865	9.4776	11.2106	8.6562	9.8467	10.0440	9.6324	10.0797	8.8554	12.2543	14.5695	11.6296	10.2151
R132	833433.92	822080.70	833460.51	822007.87	18	0	1	5.7380	5.8754	6.2563	6.0858	5.8311	5.8362	5.4865	6.2899	5.8364	6.8319	6.1064	6.3406	6.0251	6.1477	5.0814	5.2744	4.8640	4.6150	4.4653	3.9639	4.6101	5.4770	4.5963	4.0777
R133	833460.45	822007.80	833481.00	821952.76	19	0	1	13.1872	13.8612	14.7196	15.1663	14.5394	13.8504	12.9070	15.0654	12.7123	14.7001	12.5801	13.7999	12.2081	13.8988	10.5969	11.3298	10.3039	9.8717	9.8241	8.8389	11.8722	13.6902	10.8485	9.7258
R134	833481.00	821952.76	833505.57	821883.06	16	0	1	9.8093	10.3582	11.3810	11.8320	11.1229	10.3864	9.4605	11.2691	9.2619	10.5305	9.4413	10.3483	9.5496	10.7011	8.6494	9.6055	9.6268	9.2569	8.9490	8.0024	10.1952	12.1957	9.9228	8.9141
R135	833209.07	822233.78	833232.06	822178.07	16	0	1	11.4513	14.6193	17.4867	17.6890	16.3271	15.9468	12.2610	11.9441	7.6227	10.8192	10.0460	10.9870	10.5947	12.2594	10.1790	10.7112	10.0383	10.1968	10.9034	9.9483	14.5634	17.1211	15.0410	12.1499
R136	833232.03	822178.06	833253.39	822120.94	18	0	1	6.4426	9.0061	11.7913	1.3707	1.3518	11.6901	10.1821	10.3290	6.8650	9.9976	8.3190	9.5908	9.2460	10.9763	8.8185	9.3261	8.8105	9.4999	10.4338	9.0654	12.5366	15.8776	13.6549	10.7348
R137	833080.91	822182.03	833100.53	822129.44	18	0	1	8.1816	8.1948	10.6878	1.3010	1.2742	10.6149	7.4922	9.5785	5.8255	8.4150	7.1840	8.5082	8.3485	9.9018	7.5890	8.2617	8.6296	8.6406	9.7175	8.4722	11.9256	15.2547	13.1382	9.7640
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	8.1816	8.1948	10.6878	1.3010	1.2742	10.6149	7.4922	9.5785	5.8255	8.4150	7.1840	8.5082	8.3485	9.9018	7.5890	8.2617	8.6296	8.6406	9.7175	8.4722	11.9256	15.2547	13.1382	9.7640
R139	833121.68	822072.03	833166.50	821977.95	18	0	1	7.4150	7.3153	7.7438	7.1158	7.4272	7.5894	7.5515	9.2013	5.9420	8.2649	7.3135	8.7021	8.0758	9.8127	7.7947	8.3246	8.4375	8.9089	10.0879	8.3859	12.3908	15.4222	12.5252	9.3832
R140	833274.48	822007.07	833296.88	821947.56	17	0	1	14.2996	14.0747	14.1679	14.3207	13.9691	14.8664	14.3461	16.5955	12.4006	15.5570	13.2110	14.1190	12.3053	13.5971	10.2425	10.2672	8.4531	8.5693	8.6446	7.4693	10.0916	12.3322	10.2629	8.6071

Caline 4 input for 2049 Q3

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R141	833295.35	821947.25	833315.56	821891.67	13	0	1
R142	833329.69	821953.87	833315.96	821891.84	13	0	1
R143	833129.75	821889.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821783.15	13	0	1
R145+R146	833812.49	821976.50	834004.58	821616.03	17	0	1
R147+R148	833736.44	821888.35	833931.13	821727.74	16	0	1
R149	833728.61	821749.52	833807.73	821684.38	14	0	1
R149	833774.08	821643.52	833807.73	821684.38	13	0	1
R150	833736.87	821759.23	833607.71	821603.87	17	0	1
R151	833613.61	821610.98	833693.50	821543.70	13	0	1
R151	833693.50	821543.70	833775.28	821642.63	14	0	1
R152	833774.08	821643.52	833826.17	821600.58	20	0	1
R153	833991.31	822369.76	834028.77	822414.27	18	0	1
R154	833960.46	822320.45	833992.00	822369.67	18	0	1
R155	833909.65	822271.38	833960.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.38	18	0	1
R157	833866.58	822222.34	833827.77	822172.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.35	18	0	1
R159	834075.91	822299.62	834112.90	822344.34	15	0	1
R160	834090.39	822287.53	834127.63	822332.11	15	0	1
R161	834034.90	822250.52	834075.91	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.96	822201.65	834034.90	822250.52	16	0	1
R164	834007.86	822189.33	834049.42	822238.28	15	0	1
R165	833953.31	822151.70	833994.47	822201.23	16	0	1
R166	833872.14	822051.39	833954.75	822150.60	19	0	1
R167	833885.47	822042.45	834007.88	822189.33	16	0	1
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1
R170+R171	833736.44	821888.35	833812.49	821976.50	18	0	1
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1
R174+R175	833561.78	821677.56	833683.38	821823.55	16	0	1
R176	833496.77	821606.49	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.68	821668.47	20	0	1
R178	833440.44	821529.90	833498.60	821608.61	16	0	1
R179	833481.64	821526.21	833511.32	821600.38	17	0	1
R180	834218.31	822258.35	834325.96	822385.39	18	0	1
R181	834181.98	822212.22	834218.31	822258.35	18	0	1
R182	834140.62	822162.67	834181.78	822212.39	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.18	13	0	1
R184	834071.90	822084.18	834097.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.66	822267.44	19	0	1
R186	834231.54	822088.63	834273.34	822138.83	19	0	1
R187	834190.59	822037.73	834231.76	822086.45	18	0	1
R188+R189	834004.98	821816.03	834059.34	821880.22	19	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1
R192+R193	833878.32	821660.75	833930.85	821727.88	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.48	20	0	1
R196+R202	833761.01	821523.35	833826.17	821600.58	20	0	1
R197	834364.36	822060.94	834400.15	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.94	18	0	1
R199	834281.93	821961.17	834323.00	822010.48	19	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R200	834239.17	821914.13	834327.69	821840.33	18	0	1

NO_2 x 100 (g/VMT) Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
12.9682	12.8034	10.7520	10.2060	12.8332	14.1910	12.9621	16.2635	11.6598	15.0103	12.2684	13.3308	11.4018	12.7781	9.3973	9.4091	7.2447	7.5395	7.7774	6.7087	9.6133	12.0288	9.7430	7.6160
6.3318	5.1567	5.9654	4.9525	4.4656	5.7836	6.3951	7.1790	5.5687	7.0483	6.6848	7.3410	7.0780	7.6134	6.5670	7.2291	6.9497	6.3730	6.2022	5.9494	7.1850	8.9947	7.6795	6.8295
14.7979	14.7673	14.7609	14.7814	14.4992	15.4046	14.7837	16.9032	13.9096	16.8157	14.6991	15.5177	13.4746	14.7295	11.7709	11.4548	9.9961	9.6184	9.5769	8.5614	10.8486	13.0365	11.0715	9.3178
14.5855	14.5281	14.5635	14.8591	14.5098	15.2891	14.6477	16.7185	13.0233	16.1036	13.9036	14.8145	13.0272	14.3639	11.1191	11.1003	9.2434	9.2366	9.1763	8.0193	10.5571	12.7604	10.8403	9.0075
11.5381	10.7725	13.0904	7.5554	14.4734	10.6584	11.2399	13.2017	8.6181	12.4223	9.8732	11.0074	9.2109	10.1590	7.4601	7.2505	5.0645	5.6010	5.4940	4.6804	6.3730	8.0230	6.8749	5.4063
9.6414	9.8566	11.7913	12.9670	11.5575	10.8965	10.0313	12.0238	7.8262	11.0444	8.8535	9.5677	8.0393	8.7030	6.2021	5.9914	4.3289	4.7988	4.4046	3.7864	5.5422	6.3564	5.7573	4.6009
8.5407	8.1556	7.6342	9.1015	9.0061	10.2163	8.2232	10.4888	6.6865	9.3037	8.3733	9.6157	9.1184	11.0401	8.9274	9.1636	10.1994	10.4742	11.8007	9.8690	14.2660	17.4660	15.3215	11.5173
8.5407	8.1556	7.6342	9.1015	9.0061	10.2163	8.2232	10.4888	6.6865	9.3037	8.3733	9.6157	9.1184	11.0401	8.9274	9.1636	10.1994	10.4742	11.8007	9.8690	14.2660	17.4660	15.3215	11.5173
8.5407	8.1556	7.6342	9.1015	9.0061	10.2163	8.2232	10.4888	6.6865	9.3037	8.3733	9.6157	9.1184	11.0401	8.9274	9.1636	10.1994	10.4742	11.8007	9.8690	14.2660	17.4660	15.3215	11.5173
8.5407	8.1556	7.6342	9.1015	9.0061	10.2163	8.6265	10.4888	6.7615	9.4115	8.3733	9.6157	9.1184	11.0401	8.7652	9.1636	9.2349	10.2078	11.4147	9.4693	14.2660	17.4660	15.3215	10.5001
8.5407	8.1556	7.6342	9.1015	9.0061	10.2163	8.6265	10.4888	6.7615	9.4115	8.3733	9.6157	9.1184	11.0401	8.7652	9.1636	9.2349	10.2078	11.4147	9.4693	14.2660	17.4660	15.3215	10.5001
8.5407	8.1556	7.6342	9.1015	9.0061	10.2163	8.2232	10.4888	6.6865	9.3037	8.2656	9.4683	8.8366	10.6099	8.3168	9.1045	9.0793	9.8060	10.5608	8.9323	13.7218	16.7447	13.2991	9.6678
9.0633	9.2545	9.1081	8.9968	9.3002	9.3761	9.2415	11.3155	7.8817	10.4075	8.7358	9.3193	8.2986	9.5648	7.0166	7.5850	7.0027	6.8669	7.0604	6.1022	8.7632	10.9544	9.1860	7.3206
8.9993	9.3368	8.8979	9.1159	9.4501	9.1270	9.3165	11.3552	7.8569	10.3044	8.6552	9.3984	8.3487	9.4307	7.0861	7.5233	6.8907	6.9783	7.1691	6.1426	8.7902	10.9110	9.0298	7.1708
8.9995	9.3511	9.1034	8.9898	9.1673	9.2584	9.3258	11.6264	8.2917	10.6693	8.9463	9.5209	8.5184	9.8609	7.1673	7.7309	7.2949	7.2235	7.2893	6.2317	9.0617	11.4274	9.3661	7.3925
12.6983	12.3103	12.3979	12.1956	11.7556	11.9945	12.8537	16.6265	12.8652	15.7061	13.9261	14.8870	13.5951	14.6936	12.0034	12.2293	11.2986	11.3154	11.0788	9.6396	12.0885	13.9470	11.9536	9.7715
13.2532	12.9766	13.2834	12.7695	12.7148	12.8670	13.3843	17.1463	13.5495	16.1804	13.9461	14.6069	13.1641	14.8505	11.5502	11.6374	10.7801	10.7326	11.0091	9.5635	12.2400	14.2341	12.0599	9.8549
13.1397	13.2203	13.4647	13.3051	13.2992	13.3333	13.2270	15.4929	11.9105	14.9610	12.9444	13.6444	12.3031	13.8764	10.8162	10.8596	10.0698	10.0194	10.4186	9.2333	12.2842	14.4573	12.1976	10.0623
9.4174	9.6484	10.6549	10.5473	8.1948	10.5587	9.3877	11.2213	8.8836	10.7816	9.7292	11.1594	10.0008	11.7035	9.0188	10.0408	10.4370	10.0059	10.2728	9.1220	12.8592	15.0986	12.4017	11.1153
11.0481	10.9908	11.2143	11.3633	10.6496	11.4166	11.5172	13.5124	10.2280	12.4759	10.4522	11.6904	10.4887	12.3122	9.0841	9.6726	9.4205	8.9574	9.1779	7.9895	11.4696	13.9935	11.2339	9.2356
9.5880	9.5571	9.7827	9.4268	9.8321	9.5881	9.8508	11.9381	8.9712	10.9130	9.7101	11.1275	10.2092	12.0993	9.4484	10.4520	10.4080	10.1812	10.4326	9.3097	12.7287	15.4105	12.3594	10.6102
11.1447	11.1108	11.2359	11.1553	10.9588	11.1918	11.2512	13.4313	10.2536	12.3762	10.4915	11.7713	10.4823	12.1324	9.1395	9.8954	9.3959	8.9543	9.1785	7.9656	11.3592	13.9879	11.2125	9.2381
10.4253	10.5621	10.9033	10.4483	10.4110	10.6804	10.6415	12.8878	10.0971	11.8771	10.1586	11.2609	10.0861	11.6745	8.7947	9.8554	9.4416	8.9813	8.9728	7.8404	11.1054	13.6487	10.8339	9.2170
10.3954	10.4014	10.6741	10.2870	10.5824	10.4887	10.4434	12.4621	9.2267	11.5455	9.6694	10.9360	9.8021	11.8522	8.8503	9.3458	9.2602	9.2162	9.6536	8.3025	11.8284	14.4642	11.6342	9.4447
11.6187	11.5400	11.5633	11.5166	11.2538	11.6992	11.7570	13.5112	11.5135	12.4740	11.4449	12.3234	11.4170	12.6992	10.3013	11.1735	10.9128	10.4447	10.3939	9.4814	12.6187	14.5212	11.9832	10.7351
8.7747	8.5230	8.8020	8.7287	8.6522	8.7358	8.8764	10.1318	8.4921	9.4679	8.7288	8.9874	8.3544	8.2444	7.4886	7.8792	7.1302	7.1610	6.4542	5.9555	6.8372	7.8372	7.0391	6.5948
15.8156	15.8808	16.1223	16.0332	16.0519	16.0815	16.0468	19.1606	16.9707	17.8347	15.5487	16.8668	15.1991	17.4448	13.3190	15.0593	15.0727	13.0454	12.4902	11.8117	15.2523	17.6287	13.9979	13.5359
3.3531	3.3245	3.5635	3.5709	3.2244	3.3521	3.3722	4.1661	3.3677	3.8010	3.5866	3.7577	3.7178	3.6351	3.2643	3.7220	3.4210	3.4822	2.9060	2.6992	3.1986	4.0846	3.4428	3.0572
4.8732	4.8918	5.1214	4.8753	4.8948	5.0250	4.9133	5.9434	4.7830	5.9452	5.4423	5.7435	5.5514	5.8236	4.9145	5.1332	4.8269	4.7961	4.6080	4.1656	5.0704	6.1054	5.2506	4.5580
10.9034	10.7868	10.9926	10.8995	10.6180	10.9816	10.8431	13.1124	9.7975	12.2361	10.3819	11.6114	10.4023	12.1371	9.4146	10.0968	9.8487	9.5308	9.5908	8.5272	11.4978	13.7498	11.1868	9.5958
11.5700	11.5737	11.7991	11.7308	11.4752	11.7485	11.7012	14.3302	11.6822	13.5067	12.1418	13.2671	12.1582	14.2144	11.2948	12.1159	12.0661	11.8009	11.6753	10.5525	13.6510	15.9147	13.1917	11.3358
10.7852	10.7654	11.0583	10.9659	10.8865	10.9074	10.8648	12.9364	10.6620	12.0085	11.1160	12.2910	11.5522	13.1778	10.9979	12.1644	12.2315	11.9287	11.8496	10.7796	13.5925	15.7613	13.1838	12.1043
12.0991	12.1273	12.3977	12.1893	11.9220	12.2775	12.1399	14.0130	10.8212	13.0579	11.3351	12.3736	11.1272	12.7672	10.0601	10.6960	10.3771	9.8264	9.6729	8.7135	11.4224	13.5890	11.2008	9.9530
12.5390	12.4577	12.7328	12.6760	12.6592	12.5744	12.7618	14.6806	12.7287	13.8003	12.9217	14.2237	13.4102	15.3519	12.8737	13.9875	13.9906	13.7329	14.0936	12.7557	16.0226	18.4114	15.6605	13.9821
13.5000	13.4501	13.7777	13.6442	13.4861	13.6102	13.6249	15.8920	12.7662	14.7801	13.0903	14.4324	13.0922	15.1365	11.8814	13.1861	13.1951	12.0219	11.6734	10.9150	14.2480	16.1875	13.1459	12.4517
11.3493	11.4538	11.9273	11.7184	11.5811	11.4222	11.6872	13.9636	10.8487	13.2667	11.2704	12.7635	11.6141	13.6909	10.5333	11.6144	11.3012	10.9838	11.1910	9.9651	13.8682	16.9348	13.5160	11.4206
11.5672	9.0061	8.3271	9.1015	10.0996	9.1109	12.4405	12.6848	8.8549	11.4267	9.9901	11.3453	11.7502	13.5279	10.4423	11.6832	11.0113	11.6847	11.9656	10.1784	14.3761	17.6173	14.5556	11.5334
10.2877	10.3608	11.2711	11.0649	12.7444	11.6207	10.5752	12.2868	9.3418	10.9510	9.8683	11.2812	10.4396	13.1991	9.3991	10.5592	11.0709	10.7460	11.0597	9.3129	13.5475	17.4867	13.5268	11.1347
11.5557	12.0229	12.9453	13.0190	13.1660	13.8110	11.6831	13.8459	10.6510	12.7583	11.1300	12.4105	11.4771	13.3129	10.4478	10.0558	9.7318	9.6597	10.3265	9.4665	13.6108	16.8893	12.8343	12.1383
11.5395	11.1507	11.2443	11.0343	10.7725	11.6901	11.6527	13.7245	8.7277	12.6815	9.6017	10.4888	8.6261	9.4460	6.6864	6.7392	5.5517	5.5673	5.5384	4.5935	6.6487	8.3735	7.2305	5.1597
11.5395	11.1507	11.2443	11.0343	10.7725	11.6901	11.6527	13.7245	8.7277	12.6815	9.6017	10.4888	8.6261	9.4460	6.6864	6.7392	5.5517	5.5673	5.5384	4.5935	6.6487	8.3735	7.2305	5.1597
11.5395	11.1507	11.2443	11.0343	10.7725	11.6901	11.6527	13.7245	8.7277	12.6815	9.6017	10.4888	8.6261	9.4460	6.6864	6.7392	5.5517	5.5673	5.5384	4.5935	6.6487	8.3735	7.2305	5.1597
11.0374	10.9397	11.6837	11.1381	11.5811	11.1188	11.4559	13.1964	10.1040	12.1791	10.8047	12.4134	11.1137	13.4991	10.5000	11.5262	11.6468	11.0515	11.4194	9.9958	13.9205	16.5434	13.4647	11.3599
12.4844	12.6581	13.9458	14.3248	15.3140	14.3413	12.2037	14.6041	11.4930	12.9757	11.3862	13.1796	11.7257	13.5279	10.4360	9.7284	9.2120	9.3539	9.8886	9.0894	12.9339	15.9099	12.8343	12.1383
12.4472	13.0317	12.7239	13.1671	13.3928	13.1725	12.8330	15.0330	12.3899	14.0309	13.2655	14.7225	13.8536	15.4672	13.1580	14.3453	14.1860	13.9510	14.0651	13.0989	16.0722	18.5029	15.8323	14.1963
10.5820	10.1436	11.1602	11.7050	10.5516	10.5199	10.7517	12.3647	9.1309	11.3080	9.8545	11.0054	10.2437	11.5984	9.0442	9.6171	9.5980	9.2916	9.4357	8.1407	11.5369	13.4610	11.1040	9.8243
11.4488	12.0671	11.9184	12.1538	12.4357	12.0581	11.9885	13.9427	10.6800	12.6744	10.9503	12.3329	11.3228	13.3080	10.1112	11.0883	11.0978	10.4317	10.8876	9.5619	13.4512	16.0774	13.1028	10.9601
8.7041	8.5353	8.7153	9.2415	9.5540	8.7226	8.5096	9.7983	7.2857	8.8815	7.9570	9.2056	8.5279	10.2037	7.0738	7.8427	7.2787	6.7596	6.3246	6.2140	9.5837	8.9886	7.5703	8.8455
16.5447	15.6397	16.4402	17.1909	17.0557	16.4346	16.5542	17.2252	14.6566	16.9099	16.1108	18.0424	17.0037	17.9179	16.3238	16.9837	17.0484	16.9898	17.3018	16.5442	18.5823	19.6622	18.1315	17.6563
16.7023	17.0989	14.1738	15.5111	15.4482	15.6800	17.1464	16.7154	16.7003	15.8590	14.1819	15.0716	16.4374	15.4527	15.7751	16.2460	16.1838	18.2780	15.7803	15.1323	17.0832	18.6503	17.0324	18.6741
13.6200	10.0996	7.6342	7.5554	9.0061	9.1109	9.0802	13.8046	10.3456	13.2812	11.7915	13.3693	8.4098	10.6085	8.8168	8.5119	8.9576	7.2327	7.5875	7.8990	11.5453	18.8209	15.3158	11.5173
11.0247	9.5164	9.1931	7.5554	9.0061	8.2512	9.0802	12.3306	8.2571	11.0241	9.7499	11.2109	10.4885	14.6950	10.0801	11.0906	11.3516	10.8844	10.9030	9.7954	15.1511	16.2077	12.9195	14.9509
13.5453	13.7298	14.2988	16.0478	15.5994	16.0390	14.2064	15.3845	12.7767	14.7049	13.2956	13.1217	12.6151	13.9026	10.8449	11.5863	11.5707	13.3141	13.0096	12.4895	14.6853	17.2735	13.1910	12.7003
12.4722	11.5079	12.4538	12.3259	12.8792	12.8840	12.6198	14.3436	11.3597	13.8718	11.1687	12.6649	11.1821	13.5005	10.1733	11.6910	11.7479	11.0590	11.0428	9.8727	13.1478	15.8268	12.6870	11.5635
12.4722	11.5079	12.4538	12.3259	12.8792	12.8840	12.6198	14.3436	11.3597	13.8718	11.1687	12.6649	11.1821	13.5005	10.1733	11.6910	11.7479	11.0590	11.0428	9.8727	13.1478	15.8268	12.6870	11.5635

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833177.37	822330.25	833231.06	822345.79	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833231.06	822345.79	833434.80	822408.45	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3800	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833434.80	822408.45	833560.46	822643.05	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3600	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R003	833560.46	822643.09	833595.46	822646.76	20	0	1	1250	800	550	400	450	650	1650	4900	5500	4650	4200	3950	3800	3600	3800	4000	4350	4800	4900	4150	2750	2600	2550	1750
R004	833118.28	822306.10	833165.93	822315.62	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833165.93	822315.62	833425.10	822380.41	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R004	833425.10	822380.41	833618.28	822421.55	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3950	3750	3500	3650	3900	4250	4700	5350	5500	4750	3100	3000	2950	2000
R005	833618.28	822421.55	833673.75	822486.58	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833673.75	822486.58	833933.67	822614.65	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833933.67	822614.65	833973.71	822626.01	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R005	833973.71	822626.09	834040.15	822628.54	19	0	1	1100	700	500	350	400	600	1500	4350	5150	4200	3900	3750	3500	3650	3900	4200	4700	5350	5500	4750	3100	2950	2950	2000
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833627.55	822455.21	833732.07	822494.47	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833732.07	822494.47	833782.11	822441.05	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R006+R007	833782.11	822441.05	833840.01	822456.02	14	0	1	17	10	6	4	4	7	18	60	69	71	72	73	100	100	100	100	68	70	67	64	59	58	31	25
R008+R009	833664.17	822398.31	833693.59	822397.15	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R008+R009	833693.59	822397.15	833841.36	822456.36	13	0	1	62	22	13	8	10	16	62	73	150	150	150	150	150	150	150	150	100	100	100	100	100	74	72	37
R010+R011	833978.10	822463.30	833988.84	822432.68	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R010+R011	833988.84	822432.88	833983.54	822462.40	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R011	833983.54	822462.40	833849.51	822459.02	12	0	1	100	72	31	21	24	38	100	200	350	400	350	350	350	350	350	350	250	300	350	250	150	150	150	100
R012+R013	833387.28	822507.47	833423.59	822696.02	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833423.59	822558.02	833416.08	822482.07	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	33	32	35	27	20	16	14	11
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	33	32	35	27	20	16	14	11
R012+R013	833544.64	822390.48	833587.56	822354.60	10	0	1	7	3	2	1	1	2	7	12	25	27	24	23	25	26	30	29	23	32	35	27	20	16	14	11
R014+R015	833468.77	822318.11	833587.56	822354.80	14	0	1	66	27	16	12	13	20	68	100	200	200	150	150	150	150	150	150	100	100	150	100	100	100	100	72
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	66	26	16	11	12	20	67	100	200	200	150	150	150	150	150	150	100	100	100	100	100	100	100	45
R019	833082.67	822192.93	833209.07	822239.78	18	0	1	50	50	16	11	13	19	50	100	200	200	200	150	150	150	150	100	50	100	50	50	50	50	50	21
R021	833209.07	822239.78	833305.00	822293.72	16	0	1	50	50	20	14	16	24	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R022	833355.00	822293.72	833460.61	822340.13	18	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R022	833460.61	822340.13	833549.46	822316.75	18	0	1	50	50	17	12	14	20	50	100	200	200	200	200	200	200	250	250	200	250	250	200	150	100	100	100
R023	833073.42	822119.68	833100.63	822129.44	14	0	1	50	23	14	11	11	17	50	100	200	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R024	833100.63	822129.44	833232.06	822178.07	14	0	1	50	22	12	9	11	16	50	100	150	200	200	200	200	250	300	300	250	350	400	300	250	200	150	150
R025	833252.06	822178.07	833377.80	822232.03	14	0	1	50	50	18	12	15	21	50	100	200	250	250	250	300	300	350	400	300	450	500	400	300	250	200	150
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	50	50	17	12	14	20	50	100	250	250	250	250	250	250	300	300	250	350	350	300	200	150	150	100
R027	833503.91	822278.46	833673.82	822341.72	13	0	1	100	50	50	22	25	50	100	200	350	400	350	350	350	350	450	400	350	450	500	400	250	250	200	150
R028	833673.82	822341.72	833768.11	822376.03	13	0	1	50	23	15	10	11	16	50	100	150	200	200	200	200	200	250	250	200	300	350	250	200	150	150	100
R029	833768.63	822376.16	833848.76	822405.79	13	0	1	50	15	9	6	8	10	50	50	150	150	100	100	100	100	100	100	100	100	100	100	50	50	50	50
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	50	50	24	17	19	50	50	150	300	350	300	300	350	350	400	400	300	450	500	400	300	250	200	150
R031	833917.83	822431.11	833990.88	822454.38	14	0	1	15	9	5	4	4	6	17	50	100	100	100	100	100	100	100	100	100	150	150	100	100	50	50	50
R032+R201	833078.99	822085.71	833121.79	822072.07	18	0	1	106	105	54	54	54	55	108	320	450	450	373	371	421	419	469	468	519	619	618	463	359	308	258	205
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	200	150	100	100	100	150	200	550	800	750	700	650	750	750	850	900	950	1150	1200	900	650	550	500	350
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	200	150	100	100	100	150	200	550	850	800	700	700	750	750	850	950	1000	1200	1200	950	650	550	500	150
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	300	250	200	200	200	250	400	900	1400	1350	1150	1050	1100	1050	1100	1150	1150	1300	1300	1000	700	600	550	400
R036	833524.35	822221.21	833653.40	822289.00	18	0	1	350	300	250	250	250	250	450	1050	1650	1550	1150	1250	1300	1300	1400	1450	1450	1700	1700	1300	900	750	700	500
R037	833653.40	822289.00	833694.88	822284.07	19	0	1	300	250	200	200	200	200	350	890	1350	1250	1100	1000	1050	1000	1050	1100	1100	1250	1200	950	650	550	500	350
R038	833694.88	822284.56	833763.79	822309.51	18	0	1	300	250	200	200	200	200	350	900	1350	1250	1100	1000	1050	1000	1100	1100	1150	1300	1300	1000	700	600	550	350
R039	833781.99	822311.12	833798.46	822320.75	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	950	900	700	500	400	350	250
R040	833798.11	822318.09	833833.16	822335.17	18	0	1	200	150	150	150	100	150	250	550	900	850	700	650	650	650	650	650	650	750	700	550	400	350	300	200
R041	833833.16	822335.17	833902.96	822360.57	18	0	1	200	150	150	150	150	150	250	700	1050	1000	850	750	800	750	800	800	800	900	850	650	450	400	350	250
R042	833902.96	822380.57	833950.46	822320.45	18	0	1	250	200	200	150	150	200	350	800	1250	1150	1000	950	1000	1000	1050	1100	1150	1350	1350	1050	700	600	550	400
R043	833950.46	822320.45	834034.00	822250.52	18	0	1	150	150	100	100	100	100	200	450	700	700	600	550	600	600	650	700	700	850	850	650	450	400	350	250
R044	834034.00	822250.52	834140.62	822162.67	18	0	1	200	150	150	150	100	150	250	550	900	850	750	700	750	700	750	800	850	950	950	750	500	450	400	300
R045	834140.62	822162.67	834231.76	822088.45	19	0	1	150	100	100	100	100	100	150	400	650	600	500	500	550	550	600	600	650	750	750	600	400	350	300	200
R046	834231.72	822088.65	834323.21	822011.22	18	0	1	200	150	150	150	100	150	250	600	900	850	750	700	750	700	800	800	850	950	950	750	500	450	400	300
R047	834322.77	822010.68	834394.01	821959.68	18	0	1	200	150	100	100	100	150	200	550	800	750	650	650	700	650	700	750	800	900	900	700	500	400	350	250
R048	833097.20	821988.43	833155.96	821977.96	17	0	1	650	500	450	450	400	500	850	2000	3100	2900	2450	2200	2250	2150	2250	2250	2200	2500	2350	1800	1250	1050	950	700
R049	833155.96	821977.96	833434.10	822080.21	18	0	1	550	450	400	400	350	450	700	1700	2650	2500	2050	1850	1900	1750	1800	1750	1700	1900	1750	1350	950	800	700	500
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	650	500	450	450	450	500	800	1950	3000	2850	2450	2300	2450	2350	2550	2650	2700	3150	3100	2400	1650	1400	1300	900
R051	833274.98	822006.60	833408.76	822087.62	18	0	1	550	450	350	350	350	400	700	1650	2500	2350	2050	1850	1950	1900	2000	2050	2100	2450	2350	1800	1250	1100	950	700
R052	833434.10	822080.21	833608.33	822174.73	18	0	1	350	300	250	250	250	250	450	1100	1700	1600	1350	1250	1350	1300	1400	1450	1500	1750	1700	1300	900	800	700	500
R053	833786.86	822123.44	833736.66	822163.25	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R053	833736.86	822165.25	833898.23	822174.73	18	0	1	400	300	300	250	250	300	550	1250	1950	1850	1600	1500	1600	1550	1700	1750	1800	2150	2100	1650	1150	950	900	600
R054	833438.63	822067.29	833586.71	822122.03	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833586.71	822122.03	833649.55	822144.45	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833649.55	822144.45	833663.68	822152.80	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833663.68	822152.80	833713.85	822149.82	18	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833713.85	822140.82	833737.83	822128.55	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R054	833737.83	822128.55	833779.48	822113.30	16	0	1	450	350	300	300	300	350	550	1350	2050	1950	1650	1550	1650	1600	1750	1800	1850	2200	2150	1650	1150	1000	900	650
R055	833786.53	822123.04	833872.14	822081.29	19	0	1	500	400	350	350	350	400	650	1500	2350	2200	1900	1750	1850	1750	1850	1900	1950	2250	2200	1700	1150	1000	900	650
R056	833778.49	822113.30	833867.20	822039.12	18	0	1	250	200	150	150	150	200	300	750	1200	1100	950	900	950	950	1000	1050	1050	1250	1250	950	650	550	500	350
R057	833873.20	822062.48	834159.21	821914.79	18	0	1	350	250	250	250	250	250	450	1100	1650	1550	1300	1200	1250	1200	1250	1250	1250	1400	1350	1050	700	600	550	400
R058	834159.21	821814.79	834250.10	821738.42	18	0	1	300	250	200	200	200	250	400	950	1500	1400	1200	1050	1100	1050	1100	1100	1100	1200	1150	900	600	550	500	350
R059	833867.29	822039.25	834058.34	821880.22	17	0	1	200	150	150	150	150	150	250	600	950	900	800	750	800	800	900	950	1000	1200	1200	900	650	550	500	350
R060	834058.34	821880.22	834241.61	821727.45	16	0	1	200	150	150	150	150	150	250	600	900	850	750	700	800	750	850	900	900	1100	1100	850	600	500	450	300
R061	833116.37	821880.28	833139.76	821889.31	16	0	1	50	22	14	9	11	16	50	100	150	200	150	150	150	150	150	150	100	100	100	100	50	50	50	50
R062	833139.76	821889.31	833296.78	821947.29	18	0	1	50	50	50	18	20	50	100	150	300	350	300	300	300	300	350	300	250	350	350	300	200	150	150	100
R063	833296.86	821947.56	833460.51	822037.97	18	0	1	50	20	13	10	10	15	50	100	150	150	150	150	200	200	200	200	200	150	300	200	150	150	100	100
R064	833460.49	822068.83	833543.73	822038.72	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833543.73	822038.72	833603.70	821983.31	15	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R064	833480.98	821952.82	833543.70	821982.31	18	0	1	50	21	13	9	10	14	50	100	150	150	150	150	150	150	150	150	100	150	150	100	100	50	50	50
R065	833160.17	821834.07	833315.56	821891.57	16	0	1	50	50	17	12	14	20	50	100	200	250	200	200	200	150	200	150	150	150	150	150	100	50	50	50
R066	833315.56	821891.48	833491.00	821982.75	16	0	1	50	50	21	15	17	24	50	100	250	250	250	250	250	250	300	300	250	350	400	300	200	200	150	100
R067	833154.01	821773.07	833178.47	821783.88	18	0	1	1500	1200	1000	1000	950	1150	1900	4450	4750	4750	4730	4750	4750	4750	4750	4750	4750	4750	4750	4750	3350	2850	2600	1800
R068	833178.74	821783.16	833253.68	821813.88	18	0	1	1350	1100	950	900	900	1050	1750	4100	4750	4750	4750	4700	4750	4750	4750	4750	4750	4750	4750	4500	3150	2650	2400	1200
R069	833166.60	821757.87	833250.16	821795.91	29	0	1	950	750	650	600	600	700	1200	2850	4350	4100	3600	3400	3600	3550	3900	4050	4200	4750	4750	3800	2650	2250	2050	1450
R070	833249.90	821820.73	833329.69	821853.87	13	0	1	400	300	250	250	250	300	500	1200	1800	1700	1450	1350	1400	1350	1450	1450	1500	1700	1650	1250	900	750	700	500

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	Vehicle count for each road																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833527.91	821859.29	833597.24	821875.22	18	0	1	450	350	300	300	300	350	550	1300	2000	1900	1650	1500	1600	1500	1650	1650	1700	1950	1900	1450	1000	850	800	550
R072	833597.24	821875.22	833691.75	821897.07	20	0	1	200	150	150	150	150	150	250	600	900	850	750	700	750	750	800	850	850	1000	1000	800	550	450	400	300
R073	833451.50	821860.54	833397.24	821875.22	17	0	1	250	200	150	150	150	200	300	750	1100	1050	900	800	850	800	850	850	850	950	900	700	500	400	350	250
R074	833261.06	821790.34	833451.50	821860.54	20	0	1	250	200	150	150	150	150	300	700	1050	1000	850	800	850	800	900	900	950	1100	1050	800	550	500	450	300
R075	833449.48	821861.09	833506.97	821583.08	16	0	1	150	150	100	100	100	100	200	450	750	700	600	550	550	550	550	550	600	650	650	500	350	300	250	200
R076	833501.48	821897.00	833548.66	821899.77	18	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	833548.66	821886.77	833603.43	821886.09	16	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R076	833603.43	821885.99	833684.92	821822.32	18	0	1	150	100	100	100	100	100	200	450	700	650	550	500	550	500	550	550	600	650	650	500	350	300	250	200
R077	833564.57	821884.14	833563.57	821884.30	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	833563.57	821884.30	833660.48	821871.28	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R077	833660.48	821871.28	833673.64	821812.01	17	0	1	300	250	200	200	200	250	400	950	1450	1400	1200	1100	1150	1100	1150	1200	1200	1400	1350	1050	750	600	550	400
R078	833683.38	821822.35	833875.32	821560.75	16	0	1	150	150	100	100	100	100	200	500	750	700	600	550	550	500	550	550	550	600	600	450	300	250	250	150
R079	833673.29	821811.43	833867.51	821651.46	16	0	1	250	200	150	150	150	200	300	750	1150	1100	950	850	900	850	900	900	950	1050	1050	800	550	450	400	300
R080	833675.67	821661.18	833999.54	821457.94	16	0	1	150	100	100	100	100	100	200	450	650	650	550	500	550	550	600	600	650	750	750	550	400	350	300	200
R081	833607.01	821650.86	833983.08	821853.08	20	0	1	250	200	200	200	200	200	350	800	1250	1200	1050	950	1000	1000	1050	1100	1150	1300	1300	1000	700	600	550	400
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R082	833510.75	821821.12	833536.36	821785.93	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R082	833536.39	821785.93	833570.13	821697.55	14	0	1	200	200	150	150	150	150	300	650	1000	1000	850	750	800	750	800	850	850	950	950	700	500	400	400	250
R083	833436.83	821858.11	833499.18	821813.11	18	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	833499.18	821813.12	833524.36	821772.29	14	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R083	833524.36	821772.29	833519.81	821652.62	14	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	300	300	250	150	150	150	100
R084	833587.54	821687.02	833582.69	821644.65	13	0	1	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R084	833582.69	821644.65	833607.71	821603.07	13	0	1	200	200	150	150	150	150	300	650	1000	950	850	750	800	750	850	850	850	1000	950	750	500	450	400	300
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R085	833681.67	821545.20	833720.52	821512.65	14	0	1	200	150	150	150	150	150	250	650	1000	950	800	750	750	750	800	800	800	900	900	650	450	400	350	250
R086	833580.70	821640.89	833603.88	821583.58	17	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	100	50	50	50	50	50	100	250	400	400	350	300	300	300	300	300	300	350	350	250	200	150	150	100
R087	833648.49	821548.43	833699.46	821538.30	13	0	1	100	100	100	100	100	100	150	350	500	500	450	400	400	400	400	400	400	400	450	350	200	200	150	150
R088	833254.24	821811.68	833365.50	821850.64	17	4	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833365.50	821850.64	833416.50	821860.81	17	7	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833416.50	821865.51	833467.63	821841.09	17	5	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833467.63	821841.09	833533.63	821786.07	17	10	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833574.80	821657.75	833660.16	821605.82	17	7	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R088	833660.16	821605.82	833712.08	821511.11	17	8	4	1200	850	600	400	400	650	1400	2950	3600	3600	3200	3100	2950	2850	3150	3250	3250	3600	3600	3200	2450	2500	2600	1950
R089	833256.85	821801.44	833370.08	821846.87	16	4	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833427.36	821852.03	833485.60	821829.25	16	9	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833485.60	821829.25	833522.46	821786.30	16	10	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833543.19	821725.47	833563.07	821653.37	16	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833563.07	821653.37	833599.89	821594.44	16	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R089	833599.89	821594.44	833693.63	821508.81	16	8	4	850	600	400	300	300	450	1000	2100	2850	2750	2400	2400	2350	2300	2650	2750	2800	3450	3600	2900	2200	2250	2350	1750
R090+R091	833260.78	821629.66	833337.84	821634.13	17	0	1	350	250	250	250	250	250	450	1050	1600	1500	1250	1100	1200	1100	1150	1150	1150	1300	1200	950	650	550	500	150
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R092+R093	833449.56	821640.31	833613.09	821599.26	20	0	1	250	200	150	150	150	200	350	750	1150	1150	950	900	900	850	900	900	950	1000	1000	750	550	450	400	300
R094	833337.84	821634.13	833341.51	821570.41	16	0	1	50	50	50	50	50	50	100	200	300	300	250	200	200	200	200	200	200	250	250	150	100	100	100	50
R095	833606.59	821501.72	833648.49	821548.43	17	0	1	100	100	100	50	50	100	150	350	500	500	450	400	400	350	400	400	400	400	400	300	200	200	150	100
R096+R097	833980.58	822454.38	834028.77	822414.27	18	0	1	57	19	11	7	7	14	57	64	150	150	150	150	150	150	150	150	70	150	150	121	64	63	62	58
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	62	56	25	17	20	28	63	150	300	300	300	250	250	250	300	250	200	250	300	250	200	150	150	73
R100+R101	834127.62	822332.11	834218.31	822258.35	18	0	1	100	100	73	34	40	100	150	300	600	650	550	500	550	500	550	550	350	500	500	450	250	250	250	150
R102+R103	834218.31	822258.35	834309.95	822180.58	18	0	1	100	36	22	16	16	26	100	150	250	300	250	250	300	300	300	300	250	350	350	250	200	200	150	100
R104+R105	834309.95	822180.58	834407.46	822098.55	18	0	1	71	27	16	11	11	19	72	100	200	200	200	200	250	250	250	250	200	300	300	200	150	150	150	100
R106	833917.63	822431.11	833991.76	822309.39	18	0	1	50	50	24	17	20	50	50	150	300	300	300	250	250	250	300	250	200	300	300	250	150	150	100	100
R107	833991.55	822370.04	834090.35	822287.53	18	0	1	50	50	20	14	16	22	50	100	250	250	200	200	200	150	150	150	100	100	100	100	50	50	50	50
R108	834090.84	822285.06	834181.98	822212.22	18	0	1	50	50	22	16	17	50	50	150	250	300	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R109	834181.98	822212.22	834273.06	822136.83	17	0	1	50	50	21	15	16	24	50	100	250	250	250	200	200	200	200	150	100	150	100	100	50	50	50	50
R110	834273.34	822136.83	834364.36	822060.96	17	0	1	100	50	50	20	21	50	100	150	350	350	300	250	250	250	250	200	150	150	150	150	100	100	50	50
R111	834363.46	822059.86	834460.74	822028.83	18	0	1	50	50	23	17	18	50	50	150	300	300	250	250	200	200	200	200	150	150	150	100	100	50	50	50
R112	833846.78	822405.79	833902.96	822380.57	19	0	1	50	22	14	10	12	17	50	100	150	200	200	200	250	250	300	300	250	400	450	350	250	200	200	150
R113	833833.46	822335.17	833909.65	822271.35	18	0	1	50	20	12	8	9	15	50	50	150	150	150	150	150	100	150	100	100	100	100	100	50	50	50	50
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	200	100	50	50	50	100	200	450	850	950	850	750	750	700	800	750	550	700	750	550	400	350	300	250
R115	833994.08	822200.75	834077.01	822132.08	18	0	1	200	100	50	50	50	50	200	400	750	850	750	700	700	650	750	700	550	700	750	600	400	350	300	250
R116	834076.90	822131.84	834097.30	822115.02	18	0	1	200	100	50	50	50	100	200	400	800	850	750	700	700	700	750	700	550	700	750	600	400	350	300	250
R117	834097.30	822115.02	834190.69	822037.73	18	0	1	200	100	50	50	50	50	200	350	700	800	700	650	650	650	700	650	500	650	700	550	400	350	300	250
R118	834190.89	822037.73	834243.25	821992.95	19	0	1	200	100	50	50	50	50	200	350	750	800	750	700	700	700	800	750	600	800	850	700	500	400	350	300
R119	834242.94	821993.65	834282.16	821951.45	19	0	1	200	100	50	50	50	100	250	450	900	950	850	800	800	800	850	800	650	800	850	700	500	400	350	300
R120	834281.93	821951.17	834389.17	821898.80	18	0	1	250	150	100	50	50	100	250	500	950	1050	950	900	900	850	950	900	700	900	950	750	500	450	400	300
R121	833768.03	822376.16	833799.11	822218.98	16	0	1	21	13	8	6	6	9	50	50	100	100	100	100	100	100	150	150	100	150	200	150	100	100	100	50
R122	833761.86	822311.12	833868.78	822222.18	18	0	1	100	50	50	50	50	50	100	200	400	450	400	400	400	400	500	450	350	500	550	450	300	250	250	200
R123	833868.78	822222.16	833964.75	822150.80	18	0	1	50	50	22	15	17	50	50	150	250	300	250	250	250	250	300	300	200	300	350	250	200	150	150	100
R124	833673.82	822341.72	833894.66	822284.07	18	0	1	50	50	20	14	16	23	50	100	250	250	200	200	200	200	200	200	150	150	150	100	100	50	50	50
R125	833894.80	822284.07	833807.77	822172.05	18	0	1	50	50	20	14	16	23	50	100	250	250	250	200	200	200	200	200	150	200	200	150	100	100	100	50
R126	833893.40	822269.00	833988.35	822174.73	13	0	1	50	50	22	15	16	25	50	150	250	300	250	250	300	300	350	350	300	400	450	350	250	200	200	150
R127	833459.65	822315.75	833593.51	822278.45	18	0	1	50	23	15	10	12	16	50	100	150	200	200	200	200	200	250	250	200	250	300	250	150	150	100	100
R128	833503.61	822278.46	833574.36	822221.24	18	0	1	50	50	18	14	15	21	50	100	200	250	250	250	250	250	300	300	250	350	400	300	200	200	150	150
R129	833377.80	822232.03	833355.09	822293.72	18	0	1	150	100	100	100	100	100	200	400	650	600	500	450	500	450	500	500	500	600	550	450	300	250	250	150
R130	833377.80	822232.03	833396.77	822175.17	18	0	1	200	150	100	100	100	150	250	550	850	800	700	600	650	650	650	700	700	800	800	600	400	350	300	250
R131	833396.42	822175.04	833414.16	822080.75	18	0	1	300	250	200	200	200	250	400	900	1400	1300	1050	950	950	900	900	850	850	900	800	650	450	350	350	250
R132	833433.92	822060.70	833469.51	822007.07	18	0	1	200	150	150	150	150	150	250	550	850	800	700	700	750	700	800	800	850	1000	1000	750	550	450	400	300
R133	833460.45	822007.00	833481.00	821952.76	18	0	1	200	100	50	50	50	100	200	350	750	800	750	700	700	700	800	750	600	800	850	700	500	400	350	300
R134	833481.00	821952.76	833500.87	821883.08	18	0	1	200	100	100	50	50	100	200	400	800	900	850	800	850	850	950	950	750	1000	1100	900	600	500	450	350
R135	833209.07	822239.75	833232.05	822178.07	18	0	1	8	6	5	3	2	4	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	20	19	14
R136	833232.03	822178.08	833253.36	822120.94	18	0	1	6	4	3	1	1	3	7	13	50	50	50	50	50	50	50	50	50	50	50	50	22	18	17	13
R137	833080.01	822182.63	833100.03	822129.44	18	0	1	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	8	4	3	1	2	3	9	17	50	50	50	50	50	50	50	50	50	50	50	50	21	17	16	13
R139	833121.68	822072.03	833158.56	821977.86	18	0	1	100	50	50	24	50	50	100	200	400	450	400	400	450	450	550	550	400	600	650	500	350	300	250	200
R140	833274.46	822007.07	833298.80	821947.38	17	0	1	100	50	50	50	50	50	100	200	450	450	450	450	500	500	600	600	500	650	750	600	400	350	300	250

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R141	833256.35	821347.25	833315.56	821491.07	13	0	1
R142	833329.69	821853.67	833315.98	821691.84	13	0	1
R143	833139.75	821885.31	833160.17	821834.07	13	0	1
R144	833160.17	821834.07	833178.74	821783.15	13	0	1
R145+R146	833812.48	821976.55	834004.98	821516.03	17	0	1
R147+R148	833736.44	821888.35	833931.13	821727.74	16	0	1
R148	833729.61	821749.62	833807.73	821684.38	14	0	1
R149	833774.08	821643.52	833807.73	821684.38	13	0	1
R150	833736.87	821756.23	833687.71	821603.87	11	0	1
R151	833613.61	821610.98	833693.50	821643.70	13	0	1
R151	833692.60	821543.70	833778.28	821642.83	14	0	1
R152	833774.08	821643.52	833828.17	821500.88	20	0	1
R153	833991.31	822380.76	834028.77	822434.27	18	0	1
R154	833960.46	822320.45	833992.00	822389.67	18	0	1
R155	833909.46	822271.35	833960.46	822320.45	18	0	1
R156	833868.78	822222.16	833909.65	822271.38	18	0	1
R157	833866.58	822222.34	833827.77	822173.95	18	0	1
R158	833827.77	822172.95	833778.49	822113.30	18	0	1
R159	834075.01	822259.63	834113.80	822384.34	18	0	1
R160	834090.39	822287.53	834137.63	822332.11	15	0	1
R161	834034.80	822250.52	834075.61	822299.62	15	0	1
R162	834049.42	822238.28	834090.39	822287.53	15	0	1
R163	833993.06	822201.68	834034.00	822250.02	18	0	1
R164	834007.86	822186.33	834049.42	822238.28	15	0	1
R165	833963.31	822151.70	833994.47	822221.23	16	0	1
R166	833872.14	822051.39	833964.76	822190.50	18	0	1
R167	833883.47	822042.45	834007.88	822180.33	18	0	1
R168+R169	833815.72	821975.47	833876.36	822050.03	21	0	1
R170+R171	833726.44	821888.35	833812.49	821978.52	18	0	1
R172+R173	833884.92	821822.32	833739.28	821687.65	20	0	1
R174+R175	833561.78	821677.56	833883.38	821823.59	18	0	1
R176	833496.77	821508.49	833560.47	821680.73	20	0	1
R177	833513.09	821599.24	833573.66	821680.47	20	0	1
R178	833440.44	821529.99	833488.60	821608.61	16	0	1
R179	833451.84	821526.31	833511.33	821600.38	17	0	1
R180	834218.31	822298.35	834305.96	822385.39	18	0	1
R181	834181.98	822212.72	834218.31	822298.38	18	0	1
R182	834140.62	822162.67	834181.76	822212.38	18	0	1
R183	834099.34	822113.33	834140.62	822162.67	18	0	1
R184	834077.01	822132.08	834051.51	822100.94	13	0	1
R184	834051.51	822100.94	834071.90	822084.58	13	0	1
R184	834071.90	822086.18	834097.30	822115.02	14	0	1
R185	834309.95	822180.58	834382.60	822387.44	19	0	1
R186	834231.54	822088.63	834273.34	822138.83	19	0	1
R187	834190.59	822037.73	834231.76	822088.45	18	0	1
R188+R189	834004.98	821816.03	834085.34	821980.22	16	0	1
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1
R192+R193	833878.32	821660.79	833930.89	821727.98	20	0	1
R194+R195	833825.79	821600.86	833867.51	821651.48	20	0	1
R196+R202	833781.01	821523.38	833826.17	821600.58	20	0	1
R197	834364.38	822060.94	834400.13	822104.71	17	0	1
R198	834322.77	822010.68	834364.36	822060.94	18	0	1
R199	834281.93	821961.17	834323.00	822010.48	19	0	1
R200	834239.17	821914.13	834280.06	821963.18	14	0	1
R300	834239.17	821914.13	834327.89	821840.33	18	0	1

Vehicle count for each road																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
50	16	10	7	8	12	50	50	100	150	150	150	150	200	250	250	200	300	350	250	200	150	150	100
50	22	14	10	11	17	50	100	200	200	200	150	200	200	200	200	150	250	250	200	150	100	100	100
150	50	50	50	50	50	150	250	550	600	500	500	450	450	500	450	350	450	450	350	250	200	200	150
100	50	50	50	50	50	100	250	450	500	450	400	400	400	450	400	300	400	400	300	200	200	150	150
24	13	8	5	7	10	25	63	100	150	124	122	123	112	174	172	117	222	224	168	113	111	110	58
57	18	12	8	9	13	58	65	150	150	150	150	150	150	150	150	100	200	200	100	100	100	100	100
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	22	16	13	12	9
17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
17	9	5	4	4	7	17	50	50	50	50	50	50	50	50	50	50	50	50	23	16	13	12	10
17	9	5	4	4	7	18	50	50	50	50	50	50	50	50	50	50	50	50	50	20	17	14	11
100	100	100	50	50	50	100	250	300	250	250	200	200	250	200	200	200	200	200	150	150	150	100	100
100	100	100	50	50	50	100	250	300	250	250	250	250	300	300	300	350	350	350	300	250	200	200	150
100	100	50	50	50	50	100	250	300	250	250	200	200	250	200	200	250	250	200	200	150	150	150	100
500	400	350	300	250	250	450	800	800	800	800	800	800	800	800	800	800	800	750	650	550	450	450	350
600	500	400	300	250	300	550	1200	1500	1300	1200	1100	1100	1150	1100	1050	1050	1050	1000	850	750	650	600	450
500	400	350	300	250	250	450	1000	1300	1100	1050	950	1000	1050	950	950	1000	1000	950	800	700	600	550	450
50	23	18	15	12	15	24	50	50	50	50	50	50	50	50	50	100	100	100	50	50	50	50	50
100	100	50	50	50	50	100	200	250	250	200	200	200	200	150	150	150	150	150	150	100	100	100	50
150	150	100	100	50	100	150	350	400	350	350	350	350	400	350	350	400	400	400	350	300	250	250	200
200	150	150	100	100	100	200	400	550	450	450	400	400	450	400	400	450	450	450	350	300	250	250	200
250	200	150	150	100	100	200	450	600	550	500	500	550	600	600	600	650	700	700	550	500	450	400	300
150	150	100	100	100	100	150	350	450	400	350	350	350	400	350	350	400	400	400	300	300	250	250	200
150	150	100	100	100	100	150	350	450	400	350	350	350	400	400	400	400	450	400	350	300	250	250	200
300	250	200	200	150	150	300	650	850	750	700	650	700	750	750	750	800	850	800	650	550	500	450	350
250	200	150	150	100	150	250	550	650	600	550	550	550	600	600	600	650	650	650	550	450	400	350	300
500	350	300	300	200	200	450	950	1200	1050	1050	1050	1100	1200	1200	1250	1350	1450	1350	1150	1000	850	800	600
450	350	300	250	200	200	400	900	1100	1050	950	950	1000	1150	1100	1150	1250	1300	1250	1050	900	750	750	550
500	400	350	250	250	250	450	1000	1300	1150	1100	1050	1100	1200	1200	1200	1300	1350	1350	1100	950	800	800	600
550	450	350	300	250	250	450	1050	1350	1200	1100	1050	1100	1200	1150	1150	1250	1300	1200	1050	900	750	750	550
350	300	250	200	150	200	300	750	900	800	700	650	700	700	650	650	650	650	650	500	450	400	350	300
250	200	200	150	100	150	250	550	700	600	600	550	600	650	650	650	700	700	700	600	500	450	400	300
350	250	200	200	150	150	300	700	850	750	700	650	650	700	650	650	650	650	650	550	450	400	400	300
350	250	200	200	150	150	300	650	850	750	700	700	750	800	800	800	900	950	900	750	650	550	550	400
200	150	150	100	100	100	200	400	500	450	400	400	400	400	400	400	400	400	400	300	300	250	250	200
15	12	9	8	7	8	14	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24
50	50	22	19	16	18	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	23	19	16	13	15	24	50	50	50	50	50	50	50	50	50	50	50	50	50	50	24	22	17
50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	50	19	16	13	15	50	50	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
100	100	50	50	50	50	100	200	250	200	200	200	200	250	250	250	250	250	250	200	200	150	150	100
22	19	15	12	11	12	20	50	50	50	50	50	50	50	50	50	50	50	50	50	50	22	22	17
100	100	50	50	50	50	100	200	250	200	200	200	200	200	200	150	150	150	150	150	100	100	100	50
68	63	61	59	58	59	64	200	200	200	200	200	200	200	200	200	250	250	250	200	200	150	150	122
100	70	66	64	56	63	72	150	200	200	200	200	200	200	200	250	250	300	250	250	200	200	200	122
42	35	29	24	22	23	38	100	100	100	100	100	100	100	73	73	70	68	68	66	66	62	62	31
64	60	58	57	55	56	63	200	200	200	200	172	172	171	119	117	116	115	114	112	111	58	58	57
100	100	70	40	33	38	100	150	200	150	150	150	100	150	100	100	100	150	100	100	100	100	100	24
10	7	5	5	4	4	8	18	24	20	17	14	13	12	11	8	7	5	5	4	4	3	3	3
19	15	12	10	8	9	16	50	50	50	50	50	50	50	50	22	21	18	18	15	13	11	11	9
22	18	15	13	10	12	21	50	50	50	50	50	50	50	50	50	50	23	20	18	15	13	12	10
50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50
50	50	23	20	16	19	50	50	100	100	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_X x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	18.9294	18.7306	18.6446	18.9785	19.2601	19.2902	19.8130	29.2652	30.7401	26.7667	24.4655	22.8893	20.5154	20.8825	20.7605	22.2935	24.7659	24.7451	25.4154	21.6647	18.8788	20.4288	20.7448	19.6656
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	18.9294	18.7306	18.6446	18.9785	19.2601	19.2902	19.8130	29.2652	30.7401	26.7667	24.4655	22.8893	20.5154	20.8825	20.7605	22.2935	24.7659	24.7451	25.4154	21.6647	18.8788	20.4288	20.7448	19.6656
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	18.9294	18.7306	18.6446	18.9785	19.2601	19.2902	19.8130	29.2652	30.7401	26.7667	24.4655	22.8893	20.5154	20.8825	20.7605	22.2935	24.7659	24.7451	25.4154	21.6647	18.8788	20.4288	20.7448	19.6656
R003	833434.80	822408.45	833960.46	822543.00	20	0	1	18.9294	18.7306	18.6446	18.9785	19.2601	19.2902	19.8130	29.2652	30.7401	26.7667	24.4655	22.8893	20.5154	20.8825	20.7605	22.2935	24.7659	24.7451	25.4154	21.6647	18.8788	20.4288	20.7448	19.6656
R003	833960.46	822543.00	833985.46	822546.76	20	0	1	18.9294	18.7306	18.6446	18.9785	19.2601	19.2902	19.8130	29.2652	30.7401	26.7667	24.4655	22.8893	20.5154	20.8825	20.7605	22.2935	24.7659	24.7451	25.4154	21.6647	18.8788	20.4288	20.7448	19.6656
R004	833118.28	822308.10	833185.93	822315.62	19	0	1	18.8030	18.5743	18.6578	19.0294	19.1897	19.2127	19.6109	26.3979	28.5427	24.5660	22.8658	21.7188	19.7680	20.3236	20.3440	22.1567	25.0579	26.2122	26.9159	22.6567	17.9883	19.4894	20.1720	18.7402
R004	833185.93	822315.62	833425.15	822386.41	19	0	1	18.8030	18.5743	18.6578	19.0294	19.1897	19.2127	19.6109	26.3979	28.5427	24.5660	22.8658	21.7188	19.7680	20.3236	20.3440	22.1567	25.0579	26.2122	26.9159	22.6567	17.9883	19.4894	20.1720	18.7402
R004	833425.10	822386.41	833518.28	822421.55	19	0	1	18.8030	18.5743	18.6578	19.0294	19.1897	19.2127	19.6109	26.3979	28.5427	24.5660	22.8658	21.7188	19.7680	20.3236	20.3440	22.1567	25.0579	26.2122	26.9159	22.6567	17.9883	19.4894	20.1720	18.7402
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	18.7661	18.5227	18.6670	19.0428	19.2290	19.2327	19.6271	26.3951	28.5420	24.5626	22.8651	21.7131	19.7607	20.3139	20.3361	22.1468	25.0498	26.1882	26.9056	22.6462	17.9738	19.4748	20.1567	18.7439
R005	833673.75	822496.58	833833.67	822614.65	19	0	1	18.7661	18.5227	18.6670	19.0428	19.2290	19.2327	19.6271	26.3951	28.5420	24.5626	22.8651	21.7131	19.7607	20.3139	20.3361	22.1468	25.0498	26.1882	26.9056	22.6462	17.9738	19.4748	20.1567	18.7439
R005	833833.67	822614.65	833973.71	822626.09	19	0	1	18.7661	18.5227	18.6670	19.0428	19.2290	19.2327	19.6271	26.3951	28.5420	24.5626	22.8651	21.7131	19.7607	20.3139	20.3361	22.1468	25.0498	26.1882	26.9056	22.6462	17.9738	19.4748	20.1567	18.7439
R005	833973.71	822626.09	834046.15	822636.54	19	0	1	18.7661	18.5227	18.6670	19.0428	19.2290	19.2327	19.6271	26.3951	28.5420	24.5626	22.8651	21.7131	19.7607	20.3139	20.3361	22.1468	25.0498	26.1882	26.9056	22.6462	17.9738	19.4748	20.1567	18.7439
R006+R007	833527.00	822410.61	833627.55	822455.21	14	0	1	32.7245	30.5573	38.2667	19.8712	20.1795	36.8529	33.3409	36.0244	26.4496	35.0536	34.1963	32.9022	36.5333	28.3985	26.9892	27.4977	18.9244	18.6416	15.1025	19.8127	22.5208	35.1231	34.8772	23.5839
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	32.7245	30.5573	38.2667	19.8712	20.1795	36.8529	33.3409	36.0244	26.4496	35.0536	34.1963	32.9022	36.5333	28.3985	26.9892	27.4977	18.9244	18.6416	15.1025	19.8127	22.5208	35.1231	34.8772	23.5839
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	32.7245	30.5573	38.2667	19.8712	20.1795	36.8529	33.3409	36.0244	26.4496	35.0536	34.1963	32.9022	36.5333	28.3985	26.9892	27.4977	18.9244	18.6416	15.1025	19.8127	22.5208	35.1231	34.8772	23.5839
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	32.7245	30.5573	38.2667	19.8712	20.1795	36.8529	33.3409	36.0244	26.4496	35.0536	34.1963	32.9022	36.5333	28.3985	26.9892	27.4977	18.9244	18.6416	15.1025	19.8127	22.5208	35.1231	34.8772	23.5839
R008+R009	833861.17	822398.31	833863.59	822397.15	13	0	1	25.6995	28.6155	27.3248	19.8712	20.1795	26.8558	26.7445	31.8467	21.1114	28.9518	27.7080	27.7528	28.0231	21.2033	22.5982	24.9019	19.4131	18.6489	15.5800	19.2177	22.6958	36.4357	36.6869	22.0893
R008+R009	833693.59	822397.16	833841.85	822460.34	13	0	1	25.6995	28.6155	27.3248	19.8712	20.1795	26.8558	26.7445	31.8467	21.1114	28.9518	27.7080	27.7528	28.0231	21.2033	22.5982	24.9019	19.4131	18.6489	15.5800	19.2177	22.6958	36.4357	36.6869	22.0893
R010+R011	833976.15	822463.30	833896.64	822432.88	12	0	1	34.0112	33.0535	31.0366	29.8984	35.5536	39.5011	35.6809	40.3719	29.9165	37.8144	36.6961	37.7160	38.1206	32.3578	33.1367	36.6975	32.9695	31.2689	29.4918	32.4552	35.8241	46.8760	46.3050	36.4161
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	34.0112	33.0535	31.0366	29.8984	35.5536	39.5011	35.6809	40.3719	29.9165	37.8144	36.6961	37.7160	38.1206	32.3578	33.1367	36.6975	32.9695	31.2689	29.4918	32.4552	35.8241	46.8760	46.3050	36.4161
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	34.0112	33.0535	31.0366	29.8984	35.5536	39.5011	35.6809	40.3719	29.9165	37.8144	36.6961	37.7160	38.1206	32.3578	33.1367	36.6975	32.9695	31.2689	29.4918	32.4552	35.8241	46.8760	46.3050	36.4161
R012+R013	833387.26	822567.47	833423.59	822556.02	10	0	1	72.0207	79.7560	26.0886	29.2012	29.5095	29.5643	73.7733	91.3162	66.9095	77.3891	71.7178	77.2241	76.6998	82.0800	73.4077	77.3167	74.8496	79.8363	82.6227	80.3114	100.7301	114.1262	102.0041	84.2258
R012+R013	833423.89	822556.02	833416.09	822482.07	10	0	1	72.0207	79.7560	26.0886	29.2012	29.5095	29.5643	73.7733	91.3162	66.9095	77.3891	71.7178	77.2241	76.6998	82.0800	73.4077	77.3167	74.8496	79.8363	82.6227	80.3114	100.7301	114.1262	102.0041	84.2258
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	72.0207	79.7560	26.0886	29.2012	29.5095	29.5643	73.7733	91.3162	66.9095	77.3891	71.7178	77.2241	76.6998	82.0800	73.4077	77.3167	74.8496	79.8363	82.6227	80.3114	100.7301	114.1262	102.0041	84.2258
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	72.0207	79.7560	26.0886	29.2012	29.5095	29.5643	73.7733	91.3162	66.9095	77.3891	71.7178	77.2241	76.6998	82.0800	73.4077	77.3167	74.8496	79.8363	82.6227	80.3114	100.7301	114.1262	102.0041	84.2258
R012+R013	833544.64	822390.48	833587.56	822354.80	10	0	1	72.0207	79.7560	26.0886	29.2012	29.5095	29.5643	73.7733	91.3162	66.9095	77.3891	71.7178	77.2241	76.6998	82.0800	73.4077	77.3167	74.8496	79.8363	82.6227	80.3114	100.7301	114.1262	102.0041	84.2258
R014+R018	833488.77	822318.11	833587.56	822354.80	14	0	1	44.7088	45.1854	47.4702	54.5909	53.0756	52.5688	47.6396	65.0808	39.4556	49.2301	50.0859	52.2258	52.3446	48.8169	47.5067	52.4709	49.4191	48.6264	46.0758	49.3008	55.7877	71.6853	71.1558	52.5190
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	44.9420	45.8329	47.4702	43.0501	42.2745	52.5688	45.8180	62.8647	37.9051	47.9875	47.3647	48.2589	48.2762	43.1179	43.4527	46.7823	40.2247	40.2645	37.6906	39.8352	47.7766	61.7539	58.7747	45.2814
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	44.9420	45.8329	47.4702	43.0501	42.2745	52.5688	45.8180	62.8647	37.9051	47.9875	47.3647	48.2589	48.2762	43.1179	43.4527	46.7823	40.2247	40.2645	37.6906	39.8352	47.7766	61.7539	58.7747	45.2814
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	73.7601	73.0898	69.6701	75.4653	80.6667	72.6813	72.8099	84.4120	66.6722	75.8320	71.6894	75.0480	72.3632	72.1393	65.8961	72.5239	72.7100	65.9487	63.6577	66.6643	78.3348	96.8894	83.2030	76.9053
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	73.1390	72.7829	69.0269	76.4328	71.0747	78.6625	74.5060	85.0056	67.2651	76.3315	71.5215	75.0492	72.3578	71.8562	66.4500	73.2844	70.2657	66.9249	65.4583	66.3630	78.2068	93.7358	85.9575	72.1631
R022	833355.00	822293.72	833480.61	822340.13	16	0	1	81.8376	77.5180	81.0587	83.5453	80.9709	83.4223	83.9986	91.4290	75.2717	84.0568	80.3245	82.7699	80.4690	79.5659	73.8395	79.4156	79.5153	73.6797	71.4247	73.0942	82.4091	97.1475	90.1297	79.8704
R022	833480.61	822340.13	833489.65	822316.75	16	0	1	81.8376	77.5180	81.0587	83.5453	80.9709	83.4223	83.9986	91.4290	75.2717	84.0568	80.3245	82.7699	80.4690	79.5659	73.8395	79.4156	79.5153	73.6797	71.4247	73.0942	82.4091	97.1475	90.1297	79.8704
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	78.5891	72.7928	80.1928	79.2387	80.4609	76.2947	78.5313	90.7261	76.0036	84.0537	79.9505	82.0594	80.9526	80.4796	74.2657	79.7720	78.2982	75.7110	75.0742	74.7109	83.2302	97.5418	89.0450	77.6745
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	79.8411	74.8411	76.2981	75.1426	80.4609	79.2562	79.5390	89.3353	75.3522	84.2259	79.9163	81.9043	78.2454	79.9636	73.9548	79.6729	79.0162	75.8032	73.1473	72.6914	83.4166	96.4060	89.4266	77.8355
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	78.7049	78.1000	75.1390	80.4810	84.9794	77.9364	78.1135	88.4605	74.3023	85.2859	81.2889	83.3973	80.0492	79.1735	75.2938	81.2225	77.5677	77.2052	74.4335	73.6183	82.2141	98.6729	88.4732	77.4026
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	82.7322	82.6209	83.9631	86.2001	83.7218	81.4514	85.0380	94.2007	85.9218	91.0161	85.5017	87.1767	82.5475	82.8601	75.8148	81.7421	83.2604	78.5053	73.9432	73.9434	83.1042	94.2042	86.6650	77.2971
R027	833503.01	822278.46	833673.82	822341.72	13	0	1	81.4656	79.7816	80.5591	81.0429	84.4764	84.5820	83.1736	93.6625	84.4363	92.2692	88.4721	89.8494	86.9164	85.7220	82.6928	85.3151	84.3211	81.2201	78.0803	77.5861	84.8754	100.3440	90.0852	79.7958
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	71.9094	70.1044	72.4156	80.0917	76.0426	71.1805	74.1851	82.8017	68.4164	78.1786	74.0273	76.5548	74.3316	73.0736	70.0216	76.2106	73.0314	70.5961	70.0417	69.3082	78.8834	95.6017	87.7360	72.3664
R029	833768.03	822376.15	833848.76	822405.79	13	0	1	69.0038	64.8837	72.3249	54.5909	67.8044	69.5565	69.3093	85.6317	71.0213	77.0112	70.0527	73.4462	69.5106	72.6025	65.5687	72.1786	75.1718	68.5007	65.0400	67.4504	78.4358	89.1807	81.9201	76.8700
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	68.1418	67.5480	69.4942	70.4651	66.7150	69.1013	69.7742	85.5269	69.6350	78.0046	71.1639	75.2116	75.4802	73.4393	68.1687	74.9284	72.7051	70.9006	68.5068	67.5065	77.2753	92.7932	82.7905	72.1144
R031	833917.83	822431.11	833980.58	822464.38	14	0	1	65.0265	72.0912	58.8606	67.2858	67.8044	55.1249	71.3096	85.0329	72.3156	77.4532	71.6608	74.1133	69.6635	72.6417	65.3113	71.5875	73.2471	68.3231	65.4303	66.7437	77.3283	90.0465	81.8798	73.4487
R032+R201	833076.99	822055.71	833121.79	822072.07	18	0	1	73.0002	71.6564	63.5895	63.9823	63.6438	67.2512	65.1192	77.0006	62.6035	70.6963	66.7155	70.0934	67.6952	67.5535	62.4980	68.0328	66.5599	64.8228	63.1027	62.7531	72.5925	84.4496	77.3118	67.4127
R033	833121.79	822072.07	833253.39	822120.94	16	0	1	64.8645	64.7772	65.0885	66.0396	66.8305	66.0513	66.5230	77.5176	61.2996	69.7112	65.6876	68.5445	66.3465	65.9093	62.4905	68.1987	66.5535	64.7261	62.8522	62.6271	70.8069	85.0454	77.9468	66.0068
R034	833253.39	822120.94	833398.77	822175.17	16	0	1	61.7068	61.9437	61.5997	63.6888	63.6273	63.9550	63.8967	75.7624	61.6652	67.6337	63.9569	67.3791	65.1926	64.7072	61.3587	67.3369	65.8090	64.1411	62.0360	61.6264	69.7003	83.6244	76.9346	65.3037
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	68.8224	68.3116	68.2309	68.3565	69.0019	69.0059	69.6051	83.2063	69.3930	76.8494	72.8074	73.9984	72.0240	71.3065	65.7826	73.6453	71.5591	66.5583	64.4251	65.0385	72.9993	87.5714	80.1906	69.2212
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	66.0877	65.4631	65.7318	66.8916	66.8635	67.5455	67.3522	79.9825	67.2523	75.9262	70.1584	73.1323	70.6702	70.3999	65.3508	71.1323	69.4816	67.7428	65.9590	65.6515	73.6437	85.8004	78.8310	69.1361
R037	833653.40	822269.00	833694.86	822284.07	18	0	1	80.8622	80.3374	80.5999	81.8376	81.9119	81.9021	82.4262	96.2584	82.7442	90.9439	82.2556	84.7026	79.9102	80.4001	71.9483	76.9920	74.5091	70.8246	67.9067	67.3715	76.0169	89.7965	81.9774	71.1341
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	81.8420	81.3239	81.8235	82.3791	83.1217	82.9678	83.2300	97.5342	83.5522	92.1198	82.2534	84.1971	78.5531	78.1636	69.1738	73.7021	72.2594	65.9093	61.7255	61.8526	69.6208	83.2155	76.4466	65.6938
R039	833761.98	822311.12	833788.45	822320.76	14	0	1	88.0640	84.7155	85.4270	87.3364	87.9590	87.5481	87.4540	102.7446	95.7089	97.2184	89.3546	91.2083	84.9492	85.6027	74.4898	82.2671	80.1678	70.1341	64.0153	66.8693	74.6574	87.6370	77.2456	72.4255
R040	833785.11	822318.98	833833.16	822335.17	18	0	1	87.0652	87.2504	87.4762	89.1331	88.7683	89.3706	89.4398	102.3940	92.4883	96.5614	88.5073	88.3657	82.5001	82.9869	72.0032	79.8959	78.0667	70.0798	63.8390	65.0568	73.6883	85.3174	76.6768	71.9982
R041	833833.16	822335.17	833902.06	822360.57	16	0	1	88.0723	85.3748	86.6217	87.7709	87.4910	88.5932	88.0416	105.1619	95.4528	99.5909	89.1847	91.0625	84.9617	85.4272	74.4309	82.1466	80.0413	70.2061	64.1517	65.4074	74.6953	88.0295	77.4279	72.5811
R042	833902.96	822360.57	833950.45	822320.45	18	0	1	88.2796	86.3177	86.4631	87.5593	87.7740	88.7141	88.4875	102.7200	92.9589	97.1483	86.8132	88.7004	82.5951	83.3509	72.1849	81.8737	79.6691	69.4505	63.0003	64.4288	73.8554	85.3090	76.5859	71.7135
R043	833950.46	822320.48	834034.90	822250.52	18	0	1	95.4372	95.4444	96.0313	96.6609	98.0112	97.7518	97.7967	108.2402	100.1330	102.8059	94.6054	97.0094	90.3080	92.5890	79.7505	88.9750	87.8990	77.9411	71.3226	72.7182	81.0048	93.8510	83.2999	80.6623
R044	834034.90	822250.53	834140.62	822162.67	18	0	1	87.2734	86.8052	87.3271	89.0839	88.7235	88.9024	89.3390	102.2122	92.4908	96.4549	86.2299	88.3829	82.2655	82.8866	71.9458	79.6598	79.4747	69.4372	63.0008	64.1777	73.2784	84.8255	76.2258	71.2467
R045	834140.67	822162.67	834231.78	822086.45	19	0	1	88.0431	78.9461	79.9745	82.8500	84.2945	83.4478	89.3701	100.0897	90.5525	94.4587	86.9908	88.9433	82.9640	83.8467	73.0439	80.6204	78.8562	69.2030	63.1935	65.9796	73.4641	86.0912	77.7188	72.8424
R046	834231.72	822085.85	834323.21	822011.22	18	0	1	88.7351	86.0339	86.5916	88.2762	87.9479	88.6177	90.7061	103.0425	93.7415	97.6190	87.7086	89.5026	83.4532	83.9830	73.2774	80.5500	80.3326	70.4397	64.2549	65.5087	74.6835	85.6419	77.2070	72.7002
R047	834322.77	822010.68	834384.01	821969.66	18	0	1	88.6706	85.5994	86.5630	87.9433	88.5229	88.2417	90.7391	103.1268	91.5791	95.3404	87.7181	89.6966	83.5347	84.1033	73.3724	80.7474	78.6529	70.5185	64.1788	65.4979	74.7762	85.7654	77.3519	72.6212
R048	833097.20	821955.43	833156.58	821977.95	17	0	1	65.5043	64.2657	64.4617	65.1297	65.5483	65.6950	66.7536	79.8216	74.1621	77.5119	69.0878	71.2479	67.2493	69.8555	61.4425	68.6487	68.2888	63.4252	60.8680	58.7483	67.1994	78.8669	70.2373	64.0422
R049	833156.56	821977.96	833434.10	822080.76	16	0	1	65.5726	65.2595	65.5324	66.1292	66.5496	66.5070	66.8853	78.6157	71.2038	74.5634	66.5812	70.0456	66.1549	67.6072	59.4191	66.4852	66.2245	61.4865	58.1962	57.2975	67.4026	78.9575	70.3957	64.4498
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	69.5297	69.3691	69.6173	70.0894	70.4783	70.7028	70.8891	83.8320	78.0679	82.3753	72.5422	75.1935	70.1385	71.7234	63.6669	69.8114	68.2409	63.6287	59.2558	57.5291	63.9110	74.3494	65.6901	59.9940
R051	833274.06	822006.80	833438.70	822067.62	16	0	1	72.5099	72.3923	72.7280	73.2881	73.6183	73.8154	73.9740	85.8461	78.1970	82.4580	73.1038	76.2003	71.1402	73.9440	64.0003	71.5517	72.4940	65.2782	60.4790	59.3434	67.1621	78.0011	69.0588	65.5467
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	72.4620	70.3073	70.3888	71.5164	71.8289	71.9267	73.4342	82.8910	76.0258	76.1654	69.1395	72.2484	67.6600	70.2902	61.6793	69.8953	69.5220	62.5728	58.9249	58.6832	68.5911	79.8455	71.0978	66.9801
R053	833786.86	822123.44	833736.68	822163.25	16	0	1	74.8760	73.1687	73.4898	74.2244	74.7558	74.8374	75.9684	85.9312	79.7688	81.7090	72.6053	76.0074	70.9153	74.6438	65.3153	73.3769	73.4559	67.5080	63.8785	63.0893	71.6941	82.8310	73.2057	69.0011
R053	833736.06	822163.26	833688.33	822174.73	18	0	1	74.8760	73.1687	73.4898	74.2244	74.7558	74.8374	75.9684	85.9312	79.7688	81.7090	72.6053	76.0074	70.9153	74.6438	65.3153	73.3769	73.4559	67.5080	63.8785	63.0893	71.6941	82.8310	73.2057	69.0011
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	77.1660	76.9051	76.9093	77.8888	78.4571	78.3012	78.5569	88.0756	81.4509	84.4693	76.8953	79.6056	75.8951	79.6501	69.8333	79.0008	81.7036	73.7106	69.5494	68.9711	78.2311	88.9363	77.6781	75.7708
R054	833586.71	822122.03	833649.55	822144.40	15	0	1	77.1660	76.9051	76.9093	77.8888	78.4571	78.3012	78.5569	88.0756	81.4509	84.4693	76.8953	79.6056	75.8951	79.6501	69.8333	79.0008	81.7036	73.7106	69.5494	68.9711	78.2311	88.9363	77.6781	75.7708
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	77.1660	76.9051	76.9093	77.8888	78.4571	78.3012	78.5569	88.0756	81.4509	84.4693	76.8953	79.6056	75.8951	79.6501	69.8333	79.0008	81.7036	73.7106	69.5494	68.9711	78.2311	88.9363	77.6781	75.7708
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	77.1660	76.9051	76.9093	77.8888	78.4571	78.3012	78.5569	88.0756	81.4509	84.4693	76.8953	79.6056	75.8951	79.6501	69.8333	79.0008	81.7036	73.7106	69.5494	68.9711	78.2311	88.9363	77.6781	75.7708
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	77.1660	76.9051	76.9093	77.8888	78.4571	78.3012	78.5569	88.0756	81.4509	84.4693	76.8953	79.6056	75.8951	79.6501	69.8333	79.0008	81.7036	73.7106	69.5494	68.9711	78.2311	88.9363	77.6781	75.7708
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	77.1660	76.9051	76.9093	77.8888	78.4571	78.3012	78.5569	88.0756	81.4509	84.4693	76.8953	79.6056	75.8951	79.6501	69.8333	79.0008	81.7036	73.7106	69.5494	68.9711	78.2311	88.9363	77.6781	75.7708
R055	833786.53	822123.04	833872.14	822061.39	16	0	1	72.8839	72.6555	72.8584	73.4401	74.0436	74.1531	74.2078	83.6620	75.0543	78.4834	71.0085	72.8588	67.9468	70.7772	61.3938	69.0321	68.3308	62.3842	59.2102	58.4050	68.2198	79.4022	70.7878	65.4069
R056	833778.49	822113.30	833867.20	822039.12	16	0	1	82.9878	82.4154	82.9257	83.6280	84.1375	84.5002	84.4669	94.4984	87.4261	86.0762	79.6162	83.4562	77.7311	83.4774	70.9944	82.1752	84.5386	72.7137	66.7522	69.5074	80.5622	90.3756	78.2049	79.5473
R057	833873.30	822052.66	834159.21	821814.78	16	0	1	59.8039	57.1143	57.5760	58.9115	59.0097	59.1903	61.0618	70.6489	64.3291	62.8673	57.6725	59.5132	56.2118	56.1148	49.8068	58.8849	58.8713	51.1138	43.7792	47.3338	53.4093	62.9032	56.5224	55.3965
R058	834159.21	821814.78	834256.10	821736.42	16	0	1	78.0708	75.3909	75.6274	76.9186	77.2448	77.6829	79.5042	89.4589	82.0327	82.4471	74.1465	77.1583	71.4301	75.0338	63.9742	72.0600	71.9758	63.1501	58.9854	60.4884	70.6482	81.5640	72.0424	68.3954
R059	833867.29	822039.22	834058.34	821880.22	17	0	1	66.1838	66.3282	66.2067	66.7559	67.8235	67.4488	67.7154	77.4366	71.7123	68.6331	63.9335	65.8392	61.6836	62.6531	54.6898	65.2574	66.0202	55.2039	47.1377	51.3069	57.9951	66.8687	59.3984	60.3023
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	80.2042	79.5419	81.0358	81.6625	81.9236	82.3045	82.2353	92.3582	84.1949	83.6644	77.4115	81.8168	76.5106	82.3307	69.6396	81.5543	84.2087	72.6035	66.6353	68.8043	80.3383	90.8823	77.6346	79.4479
R061	833115.37	821880.28	833139.76	821889.31	16	0	1	102.0156	99.1815	100.9412	98.9232	93.9393	103.4120	102.6636	104.3171	99.4102	102.2951	100.4434	100.5984	98.5222	98.3359	96.3764	99.0353	99.2161	97.8699	98.3904	98.8826	101.2290	105.1847	103.9761	99.0343
R062	833139.76	821889.31	833296.76	821947.76	16	0	1	71.6697	70.0451	71.8237	70.9163	75.3921	74.0659	72.8656	83.3317	70.4905	77.7504	74.4690	77.4826	75.4188	74.5950	69.1746	75.5818	73.7933	70.6500	68.0415	68.3925	76.8709	91.6052	83.6739	74.8472
R063	833296.66	821947.56	833460.51	822007.97	16	0	1	73.4841	66.6762	75.1375	74.3155	74.9968	70.5031	73.0922	85.5556	67.8499	76.3492	72.3015	75.0996	72.7841	72.5539	67.1905	72.8321	72.0793	67.5707	66.9707	66.8517	77.0885	92.4859	85.5090	74.3356
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	71.1297	63.6346	70.5713	73.1734	69.4568	69.0975	70.7471	84.1475	65.9752	74.8211	70.4225	74.5857	71.7272	71.1561	65.4886	72.2474	70.4809	65.7203	64.1114	66.3162	76.9215	92.5325	84.8556	75.2465
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	71.1297	63.6346	70.5713	73.1734	69.4568	69.0975	70.7471	84.1475	65.9752	74.8211	70.4225	74.5857	71.7272	71.1561	65.4886	72.2474	70.4809	65.7203	64.1114	66.3162	76.9215	92.5325	84.8556	75.2465
R064	833480.98	821952.82	833563.70	821983.31	15	0	1	71.1297	63.6346	70.5713	73.1734	69.4568	69.0975	70.7471	84.1475	65.9752	74.8211	70.4225	74.5857	71.7272	71.1561	65.4886	72.2474	70.4809	65.7203	64.1114	66.3162	76.9215	92.5325	84.8556	75.2465
R065	833160.17	821834.07	833315.56	821891.67	16	0	1	76.5826	72.7512	74.7829	75.8664	73.6302	72.3954	78.2043	86.3432	71.2768	79.6041	75.7097	78.8990	76.4861	74.9563	69.8353	74.7547	74.3207	69.7769	65.8708	67.5936	76.6288	91.2001	84.6487	74.9671
R066	833315.06	821891.68	833481.00	821962.76	16	0	1	74.4021	73.3512	73.2059	76.6726	74.8877	71.6416	76.0103	86.5755	69.7724	78.3237	74.3029	77.3620	74.4276	73.0560	69.6108	75.4201	71.5333	69.0934	66.1787	67.5675	76.0020	91.5058	83.7498	72.8715
R067	833104.01	821775.07	833178.47	821783.88	16	0	1	46.5719	46.3835	46.2956	46.7042	46.9197	47.1832	47.6099	65.8323	53.1890	62.1374	57.1737	60.4734	57.1643	58.8200	52.3836	55.8537	53.9996	52.1322	52.3285	51.5926	52.4842	61.0039	54.4745	44.8072
R068	833178.74	821783.15	833253.68	821813.88	16	0	1	46.2020	46.1855	46.1364	46.6079	46.7961	47.0525	47.2910	62.9439	52.9832	61.9921	56.9806	59.4858	57.0297	58.6849	52.2422	55.7224	53.9001	52.0392	52.2464	48.6801	51.2297	60.9708	54.4487	44.7429
R069	833166.60	821757.87	833250.16	821795.91	29	0	1	38.8784	38.9706	38.9550	39.2494	39.5182	39.6585	39.9177	48.5624	39.9437	47.0046	41.2478	43.4828	42.4434	43.2709	40.9966	44.3114	43.4185	47.7958	49.2905	41.8625	47.5035	58.5780	52.6791	41.5223
R070	833249.00	821820.73	833329.89	821852.87	13	0	1	62.3381	61.9840	62.2219	62.6641	63.2215	63.3274	63.5220	73.9227	61.6547	70.7382	63.5348	66.5568	63.1750	64.4727	58.3380	61.6840	60.8553	59.7703	58.8930	56.3696	64.5414	76.7408	69.8449	59.6411

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NOx x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	833327.91	821859.29	833397.24	821875.22	18	0	1	61.3053	61.3413	61.6621	62.2739	62.4322	62.7878	62.8080	71.2510	58.6617	67.5364	61.7123	63.7131	60.4113	61.6989	56.5076	59.9744	58.1014	56.8578	56.8283	54.5330	63.6216	75.7075	69.1002	58.8526
R072	833397.24	821875.22	833501.75	821897.07	20	0	1	54.7581	54.4769	54.6189	55.4390	56.2774	55.4918	55.6780	64.7054	50.6494	57.1341	52.7189	55.2342	52.4986	52.2353	47.1119	51.8106	50.0129	46.8472	44.6772	45.4980	53.9461	65.8333	60.1927	51.1328
R073	833451.80	821860.54	833397.24	821875.22	17	0	1	57.7251	57.3016	57.8664	58.6080	58.9343	58.5291	58.9079	66.7844	52.5693	61.0856	56.7017	59.2162	56.8014	56.9010	52.7708	55.7347	53.8372	52.5418	52.5421	52.3717	60.2742	71.2901	66.0832	57.2076
R074	833281.64	821790.34	833451.80	821860.54	20	0	1	58.0756	57.7627	58.2829	58.3420	59.0756	59.0491	59.3160	67.0428	52.7793	60.5263	56.7533	59.0624	56.3073	56.4071	51.6564	54.6533	52.4493	51.5743	50.7218	50.2576	59.4456	71.5403	65.8544	55.1802
R075	833445.48	821861.09	833506.97	821883.08	16	0	1	54.0961	54.0800	53.9044	54.9908	54.9602	55.5850	55.4935	63.4986	48.8232	56.5545	52.9328	55.3159	52.9181	52.4253	48.2003	51.5588	49.2209	47.8137	47.3875	47.2677	55.9264	68.1990	62.9886	51.7769
R076	833501.46	821897.80	833548.66	821899.77	16	0	1	56.6972	57.3196	56.8111	58.0783	58.1647	57.9035	58.1606	67.2710	53.3077	59.4649	55.2337	58.2689	55.4605	56.6991	50.9593	55.6694	54.1563	51.6085	51.2388	50.9792	61.3984	73.9605	67.1369	56.3992
R076	833548.66	821899.77	833603.43	821886.99	16	0	1	56.6972	57.3196	56.8111	58.0783	58.1647	57.9035	58.1606	67.2710	53.3077	59.4649	55.2337	58.2689	55.4605	56.6991	50.9593	55.6694	54.1563	51.6085	51.2388	50.9792	61.3984	73.9605	67.1369	56.3992
R076	833603.43	821886.99	833684.92	821822.32	16	0	1	56.6972	57.3196	56.8111	58.0783	58.1647	57.9035	58.1606	67.2710	53.3077	59.4649	55.2337	58.2689	55.4605	56.6991	50.9593	55.6694	54.1563	51.6085	51.2388	50.9792	61.3984	73.9605	67.1369	56.3992
R077	833506.57	821884.14	833553.57	821884.36	17	0	1	54.7042	54.7844	54.9460	55.4641	56.0611	55.8704	56.1246	64.3362	50.3273	58.2138	53.8301	56.5715	54.1654	54.6624	50.1455	53.6241	51.7127	51.3842	50.9477	50.3684	60.0767	72.5963	66.3957	55.2390
R077	833553.57	821884.36	833600.48	821871.28	17	0	1	54.7042	54.7844	54.9460	55.4641	56.0611	55.8704	56.1246	64.3362	50.3273	58.2138	53.8301	56.5715	54.1654	54.6624	50.1455	53.6241	51.7127	51.3842	50.9477	50.3684	60.0767	72.5963	66.3957	55.2390
R077	833600.48	821871.28	833673.84	821812.09	17	0	1	54.7042	54.7844	54.9460	55.4641	56.0611	55.8704	56.1246	64.3362	50.3273	58.2138	53.8301	56.5715	54.1654	54.6624	50.1455	53.6241	51.7127	51.3842	50.9477	50.3684	60.0767	72.5963	66.3957	55.2390
R078	833682.38	821822.35	833875.32	821680.75	16	0	1	61.5618	60.9794	61.4387	62.1959	62.3772	62.9167	62.9556	71.8472	59.0191	64.4096	59.8201	62.6944	59.2903	60.5000	54.3254	58.7982	57.4058	54.2081	53.7033	53.5518	63.0236	75.1722	68.4339	59.0625
R079	833673.29	821811.43	833867.51	821651.46	16	0	1	52.4050	52.8532	52.6448	53.4397	53.6670	53.4739	53.8778	61.6478	46.4425	54.9379	52.0121	54.8865	53.0232	53.4024	49.6336	52.5401	50.6011	50.5757	51.9539	50.9278	60.8983	73.5022	67.5127	55.2332
R080	833875.67	821661.18	833989.54	821587.94	16	0	1	61.0591	61.0853	61.3273	62.0732	62.2164	61.7538	62.3008	70.8768	55.0102	63.8470	59.0098	62.2585	58.8503	60.4774	53.8781	57.5719	55.5878	53.3687	53.5531	52.6730	63.4177	76.2270	69.0425	58.1243
R081	833867.01	821650.88	833983.09	821582.98	20	0	1	54.7327	55.0735	55.0147	55.6411	55.8845	55.7670	56.3547	63.5967	49.2988	57.3601	54.5903	57.2175	55.1403	55.4327	51.8048	54.5517	52.5790	52.3721	53.8253	52.7983	62.2871	74.4002	68.8443	57.1457
R082	833458.18	821864.41	833510.75	821821.12	14	0	1	78.8993	79.1876	78.7213	79.5899	80.2314	79.8340	80.6080	90.9568	77.0574	88.5036	81.4006	84.2352	80.5902	81.4704	75.2699	78.2495	75.9377	73.9789	74.0418	73.8541	82.4374	95.4974	88.4000	75.8768
R082	833510.75	821821.12	833536.39	821785.93	14	0	1	78.8993	79.1876	78.7213	79.5899	80.2314	79.8340	80.6080	90.9568	77.0574	88.5036	81.4006	84.2352	80.5902	81.4704	75.2699	78.2495	75.9377	73.9789	74.0418	73.8541	82.4374	95.4974	88.4000	75.8768
R082	833536.39	821785.93	833670.13	821687.58	14	0	1	78.8993	79.1876	78.7213	79.5899	80.2314	79.8340	80.6080	90.9568	77.0574	88.5036	81.4006	84.2352	80.5902	81.4704	75.2699	78.2495	75.9377	73.9789	74.0418	73.8541	82.4374	95.4974	88.4000	75.8768
R083	833436.83	821855.11	833496.18	821813.12	14	0	1	42.9580	43.2695	43.3585	44.4235	45.3273	45.0446	44.6660	47.4678	41.9161	47.0544	44.9459	44.9339	44.8712	41.5538	41.9039	43.6794	41.7176	41.0808	40.2693	42.2424	45.0140	53.4837	52.3903	44.4456
R083	833496.18	821813.12	833524.36	821772.29	14	0	1	42.9580	43.2695	43.3585	44.4235	45.3273	45.0446	44.6660	47.4678	41.9161	47.0544	44.9459	44.9339	44.8712	41.5538	41.9039	43.6794	41.7176	41.0808	40.2693	42.2424	45.0140	53.4837	52.3903	44.4456
R083	833524.36	821772.29	833559.81	821652.62	14	0	1	42.9580	43.2695	43.3585	44.4235	45.3273	45.0446	44.6660	47.4678	41.9161	47.0544	44.9459	44.9339	44.8712	41.5538	41.9039	43.6794	41.7176	41.0808	40.2693	42.2424	45.0140	53.4837	52.3903	44.4456
R084	833567.54	821687.02	833582.69	821644.65	13	0	1	79.7745	79.2315	79.2901	80.5469	80.8505	80.6263	81.1727	91.4620	77.0344	86.9743	82.3447	85.7333	82.4874	84.3012	78.3208	80.6981	78.8216	80.6312	81.0681	79.7547	89.1186	102.3483	95.1632	80.5091
R084	833582.69	821644.68	833607.71	821603.87	13	0	1	79.7745	79.2315	79.2901	80.5469	80.8505	80.6263	81.1727	91.4620	77.0344	86.9743	82.3447	85.7333	82.4874	84.3012	78.3208	80.6981	78.8216	80.6312	81.0681	79.7547	89.1186	102.3483	95.1632	80.5091
R085	833609.34	821605.84	833640.24	821575.52	14	0	1	81.9435	82.0965	82.0811	83.0243	83.3394	83.7000	84.2461	93.1891	80.8276	89.3130	85.1544	88.1182	84.7979	86.2057	80.6729	82.7269	80.8428	80.5705	82.6741	79.5500	90.0322	102.7547	93.7503	82.2099
R085	833640.24	821575.52	833681.67	821545.20	14	0	1	81.9435	82.0965	82.0811	83.0243	83.3394	83.7000	84.2461	93.1891	80.8276	89.3130	85.1544	88.1182	84.7979	86.2057	80.6729	82.7269	80.8428	80.5705	82.6741	79.5500	90.0322	102.7547	93.7503	82.2099
R085	833681.67	821545.20	833720.62	821512.85	14	0	1	81.9435	82.0965	82.0811	83.0243	83.3394	83.7000	84.2461	93.1891	80.8276	89.3130	85.1544	88.1182	84.7979	86.2057	80.6729	82.7269	80.8428	80.5705	82.6741	79.5500	90.0322	102.7547	93.7503	82.2099
R086	833550.70	821649.89	833603.88	821583.58	17	0	1	80.5643	79.9209	80.8223	80.2658	81.6075	81.8530	82.0508	89.4191	74.5923	85.4216	78.8031	81.6365	77.9098	79.0886	73.1998	75.0087	72.4314	71.8951	73.1333	71.9049	81.8047	94.7236	88.8321	75.6177
R086	833603.88	821583.58	833646.83	821546.45	17	0	1	80.5643	79.9209	80.8223	80.2658	81.6075	81.8530	82.0508	89.4191	74.5923	85.4216	78.8031	81.6365	77.9098	79.0886	73.1998	75.0087	72.4314	71.8951	73.1333	71.9049	81.8047	94.7236	88.8321	75.6177
R087	833648.49	821548.43	833695.49	821508.30	13	0	1	97.3796	97.0363	97.5067	97.5903	98.0930	98.1178	98.7580	101.6031	97.4247	100.6212	99.1030	99.0498	96.5962	96.7333	94.9339	95.8351	95.3678	95.6568	96.6025	95.0805	98.0471	101.7168	99.5410	96.1700
R088	833254.24	821811.68	833365.50	821856.64	17	4	4	18.5149	18.2857	18.3042	18.5693	18.7094	18.9292	19.4063	26.8820	28.3649	27.4287	26.1883	24.8667	22.1835	19.0702	21.1381	18.3488	19.8512	19.8659	17.6822	15.0263	16.2013	18.3015	18.6655	15.5964
R088	833365.50	821856.64	833416.50	821865.51	17	7	4	18.5149	18.2857	18.3042	18.5693	18.7094	18.9292	19.4063	26.8820	28.3649	27.4287	26.1883	24.8667	22.1835	19.0702	21.1381	18.3488	19.8512	19.8659	17.6822	15.0263	16.2013	18.3015	18.6655	15.5964
R088	833416.50	821865.51	833487.63	821841.09	17	9	4	18.5149	18.2857	18.3042	18.5693	18.7094	18.9292	19.4063	26.8820	28.3649	27.4287	26.1883	24.8667	22.1835	19.0702	21.1381	18.3488	19.8512	19.8659	17.6822	15.0263	16.2013	18.3015	18.6655	15.5964
R088	833487.63	821841.09	833533.63	821786.07	17	10	4	18.5149	18.2857	18.3042	18.5693	18.7094	18.9292	19.4063	26.8820	28.3649	27.4287	26.1883	24.8667	22.1835	19.0702	21.1381	18.3488	19.8512	19.8659	17.6822	15.0263	16.2013	18.3015	18.6655	15.5964
R088	833533.63	821786.07	833574.80	821657.75	17	9	4	18.5149	18.2857	18.3042	18.5693	18.7094	18.9292	19.4063	26.8820	28.3649	27.4287	26.1883	24.8667	22.1835	19.0702	21.1381	18.3488	19.8512	19.8659	17.6822	15.0263	16.2013	18.3015	18.6655	15.5964
R088	833574.80	821657.75	833600.16	821605.82	17	7	4	18.5149	18.2857	18.3042	18.5693	18.7094	18.9292	19.4063	26.8820	28.3649	27.4287	26.1883	24.8667	22.1835	19.0702	21.1381	18.3488	19.8512	19.8659	17.6822	15.0263	16.2013	18.3015	18.6655	15.5964
R088	833600.16	821605.82	833712.08	821511.11	17	6	4	18.5149	18.2857	18.3042	18.5693	18.7094	18.9292	19.4063	26.8820	28.3649	27.4287	26.1883	24.8667	22.1835	19.0702	21.1381	18.3488	19.8512	19.8659	17.6822	15.0263	16.2013	18.3015	18.6655	15.5964
R089	833256.66	821891.44	833370.08	821846.87	16	4	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R089	833370.08	821846.87	833427.36	821852.03	16	7	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R089	833427.36	821852.03	833480.60	821829.25	16	9	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R089	833480.60	821829.25	833522.46	821786.30	16	10	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R089	833522.46	821786.30	833543.19	821725.47	16	9	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R089	833543.19	821725.47	833562.07	821653.37	16	8	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R089	833562.07	821653.37	833598.99	821594.44	16	8	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R089	833598.99	821594.44	833699.93	821506.87	16	6	4	18.2959	18.0801	18.1222	18.4833	18.7378	18.7495	19.0630	21.9131	22.1955	20.9767	20.9339	20.4412	18.9590	16.7345	18.6669	16.1071	17.8606	19.0974	17.6218	14.2443	15.8550	18.1063	18.1376	15.4385
R090+R091	833260.76	821829.64	833337.84	821634.13	17	0	1	59.0894	58.8514	58.6611	59.6018	60.6063	59.9533	60.6975	74.8361	58.1873	69.2151	63.1397	65.3817	64.5235	60.9633	58.1635	64.3817	61.5190	60.7576	57.4070	58.2156	65.5576	81.7112	73.7368	60.8764
R092+R093	833337.92	821632.93	833449.86	821640.31	20	0	1	57.9353	57.3811	59.7361	61.1272	60.7907	57.9588	60.0968	72.8940	55.6265	65.9644	62.4817	64.7879	63.5709	60.7165	57.3988	63.5692	61.2470	59.0718	56.0202	56.9263	65.1396	80.1024	73.8275	61.8985
R092+R093	833449.86	821640.31	833513.09	821599.24	20	0	1	57.9353	57.3811	59.7361	61.1272	60.7907	57.9588	60.0968	72.8940	55.6265	65.9644	62.4817	64.7879	63.5709	60.7165	57.3988	63.5692	61.2470	59.0718	56.0202	56.9263	65.1396	80.1024	73.8275	61.8985
R094	833337.84	821634.13	833341.51	821576.41	16	0	1	48.7088	48.2738	48.4136	49.8503	50.3985	50.5062	49.5880	54.0441	43.2651	50.5612	47.3413	45.7472	44.1229	37.3672	36.2237	36.8623	32.6165	29.6449	25.5323	28.5257	32.3897	43.8976	43.3121	31.9958
R095	833609.59	821591.72	833648.49	821548.43	17	0	1	105.0757	104.1574	105.0831	105.9853	106.5476	106.9327	107.8075	112.7696	107.3723	109.8573	108.5049	106.7553	106.3610	106.2109	104.4256	106.2700	106.1622	105.7055	106.7859	104.5432	108.1284	112.9862	110.6996	106.4076
R096+R097	833960.59	822454.38	834028.77	822414.27	18	0	1	71.1293	81.5931	69.9059	50.9638	51.3923	77.1257	70.3738	86.2027	74.9726	83.0629	77.6446	78.5052	75.4452	75.9463	69.5969	76.0149	71.2648	68.1620	64.2449	64.6214	73.4164	90.5797	84.0379	73.2867
R098+R099	834028.77	822414.27	834127.62	822332.11	18	0	1	95.3048	94.5993	97.4676	101.0857	98.6302	91.8235	94.4369	104.2783	104.5163	111.9771	102.8669	101.0613	94.3252	93.5363	85.9849	90.6728	80.0350	75.4960	72.6007	73.7385	82.1281	95.1595	85.8900	77.2680
R100+R101	834127.62	822332.11	834218.31	822256.35	16	0	1	83.0300	82.4341	90.3824	84.5918	89.6630	83.8271	92.6804	99.5106	90.1825	103.1429	94.0743	92.1802	91.4873	86.2198	80.5441	88.5541	79.0634	75.3008	70.8143	71.6015	79.4625	96.9352	87.3450	78.1361
R102+R103	834218.31	822256.36	834309.95	822180.58	16	0	1	82.6003	88.2453	81.1750	82.8826	83.5091	88.3921	84.6362	101.6488	84.8402	94.0594	84.3878	87.7599	80.2961	79.6220	70.2821	78.2278	73.2797	65.9020	61.4394	64.0903	76.1620	91.8798	82.8042	73.9081
R104+R105	834309.95	822180.68	834407.46	822098.55	18	0	1	76.7071	84.3300	79.1621	75.4653	76.0426	83.5113	76.8972	95.7521	81.4588	88.0059	82.0000	85.1109	78.6071	76.7197	69.0092	76.2560	71.0691	66.8330	62.2830	65.1061	75.9433	91.0334	83.5850	73.9692
R106	833917.63	822431.11	833991.76	822369.39	18	0	1	65.8815	65.9478	68.5981	68.0978	70.4207	65.5898	67.1342	79.6580	63.6181	74.1031	70.0540	73.1909	71.2211	70.7731	65.8981	73.0024	69.6897	67.9667	64.9261	66.5515	75.0985	91.8697	81.6805	70.2915
R107	833991.55	822370.04	834090.39	822287.63	18	0	1	68.4509	64.2205	69.0269	76.4328	71.0747	66.8017	70.0741	78.1794	60.9247	69.7947	66.0359	69.8279	68.1350	66.8167	61.9084	68.6905	67.7421	64.6699	61.0294	62.3623	72.3055	89.0835	82.7279	73.3348
R108	834090.84	822288.08	834181.98	822212.22	18	0	1	67.7962	64.6846	68.4085	74.3202	72.3217	71.3759	69.5730	78.1818	61.7198	70.6469	67.6881	69.8378	68.4261	67.7303	63.1945	69.7899	69.4573	65.3711	62.4806	63.6550	74.3158	89.8515	81.1365	70.4162
R109	834181.98	822212.22	834273.05	822136.48	17	0	1	66.6820	63.4029	67.3306	73.4472	71.2904	70.3168	68.4401	77.3569	60.3594	69.5714	66.6398	69.0930	67.1501	66.7590	62.2483	68.4622	67.9824	63.7576	61.0529	61.6851	71.9496	88.3338	82.5331	70.9747
R110	834273.54	822136.83	834364.38	822060.84	17	0	1	65.6484	65.3184	64.3606	70.0389	68.6669	66.1136	68.9816	78.2279	59.8578	69.5648	65.9496	68.8006	67.2580	66.0600	61.7548	68.1553	66.5249	62.6904	61.0667	62.5050	71.7076	86.6171	81.1950	70.1321
R111	834363.46	822059.86	834400.74	822028.83	18	0	1	66.4888	66.9823	63.8528	68.1505	66.5577	65.7085	68.2479	77.6315	62.1858	71.8303	66.4967	69.6254	67.3379	66.0015	61.9407	67.5870	67.1808	63.0654	59.9844	62.4535	72.1665	88.4643	80.6530	67.0197
R112	833849.76	822405.79	833902.96	822360.57	19	0	1	98.3460	99.6543	104.5999	100.5144	102.0552	101.9621	102.1303	113.2552	104.2725	109.1581	100.4567	101.4765	98.0347	97.9413	84.7500	92.9609	85.0067	77.7652	74.4159	75.7720	84.6364	98.5047	88.1275	81.9760
R113	833833.16	822335.17	833909.65	822271.35	18	0	1	61.3476	60.9600	62.7100	59.5478	56.3683	65.4155	61.0422	70.0574	55.2703	64.3715	60.2446	63.8041	61.1678	59.2842	56.4407	61.4653	60.6379	57.0533	54.6877	55.1883	66.1875	79.9389	73.7757	63.2932
R114	833909.65	822271.35	833994.47	822201.23	18	0	1	68.3808	65.9770	66.8974	68.1143	67.9976	67.9129	69.5671	79.7189	69.4207	79.9229	74.9390	75.5812	73.2586	71.8517	69.6696	73.0971	72.1147	68.8290	65.9888	65.7831	72.7878	86.0250	78.0184	68.9356
R115	833994.06	822200.75	834077.01	822132.08	16	0	1	83.9325	83.4674	84.1148	84.8078	83.6885	84.9397	85.5092	94.3756	83.6189	91.6347	83.7662	85.9463	81.2471	81.7747	73.5522	79.4800	77.1893	70.5147	66.8765	68.6631	76.1343	88.9103	80.7232	74.8034
R116	834076.90	822131.94	834097.30	822115.02	18	0	1	65.0318	64.8754	67.0116	68.1736	67.8149	67.7458	67.0342	75.5137	61.6520	71.3896	66.7623	69.3174	67.2436	66.3493	62.3895	67.6750	68.0247	63.4565	60.8706	62.3134	69.4094	81.9857	75.9409	66.9725
R117	834097.30	822115.02	834190.59	822037.73	18	0	1	65.3388	66.6988	65.9814	68.0246	68.4621	67.4767	67.5708	75.5862	62.2308	70.2729	67.3715	69.7872	67.5839	66.7146	62.8930	67.7535	68.5392	63.9299	61.2915	62.7023	69.5852	82.2273	76.3785	67.8737
R118	834190.59	822037.73	834243.25	821993.98	19	0	1	67.2160	66.8821	66.5997	68.5942	69.0447	68.0968	67.9899	76.1218	62.9631	70.8030	68.0664	70.1425	67.9823	67.1040	63.3864	68.2621	68.9985	64.3872	63.2183	63.0309	71.5978	82.5202	76.7847	67.6701
R119	834242.94	821993.86	834282.16	821961.45	19	0	1	65.3260	64.6761	65.9721	66.2587	65.5494	66.5088	66.9306	75.2437	63.2466	71.1895	68.3494	69.2776	67.3102	66.4271	64.1429	67.8817	68.8208	64.1489	63.2183	63.0309	71.5978	82.5202	76.7847	67.6701
R120	834281.93	821961.17	834309.17	821938.80	18	0	1	66.4993	66.6194	66.8624	67.0494	66.5010	68.5597	67.6016	77.6997	64.1539	72.2510	69.3384	71.7132	69.6425	68.5401	64.8302	69.9822	69.1351	65.9960	63.4558	63.2298	71.6535	82.3960	76.4063	68.2097
R121	833768.03	822376.18	833709.11	822318.98	18	0	1	81.3432	74.9693	85.4382	79.9807	80.5693	80.6854	78.8760	91.0885	69.4872	83.5771	79.4396	84.6142	84.3050	87.3047	83.4475	86.8646	86.7406	89.9747	93.8594	90.7796	105.7424	123.3070	112.2831	94.3123
R122	833761.98	822311.12	833868.78	822222.16	18	0	1	82.7030	83.6855	83.5356	85.5168	87.1765	85.1749	83.8840	95.8220	78.6013	96.0013	85.5448	87.0553	81.8638	79.8231	74.6791	75.5404	65.2802	66.4095	67.7027	66.4039	73.4382	88.3620	83.0543	66.2903
R123	833868.78	822222.16	833954.75	822150.69	18	0	1	49.7009	49.3978	49.1960	49.5130	47.5306	53.1625	51.9688	62.7292	43.4833	55.1096	52.5870	54.9645	55.1382	51.4315	50.5830	55.0617	51.7639	53.3721	53.5363	52.9540	60.5499	77.1797	72.9625	54.9453
R124	833673.82	822341.72	833694.88	822284.07	18	0	1	88.2453	86.1792	86.4067	90.5900	87.8702	90.4475	88.4600	96.5233	83.3847	95.3918	89.8191	93.1896	91.6847	94.3732	89.1625	92.1589	94.7199	93.7697	96.3550	92.3255	105.9632	119.5656	112.4971	94.7871
R125	833694.86	822284.07	833827.77	822172.99	19	0	1	87.0906	87.5230	85.1203	88.3535	91.2044	86.0623	88.5887	99.0147	78.5437	93.6289	83.9759	84.4360	77.7636	75.1152	66.6336	66.4251	53.4083	53.7404	52.0999	52.5161	60.7332	74.9260	72.1670	56.6975
R126	833653.46	822269.00	833668.33	822174.73	13	0	1	73.6994	73.3935	71.7076	78.6679	76.4319	74.4924	76.0042	85.3101	70.4344	80.0046	75.4296	78.7140	75.7980	75.1370	71.5023	78.0511	74.5149	72.1998	71.8382	71.2822	79.8651	96.6527	87.7651	74.7735
R127	833409.65	822315.75	833503.51	822278.46	16	0	1	72.4328	75.9286	73.2264	73.0581	70.7606	73.2222	75.1996	83.9093	66.6546	77.8789	75.3635	78.7887	77.0260	76.3491	75.4613	79.1850	78.2776	79.3954	80.5534	79.4399	88.9633	104.6416	95.2289	80.1115
R128	833503.61	822278.46	833524.35	822221.21	16	0	1	69.8264	69.2549	72.0678	72.6025	70.7559	70.0516	70.4192	79.6970	60.9032	72.3192	69.5490	73.1847	71.8868	71.6823	70.4065	74.1248	73.1509	74.6893	75.9132	75.1497	84.2292	100.2298	93.7586	77.6553
R129	833377.80	822232.03	833308.00	822293.72	16	0	1	58.8202	58.5602	58.1926	59.8650	59.5190	60.1416	60.4037	70.7614	53.0244	64.3212	61.7057	64.0553	64.5095	63.0024	61.6073	65.1797	63.1979	64.5034	66.9173	64.3364	75.6943	89.1143	82.5086	67.5238
R130	833377.80	822232.03	833398.77	822175.17	18	0	1	57.7479	57.5771	57.4807	58.1049	59.0131	58.6108	59.0279	69.7203	51.7816	63.3122	60.7202	63.0033	61.9063	62.0208	58.9937	64.1534	61.9702	63.4847	65.9644	63.3063	75.1869	88.6061	81.8290	66.3573
R131	833398.42	822175.04	833434.15	822080.76	16	0	1	60.1832	60.0455	60.4061	60.7927	61.6987	61.2962	61.6186	72.8075	57.0692	66.5852	60.9200	64.3418	62.6576	62.6208	57.9558	63.3085	62.4010	60.7279	60.9161	60.6007	70.0216	83.7859	76.8422	65.2970
R132	833433.92	822080.70	833460.51	822007.97	18	0	1	45.6137	45.4029	45.9456	46.5345	46.6870	46.8689	46.4432	50.4637	45.6097	51.3052	48.7342	48.0547	47.5224	42.6026	41.5797	42.8714	40.0017	38.2592	36.2580	37.9831	39.4010	48.5296	46.7844	38.3534
R133	833460.45	822007.98	833481.00	821952.76	19	0	1	74.6062	75.9407	77.3021	78.8946	78.9699	76.8855	75.3796	85.2561	73.3893	82.4091	75.4299	77.7264	73.1390	72.3208	64.9934	68.4206	61.5256	60.4307	59.0880	59.4417	67.8988	80.9477	72.9323	61.9030
R134	833481.00	821952.76	833505.97	821883.05	16	0	1	60.2002	61.6954	63.8874	66.0200	65.0220	62.9192	60.7130	71.1243	56.7965	65.0852	61.1873	63.3652	61.4523	59.4843	55.9664	60.4500	58.6729	57.5085	55.3425	55.1142	61.5209	75.8019	70.2992	58.0585
R135	833209.07	822239.78	833232.08	822178.07	16	0	1	66.5848	78.6899	89.0268	77.8862	74.8891	88.0929	77.7976	78.2144	57.4180	71.5185	67.7667	69.9248	70.4542	69.4846	67.2299	71.0661	67.5212	67.9973	68.2544	69.6097	81.1117	96.1258	92.6209	78.1060
R136	833232.03	822178.06	833253.39	822120.94	16	0	1	53.6738	66.2283	79.1102	29.2012	29.5095	80.6854	73.6031	75.0796	55.5081	69.7693	63.9487	66.8898	67.7117	66.5733	64.3115	68.2737	64.8623	66.4510	67.1470	67.6593	76.8333	94.6649	90.8840	75.3342
R137	833080.91	822182.83	833100.53	822129.44	18	0	1	58.7356	58.6299	69.5743	27.1911	27.4606	70.9215	56.6168	67.7681	46.3654	58.9030	54.7341	58.4136	59.6562	58.7751	54.7137	59.1978	60.3361	58.4506	60.3041	60.6293	70.1802	87.1741	83.3735	66.3369
R138	833100.53	822129.44	833121.79	822072.07	18	0	1	58.7356	58.6299	69.5743	27.1911	27.4606	70.9215	56.6168	67.7681	46.3654	58.9030	54.7341	58.4136	59.6562	58.7751	54.7137	59.1978	60.3361	58.4506	60.3041	60.6293	70.1802	87.1741	83.3735	66.3369
R139	833121.68	822072.03	833156.56	821977.96	18	0	1	55.1320	54.5329	56.0480	54.1550	56.3715	56.8186	56.8909	66.1829	47.0546	58.2417	55.3659	59.2681	58.3959	58.4004	55.5645	59.2970	59.0282	59.6815	62.6093	60.0635	71.9558	87.7038	80.9888	64.5401
R140	833274.46	822007.07	833296.88	821947.56	17	0	1	86.8823	85.6707	85.7048	86.6335	86.7770	89.2901	88.4642	98.0328	78.6162	90.5793	82.8052	83.4832	77.7719	74.9647	67.2300	68.2487	58.4404	58.6440	57.3132	56.6873	65.3991	80.8204	76.2462	62.0264

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NOx x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.36	821847.25	833315.58	821891.87	13	0	1	82.6626	81.1415	74.0478	72.7265	86.9518	87.8549	84.1696	97.1922	76.2556	89.0541	80.2708	81.2137	75.3273	72.1663	64.6414	65.6524	54.6166	54.4054	53.4735	54.1526	63.8551	80.2419	74.9282	58.7887
R142	833329.89	821853.87	833315.98	821891.84	13	0	1	53.8940	49.4938	52.1567	51.3469	49.0231	53.9436	55.5359	59.1779	48.6219	56.4327	55.2900	55.5435	54.9342	50.2815	49.5873	52.3692	48.1369	45.8167	44.2195	47.3365	52.0282	65.3913	62.4423	51.4504
R143	833139.78	821889.31	833160.17	821834.07	13	0	1	88.0443	87.7233	87.1003	87.8421	88.1659	91.0508	89.3120	98.4529	85.9002	96.8312	89.6318	89.9272	82.0940	79.6391	74.1271	72.9335	64.6102	62.4663	60.9186	61.4886	68.1766	82.8684	78.4456	64.6214
R144	833160.17	821834.07	833179.74	821783.15	13	0	1	87.5032	87.1222	86.6112	88.8226	88.8935	90.7997	89.1353	97.9754	81.6692	93.2643	85.8545	86.5964	80.8554	78.3518	70.9609	71.7809	60.9989	61.0425	59.2787	58.6159	67.0391	82.0399	77.8878	63.5943
R145+R146	833812.49	821976.50	834004.98	821816.03	17	0	1	79.1227	74.9693	85.4382	59.6689	95.1578	75.5733	78.8726	87.9030	66.6281	81.0685	72.0036	73.4893	67.5401	52.9855	57.9457	57.8657	44.4713	45.3289	43.5035	44.9816	50.6433	65.8961	64.0011	48.6374
R147+R148	833738.44	821888.36	833931.13	821727.74	16	0	1	69.6468	70.4369	79.1102	86.3281	80.5693	76.7530	72.8490	82.6454	61.6035	74.6466	66.7183	66.7825	61.7915	56.5990	50.8849	50.6140	40.4689	40.5253	37.7732	39.7153	47.1141	59.7916	59.5702	44.6038
R149	833728.61	821749.52	833807.73	821684.38	14	0	1	64.1527	62.0198	58.8606	67.2858	67.8044	73.3824	63.8449	75.7894	54.3760	66.5354	64.2301	67.0060	67.0854	66.8529	64.8703	67.4130	72.4238	71.8255	73.8022	71.9169	84.1802	100.4816	97.4906	79.2542
R149	833774.08	821843.52	833807.73	821684.38	13	0	1	64.1527	62.0198	58.8606	67.2858	67.8044	73.3824	63.8449	75.7894	54.3760	66.5354	64.2301	67.0060	67.0854	66.8529	64.8703	67.4130	72.4238	71.8255	73.8022	71.9169	84.1802	100.4816	97.4906	79.2542
R150	833736.67	821759.23	833667.71	821603.87	11	0	1	64.1527	62.0198	58.8606	67.2858	67.8044	73.3824	63.8449	75.7894	54.3760	66.5354	64.2301	67.0060	67.0854	66.8529	64.8703	67.4130	72.4238	71.8255	73.8022	71.9169	84.1802	100.4816	97.4906	79.2542
R151	833613.61	821610.98	833693.50	821542.70	13	0	1	64.1527	62.0198	58.8606	67.2858	67.8044	73.3824	65.8539	75.7894	54.8517	67.0375	64.2301	67.0060	67.0854	66.8529	64.0379	67.4130	67.1727	70.3559	71.9262	69.8008	84.1802	100.4816	97.4906	74.1582
R151	833693.50	821543.70	833775.28	821642.53	14	0	1	64.1527	62.0198	58.8606	67.2858	67.8044	73.3824	65.8539	75.7894	54.8517	67.0375	64.2301	67.0060	67.0854	66.8529	64.0379	67.4130	67.1727	70.3559	71.9262	69.8008	84.1802	100.4816	97.4906	74.1582
R152	833774.08	821843.52	833826.17	821500.56	20	0	1	64.1527	62.0198	58.8606	67.2858	67.8044	73.3824	63.8449	75.7894	54.3760	66.5354	63.6717	66.3192	65.7028	64.9656	61.7367	67.1000	66.3258	68.1396	67.7657	66.9545	81.8699	97.8405	89.4714	69.9889
R153	833991.31	822369.76	834026.77	822414.27	16	0	1	65.0244	65.3369	64.6608	65.1583	67.3585	67.5174	66.9349	78.8219	58.4284	70.6621	64.8510	64.3495	61.6797	59.8392	54.1077	57.6102	53.3720	51.3449	50.3981	51.4156	60.4337	76.4215	72.9017	57.1088
R154	833950.46	822320.45	833992.00	822369.67	18	0	1	64.6597	65.7221	63.6004	65.7201	68.0726	66.2263	67.2896	78.9674	58.1857	70.2254	64.5822	65.5712	62.8718	59.5038	55.3474	58.3478	53.9092	52.6723	51.5942	52.5140	60.6938	76.3461	72.3854	56.7998
R155	833909.65	822271.38	833950.46	822320.45	18	0	1	64.5975	65.6999	64.5623	65.0186	66.5812	66.8476	67.2568	80.9452	61.7639	72.5527	66.5756	65.9592	63.4573	61.7335	55.5264	59.0637	56.2186	54.3804	52.0834	52.8079	62.4750	79.1924	74.6390	57.5687
R156	833868.78	822222.16	833909.65	822271.35	18	0	1	82.4165	79.4762	78.0120	78.6054	77.1161	77.4345	84.5382	106.7608	84.7410	98.3607	91.8583	93.1590	89.5430	84.9899	80.2293	82.7234	77.2830	75.8694	71.9257	70.9654	78.0384	91.6788	87.3832	68.4884
R157	833868.56	822222.34	833827.77	822172.95	18	0	1	85.0130	82.4373	82.8154	81.2479	82.0668	82.3262	86.9965	108.5255	92.6376	100.3857	92.2017	90.5248	86.1534	85.2315	76.8894	78.5049	73.3585	71.6548	70.7085	69.5065	77.0945	90.3554	85.5360	68.6175
R158	833827.77	822172.95	833778.49	822113.30	18	0	1	81.2844	81.3009	81.4077	82.2975	83.3416	83.0164	82.9820	94.3646	77.4547	89.5024	82.4519	81.6672	77.7229	77.3219	69.8051	71.2721	66.7851	65.3893	65.1015	65.3786	74.9784	88.1036	83.0752	68.5076
R159	834075.91	822299.62	834112.00	822344.34	15	0	1	61.6802	62.0567	64.9981	64.8486	59.9818	65.4155	62.2319	72.2229	56.6289	66.1611	63.0281	66.7195	63.8402	63.6143	58.4288	63.4653	62.9604	61.2396	60.6601	60.8689	72.0099	85.9340	79.7348	68.7528
R160	834090.29	822287.53	834127.62	822332.11	15	0	1	68.4873	68.0272	68.4753	69.8003	68.2355	70.3655	71.3428	81.9044	63.9331	74.2125	67.5269	70.1439	66.9609	66.6984	58.8563	62.0828	59.4447	57.1052	56.2715	55.9997	66.8921	82.1699	75.4819	61.6174
R161	834034.90	822250.52	834075.91	822299.62	15	0	1	62.4817	62.0805	62.4077	62.2312	64.5492	63.3247	64.4419	76.6926	58.6961	68.6294	65.0706	68.5399	66.4894	66.4231	61.6878	66.5862	64.6201	63.3659	62.7365	63.0686	72.4957	87.8276	80.4072	67.5676
R162	834049.42	822238.28	834090.39	822287.53	15	0	1	68.9157	68.5500	68.4910	69.4154	69.6740	69.9421	70.4083	81.6413	63.9379	73.7604	67.6056	70.3752	66.8932	66.1176	60.0643	63.7415	60.2385	58.0345	57.3421	56.3246	66.8595	82.1267	75.6071	61.7056
R163	833993.96	822201.68	834034.90	822250.82	15	0	1	65.2514	65.5377	66.1564	65.6216	66.3446	67.0261	67.1876	78.7819	61.5656	70.9155	65.2014	67.6219	64.5414	63.5685	57.8159	62.4570	59.2206	57.8540	56.4876	55.7407	66.0952	81.6363	74.9259	60.7786
R164	834007.86	822189.33	834049.42	822238.28	15	0	1	66.4630	66.2086	66.7108	66.4097	68.2791	67.7291	67.9380	77.6152	60.6783	71.1574	64.2538	67.1283	64.2540	65.6889	58.7154	61.7872	60.6324	59.6465	59.4935	58.0265	68.7921	83.9461	77.2362	63.0730
R165	833953.31	822151.70	833994.47	822201.23	16	0	1	67.3777	66.9037	66.3116	67.4835	67.3897	68.5697	69.0155	78.7122	64.2581	71.0679	67.6999	69.8082	67.5513	66.2836	61.7872	66.1418	63.8014	61.8168	60.5031	61.1159	71.1061	83.1677	77.1372	65.6762
R166	833872.14	822051.39	833964.75	822180.50	19	0	1	56.2806	54.7610	55.4014	56.0866	56.4489	56.5354	57.8353	66.7226	52.5589	60.3084	56.2806	56.6689	54.7162	49.9105	49.5065	52.1473	47.6472	46.4874	43.2865	44.4115	48.8786	60.3216	58.7749	47.9519
R167	833865.47	822042.45	834007.86	822189.33	19	0	1	83.4734	83.3843	83.1809	84.1884	85.6223	84.9588	85.3238	99.7195	85.9470	91.7814	84.4376	87.0395	82.2164	83.0995	73.5772	80.0792	78.0924	71.3468	68.7712	70.1520	79.9040	94.3091	84.8667	76.0815
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1	32.2806	31.6615	32.5228	33.3558	32.0353	32.4659	33.2715	39.7862	28.0788	34.7265	33.4501	33.7283	34.6191	29.4157	30.2233	32.8290	30.1282	29.1438	26.0022	28.4434	31.6946	43.9162	42.1508	30.6434
R170+R171	833738.44	821888.35	833812.49	821976.50	16	0	1	44.0777	44.0703	44.1790	43.9911	45.6826	45.6242	45.0268	51.6292	43.1688	49.5641	47.3551	46.8584	46.8346	42.1700	41.6778	43.2076	40.8315	40.1877	37.7284	39.5862	42.7535	51.9813	50.3905	41.2729
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1	68.5469	67.6922	67.6873	68.5735	68.4218	69.3518	69.3468	81.0374	63.9077	74.5367	67.4745	70.0799	66.6717	66.6060	61.0925	64.4985	61.9823	59.8425	58.7197	58.6825	67.6317	81.8135	75.6300	62.7636
R174+R175	833561.78	821677.56	833683.38	821823.65	18	0	1	70.7537	70.0532	70.2087	71.4303	70.6657	71.1632	71.9489	86.6394	71.9692	80.0563	75.6257	77.4698	74.5893	75.9320	69.7423	73.8506	72.3306	71.4263	68.6835	68.3882	77.4883	90.4863	83.9959	69.8609
R176	833498.77	821608.49	833560.47	821680.73	20	0	1	65.1627	64.9225	65.4111	66.2558	66.8936	66.6261	66.5728	77.5259	61.9872	70.0991	67.2541	70.1882	68.4329	68.4013	64.5290	69.6525	68.4298	67.3098	66.1536	65.1203	73.9955	86.9808	80.5910	70.6214
R177	833513.09	821599.24	833573.68	821668.47	20	0	1	72.7475	72.6626	72.9668	73.3903	73.3723	74.2465	74.0895	82.8858	67.2738	75.7462	69.6446	71.5078	67.7717	68.0697	62.2009	65.3029	62.1892	59.3115	57.7358	57.3396	66.0917	80.1596	74.3973	62.8093
R178	833440.44	821529.90	833483.80	821608.81	16	0	1	71.1988	70.8148	71.1501	72.1087	73.1023	72.2901	73.1962	83.1824	69.3585	76.2277	73.9050	77.3154	75.3184	76.7771	72.1950	77.2596	76.4694	75.8812	76.1554	74.0720	83.7803	96.0796	89.3825	78.5330
R179	833451.64	821526.21	833511.32	821600.38	17	0	1	77.0006	76.5335	76.9133	77.6900	78.1863	78.2878	78.5420	89.4731	73.0811	81.9720	76.2137	78.9082	75.0129	75.5944	68.3725	73.4622	71.4748	67.1138	65.1598	66.1586	76.5899	88.6215	80.9591	71.5727
R180	834218.31	822256.35	834335.86	822385.33	18	0	1	73.9636	73.8724	74.8024	75.3341	76.0904	75.2265	76.3556	88.2870	70.9773	82.4715	74.9936	78.3836	75.4892	75.2474	69.1531	74.2151	71.3710	69.5779	68.6260	69.0161	80.9918	98.4265	90.0321	74.0833
R181	834181.98	822212.22	834218.31	822256.35	18	0	1	72.3870	66.2283	62.2356	67.2858	73.2750	67.9051	77.3595	82.5774	61.8235	73.7326	69.2200	72.3277	74.6353	73.6525	67.7394	73.9647	69.6663	71.7850	70.9503	69.2694	81.7411	99.4371	92.4521	75.0416
R182	834140.62	822162.67	834181.78	822212.39	18	0	1	70.0219	69.3511	72.0346	71.7722	80.4184	74.8309	72.2724	81.3334	62.9516	71.7673	68.6378	71.9027	70.5261	72.6737	64.4902	70.2060	69.7730	68.8868	68.1029	66.3175	79.2263	99.3308	89.2316	74.2111
R183	834099.34	822113.33	834140.62	822162.67	18	0	1	75.3841	76.6918	79.1539	80.0500	80.6667	84.1792	76.7092	87.6037	69.5370	79.5789	74.2487	76.2296	74.4129	73.2973	68.0945	68.4933	65.5890	64.0919	64.9098	66.8389	79.4761	97.2705	86.1725	76.3046
R184	834077.01	822132.08	834051.51	822109.94	13	0	1	79.1261	76.8378	76.4458	76.8070	76.6416	80.6854	80.9253	90.2360	67.3209	82.2740	70.5959	71.0742	64.6696	59.8588	53.3688	54.5768	47.1265	44.7655	43.2954	43.9883	51.8148	67.1802	65.4113	47.4047
R184	834051.51	822100.94	834071.90	822084.13	13	0	1	79.1261	76.8378	76.4458	76.8070	76.6416	80.6854	80.9253	90.2360	67.3209	82.2740	70.5959	71.0742	64.6696	59.8588	53.3688	54.5768	47.1265	44.7655	43.2954	43.9883	51.8148	67.1802	65.4113	47.4047
R184	834071.90	822084.18	834087.30	822118.02	14	0	1	79.1261	76.8378	76.4458	76.8070	76.6416	80.6854	80.9253	90.2360	67.3209	82.2740	70.5959	71.0742	64.6696	59.8588	53.3688	54.5768	47.1265	44.7655	43.2954	43.9883	51.8148	67.1802	65.4113	47.4047
R185	834309.95	822180.58	834383.86	822267.44	19	0	1	72.4055	71.9426	73.6159	73.4431	76.0904	73.7230	75.2301	84.2571	66.9068	76.2517	71.9405	75.9560	72.6109	74.5418	69.0541	74.0677	72.4748	69.9116	69.5713	68.2043	80.1249	95.9335	88.6640	74.6215
R186	834231.54	822086.63	834273.34	822136.83	19	0	1	79.1573	78.8946	82.5405	84.3048	89.9680	85.0526	78.4282	90.1424	72.2500	79.7464	74.6068	78.9588	74.9078	73.6525	67.3297	66.2525	62.2956	62.2254	62.6783	64.6460	76.4515	93.5829	86.1725	76.3046
R187	834190.68	822037.73	834231.76	822086.45	18	0	1	76.7200	78.6019	76.5260	79.8149	81.4979	80.1835	79.4284	90.8600	75.4302	83.0279	80.7622	84.0374	81.9517	80.9529	77.2179	82.5981	80.6237	79.7055	78.7493	79.7073	87.5028	101.4875	95.3774	83.5089
R188+R189	834004.98	821816.03	834068.34	821880.22	19	0	1	70.5363	69.2447	72.5026	75.5851	72.9915	72.4659	72.7114	80.5379	62.8906	73.1534	68.4696	70.4699	69.0558	66.8075	62.3901	65.4625	63.9473	61.9270	60.8724	60.7189	71.3805	84.3316	79.0601	67.8438
R190+R191	833931.13	821727.74	834004.98	821816.03	19	0	1	74.6614	76.4940	75.7602	77.8695	79.2213	77.7412	78.1066	87.1853	68.9346	78.7126	73.0611	76.0327	73.7194	73.2441	66.7425	72.2693	70.3083	67.2430	67.2304	67.0885	78.4782	94.2392	87.2455	72.3040
R192+R193	833875.32	821660.75	833930.85	821727.98	20	0	1	60.0390	59.9622	58.6349	61.1705	64.5345	60.7670	62.0816	69.5137	54.8040	62.7638	58.8695	62.0617	60.7854	60.2529	52.1727	55.9919	52.1615	50.1868	46.7378	50.2977	60.3997	63.8859	61.1930	60.4564
R194+R195	833825.79	821600.86	833867.51	821651.45	20	0	1	91.0319	87.7404	89.5815	94.6630	94.8550	91.3041	92.9322	96.9922	82.7294	91.9638	89.2669	93.8994	90.0213	88.8057	86.2534	88.9181	88.5557	88.6517	89.6193	89.6716	96.3679	103.4469	100.0409	94.1187
R196+R202	833761.01	821523.36	833828.17	821600.56	20	0	1	89.5592	90.1518	79.3960	84.8079	85.6335	86.2223	92.0211	92.1079	87.7072	85.4502	79.7256	81.4914	85.9795	78.0095	82.1347	84.3970	83.5420	91.8379	82.2320	82.7273	88.9120	97.9122	94.3254	95.9638
R197	834364.36	822060.94	834400.15	822104.71	17	0	1	79.1988	71.6394	58.8606	59.6689	67.8044	67.9051	68.1141	85.5694	67.5997	80.4915	75.1721	77.8507	63.6131	64.9621	64.3077	63.9666	65.6690	53.9519	53.2837	61.4878	72.6283	105.4493	97.4761	79.2542
R198	834322.77	822010.68	834364.36	822060.94	16	0	1	71.1262	68.7535	66.4542	59.6689	67.8044	63.6450	68.1141	81.6313	59.3454	72.2018	68.0723	71.4366	70.4108	77.1272	66.6657	70.8313	70.3285	67.2523	65.9131	65.2473	83.8103	93.4756	85.0566	85.0070
R199	834281.93	821961.17	834323.00	822010.48	15	0	1	80.9786	80.6858	80.9202	89.9287	87.4552	90.6801	85.2674	90.7498	75.3486	84.8101	79.5846	76.9301	76.0836	74.2727	67.6092	71.2898	69.7213	77.4108	74.5908	76.0905	83.8689	96.4582	82.7910	77.0916
R200	834239.17	821914.13	834280.06	821963.18	14	0	1	78.0650	74.2751	77.4904	77.9033	80.9047	81.1039	79.6458	88.4143	71.6555	82.5504	74.0264	76.9136	72.8534	74.1125	66.7254	73.1346	71.4162	69.0526	67.5343	67.6557	77.4398	92.7742	85.2739	75.0186
R200	834239.17	821914.13	834327.89	821948.33	18	0	1	78.0650	74.2751	77.4904	77.9033	80.9047	81.1039	79.6458	88.4143	71.6555	82.5504	74.0264	76.9136	72.8534	74.1125	66.7254	73.1346	71.4162	69.0526	67.5343	67.6557	77.4398	92.7742	85.2739	75.0186

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO$_2$ x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R003	833125.78	822324.11	833177.37	822330.25	20	0	1	2.5556	2.5379	2.5214	2.5501	2.5933	2.5925	2.6327	4.2904	4.3828	3.6440	3.3399	3.2040	2.8146	2.8877	2.8993	3.2569	3.4892	3.3329	3.4268	2.9244	2.6001	2.3865	2.4759	2.5987
R003	833177.37	822330.25	833231.06	822345.76	20	0	1	2.5556	2.5379	2.5214	2.5501	2.5933	2.5925	2.6327	4.2904	4.3828	3.6440	3.3399	3.2040	2.8146	2.8877	2.8993	3.2569	3.4892	3.3329	3.4268	2.9244	2.6001	2.3865	2.4759	2.5987
R003	833231.06	822345.76	833434.80	822408.45	20	0	1	2.5556	2.5379	2.5214	2.5501	2.5933	2.5925	2.6327	4.2904	4.3828	3.6440	3.3399	3.2040	2.8146	2.8877	2.8993	3.2569	3.4892	3.3329	3.4268	2.9244	2.6001	2.3865	2.4759	2.5987
R003	833434.80	822408.45	833960.46	822643.00	20	0	1	2.5556	2.5379	2.5214	2.5501	2.5933	2.5925	2.6327	4.2904	4.3828	3.6440	3.3399	3.2040	2.8146	2.8877	2.8993	3.2569	3.4892	3.3329	3.4268	2.9244	2.6001	2.3865	2.4759	2.5987
R003	833960.46	822643.00	833995.46	822646.78	20	0	1	2.5556	2.5379	2.5214	2.5501	2.5933	2.5925	2.6327	4.2904	4.3828	3.6440	3.3399	3.2040	2.8146	2.8877	2.8993	3.2569	3.4892	3.3329	3.4268	2.9244	2.6001	2.3865	2.4759	2.5987
R004	833118.28	822308.10	833188.93	822315.62	19	0	1	2.5509	2.5230	2.5280	2.5678	2.5718	2.5650	2.6087	3.7923	4.0164	3.2928	3.0852	3.0088	2.7174	2.8162	2.8625	3.2689	3.5674	3.6945	3.7452	3.1502	2.4836	2.3002	2.4156	2.4748
R004	833188.93	822315.62	833425.15	822386.41	19	0	1	2.5509	2.5230	2.5280	2.5678	2.5718	2.5650	2.6087	3.7923	4.0164	3.2928	3.0852	3.0088	2.7174	2.8162	2.8625	3.2689	3.5674	3.6945	3.7452	3.1502	2.4836	2.3002	2.4156	2.4748
R004	833425.15	822386.41	833518.28	822421.55	19	0	1	2.5509	2.5230	2.5280	2.5678	2.5718	2.5650	2.6087	3.7923	4.0164	3.2928	3.0852	3.0088	2.7174	2.8162	2.8625	3.2689	3.5674	3.6945	3.7452	3.1502	2.4836	2.3002	2.4156	2.4748
R005	833518.28	822421.55	833673.75	822496.58	19	0	1	2.5388	2.5046	2.5323	2.5739	2.5826	2.5719	2.6142	3.7920	4.0173	3.2923	3.0848	3.0071	2.7151	2.8132	2.8597	3.2656	3.5642	3.6860	3.7412	3.1462	2.4784	2.2947	2.4099	2.4758
R005	833673.75	822496.58	833933.67	822614.65	19	0	1	2.5388	2.5046	2.5323	2.5739	2.5826	2.5719	2.6142	3.7920	4.0173	3.2923	3.0848	3.0071	2.7151	2.8132	2.8597	3.2656	3.5642	3.6860	3.7412	3.1462	2.4784	2.2947	2.4099	2.4758
R005	833933.67	822614.65	833973.71	822626.09	19	0	1	2.5388	2.5046	2.5323	2.5739	2.5826	2.5719	2.6142	3.7920	4.0173	3.2923	3.0848	3.0071	2.7151	2.8132	2.8597	3.2656	3.5642	3.6860	3.7412	3.1462	2.4784	2.2947	2.4099	2.4758
R005	833973.71	822626.09	834046.15	822626.54	19	0	1	2.5388	2.5046	2.5323	2.5739	2.5826	2.5719	2.6142	3.7920	4.0173	3.2923	3.0848	3.0071	2.7151	2.8132	2.8597	3.2656	3.5642	3.6860	3.7412	3.1462	2.4784	2.2947	2.4099	2.4758
R006+R007	833527.80	822410.61	833627.55	822455.21	14	0	1	3.0033	2.6688	3.8468	0.9306	0.9419	3.5255	2.9739	3.3522	2.5204	3.3505	3.0510	3.0417	3.2935	2.8746	2.1497	2.2634	1.2230	1.5577	0.9353	1.0867	1.1967	1.8504	1.7240	1.5864
R006+R007	833627.55	822455.21	833732.97	822494.47	14	0	1	3.0033	2.6688	3.8468	0.9306	0.9419	3.5255	2.9739	3.3522	2.5204	3.3505	3.0510	3.0417	3.2935	2.8746	2.1497	2.2634	1.2230	1.5577	0.9353	1.0867	1.1967	1.8504	1.7240	1.5864
R006+R007	833732.97	822494.47	833782.11	822441.65	14	0	1	3.0033	2.6688	3.8468	0.9306	0.9419	3.5255	2.9739	3.3522	2.5204	3.3505	3.0510	3.0417	3.2935	2.8746	2.1497	2.2634	1.2230	1.5577	0.9353	1.0867	1.1967	1.8504	1.7240	1.5864
R006+R007	833782.11	822441.65	833840.51	822456.02	14	0	1	3.0033	2.6688	3.8468	0.9306	0.9419	3.5255	2.9739	3.3522	2.5204	3.3505	3.0510	3.0417	3.2935	2.8746	2.1497	2.2634	1.2230	1.5577	0.9353	1.0867	1.1967	1.8504	1.7240	1.5864
R008+R009	833661.17	822398.31	833693.59	822397.15	13	0	1	1.9193	2.3688	2.1553	0.9306	0.9419	1.9743	1.9502	2.6260	1.8947	2.3020	2.0858	2.1636	1.9738	1.5886	1.4963	1.8812	1.2888	1.5587	1.0109	1.0000	1.2309	2.1712	2.1093	1.3557
R008+R009	833693.59	822397.15	833841.86	822450.36	13	0	1	1.9193	2.3688	2.1553	0.9306	0.9419	1.9743	1.9502	2.6260	1.8947	2.3020	2.0858	2.1636	1.9738	1.5886	1.4963	1.8812	1.2888	1.5587	1.0109	1.0000	1.2309	2.1712	2.1093	1.3557
R010+R011	833978.15	822463.30	833896.64	822432.88	12	0	1	4.1589	4.0953	3.6212	2.4854	4.5010	5.3860	4.2472	5.0907	4.2880	4.8115	4.4942	4.8546	4.5446	4.4528	3.9088	4.6328	4.1357	4.0233	3.8646	3.6672	4.4247	5.1602	4.6978	4.6395
R010+R011	833896.64	822432.88	833883.54	822462.40	12	0	1	4.1589	4.0953	3.6212	2.4854	4.5010	5.3860	4.2472	5.0907	4.2880	4.8115	4.4942	4.8546	4.5446	4.4528	3.9088	4.6328	4.1357	4.0233	3.8646	3.6672	4.4247	5.1602	4.6978	4.6395
R010+R011	833883.54	822462.40	833840.51	822456.02	12	0	1	4.1589	4.0953	3.6212	2.4854	4.5010	5.3860	4.2472	5.0907	4.2880	4.8115	4.4942	4.8546	4.5446	4.4528	3.9088	4.6328	4.1357	4.0233	3.8646	3.6672	4.4247	5.1602	4.6978	4.6395
R012+R013	833387.26	822567.47	833423.69	822656.02	10	0	1	11.0496	12.7348	1.1866	1.6113	1.6225	1.6276	11.1871	15.2027	9.4181	12.4546	10.4591	12.4940	11.5964	15.0482	11.0779	11.5838	11.2426	12.7498	14.6849	12.5431	19.7459	22.8849	17.9008	13.6744
R012+R013	833423.69	822656.02	833416.08	822482.07	10	0	1	11.0496	12.7348	1.1866	1.6113	1.6225	1.6276	11.1871	15.2027	9.4181	12.4546	10.4591	12.4940	11.5964	15.0482	11.0779	11.5838	11.2426	12.7498	14.6849	12.5431	19.7459	22.8849	17.9008	13.6744
R012+R013	833416.08	822482.07	833447.62	822425.39	10	0	1	11.0496	12.7348	1.1866	1.6113	1.6225	1.6276	11.1871	15.2027	9.4181	12.4546	10.4591	12.4940	11.5964	15.0482	11.0779	11.5838	11.2426	12.7498	14.6849	12.5431	19.7459	22.8849	17.9008	13.6744
R012+R013	833447.62	822425.39	833544.64	822390.48	10	0	1	11.0496	12.7348	1.1866	1.6113	1.6225	1.6276	11.1871	15.2027	9.4181	12.4546	10.4591	12.4940	11.5964	15.0482	11.0779	11.5838	11.2426	12.7498	14.6849	12.5431	19.7459	22.8849	17.9008	13.6744
R012+R013	833544.64	822390.48	833587.56	822354.80	10	0	1	11.0496	12.7348	1.1866	1.6113	1.6225	1.6276	11.1871	15.2027	9.4181	12.4546	10.4591	12.4940	11.5964	15.0482	11.0779	11.5838	11.2426	12.7498	14.6849	12.5431	19.7459	22.8849	17.9008	13.6744
R014+R015	833488.77	822318.11	833587.56	822354.80	14	0	1	5.1459	5.2382	5.7088	7.1215	6.7323	6.6123	5.5273	8.9010	4.6977	5.8867	5.9861	6.7816	6.3450	7.1310	5.7488	6.6047	6.3294	6.7402	6.5796	6.1840	8.3265	10.4834	9.5395	6.8227
R016+R017	833587.56	822354.80	833633.17	822374.91	15	0	1	5.1963	5.3786	5.7088	4.6168	4.3903	6.6123	5.1328	8.3686	4.4368	5.6068	5.4346	5.8910	5.4843	5.7937	4.9289	5.4877	4.5523	5.1299	4.7940	4.2428	6.2912	7.5815	6.1841	5.2580
R016+R017	833633.17	822374.91	833661.17	822398.31	15	0	1	5.1963	5.3786	5.7088	4.6168	4.3903	6.6123	5.1328	8.3686	4.4368	5.6068	5.4346	5.8910	5.4843	5.7937	4.9289	5.4877	4.5523	5.1299	4.7940	4.2428	6.2912	7.5815	6.1841	5.2580
R019	833082.67	822192.93	833209.07	822239.78	16	0	1	13.0337	13.2092	12.0863	13.9483	14.6759	12.3156	12.5179	15.0419	11.9817	13.5731	12.1060	13.5477	12.3563	14.2666	11.1639	13.0072	13.8733	12.0737	11.8098	11.4693	15.4405	19.0242	13.7676	14.4955
R021	833209.07	822239.78	833355.00	822293.72	16	0	1	12.9994	12.7356	11.6339	13.6661	12.2284	14.3963	12.9748	15.2744	12.2277	13.7458	12.1414	13.5836	12.3044	14.1110	11.2890	13.0794	12.8940	12.1224	12.1932	11.3740	15.3397	17.7947	14.5778	12.8391
R022	833355.00	822293.72	833480.61	822340.13	18	0	1	16.0367	14.5283	15.8175	16.7485	16.0116	15.8923	16.2069	17.6027	14.8702	16.4981	15.1791	16.3136	15.1617	16.6363	13.8403	15.2373	16.0277	14.3837	14.1560	13.5611	16.7794	19.2178	16.2040	15.4698
R022	833480.61	822340.13	833489.65	822315.75	18	0	1	16.0367	14.5283	15.8175	16.7485	16.0116	15.8923	16.2069	17.6027	14.8702	16.4981	15.1791	16.3136	15.1617	16.6363	13.8403	15.2373	16.0277	14.3837	14.1560	13.5611	16.7794	19.2178	16.2040	15.4698
R023	833073.42	822119.68	833100.53	822129.44	14	0	1	14.6699	12.9192	14.8284	14.7670	15.0676	13.6705	14.3940	17.3392	14.7357	16.0453	14.6325	15.6427	14.5806	16.3452	13.2654	14.6786	14.9380	14.1231	14.2227	13.1749	16.3937	18.8789	15.3628	14.3438
R024	833100.53	822129.44	833232.06	822178.07	14	0	1	15.1665	13.4415	14.3099	12.7091	15.0676	14.4337	14.8228	16.9306	14.4683	16.1619	14.7099	15.6680	14.0651	16.1832	13.2081	14.6378	15.1487	14.1591	13.8823	12.8269	16.4594	18.4992	15.4743	14.3158
R025	833232.06	822178.07	833377.80	822232.03	14	0	1	14.7551	14.9089	13.9318	15.6267	16.2189	14.1377	14.3339	16.5789	14.1194	16.1202	14.7019	15.7467	14.2446	15.9385	13.2903	14.7894	14.7233	14.2753	14.0213	12.8272	16.0785	18.8661	15.1314	14.2101
R026	833377.80	822232.03	833503.34	822278.92	14	0	1	16.1842	15.7967	16.3588	17.0782	16.4054	15.5546	16.3944	19.2552	18.0329	18.5127	16.6044	17.3875	15.3915	17.3776	14.0539	15.6117	16.8885	15.2086	14.2555	13.4945	16.9220	18.1607	15.0176	14.7647
R027	833503.51	822278.46	833673.82	822341.72	13	0	1	15.7179	15.2363	15.1409	15.4896	16.0606	16.4840	15.8148	17.9845	16.5107	17.9451	16.6477	17.4605	16.2404	17.5746	15.3342	16.1354	16.4979	15.4548	15.0301	14.0442	16.8443	19.5658	15.8979	15.0036
R028	833673.82	822341.72	833768.11	822376.93	13	0	1	12.8250	11.7266	12.7859	15.1820	14.0298	12.2426	12.9867	14.5817	12.3574	14.0521	12.5846	13.7693	12.6567	14.2818	11.8448	13.4260	13.5263	12.8285	12.9644	11.7653	15.2872	18.1298	14.7981	12.5470
R029	833768.03	822376.15	833848.76	822405.79	13	0	1	11.4219	10.4258	12.6024	7.1215	9.9260	11.6758	11.2224	16.3531	13.7411	14.3092	12.1922	13.5333	11.7522	14.8824	11.4790	13.3057	15.1269	13.1731	12.5320	12.3098	16.2169	17.4869	14.4477	14.8588
R030	833848.76	822405.79	833917.83	822431.11	14	0	1	11.2139	11.1681	11.6722	11.3847	10.4290	11.1935	11.2830	15.3759	12.6023	13.4639	11.4285	13.0803	12.3527	13.9650	11.0369	12.7913	13.2495	12.3608	12.2297	10.9333	14.6200	16.9732	13.2644	12.5504
R031	833917.83	822431.11	833960.58	822454.38	14	0	1	10.4615	12.5740	8.1779	9.8766	9.9260	7.1661	11.4819	16.5336	14.7916	14.9680	12.9791	13.9080	11.9783	14.9654	11.3536	13.0069	14.3468	12.6392	12.2823	11.8624	15.6423	17.3898	14.1227	13.6321
R032+R201	833076.99	822068.71	833121.79	822072.07	18	0	1	14.4285	13.8899	10.8604	10.8780	10.5813	10.5176	10.9890	14.0004	11.4718	12.8199	11.6053	12.9528	11.8886	13.5587	11.0267	12.4513	12.6266	12.1459	12.0573	11.1878	14.4620	16.3379	13.3826	12.5318
R033	833121.79	822072.07	833253.39	822120.94	18	0	1	11.5676	11.5411	11.6093	11.7614	11.9077	11.6995	11.7634	13.9747	11.2429	12.6938	11.3576	12.5505	11.5025	13.1039	10.8172	12.3026	12.4390	11.9257	11.8313	10.9523	13.9293	16.2634	13.3178	12.1167
R034	833253.39	822120.94	833398.77	822175.17	18	0	1	10.4276	10.5172	10.4259	10.8717	10.8256	10.9022	10.8193	13.4473	11.1893	12.0578	10.8176	12.1944	11.1489	12.7449	10.4817	12.0378	12.2099	11.7450	11.5871	10.6504	13.6022	15.8335	13.0057	11.8982
R035	833398.77	822175.17	833524.35	822221.21	18	0	1	13.0450	12.8670	12.8198	12.6528	12.7915	12.7375	12.9366	15.8040	13.5661	14.6877	13.3438	14.3072	13.3882	14.8746	12.1529	14.1741	14.1701	12.8441	12.6168	12.0426	14.8719	17.4497	14.3314	13.4973
R036	833524.35	822221.21	833653.40	822269.00	18	0	1	12.0393	11.8385	11.9004	12.0890	11.9792	12.1778	12.0976	14.5888	12.4147	13.9303	12.3055	13.5554	12.4289	14.1177	11.5418	13.0303	13.1533	12.6545	12.6013	11.6928	14.6364	16.5894	13.6883	12.9178
R037	833653.40	822269.00	833694.88	822284.07	19	0	1	16.0833	15.9150	15.9647	16.1907	16.1007	16.0992	16.2509	19.3282	16.4372	18.2447	15.6401	16.9140	15.0836	17.0537	13.3828	14.7909	14.6856	13.6000	13.2475	12.3152	15.5198	17.8989	14.6778	13.6855
R038	833694.68	822284.56	833763.79	822309.61	18	0	1	16.3023	16.1602	16.2779	16.2818	16.4411	16.3691	16.3973	19.6433	16.5903	18.5220	15.5692	16.7650	14.6976	16.4976	12.7143	13.9937	14.0806	12.5187	11.7747	11.0405	13.7814	15.8712	13.0571	12.3122
R039	833761.99	822311.12	833798.46	822320.75	14	0	1	19.1985	17.8744	18.1109	18.6535	18.6871	18.5604	18.4568	22.6239	21.7248	21.4041	18.7597	19.8770	17.5771	19.6441	15.1969	17.6256	17.8015	14.8796	13.3272	13.3795	16.0117	17.8252	14.1540	15.1961
R040	833789.11	822318.98	833833.16	822335.17	18	0	1	18.7981	18.8567	18.8670	19.3119	19.1222	19.2928	19.2424	22.4388	20.9403	21.1525	18.4495	19.1824	17.0126	18.9894	14.5634	17.0509	17.2767	14.8206	13.2110	12.9142	15.6387	17.2591	13.8731	14.9503
R041	833833.16	822335.17	833902.96	822360.57	18	0	1	19.1856	18.1403	18.5729	18.7861	18.6189	18.9662	18.7305	23.1247	21.6497	21.8797	18.7032	19.8194	17.5726	19.5931	15.1685	17.5771	17.7373	14.8949	13.3580	13.0919	16.0298	17.9505	14.2103	15.2201
R042	833902.96	822360.57	833960.46	822320.45	18	0	1	19.2531	18.4943	18.5729	18.7699	18.7486	19.0504	18.9092	22.6134	21.1283	21.3789	18.2312	19.3257	17.0787	19.1435	14.6893	17.5069	17.6563	14.6911	13.0385	12.8078	15.7775	17.2809	13.9099	14.9726
R043	833960.46	822320.46	834034.90	822250.52	18	0	1	21.5908	21.6330	21.7501	21.8001	22.1275	22.0634	22.0167	24.8088	23.6242	23.4854	20.6970	21.9953	19.5541	22.0743	17.0579	20.0164	20.4997	17.3306	15.5634	15.4032	18.2938	20.2743	16.2673	17.8794
R044	834034.90	822250.52	834140.62	822162.67	18	0	1	18.8673	18.7112	18.8471	19.2783	19.0896	19.1386	19.2165	22.3888	20.9339	21.1186	18.0000	19.1873	16.9507	18.9568	14.5686	16.9739	17.5533	14.6459	12.9916	12.6895	15.5386	17.0978	13.7194	14.7457
R045	834140.62	822162.67	834231.76	822086.45	19	0	1	19.1752	15.7955	16.0451	16.9249	17.2776	17.0213	19.2706	22.0057	20.5394	20.7443	18.2448	19.3711	17.1888	19.2454	14.9473	17.2919	17.5682	14.7636	13.2171	13.2731	15.8037	17.5678	14.3255	15.2760
R046	834231.72	822086.65	834323.21	822011.22	18	0	1	19.3703	18.2589	18.3938	18.8279	18.6514	18.8434	19.6520	22.6950	21.2899	21.4922	18.4885	19.5376	17.3356	19.2647	14.9904	17.2490	17.7945	14.9278	13.3486	13.0957	15.9764	17.3952	14.1217	15.2051
R047	834322.77	822010.68	834384.01	821959.68	18	0	1	19.3746	18.1458	18.4799	18.6914	18.8583	18.7596	19.6744	22.7274	20.8682	21.0439	18.5047	19.6158	17.3693	19.3220	15.0376	17.3312	17.4733	14.9817	13.3506	13.1106	16.0268	17.4377	14.1798	15.2338
R048	833097.20	821958.43	833156.56	821977.06	17	0	1	14.0857	13.6109	13.6358	13.7152	13.7862	13.8250	14.2149	17.1116	16.5166	16.6362	14.1991	15.3025	13.7042	15.9707	12.4289	14.5150	14.9782	13.3943	12.8790	11.8901	14.9747	16.9907	13.6433	13.5748
R049	833156.56	821977.96	833414.10	822080.78	16	0	1	14.1080	14.0020	14.0777	14.1231	14.1963	14.1650	14.2592	16.8806	15.9319	16.0594	13.7379	15.0724	13.5147	15.5112	12.0790	14.1286	14.5895	13.0721	12.4218	11.6826	15.0316	17.0279	13.7044	13.6993
R050	833101.47	821942.33	833274.46	822007.07	21	0	1	15.0470	15.0030	15.0518	15.0717	15.1281	15.1858	15.2147	18.1573	17.0566	17.7755	14.9574	16.1626	14.2941	16.3075	12.7772	14.5991	14.7714	13.2295	12.2349	11.3403	13.8015	15.3452	12.1894	12.4623
R051	833274.56	822006.80	833438.70	822067.62	16	0	1	16.1916	16.1658	16.2476	16.2970	16.3431	16.3877	16.4032	19.2190	17.9800	18.4308	15.6985	17.0163	15.1431	17.4636	13.5186	15.8401	16.6597	14.3828	13.1385	12.4705	15.2405	16.8953	13.4860	14.4211
R052	833434.10	822080.21	833688.33	822174.73	16	0	1	16.6941	15.9292	15.9385	16.1737	16.2205	16.2264	16.7403	18.9788	18.5571	17.5906	15.3867	16.5656	14.8085	16.9107	13.2365	15.7388	16.1402	13.8739	12.9060	12.3955	15.6293	17.5378	14.0953	14.7929
R053	833786.86	822123.44	833736.66	822163.25	18	0	1	17.3106	16.6473	16.7215	16.8305	16.9340	16.9566	17.4050	19.8917	19.3208	18.9020	16.1497	17.4754	15.5308	18.0339	14.0969	16.5296	17.0990	14.9753	14.0571	13.3913	16.5559	18.4836	14.8082	15.3198
R053	833736.66	822163.25	833688.33	822174.73	18	0	1	17.3106	16.6473	16.7215	16.8305	16.9340	16.9566	17.4050	19.8917	19.3208	18.9020	16.1497	17.4754	15.5308	18.0339	14.0969	16.5296	17.0990	14.9753	14.0571	13.3913	16.5559	18.4836	14.8082	15.3198
R054	833438.83	822067.29	833586.71	822122.03	16	0	1	17.7662	17.6840	17.6655	17.8579	17.9682	17.9003	17.9533	20.3888	19.3829	19.4975	17.1094	18.4527	16.8441	19.5171	15.4443	18.3200	19.6336	16.9784	15.8896	15.3495	18.7892	20.7041	16.4716	17.6220
R054	833586.71	822122.03	833649.55	822144.40	16	0	1	17.7662	17.6840	17.6655	17.8579	17.9682	17.9003	17.9533	20.3888	19.3829	19.4975	17.1094	18.4527	16.8441	19.5171	15.4443	18.3200	19.6336	16.9784	15.8896	15.3495	18.7892	20.7041	16.4716	17.6220
R054	833649.55	822144.40	833683.68	822152.80	16	0	1	17.7662	17.6840	17.6655	17.8579	17.9682	17.9003	17.9533	20.3888	19.3829	19.4975	17.1094	18.4527	16.8441	19.5171	15.4443	18.3200	19.6336	16.9784	15.8896	15.3495	18.7892	20.7041	16.4716	17.6220
R054	833683.68	822152.80	833713.85	822149.82	16	0	1	17.7662	17.6840	17.6655	17.8579	17.9682	17.9003	17.9533	20.3888	19.3829	19.4975	17.1094	18.4527	16.8441	19.5171	15.4443	18.3200	19.6336	16.9784	15.8896	15.3495	18.7892	20.7041	16.4716	17.6220
R054	833713.85	822149.82	833757.83	822128.55	16	0	1	17.7662	17.6840	17.6655	17.8579	17.9682	17.9003	17.9533	20.3888	19.3829	19.4975	17.1094	18.4527	16.8441	19.5171	15.4443	18.3200	19.6336	16.9784	15.8896	15.3495	18.7892	20.7041	16.4716	17.6220
R054	833757.83	822128.55	833778.49	822113.30	16	0	1	17.7662	17.6840	17.6655	17.8579	17.9682	17.9003	17.9533	20.3888	19.3829	19.4975	17.1094	18.4527	16.8441	19.5171	15.4443	18.3200	19.6336	16.9784	15.8896	15.3495	18.7892	20.7041	16.4716	17.6220
R055	833786.53	822123.04	833872.14	822051.30	19	0	1	16.4033	16.3374	16.3741	16.4269	16.5462	16.5890	16.5754	18.9034	17.5871	17.7696	15.4194	16.3986	14.5629	16.7346	12.9736	15.1321	15.4290	13.5248	12.7663	12.0783	15.3200	17.2476	13.8893	14.0495
R056	833778.49	822113.30	833867.20	822039.12	18	0	1	20.2043	19.9939	20.1539	20.2683	20.3796	20.4717	20.4295	23.0624	22.4477	21.0113	18.8200	20.3148	18.1991	21.3018	16.5266	20.1150	21.4675	17.6230	15.8139	16.1744	19.8672	21.4391	16.9374	19.2460
R057	833873.20	822052.66	834159.21	821814.78	16	0	1	13.2618	12.2965	12.4334	12.7263	12.7122	12.7571	13.3824	15.3529	15.8675	13.8703	12.3838	13.0370	11.7451	13.0071	10.3724	13.1184	13.7930	11.3799	9.1570	9.6999	11.3124	12.0053	9.5936	11.8869
R058	834159.21	821814.78	834250.10	821738.42	16	0	1	18.5274	17.5442	17.5584	17.8775	17.9197	18.0693	18.7359	21.2528	20.5147	19.6132	16.9431	18.1235	15.9791	18.3974	14.0612	16.5154	17.0127	14.2265	13.0719	12.9305	16.2862	18.1016	14.4768	15.2190
R059	833867.29	822039.23	834058.34	821880.22	17	0	1	15.5447	15.5460	15.5191	15.5502	15.8472	15.7036	15.7556	17.8773	18.6051	16.0353	14.6042	15.2827	13.7244	15.2960	12.1260	15.4196	16.3524	12.9513	10.3857	11.1706	12.9924	13.5236	10.7484	13.6878
R060	834058.34	821880.22	834241.81	821727.45	16	0	1	19.0884	18.8934	19.3836	19.4666	19.4544	19.6011	19.5110	22.1440	21.2386	20.0734	17.9494	19.6506	17.6774	20.8202	15.9126	19.7827	21.2158	17.4515	15.6391	15.7747	19.6474	21.5207	16.5226	19.0555
R061	833116.37	821880.20	833139.75	821889.31	16	0	1	22.3406	21.2918	21.4972	21.4687	19.9679	21.9962	22.1962	22.2956	21.4843	22.2154	21.6831	22.0123	21.5110	21.9121	21.1739	21.8283	21.9589	21.4312	21.6218	21.5380	22.2770	22.9853	22.4469	21.4614
R062	833139.75	821889.31	833296.78	821947.78	16	0	1	12.3861	11.9500	12.1385	12.0783	12.9006	12.9058	12.3509	14.7195	12.7696	13.7790	12.6591	13.9824	13.0112	14.5517	11.7534	13.5261	13.8869	12.8439	12.4997	11.5011	14.6812	17.1825	13.7608	13.4924
R063	833296.86	821947.56	833460.51	822007.97	16	0	1	12.9247	10.8553	13.0567	13.1001	13.2181	11.7144	12.5584	15.5366	12.5096	13.8151	12.4501	13.6602	12.4722	14.3675	11.5738	13.0392	13.5121	12.3822	12.4723	11.5251	14.9984	17.5004	14.4458	13.6349
R064	833460.49	822008.03	833543.73	822038.72	15	0	1	12.1832	9.9978	11.7725	12.6694	11.6636	11.1921	11.8147	15.0131	11.8906	13.2536	11.7421	13.3870	12.0426	13.8887	10.9463	12.7281	12.9921	11.7893	11.8061	11.3083	14.8699	17.4309	14.2842	13.7534
R064	833543.73	822038.72	833563.70	821983.31	15	0	1	12.1832	9.9978	11.7725	12.6694	11.6636	11.1921	11.8147	15.0131	11.8906	13.2536	11.7421	13.3870	12.0426	13.8887	10.9463	12.7281	12.9921	11.7893	11.8061	11.3083	14.8699	17.4309	14.2842	13.7534
R064	833460.98	821962.82	833563.70	821983.31	15	0	1	12.1832	9.9978	11.7725	12.6694	11.6636	11.1921	11.8147	15.0131	11.8906	13.2536	11.7421	13.3870	12.0426	13.8887	10.9463	12.7281	12.9921	11.7893	11.8061	11.3083	14.8699	17.4309	14.2842	13.7534
R065	833160.17	821834.07	833315.56	821891.67	16	0	1	14.0393	12.7134	13.4542	13.8720	13.2536	12.6708	14.3170	15.7805	13.3527	14.8466	13.5140	14.8709	13.7401	15.0118	12.3300	13.5898	14.1123	12.8548	12.1219	11.4929	14.5612	17.1011	14.1356	13.6359
R066	833316.56	821891.68	833461.00	821952.75	16	0	1	13.2652	13.0251	12.7669	13.6290	13.1521	12.2096	13.3210	15.7966	12.7905	14.3712	13.0270	14.3062	13.0019	14.4024	11.9610	13.4848	13.2698	12.5153	12.1114	11.3686	14.5202	17.1688	13.8048	13.0067
R067	833164.01	821776.07	833178.47	821783.88	19	0	1	9.5274	9.4976	9.4891	9.5103	9.5301	9.5632	9.5956	12.9684	10.1884	12.2646	10.6174	11.8994	10.5932	12.4433	9.6248	10.4163	10.3038	9.9599	10.4086	9.3993	11.3198	12.9953	10.4974	8.9614
R068	833178.74	821783.16	833253.69	821813.88	18	0	1	9.4463	9.4304	9.4350	9.4800	9.4911	9.5200	9.5362	12.4762	10.1242	12.2135	10.5492	11.7164	10.5433	12.4016	9.5763	10.3715	10.2731	9.9326	10.3856	8.9687	11.1260	12.9809	10.4850	8.9416
R069	833166.60	821757.87	833260.16	821795.91	29	0	1	7.0628	7.0784	7.0471	7.0599	7.0985	7.1001	7.1288	8.6738	6.8546	8.3960	7.0806	8.0131	7.3489	8.7044	7.0653	7.6777	7.6273	8.4850	9.3455	7.3518	9.9610	12.1062	9.8115	7.7935
R070	833248.90	821820.73	833329.69	821853.67	13	0	1	12.3035	12.2000	12.2509	12.2275	12.3312	12.3445	12.3919	14.5812	11.8312	13.9877	11.9759	13.2136	11.8873	13.6413	10.9057	11.6684	11.6977	11.4186	11.7343	10.4582	13.5523	15.9131	13.1235	11.5032

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (including mixing zone)	Height (m)	Road Type (caline 4)
R071	833327.91	821859.29	833397.24	821875.22	18	0	1
R072	833397.24	821875.22	833591.76	821897.07	20	0	1
R073	833451.50	821860.54	833397.24	821875.22	17	0	1
R074	833261.64	821790.34	833451.50	821860.54	20	0	1
R075	833449.48	821861.09	833506.97	821883.08	16	0	1
R076	833501.48	821897.80	833548.66	821899.77	16	0	1
R076	833548.66	821899.77	833603.43	821886.99	16	0	1
R076	833603.43	821885.99	833684.92	821822.32	16	0	1
R077	833506.57	821884.14	833553.57	821884.35	17	0	1
R077	833553.57	821884.36	833600.48	821871.28	17	0	1
R077	833600.48	821871.28	833673.84	821812.09	17	0	1
R078	833682.38	821822.35	833675.32	821660.79	16	0	1
R079	833673.29	821911.43	833667.51	821651.48	16	0	1
R080	833676.67	821661.18	833699.54	821557.94	16	0	1
R081	833867.01	821650.86	833963.08	821552.08	20	0	1
R082	833458.18	821884.41	833510.75	821821.12	14	0	1
R082	833510.75	821821.12	833536.36	821785.93	14	0	1
R082	833526.39	821785.93	833570.13	821687.58	14	0	1
R083	833436.83	821858.11	833496.18	821813.12	14	0	1
R083	833496.18	821813.12	833524.36	821772.29	14	0	1
R083	833524.36	821772.29	833559.81	821652.62	14	0	1
R084	833567.54	821687.02	833582.69	821644.65	13	0	1
R084	833582.69	821644.65	833607.71	821603.87	13	0	1
R085	833609.34	821605.84	833640.24	821575.52	14	0	1
R085	833640.24	821575.52	833691.67	821545.20	14	0	1
R085	833681.67	821565.20	833720.62	821512.85	14	0	1
R086	833580.70	821649.89	833603.88	821583.58	17	0	1
R086	833603.88	821583.58	833646.83	821546.45	17	0	1
R087	833646.49	821548.43	833696.49	821508.30	13	0	1
R088	833254.24	821811.68	833365.50	821856.64	17	4	4
R088	833365.50	821856.64	833416.50	821865.51	17	7	4
R088	833416.50	821865.51	833487.63	821841.09	17	9	4
R088	833487.63	821841.09	833533.63	821786.07	17	10	4
R088	833533.63	821786.07	833574.80	821657.75	17	9	4
R088	833574.80	821657.75	833600.16	821605.82	17	7	4
R088	833600.16	821605.82	833712.08	821511.11	17	6	4
R089	833256.85	821801.44	833370.08	821846.87	16	4	4
R089	833370.08	821846.97	833427.36	821852.03	16	7	4
R089	833427.36	821852.03	833480.60	821829.25	16	9	4
R089	833480.60	821829.25	833522.46	821786.30	16	10	4
R089	833522.46	821786.30	833543.19	821725.47	16	9	4
R089	833543.19	821725.47	833562.07	821653.37	16	8	4
R089	833562.07	821653.37	833596.99	821594.44	16	8	4
R089	833596.99	821594.44	833699.53	821508.87	16	6	4
R090+R091	833269.78	821629.64	833337.84	821634.13	17	0	1
R092+R093	833337.92	821632.93	833449.56	821640.31	20	0	1
R092+R093	833449.56	821640.31	833513.09	821599.24	20	0	1
R094	833337.84	821634.13	833341.81	821576.41	16	0	1
R095	833609.59	821501.72	833648.49	821548.43	17	0	1
R096+R097	833980.59	822454.38	834028.77	822414.27	18	0	1
R098+R099	834028.77	822414.27	834137.62	822332.11	18	0	1
R100+R101	834127.62	822332.11	834218.31	822256.35	18	0	1
R102+R103	834216.31	822256.35	834309.95	822180.58	18	0	1
R104+R105	834309.95	822180.58	834407.40	822098.55	18	0	1
R106	833917.83	822431.11	833991.76	822369.39	18	0	1
R107	833991.55	822370.04	834090.35	822287.85	18	0	1
R108	834090.84	822285.06	834181.98	822212.22	16	0	1
R109	834181.98	822212.22	834273.05	822136.48	17	0	1
R110	834273.34	822136.83	834364.36	822060.84	17	0	1
R111	834363.46	822059.86	834400.74	822028.83	18	0	1
R112	833848.76	822405.79	833992.86	822380.57	19	0	1
R113	833833.16	822335.17	833909.66	822271.35	18	0	1
R114	833909.65	822271.35	833994.47	822301.23	18	0	1
R115	833994.06	822200.75	834077.01	822132.08	18	0	1
R116	834076.90	822131.84	834097.30	822115.02	19	0	1
R117	834097.30	822115.02	834190.89	822037.73	18	0	1
R118	834190.59	822037.73	834243.28	821993.08	19	0	1
R119	834242.04	821993.65	834282.16	821961.45	19	0	1
R120	834281.93	821961.17	834359.17	821896.80	18	0	1
R121	833768.03	822376.15	833790.11	822318.98	18	0	1
R122	833761.98	822311.12	833868.78	822222.16	18	0	1
R123	833868.78	822222.16	833954.75	822150.50	18	0	1
R124	833673.82	822341.72	833694.86	822284.07	18	0	1
R125	833694.86	822284.07	833827.77	822172.85	18	0	1
R126	833693.40	822269.00	833888.33	822174.73	13	0	1
R127	833489.65	822315.75	833503.51	822278.48	18	0	1
R128	833503.51	822278.46	833524.36	822221.21	18	0	1
R129	833377.80	822232.03	833335.00	822293.72	18	0	1
R130	833377.80	822232.03	833398.77	822175.17	18	0	1
R131	833396.42	822175.04	833434.10	822080.78	18	0	1
R132	833433.92	822080.79	833460.51	822007.87	16	0	1
R133	833460.45	822007.95	833481.00	821952.76	16	0	1
R134	833481.00	821952.76	833506.97	821883.08	16	0	1
R135	833209.07	822239.78	833232.06	822178.07	18	0	1
R136	833232.03	822178.06	833253.39	822120.94	18	0	1
R137	833080.91	822182.63	833100.53	822129.44	18	0	1
R138	833100.53	822129.44	833121.79	822072.07	18	0	1
R139	833121.68	822072.03	833156.56	821977.95	18	0	1
R140	833274.46	822007.07	833296.66	821947.56	17	0	1

Road Pair	NO_2 x 100 (g/VMT) Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R071	11.9803	11.9855	12.0602	12.1249	12.0827	12.1928	12.1663	14.0369	11.2644	13.3364	11.5901	12.6499	11.3596	13.0808	10.5243	11.3361	11.2108	10.9149	11.3093	10.0893	13.3092	15.5777	12.8890	11.3059
R072	10.4884	10.4066	10.4015	10.5332	10.7198	10.4474	10.4684	12.3253	10.1096	11.0436	9.6564	10.6082	9.4949	10.7681	8.4217	9.6222	9.6171	8.8767	8.4887	7.9969	10.6364	12.3843	10.0761	9.3929
R073	10.8809	10.7134	10.8795	10.9614	11.0013	10.8399	10.9312	12.5438	9.7287	11.6202	10.3810	11.3882	10.4567	11.6918	9.7530	10.4025	10.2508	10.1023	10.4146	9.6728	12.2327	14.1074	11.9750	10.8915
R074	11.0831	10.9650	11.1468	10.9812	11.1270	11.1184	11.1678	12.7314	10.0881	11.6906	10.4897	11.4020	10.3303	11.5767	9.3882	10.0142	9.7664	9.6195	9.8216	8.9205	11.9471	14.0976	11.7449	10.1450
R075	9.9813	9.9793	9.8900	10.0629	10.0139	10.1946	10.1366	11.6610	9.1221	10.5712	9.4331	10.3441	9.3581	10.4738	8.4343	9.1479	8.8945	8.7241	8.9254	8.1137	10.9237	12.9764	10.7829	9.1743
R076	11.1399	11.3539	11.1679	11.4126	11.4125	11.2679	11.3537	13.2436	10.9960	11.8510	10.4537	11.5378	10.3427	12.0493	9.4105	10.5621	10.5452	9.9063	10.1158	9.2516	12.7269	15.0013	12.2126	10.6458
R076	11.1399	11.3539	11.1679	11.4126	11.4125	11.2679	11.3537	13.2436	10.9960	11.8510	10.4537	11.5378	10.3427	12.0493	9.4105	10.5621	10.5452	9.9063	10.1158	9.2516	12.7269	15.0013	12.2126	10.6458
R076	11.1399	11.3539	11.1679	11.4126	11.4125	11.2679	11.3537	13.2436	10.9960	11.8510	10.4537	11.5378	10.3427	12.0493	9.4105	10.5621	10.5452	9.9063	10.1158	9.2516	12.7269	15.0013	12.2126	10.6458
R077	10.2149	10.2531	10.2548	10.2897	10.3992	10.3165	10.3724	12.0025	9.4961	11.0160	9.7407	10.7565	9.7364	11.1564	8.9761	9.7206	9.5536	9.5435	9.8863	8.9274	12.1658	14.4698	11.9123	10.3427
R077	10.2149	10.2531	10.2548	10.2897	10.3992	10.3165	10.3724	12.0025	9.4961	11.0160	9.7407	10.7565	9.7364	11.1564	8.9761	9.7206	9.5536	9.5435	9.8863	8.9274	12.1658	14.4698	11.9123	10.3427
R077	10.2149	10.2531	10.2548	10.2897	10.3992	10.3165	10.3724	12.0025	9.4961	11.0160	9.7407	10.7565	9.7364	11.1564	8.9761	9.7206	9.5536	9.5435	9.8863	8.9274	12.1658	14.4698	11.9123	10.3427
R078	12.7378	12.5209	12.6066	12.7353	12.7637	12.9044	12.8665	14.8017	12.7419	13.4325	11.9045	12.9690	11.5950	13.2316	10.4972	11.6081	11.6066	10.7417	10.8667	10.0919	13.2473	15.4746	12.7691	11.5421
R079	9.3224	9.4765	9.3715	9.4655	9.4766	9.3833	9.5035	10.9602	8.2130	9.9583	9.0274	10.0679	9.2374	10.5879	8.6601	9.1913	8.9735	9.2048	10.0117	8.8959	12.2675	14.6766	12.1720	9.9430
R080	11.9204	11.9622	11.9844	12.0899	12.0912	11.8649	12.0365	13.9290	10.6073	12.6709	11.0581	12.3457	11.0013	12.8318	9.9357	10.8280	10.6501	10.1602	10.6114	9.5420	13.1866	15.7217	12.7662	11.0137
R081	10.0117	10.1313	10.0698	10.1142	10.1292	10.0592	10.2226	11.5764	8.9849	10.6626	9.7878	10.7625	9.8931	11.1487	9.3139	9.8178	9.5632	9.7170	10.5338	9.4532	12.6525	14.9869	12.6596	10.5232
R082	14.5096	14.6345	14.4354	14.5241	14.6264	14.4815	14.6822	16.9962	13.2456	16.4862	14.4256	15.8811	14.4870	16.4656	13.5547	14.2386	14.0348	13.7750	14.4318	13.3833	16.7863	19.3744	16.3482	14.3338
R082	14.5096	14.6345	14.4354	14.5241	14.6264	14.4815	14.6822	16.9962	13.2456	16.4862	14.4256	15.8811	14.4870	16.4656	13.5547	14.2386	14.0348	13.7750	14.4318	13.3833	16.7863	19.3744	16.3482	14.3338
R082	14.5096	14.6345	14.4354	14.5241	14.6264	14.4815	14.6822	16.9962	13.2456	16.4862	14.4256	15.8811	14.4870	16.4656	13.5547	14.2386	14.0348	13.7750	14.4318	13.3833	16.7863	19.3744	16.3482	14.3338
R083	6.1530	6.3074	6.3964	6.5354	6.6833	6.5185	6.4130	6.9228	6.2308	7.0272	6.4737	6.7578	6.4309	6.5895	6.0534	6.3315	6.0304	6.0287	6.2097	5.9530	6.9176	8.1178	7.3427	6.3725
R083	6.1530	6.3074	6.3964	6.5354	6.6833	6.5185	6.4130	6.9228	6.2308	7.0272	6.4737	6.7578	6.4309	6.5895	6.0534	6.3315	6.0304	6.0287	6.2097	5.9530	6.9176	8.1178	7.3427	6.3725
R083	6.1530	6.3074	6.3964	6.5354	6.6833	6.5185	6.4130	6.9228	6.2308	7.0272	6.4737	6.7578	6.4309	6.5895	6.0534	6.3315	6.0304	6.0287	6.2097	5.9530	6.9176	8.1178	7.3427	6.3725
R084	14.5912	14.4051	14.4079	14.5868	14.6007	14.5203	14.6460	16.9566	12.9084	16.1177	14.4239	16.0176	14.6698	16.8806	13.9338	14.3237	14.1031	14.5878	15.7448	14.3012	18.2416	21.2273	18.0894	15.0148
R084	14.5912	14.4051	14.4079	14.5868	14.6007	14.5203	14.6460	16.9566	12.9084	16.1177	14.4239	16.0176	14.6698	16.8806	13.9338	14.3237	14.1031	14.5878	15.7448	14.3012	18.2416	21.2273	18.0894	15.0148
R085	15.4252	15.4832	15.4716	15.5750	15.5958	15.6416	15.7726	17.7396	14.2554	17.0518	15.5267	16.9583	15.6536	17.5436	14.8470	15.1504	14.8803	14.9912	16.2943	14.6516	18.5659	21.4648	18.0885	15.6140
R085	15.4252	15.4832	15.4716	15.5750	15.5958	15.6416	15.7726	17.7396	14.2554	17.0518	15.5267	16.9583	15.6536	17.5436	14.8470	15.1504	14.8803	14.9912	16.2943	14.6516	18.5659	21.4648	18.0885	15.6140
R085	15.4252	15.4832	15.4716	15.5750	15.5958	15.6416	15.7726	17.7396	14.2554	17.0518	15.5267	16.9583	15.6536	17.5436	14.8470	15.1504	14.8803	14.9912	16.2943	14.6516	18.5659	21.4648	18.0885	15.6140
R086	14.8538	14.6998	14.8930	14.6429	14.8957	14.9350	14.9648	16.7137	12.8099	16.0038	14.0735	15.4525	14.0457	15.8713	13.1606	13.4151	12.9759	13.0705	14.0649	12.7701	16.3704	19.1819	16.5467	13.7379
R086	14.8538	14.6998	14.8930	14.6429	14.8957	14.9350	14.9648	16.7137	12.8099	16.0038	14.0735	15.4525	14.0457	15.8713	13.1606	13.4151	12.9759	13.0705	14.0649	12.7701	16.3704	19.1819	16.5467	13.7379
R087	21.0662	20.9566	21.0381	20.9566	21.0098	21.0040	21.1326	21.7559	20.6643	21.7189	21.2957	21.6037	21.0029	21.5145	20.7465	20.9006	20.7761	20.7611	21.2008	20.6230	21.6192	22.4110	21.5663	20.8515
R088	2.3066	2.2739	2.2875	2.3154	2.3058	2.3375	2.3687	3.8223	3.9463	3.8309	3.5514	2.9584	2.6789	2.3421	2.4336	2.3108	2.1473	2.1462	1.8941	1.5558	1.6365	1.6111	1.6997	1.4957
R088	2.3066	2.2739	2.2875	2.3154	2.3058	2.3375	2.3687	3.8223	3.9463	3.8309	3.5514	2.9584	2.6789	2.3421	2.4336	2.3108	2.1473	2.1462	1.8941	1.5558	1.6365	1.6111	1.6997	1.4957
R088	2.3066	2.2739	2.2875	2.3154	2.3058	2.3375	2.3687	3.8223	3.9463	3.8309	3.5514	2.9584	2.6789	2.3421	2.4336	2.3108	2.1473	2.1462	1.8941	1.5558	1.6365	1.6111	1.6997	1.4957
R088	2.3066	2.2739	2.2875	2.3154	2.3058	2.3375	2.3687	3.8223	3.9463	3.8309	3.5514	2.9584	2.6789	2.3421	2.4336	2.3108	2.1473	2.1462	1.8941	1.5558	1.6365	1.6111	1.6997	1.4957
R088	2.3066	2.2739	2.2875	2.3154	2.3058	2.3375	2.3687	3.8223	3.9463	3.8309	3.5514	2.9584	2.6789	2.3421	2.4336	2.3108	2.1473	2.1462	1.8941	1.5558	1.6365	1.6111	1.6997	1.4957
R088	2.3066	2.2739	2.2875	2.3154	2.3058	2.3375	2.3687	3.8223	3.9463	3.8309	3.5514	2.9584	2.6789	2.3421	2.4336	2.3108	2.1473	2.1462	1.8941	1.5558	1.6365	1.6111	1.6997	1.4957
R088	2.3066	2.2739	2.2875	2.3154	2.3058	2.3375	2.3687	3.8223	3.9463	3.8309	3.5514	2.9584	2.6789	2.3421	2.4336	2.3108	2.1473	2.1462	1.8941	1.5558	1.6365	1.6111	1.6997	1.4957
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R089	2.2655	2.2345	2.2574	2.2821	2.3152	2.3046	2.3264	2.9207	2.9305	2.7706	2.6736	2.3071	2.1958	1.9627	2.0691	1.9617	1.8815	2.0242	1.8787	1.4516	1.5746	1.5765	1.6104	1.4652
R090+R091	9.0329	9.0855	8.9433	9.0497	9.2269	9.0547	9.1309	11.6119	9.0865	10.7204	9.2379	10.3569	9.5236	10.6643	8.7183	10.2254	10.1426	10.1209	9.7456	8.9692	11.4740	13.8096	10.7919	9.7949
R092+R093	8.7903	8.5875	9.3134	9.5122	9.4155	8.4303	8.9973	11.2809	8.8020	10.2999	9.3061	10.2869	9.4686	10.7597	8.5880	10.0903	10.1602	9.9258	9.5396	8.8125	11.4202	13.5180	10.8447	10.1918
R092+R093	8.7903	8.5875	9.3134	9.5122	9.4155	8.4303	8.9973	11.2809	8.8020	10.2999	9.3061	10.2869	9.4686	10.7597	8.5880	10.0903	10.1602	9.9258	9.5396	8.8125	11.4202	13.5180	10.8447	10.1918
R094	5.4705	5.4065	5.4161	5.5796	5.6345	5.6442	5.4958	6.4855	4.4902	5.9141	4.9444	5.1363	4.4383	4.4343	3.4650	3.5480	3.0657	3.0326	2.5874	2.3559	3.1266	3.9948	3.5188	2.8848
R095	23.0683	22.7126	22.8881	23.0649	23.1332	23.1461	23.3639	24.3704	23.4670	24.0309	23.6506	23.9936	23.3930	23.7744	22.9474	23.3317	23.2986	22.9982	23.4267	22.5991	23.7845	24.8249	23.8486	23.0670
R096+R097	12.1830	15.7593	10.5722	6.3343	6.3674	13.7591	11.7346	15.8365	14.5357	15.9027	14.0401	14.7952	13.3745	15.4955	12.4801	14.1650	13.7630	12.9765	12.2626	11.1408	14.2206	17.1775	14.1650	13.6655
R098+R099	20.3407	20.1309	20.5538	21.6700	20.4339	18.7695	19.6805	21.5236	23.0039	24.1075	20.9700	21.4107	18.8693	20.8998	17.1060	18.7661	16.8952	15.4469	14.7364	14.1751	17.1402	18.6409	15.0466	15.4318
R100+R101	16.2197	16.1559	18.6533	16.6044	17.8522	16.0628	18.6901	19.8581	18.6609	21.0716	18.2829	18.4717	17.5658	18.4170	15.2753	17.6422	16.3383	15.0489	14.0826	13.3055	16.2068	19.0484	15.2496	15.5124
R102+R103	15.9731	17.8336	15.1830	16.2809	16.3782	17.1910	16.2888	20.8311	17.8819	19.4648	16.3143	17.8484	15.1054	16.9333	12.8802	15.2823	14.6758	12.5008	11.4680	11.1609	15.2220	17.7574	13.7571	14.1206
R104+R105	14.1639	16.4154	14.1439	13.9483	14.0298	16.0075	13.9483	18.9767	16.7686	17.5706	15.5345	17.0169	14.4888	15.9762	12.5230	14.5200	13.8025	12.8217	11.8042	11.4568	15.0761	17.3002	14.1905	14.1266
R106	10.8183	11.0208	11.3322	11.5388	11.7679	10.3809	10.7897	13.2760	10.7295	12.5398	11.1670	12.5363	11.4906	13.4665	10.8169	12.6663	12.7512	12.2858	11.8826	11.1622	14.3162	17.0004	13.3356	12.5034
R107	11.6041	10.1716	11.6339	13.6661	12.2284	10.8581	11.6480	13.1000	10.3813	11.7699	10.5420	12.0821	11.1261	12.6801	10.1209	11.8519	12.4224	11.8275	11.2113	10.4910	13.6899	16.5800	13.5828	13.5480
R108	11.4633	10.3398	11.5071	13.1266	12.5456	11.8270	11.5469	13.0972	10.5226	11.9571	11.0053	12.0311	11.2512	12.9296	10.4586	12.2140	12.9025	11.9616	11.5842	10.8656	14.2987	16.8119	13.3059	12.6224
R109	11.1290	9.9479	11.1804	12.8639	12.2403	11.4964	11.2064	12.8122	10.1615	11.6290	10.6770	11.8047	10.8025	12.6448	10.1659	11.7927	12.4420	11.5459	11.1039	10.2798	13.6331	16.1922	13.6411	12.6656
R110	10.6239	10.7195	10.2811	11.7160	11.3046	10.3544	11.3488	13.0820	10.0150	11.6647	10.4991	11.7243	10.8062	12.4660	10.0121	11.6737	12.0162	11.1529	11.0979	10.3790	13.4251	15.6393	13.2011	12.5050
R111	10.9168	11.2254	10.2984	11.4930	11.0119	10.3567	11.0074	12.9171	10.5036	12.1176	10.6769	11.9531	10.8818	12.3899	10.1083	11.4858	12.1303	11.2514	10.7607	10.3331	13.6568	16.2597	12.9503	11.4997
R112	21.1474	21.5857	23.4594	22.1404	21.6015	21.8255	21.9914	24.8469	23.6270	24.0463	21.0861	22.0622	20.2100	22.4685	17.1747	19.7856	18.6666	16.2862	15.3433	14.9077	17.9861	19.9202	15.9067	17.0357
R113	10.5925	10.3828	11.4288	8.9122	8.1317	11.5511	10.2473	11.7725	9.5484	11.1198	9.7790	11.1593	10.0005	11.3815	9.3148	10.7897	11.4215	10.5205	10.1291	9.3747	12.8222	14.8664	12.2838	11.4556
R114	12.6866	12.1502	12.4728	12.6036	12.4523	12.4402	12.6945	14.6825	12.9798	14.8454	13.5108	14.2736	13.2581	14.4646	12.6530	13.6601	14.2531	13.2386	12.7710	11.9551	14.4806	16.5712	13.6321	13.0379
R115	17.5670	17.4345	17.6178	17.7173	17.2136	17.6230	17.7018	19.8603	17.8882	19.3048	16.9808	18.1039	16.3622	18.1524	14.7037	16.4562	16.6046	14.6354	13.8044	13.5289	16.2003	18.2751	15.0542	15.3739
R116	11.7815	11.7574	12.3671	12.4781	12.2555	12.2488	12.0731	13.7105	11.3994	13.1114	11.8713	12.9386	12.0274	13.3168	11.2456	12.6080	13.3737	12.1980	11.7750	11.3159	13.8228	15.7266	13.2125	12.6294
R117	11.8785	12.2946	11.9609	12.5538	12.5281	12.3171	12.2257	13.7502	11.5761	12.9766	12.0702	13.0951	12.1430	13.4127	11.4032	12.6356	13.5436	12.3427	11.8872	11.4255	13.8679	15.8215	13.3636	12.9037
R118	12.4168	12.3404	12.1267	12.6997	12.6794	12.4763	12.3339	13.8961	11.7344	13.1087	12.2512	13.1762	12.2475	13.4911	11.5319	12.7701	13.6500	12.4445	12.2766	11.5153	14.2903	15.8823	13.4716	12.8190
R119	11.8544	11.6194	12.0142	11.9634	11.6534	11.8605	11.9525	13.6027	11.6349	13.0090	12.1100	12.9087	12.0312	13.3003	11.5526	12.6533	13.6013	12.3829	12.2766	11.5153	14.2903	15.8823	13.4716	12.8190
R120	12.2160	12.2237	12.2429	12.1370	11.8846	12.5576	12.2048	14.1751	11.9202	13.3463	12.4133	13.4445	12.5369	13.7602	11.7641	13.1025	13.6936	12.7322	12.3213	11.5607	14.2847	15.8581	13.3710	12.9868
R121	13.0668	11.6969	13.9391	12.6317	12.6938	12.7047	12.2932	15.1496	9.8561	13.8633	12.0330	14.1609	13.4238	16.4665	13.1061	13.5164	14.1448	15.0092	17.2573	14.8007	21.3363	25.7074	20.8525	16.2696
R122	14.0927	14.5722	14.8492	15.4365	15.5282	14.6223	13.9080	16.4977	11.5356	16.2362	13.2928	14.5648	12.6838	14.3421	11.2760	11.2774	9.8436	10.2211	11.0770	9.6545	12.8483	15.2333	12.7943	10.2108
R123	6.2259	6.1526	6.0829	6.0194	5.5300	6.7415	6.4659	8.1765	5.3230	7.1179	6.3200	7.2046	6.7405	7.5754	6.2133	6.9588	6.6785	7.4620	7.9548	6.6869	9.3704	11.8151	9.7766	7.3469
R124	15.9521	15.5059	15.5235	16.2666	15.6510	16.2353	15.7896	17.6681	14.0133	17.4693	15.7157	17.2614	16.3575	18.7660	15.8570	16.2229	17.1463	16.9006	18.5688	16.4895	21.8409	25.3215	21.9317	17.1860
R125	14.6044	14.7057	14.1613	14.7451	15.2916	14.1645	14.6926	17.3249	11.6572	16.2161	13.1570	14.2501	12.0403	13.5744	10.0782	9.9168	7.8815	8.1818	8.2170	7.3929	9.8966	11.8200	10.3254	8.1176
R126	13.0306	13.2389	12.5048	14.4032	13.7706	12.7811	13.6199	15.4312	12.8774	14.6587	13.0956	14.4948	13.1401	14.8623	12.3482	14.0472	13.9251	13.2818	13.4277	12.3686	15.5587	18.5174	14.9101	13.6231
R127	12.4829	13.2405	12.5760	12.4331	11.8955	12.4778	12.8342	14.5918	11.1142	13.6658	12.6513	13.9743	12.9305	14.4707	12.6366	13.1302	13.4913	13.7336	14.9038	13.2553	17.2223	20.4007	16.8338	13.8793
R128	11.3505	11.2297	11.8194	11.7665	11.3327	11.2122	11.2561	13.1001	9.4432	11.9978	10.9610	12.3356	11.4529	13.1107	11.2297	11.7536	12.0257	12.4763	13.6548	12.1206	15.9402	19.2210	16.2124	12.9780
R129	9.3047	9.2399	9.1310	9.3963	9.2669	9.3929	9.4318	11.3387	7.9041	10.3625	9.3624	10.5649	9.9684	11.4582	9.6019	10.1588	9.9357	10.6029	11.9781	10.2861	14.3810	17.1507	14.1941	11.2371
R130	8.9238	8.8811	8.8328	8.8575	9.0120	8.9080	8.9810	10.9671	7.4894	9.9919	8.9756	10.1741	9.3623	11.1048	8.9988	9.7480	9.4896	10.2319	11.6318	9.8987	14.2295	16.9092	13.8902	10.8238
R131	9.8557	9.8080	9.8670	9.8500	10.0115	9.9070	9.9408	12.1617	9.4048	11.2156	9.5193	10.8511	9.9064	11.5996	9.0268	10.3016	10.5724	10.2454	10.8325	9.6379	13.2424	15.6449	12.5706	11.0799
R132	6.8492	6.9268	7.0975	7.1109	7.0445	6.8904	6.5494	7.4781	6.8194	7.8284	6.8901	7.1025	6.6002	6.6407	5.5609	5.8104	5.4313	5.2740	5.2458	4.7784	5.5703	6.5307	5.5374	4.9168
R133	14.2823	14.9454	15.6196	16.3246	15.8726	14.9557	13.9827	16.2752	13.7533	15.7819	13.4326	14.6323	12.8329	14.4293	11.1157	11.9038	10.8526	10.5551	10.6519	9.6995	12.8951	14.8002	11.8056	10.5809
R134	10.6518	11.1971	12.0997	12.7598	12.1769	11.2451	10.2821	12.2396	10.0267	11.3180	10.0789	10.9773	10.0387	11.1169	9.0758	10.1027	10.1564	9.9222	9.7393	8.8075	11.0852	13.2582	10.8738	9.7467
R135	12.5889	15.9411	18.6836	19.2813	18.1223	17.3817	13.4424	13.0758	8.3074	11.6094	10.7227	11.6536	11.1080	12.7358	10.6625	11.2618	10.6191	10.9228	11.7933	10.9257	15.9394	18.5840	16.4264	13.3224
R136	7.0837	9.8014	12.5674	1.6113	1.6225	12.7047	11.1503	11.3024	7.4832	10.7223	8.8775	10.1657	9.6884	11.3926	9.2317	9.7995	9.3139	10.1723	11.2782	9.9483	13.6744	17.1983	14.8869	11.7528
R137	8.8739	8.8495	11.3195	1.5158	1.5342	11.4407	8.1534	10.3902	6.3024	8.9777	7.6293	8.9713	8.7112	10.2355	7.9138	8.6431	9.0767	9.1833	10.4064	9.2087	12.8748	16.3581	14.1756	10.5885
R138	8.8739	8.8495	11.3195	1.5158	1.5342	11.4407	8.1534	10.3902	6.3024	8.9777	7.6293	8.9713	8.7112	10.2355	7.9138	8.6431	9.0767	9.1833	10.4064	9.2087	12.8748	16.3581	14.1756	10.5885
R139	8.0545	7.9146	8.2332	7.6795	8.1331	8.2227	8.2166	9.9899	6.4267	8.8198	7.7651	9.1736	8.4285	10.1437	8.1303	8.7114	8.8782	9.4687	10.8212	9.1209	13.3793	16.5491	13.5382	10.1805
R140	15.6704	15.3287	15.1314	15.5572	15.4153	16.2426	15.7435	18.1145	13.4806	16.7194	14.1307	14.9920	12.9332	14.1394	10.7519	10.8088	8.9430	9.1990	9.4079	8.2386	11.0653	13.4567	11.2832	9.4832

Caline 4 input for 2049 Q4

Road Pair	Coordinate (m)				Width (including mixing zone)	Height (m)	Road Type (caline 4)	NO_2 x 100 (g/VMT)																							
	X1	Y1	X2	Y2				Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R141	833295.35	821947.25	833315.56	821891.67	13	0	1	14.2192	13.8954	11.4700	11.0573	14.0777	15.4177	14.2409	17.7867	12.7019	16.1656	13.1478	14.1763	11.9995	13.2960	9.8813	9.9188	7.6768	8.1068	8.4601	7.4196	10.5486	13.1338	10.7427	8.4028
R142	833329.69	821953.87	833315.96	821891.84	13	0	1	7.5593	6.0967	6.7785	5.8110	5.4202	6.8396	7.6437	8.5395	6.5097	8.0780	7.5440	8.2222	7.7509	8.2209	7.1803	7.9555	7.7392	7.2831	7.2859	7.1483	8.6525	10.6881	9.2053	8.2029
R143	833129.75	821889.31	833160.17	821834.07	13	0	1	16.1859	16.0533	15.7467	16.0274	15.9663	16.7930	16.1950	18.4284	15.1465	18.1117	15.7384	16.5007	14.1601	15.3236	12.3659	12.0530	10.5735	10.3096	10.4056	9.4384	11.8821	14.2056	12.1579	10.2350
R144	833160.17	821834.07	833178.74	821783.15	13	0	1	15.9673	15.8047	15.5442	16.1182	15.9862	16.6819	16.0582	18.2376	14.1626	17.3216	14.8756	15.7365	13.6966	14.9456	11.6772	11.6879	9.7710	9.9077	9.9797	8.8338	11.5703	13.9166	11.9177	9.9040
R145+R146	833812.49	821976.50	834004.58	821616.03	17	0	1	12.5848	11.6969	13.9391	8.2235	15.8571	11.5970	12.2915	14.3840	9.3703	13.2926	10.5181	11.6537	9.6517	10.5475	7.8257	7.6350	5.3732	6.0282	5.9923	5.2008	7.0194	8.7918	7.6006	5.9840
R147+R148	833736.44	821888.35	833931.13	821727.74	16	0	1	10.5373	10.7140	12.5674	14.0092	12.6938	11.8526	10.9878	13.1204	8.5180	11.8319	9.4417	10.1415	8.4306	9.0418	6.5048	6.3124	4.5994	5.1804	4.8122	4.2183	6.1225	7.0080	6.3997	5.1120
R149	833728.61	821749.52	833807.73	821684.38	14	0	1	9.3489	8.8888	8.1779	9.8766	9.9260	11.1223	9.0369	11.4737	7.2911	9.9868	8.9348	10.1919	9.5553	11.4585	9.3452	9.6296	10.7749	11.2069	12.7439	10.8203	15.5416	18.8982	16.6781	12.5999
R149	833774.08	821643.52	833807.73	821684.38	13	0	1	9.3489	8.8888	8.1779	9.8766	9.9260	11.1223	9.0369	11.4737	7.2911	9.9868	8.9348	10.1919	9.5553	11.4585	9.3452	9.6296	10.7749	11.2069	12.7439	10.8203	15.5416	18.8982	16.6781	12.5999
R150	833736.87	821759.23	833807.71	821603.87	11	0	1	9.3489	8.8888	8.1779	9.8766	9.9260	11.1223	9.0369	11.4737	7.2911	9.9868	8.9348	10.1919	9.5553	11.4585	9.3452	9.6296	10.7749	11.2069	12.7439	10.8203	15.5416	18.8982	16.6781	12.5999
R151	833613.61	821610.98	833693.50	821543.70	13	0	1	9.3489	8.8888	8.1779	9.8766	9.9260	11.1223	9.4720	11.4737	7.3718	10.1009	8.9348	10.1919	9.5553	11.4585	9.1761	9.6296	9.7603	10.9240	12.3301	10.3865	15.5416	18.8982	16.6781	11.4986
R151	833693.50	821543.70	833775.28	821642.63	14	0	1	9.3489	8.8888	8.1779	9.8766	9.9260	11.1223	9.4720	11.4737	7.3718	10.1009	8.9348	10.1919	9.5553	11.4585	9.1761	9.6296	9.7603	10.9240	12.3301	10.3865	15.5416	18.8982	16.6781	11.4986
R152	833774.08	821643.52	833826.17	821600.58	20	0	1	9.3489	8.8888	8.1779	9.8766	9.9260	11.1223	9.0369	11.4737	7.2911	9.9868	8.8211	10.0371	9.2617	11.0137	8.7088	9.5678	9.5966	10.4973	11.4143	9.8038	14.9541	18.1263	14.5046	10.5976
R153	833991.31	822369.76	834028.77	822414.27	18	0	1	9.9614	10.1233	9.7613	9.8044	10.3024	10.2642	10.1909	12.4271	8.6130	11.2345	9.3805	9.9145	8.7309	9.9621	7.3705	7.9942	7.4219	7.3841	7.6737	6.7478	9.6202	11.9646	10.1196	8.0887
R154	833950.46	822320.45	833992.00	822399.67	18	0	1	9.8935	10.2122	9.5402	9.9324	10.4661	9.9982	10.2723	12.4706	8.5867	11.1235	9.2917	10.0062	8.7914	9.8190	7.4495	7.9322	7.3112	7.4977	7.8021	6.8022	9.6415	11.9041	9.9379	7.9138
R155	833909.65	822271.35	833960.46	822320.45	18	0	1	9.8956	10.2300	9.7578	9.7995	10.1616	10.1401	10.2845	12.7799	9.0911	11.5442	9.6225	10.1398	8.9738	10.2770	7.5383	8.1536	7.7603	7.7729	7.9354	6.9041	9.9644	12.4922	10.3299	8.1637
R156	833868.78	822222.16	833909.65	822271.35	18	0	1	14.0528	13.5141	13.3171	13.3204	13.0413	13.1476	14.2560	18.5061	14.2029	17.1360	15.0678	15.9938	14.4167	15.4051	12.7142	12.9956	12.0940	12.2776	12.2011	10.7568	13.4228	15.3488	13.2500	10.8053
R157	833866.58	822222.34	833827.77	822172.95	18	0	1	14.5694	14.1560	14.2154	13.8574	14.0316	14.0407	14.7301	18.9518	14.9363	17.5446	15.0091	15.5996	13.8898	15.5238	12.1720	12.3069	11.4819	11.5983	12.0643	10.6199	13.5165	15.5795	13.3033	10.8652
R158	833827.77	822172.95	833778.49	822113.35	18	0	1	14.3563	14.3644	14.3675	14.4082	14.6329	14.5107	14.4782	16.9211	12.9691	16.0950	13.8371	14.4728	12.9136	14.4376	11.3413	11.4224	10.6578	10.7378	11.3090	10.1701	13.4658	15.7164	13.3549	11.6448
R159	834075.91	822299.62	834112.90	822344.34	15	0	1	10.2936	10.5027	11.3924	11.4756	8.9564	11.5511	10.2922	12.2181	9.6220	11.5933	10.4244	11.8505	10.5186	12.1479	9.4669	10.5529	11.0128	10.6916	11.1154	10.0136	14.0073	16.3496	13.5497	12.1782
R160	834090.39	822287.53	834127.63	822332.11	15	0	1	12.0659	11.9385	11.9567	12.3052	11.7119	12.4329	12.5966	14.7017	11.0942	13.3983	11.1835	12.4041	11.0289	12.7874	9.5323	10.1643	9.9382	9.5653	9.9160	8.7699	12.4876	15.1514	12.2822	10.1027
R161	834034.90	822250.52	834075.91	822299.62	15	0	1	10.4760	10.3910	10.4436	10.2097	10.8294	10.4399	10.7851	13.0249	9.7506	11.7499	10.4046	11.8284	10.7537	12.5718	9.9311	11.0114	11.0036	10.9081	11.3166	10.2498	13.8771	16.7379	13.5360	11.6455
R162	834049.42	822238.28	834090.39	822287.53	15	0	1	12.1683	12.0656	11.9800	12.0657	12.0419	12.1723	12.3003	14.6107	11.1204	13.2869	11.2206	12.4881	11.0183	12.5979	9.5946	10.4070	9.9256	9.5767	9.9269	8.7440	12.3533	15.1528	12.2627	10.1088
R163	833993.96	822201.65	834034.90	822250.52	15	0	1	11.4176	11.5049	11.6571	11.3391	11.4923	11.6534	11.6701	14.0562	10.9650	12.7915	10.9015	11.9748	10.6248	12.1391	9.2517	10.3792	9.9820	9.6331	9.7509	8.6470	12.1345	14.8562	11.9010	10.1149
R164	834007.86	822189.33	834049.42	822238.28	15	0	1	11.3351	11.2847	11.3750	11.1186	11.6299	11.3942	11.3962	13.5329	10.0058	12.3798	10.3161	11.5727	10.2766	12.2955	9.2682	9.8071	9.7756	9.8435	10.4146	9.0893	12.8400	15.6226	12.6630	10.3097
R165	833953.31	822151.70	833994.47	822201.23	16	0	1	12.7100	12.5615	12.3545	12.4860	12.4048	12.7546	12.8871	14.7451	12.4801	13.4339	12.2600	13.0943	12.0124	13.2037	10.8209	11.7512	11.5228	11.1704	11.2621	10.4281	13.7786	15.7765	13.1291	11.7608
R166	833872.14	822051.39	833954.76	822150.60	19	0	1	9.5614	9.2286	9.3697	9.4248	9.4925	9.4810	9.6966	11.0575	9.2058	10.1728	9.2908	9.5224	8.7554	8.5680	7.8503	8.2829	7.5441	7.6665	7.0028	6.5362	7.4982	8.5545	7.7316	7.2318
R167	833885.47	822042.45	834007.86	822189.33	16	0	1	17.3862	17.3475	17.2709	17.4503	17.7731	17.5988	17.6573	20.9543	18.4413	19.3153	16.7817	18.0338	16.1107	18.2068	14.0834	15.9244	15.9605	14.0396	13.6859	13.1269	16.7709	19.3684	15.5588	14.9677
R168+R169	833813.72	821975.47	833876.36	822050.03	21	0	1	3.8916	3.8332	3.9607	4.0586	3.8130	3.8867	3.9097	4.8236	3.8581	4.2857	3.9872	4.1422	4.0161	3.8704	3.5238	4.0352	3.7450	3.8832	3.3215	3.1527	3.7340	4.7198	4.0428	3.5762
R170+R171	833736.44	821888.35	833812.49	821976.50	18	0	1	5.8301	5.7829	5.8234	5.7142	5.9318	5.9468	5.8751	7.0726	5.5944	6.8271	6.1485	6.4417	6.0921	6.2929	5.3787	5.6625	5.3894	5.4822	5.4166	5.0119	6.1179	7.2713	6.3053	5.4943
R172+R173	833684.92	821822.32	833739.28	821887.65	20	0	1	11.8830	11.6845	11.7067	11.7702	11.6460	11.9207	11.8392	14.2545	10.6343	13.1289	11.0886	12.3086	10.9282	12.6097	9.8843	10.6307	10.4155	10.2138	10.4113	9.3879	12.5551	14.9407	12.2623	10.5312
R174+R175	833561.78	821677.56	833683.38	821823.55	16	0	1	12.6404	12.5765	12.5899	12.6988	12.6246	12.7858	12.8014	15.6766	12.7363	14.5568	13.0195	14.1067	12.7953	14.8031	11.8740	12.7649	12.7753	12.6794	12.6997	11.6369	14.9451	17.3153	14.4681	12.4169
R176	833496.77	821606.49	833560.47	821680.73	20	0	1	11.8034	11.7208	11.8183	11.8966	12.0068	11.8929	11.9073	14.1154	11.5630	12.9299	11.9054	13.0559	12.1482	13.6959	11.5422	12.7835	12.9048	12.7409	12.8263	11.8088	14.8090	17.1095	14.4278	13.2337
R177	833513.09	821599.24	833573.68	821668.47	20	0	1	13.1366	13.1021	13.1719	13.1281	13.0317	13.2886	13.1941	15.1706	11.6940	13.9393	12.0595	13.0792	11.6585	13.2495	10.5481	11.2411	10.9583	10.5146	10.4873	9.5781	12.4618	14.7724	12.2958	10.9090
R178	833440.44	821529.90	833498.60	821608.61	16	0	1	13.7248	13.5599	13.6028	13.7500	13.9612	13.7105	13.9853	16.0112	13.7924	14.8610	13.8260	15.0948	14.0878	15.9440	13.4887	14.6797	14.7410	14.6380	15.2045	13.9191	17.3968	19.8956	17.0474	15.2302
R179	833481.64	821526.21	833511.32	821600.35	17	0	1	14.7275	14.5908	14.6828	14.7525	14.8147	14.7848	14.8803	17.2750	13.8192	15.8653	14.0091	15.3315	13.7868	15.7452	12.5060	13.8947	13.9463	12.8957	12.7246	12.0726	15.6277	17.6950	14.5292	13.7030
R180	834218.31	822258.35	834325.56	822385.39	18	0	1	12.4983	12.5446	12.8084	12.7937	12.8566	12.5248	12.9062	15.3386	11.8766	14.3773	12.1334	13.6228	12.2728	14.2808	11.1146	12.2773	11.9952	11.8273	12.2356	10.6679	15.2757	18.5751	14.9572	12.6303
R181	834161.98	822212.22	834218.31	822258.35	18	0	1	12.8074	9.8014	8.9095	9.8766	11.1122	9.9354	13.7953	13.9109	9.6626	12.3230	10.7243	12.0812	12.4147	14.1025	11.0101	12.3365	11.6710	12.5801	13.0751	11.2781	15.8198	19.3291	16.1241	12.7409
R182	834140.62	822162.67	834151.78	822212.39	18	0	1	11.3181	11.3530	12.1111	12.1095	14.1720	12.7815	11.6705	13.4722	10.1984	11.8107	10.5946	12.0173	10.9984	13.7544	9.8901	11.1378	11.7354	11.5606	12.0620	10.3072	14.8817	19.1267	14.9561	12.2802
R183	834099.34	822113.33	834140.62	822162.67	18	0	1	12.7102	13.1551	13.8950	14.2256	14.6759	15.1657	12.8913	15.1608	11.6178	13.7460	11.9491	13.2282	12.1058	13.8700	11.0101	10.6013	10.3081	10.3843	11.2353	10.4674	14.9394	18.4658	14.2010	13.4468
R184	834077.01	822132.08	834051.51	822100.94	13	0	1	12.5865	12.1029	11.9898	11.9429	11.8422	12.7047	12.7370	14.9448	9.4884	13.5673	10.2315	11.1088	9.0422	9.8101	7.0095	7.0944	5.8858	5.9964	6.0281	5.0943	7.3172	9.1669	7.9829	5.7168
R184	834051.51	822100.94	834071.90	822084.18	13	0	1	12.5865	12.1029	11.9898	11.9429	11.8422	12.7047	12.7370	14.9448	9.4884	13.5673	10.2315	11.1088	9.0422	9.8101	7.0095	7.0944	5.8858	5.9964	6.0281	5.0943	7.3172	9.1669	7.9829	5.7168
R184	834071.90	822084.18	834097.30	822115.02	14	0	1	12.5865	12.1029	11.9898	11.9429	11.8422	12.7047	12.7370	14.9448	9.4884	13.5673	10.2315	11.1088	9.0422	9.8101	7.0095	7.0944	5.8858	5.9964	6.0281	5.0943	7.3172	9.1669	7.9829	5.7168
R185	834309.95	822180.58	834382.86	822267.44	19	0	1	12.1615	11.9769	12.5512	12.1494	12.8566	12.1990	12.6560	14.4760	11.0428	13.1520	11.6210	13.2389	11.7275	14.0798	11.0785	12.1817	12.3637	11.8998	12.4882	11.0828	15.3105	18.1073	14.8795	12.5576
R186	834231.54	822086.63	834273.34	822138.83	19	0	1	13.7368	13.8611	14.9806	15.6753	17.0493	15.7810	13.4773	15.9970	12.5397	14.0033	12.2433	14.0587	12.3807	14.1025	11.0102	10.2642	9.7641	10.0620	10.7699	10.0636	14.2167	17.4344	14.2010	13.4468
R187	834190.59	822037.73	834231.76	822086.45	18	0	1	13.6621	14.2294	13.6258	14.3270	14.8305	14.4143	14.1209	16.4844	13.5230	15.1326	14.2250	15.6800	14.5962	16.1151	13.8423	15.1257	15.0262	14.9764	15.3315	14.4773	17.6896	20.2098	17.4220	15.6261
R188+R189	834004.98	821816.03	834058.34	821880.22	19	0	1	11.8024	11.1656	12.0310	12.8203	11.7447	11.5642	11.9468	13.6910	10.0465	12.2925	10.6629	11.8077	10.8705	12.1452	9.5825	10.2201	10.2358	10.0780	10.3857	9.1376	12.8622	15.0002	12.5007	10.9508
R190+R191	833931.13	821737.74	834004.98	821816.03	19	0	1	12.6090	13.2134	12.7794	13.2494	13.8178	13.2242	13.2243	15.2876	11.6538	13.6721	11.7658	13.1423	11.9437	13.8656	10.6527	11.7140	11.7765	11.2283	11.8951	10.6139	14.7847	17.6066	14.4884	12.1166
R192+R193	833878.32	821660.75	833930.85	821727.99	20	0	1	9.8923	9.6409	9.5982	10.3744	10.9746	9.8728	9.6977	11.0323	8.1475	9.7697	8.6605	9.9402	9.0674	10.7318	7.5720	8.4316	7.9026	7.4991	7.1593	7.1973	11.0551	13.5527	8.8029	10.1301
R194+R195	833825.79	821600.86	833867.51	821651.46	20	0	1	18.1229	16.9850	17.5410	18.6147	18.7771	17.9008	18.1392	18.8020	15.8941	18.1627	17.1846	19.1308	17.8196	18.6146	17.0755	17.8220	17.9863	18.1432	18.7065	18.1002	20.3171	21.3830	19.8141	19.3269
R196+R202	833761.01	821523.38	833826.17	821600.55	20	0	1	18.1488	18.4711	15.0483	16.7097	16.8903	16.9690	18.6477	18.1338	18.0204	16.9544	15.0460	15.8971	17.1648	16.0081	16.4603	17.0064	17.0407	19.4765	17.0039	16.5011	18.6000	20.1657	18.5063	20.3535
R197	834364.36	822060.94	834400.15	822104.71	17	0	1	15.1192	10.9748	8.1779	8.2235	9.9260	9.9354	9.9615	15.1666	11.2890	14.3490	12.7089	14.3108	8.8169	11.0120	9.2300	8.9482	9.4687	7.7649	8.2258	8.6821	12.6044	20.3487	16.6710	12.5999
R198	834322.77	822010.68	834364.36	822060.94	18	0	1	12.1815	10.3490	9.8240	8.2235	9.9260	9.0123	9.9615	13.5139	9.0113	11.8852	10.4685	11.9472	11.0570	13.3380	10.6189	11.7168	12.0361	11.7320	11.9299	10.9191	16.7243	17.9548	14.4881	16.6469
R199	834281.93	821961.17	834323.00	822010.48	19	0	1	14.9018	15.0336	15.3686	17.5251	17.3979	17.6133	15.6537	16.8572	13.9274	15.8530	14.2741	13.9593	13.2694	14.4793	11.3538	12.1731	12.2328	14.2556	14.1094	13.7110	16.0902	18.7757	14.4612	13.9410
R200	834239.17	821914.13	834299.06	821983.18	14	0	1	13.6235	12.5084	13.2868	13.3506	14.1634	14.0170	13.8151	15.6480	12.3439	14.9122	11.8977	13.4137	11.7144	14.0200	10.6503	12.2821	12.4171	11.8444	11.9838	10.8435	14.3813	17.1853	13.8672	12.6790
R200	834239.17	821914.13	834327.69	821840.33	18	0	1	13.6235	12.5084	13.2868	13.3506	14.1634	14.0170	13.8151	15.6480	12.3439	14.9122	11.8977	13.4137	11.7144	14.0200	10.6503	12.2821	12.4171	11.8444	11.9838	10.8435	14.3813	17.1853	13.8672	12.6790

APPENDIX 4-4

Bus Schedule & Emission Inventory for Buses Start Emission

Bus Schedule

			Hour																							
			00:00 - 01:00	01:00 - 02:00	02:00 - 03:00	03:00 - 04:00	04:00 - 05:00	05:00 - 06:00	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 24:00
By Route	KMB	2B	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	KMB	2F	1	0	0	0	0	0	3	4	4	4	4	4	4	4	5	5	5	5	5	5	5	3	3	3
	KMB	30	0	0	0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	KMB	72	1	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	3	3	3
	KMB	86C	1	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
By Road	RB01	30	0	0	0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	RB02	2B, 2F, 30, 72, 86C	3	0	0	0	0	3	14	15	15	15	15	15	15	15	16	16	16	17	17	17	16	14	14	14
	RB03	2B, 2F, 30, 72, 86C	3	0	0	0	0	3	14	15	15	15	15	15	15	15	16	16	16	17	17	17	16	14	14	14
	RB04	30	0	0	0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	RB05	2B, 2F, 72, 86C	3	0	0	0	0	1	11	12	12	12	12	12	12	12	13	13	13	14	14	14	13	11	11	11
	RB06	2B, 2F, 72, 86C	3	0	0	0	0	1	11	12	12	12	12	12	12	12	13	13	13	14	14	14	13	11	11	11

Source [illegible]

Bus Soak Time (min)

			Hour																							
			00:00 - 01:00	01:00 - 02:00	02:00 - 03:00	03:00 - 04:00	04:00 - 05:00	05:00 - 06:00	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 24:00
By Route	KMB	2B	N/A	N/A	N/A	N/A	N/A	720	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	KMB	2F	30	N/A	N/A	N/A	N/A	N/A	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	KMB	30	N/A	N/A	N/A	N/A	N/A	720	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	KMB	72	30	N/A	N/A	N/A	N/A	N/A	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	KMB	86C	30	N/A	N/A	N/A	N/A	720	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
By Road	All	All	30	N/A	N/A	N/A	N/A	720	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

Note
[1] The soak time of the buses are found to be <30 minutes during daytime and evening time according to site survey in 10th July 2021.
[2] The soak time of the buses during 5:00-7:00 are unknown thus 720 min has been assumpted for conservative assessment.

Bus Schedule & Emission Factor

		Hour																							
		00:00 - 01:00	01:00 - 02:00	02:00 - 03:00	03:00 - 04:00	04:00 - 05:00	05:00 - 06:00	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 24:00
Hourly Trip count By Road Section	RB01	0	0	0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	RB02	3	0	0	0	0	3	14	15	15	15	15	15	15	15	16	16	16	17	17	17	16	14	14	14
	RB03	3	0	0	0	0	3	14	15	15	15	15	15	15	15	16	16	16	17	17	17	16	14	14	14
	RB04	0	0	0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	RB05	3	0	0	0	0	1	11	12	12	12	12	12	12	12	13	13	13	14	14	14	13	11	11	11
	RB06	3	0	0	0	0	1	11	12	12	12	12	12	12	12	13	13	13	14	14	14	13	11	11	11
Soak Time (min)	All	30	N/A	N/A	N/A	N/A	720	720	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Emisison Factor (g/trip)	NOx	1.138	N/A	N/A	N/A	N/A	10.710	10.710	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138
	NO2	0.330	N/A	N/A	N/A	N/A	3.406	3.406	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330	0.330
	RSP	0.000	N/A	N/A	N/A	N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	FSP	0.000	N/A	N/A	N/A	N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Emission Factor for each Road Section

			Hour																								Peak hour
			00:00 - 01:00	01:00 - 02:00	02:00 - 03:00	03:00 - 04:00	04:00 - 05:00	05:00 - 06:00	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 24:00	
Emisison Factor ($g/m^2/s$)	NOx	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-07	7.97E-07	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	7.969E-07
		RB02	8.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.97E-07	3.72E-06	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.52E-07	4.52E-07	4.52E-07	4.80E-07	4.80E-07	4.80E-07	4.52E-07	3.95E-07	3.95E-07	3.95E-07	3.719E-06
		RB03	8.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.97E-07	3.72E-06	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.23E-07	4.52E-07	4.52E-07	4.52E-07	4.80E-07	4.80E-07	4.80E-07	4.52E-07	3.95E-07	3.95E-07	3.95E-07	3.719E-06
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-07	7.97E-07	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	8.47E-08	7.969E-07
		RB05	8.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-07	2.92E-06	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.67E-07	3.67E-07	3.67E-07	3.95E-07	3.95E-07	3.95E-07	3.67E-07	3.10E-07	3.10E-07	3.10E-07	2.922E-06
		RB06	8.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-07	2.92E-06	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.39E-07	3.67E-07	3.67E-07	3.67E-07	3.95E-07	3.95E-07	3.95E-07	3.67E-07	3.10E-07	3.10E-07	3.10E-07	2.922E-06
Emisison Factor ($g/m^2/s$)	NO2	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-07	2.31E-07	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.311E-07
		RB02	2.46E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-07	1.08E-06	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.31E-07	1.31E-07	1.31E-07	1.39E-07	1.39E-07	1.39E-07	1.31E-07	1.15E-07	1.15E-07	1.15E-07	1.078E-06
		RB03	2.46E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-07	1.08E-06	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.23E-07	1.31E-07	1.31E-07	1.31E-07	1.39E-07	1.39E-07	1.39E-07	1.31E-07	1.15E-07	1.15E-07	1.15E-07	1.078E-06
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-07	2.31E-07	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.46E-08	2.311E-07
		RB05	2.46E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-08	8.47E-07	9.82E-08	9.82E-08	9.82E-08	9.82E-08	9.82E-08	9.82E-08	9.82E-08	1.06E-07	1.06E-07	1.06E-07	1.15E-07	1.15E-07	1.15E-07	1.06E-07	9.00E-08	9.00E-08	9.00E-08	8.471E-07
		RB06	2.46E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-08	8.47E-07	9.82E-08	9.82E-08	9.82E-08	9.82E-08	9.82E-08	9.82E-08	9.82E-08	1.06E-07	1.06E-07	1.06E-07	1.15E-07	1.15E-07	1.15E-07	1.06E-07	9.00E-08	9.00E-08	9.00E-08	8.471E-07
Emisison Factor ($g/m^2/s$)	RSP	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
Emisison Factor ($g/m^2/s$)	FSP	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00
		RB06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00

[1] The start emission is assumed to be evenly distributed in the first 700m travel distance.
[2] The width of the source (road surface with mixing zone) is 16m.

Emission Factor Ratio

			Hour																							
			00:00 - 01:00	01:00 - 02:00	02:00 - 03:00	03:00 - 04:00	04:00 - 05:00	05:00 - 06:00	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 24:00
Ratio to Peak	NOx	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-01	1.00E+00	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01
		RB02	2.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	1.00E+00	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.21E-01	1.21E-01	1.21E-01	1.29E-01	1.29E-01	1.29E-01	1.21E-01	1.06E-01	1.06E-01	1.06E-01
		RB03	2.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	1.00E+00	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.21E-01	1.21E-01	1.21E-01	1.29E-01	1.29E-01	1.29E-01	1.21E-01	1.06E-01	1.06E-01	1.06E-01
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-01	1.00E+00	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01
		RB05	2.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-02	1.00E+00	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.26E-01	1.26E-01	1.26E-01	1.35E-01	1.35E-01	1.35E-01	1.26E-01	1.06E-01	1.06E-01	1.06E-01
		RB06	2.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-02	1.00E+00	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.26E-01	1.26E-01	1.26E-01	1.35E-01	1.35E-01	1.35E-01	1.26E-01	1.06E-01	1.06E-01	1.06E-01
Ratio to Peak	NO2	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-01	1.00E+00	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01
		RB02	2.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	1.00E+00	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.21E-01	1.21E-01	1.21E-01	1.29E-01	1.29E-01	1.29E-01	1.21E-01	1.06E-01	1.06E-01	1.06E-01
		RB03	2.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	1.00E+00	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.21E-01	1.21E-01	1.21E-01	1.29E-01	1.29E-01	1.29E-01	1.21E-01	1.06E-01	1.06E-01	1.06E-01
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-01	1.00E+00	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01
		RB05	2.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-02	1.00E+00	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.26E-01	1.26E-01	1.26E-01	1.35E-01	1.35E-01	1.35E-01	1.26E-01	1.06E-01	1.06E-01	1.06E-01
		RB06	2.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-02	1.00E+00	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.26E-01	1.26E-01	1.26E-01	1.35E-01	1.35E-01	1.35E-01	1.26E-01	1.06E-01	1.06E-01	1.06E-01
Ratio to Peak	RSP	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ratio to Peak	FSP	RB01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		RB06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

APPENDIX 4-5

Predicted Pollutant Concentration (Air Quality)

Appendix 4-5 - Predicted Pollutant Concentration

Assessment Point	PATH Grid	Easting (m)	Northing (m)	Level (mAG)	Level (mPD)	Concentraion (µg/m³)								
						Daily 1st Maximum RSP	Daily 10th Maximum RSP	Annual RSP	Daily 1st Maximum FSP	Daily 36th Maximum FSP	Annual FSP	Hourly 1st Maximum NO2	Hourly 19th Maximum NO2	Annual NO2
Criteria (AQO)						–	100	50	–	50	35	–	200	40
AP-01	[38,35]	833893.99	822103.34	1.5	6.55	91.98	63.55	27.86	74.88	24.75	15.44	194.63	154.43	37.95
AP-01	[38,35]	833893.99	822103.34	6.35	11.4	91.83	63.37	27.70	74.75	24.55	15.29	193.67	148.26	33.15
AP-02	[38,35]	833881.31	822088.08	1.5	6.55	92.10	63.60	27.92	74.99	24.76	15.50	198.35	160.49	39.33
AP-02	[38,35]	833881.31	822088.08	6.35	11.4	91.89	63.40	27.72	74.80	24.56	15.31	195.60	155.20	33.57
AP-03	[38,35]	833868.63	822072.83	1.5	6.55	92.48	63.76	28.13	75.35	24.82	15.68	219.17	177.14	41.92
AP-03	[38,35]	833868.63	822072.83	6.35	11.4	91.99	63.46	27.72	74.89	24.60	15.31	199.02	161.54	33.31
AP-04	[38,35]	833854.78	822084.34	1.5	6.55	92.41	63.61	28.06	75.28	24.72	15.62	219.16	176.41	41.98
AP-04	[38,35]	833854.78	822084.34	6.35	11.4	91.97	63.41	27.72	74.88	24.61	15.31	199.42	162.47	33.37
AP-05	[38,35]	833840.93	822095.85	1.5	6.55	92.39	63.57	28.04	75.26	24.68	15.60	221.02	176.54	41.34
AP-05	[38,35]	833840.93	822095.85	6.35	11.4	91.96	63.39	27.72	74.87	24.60	15.31	202.73	163.04	33.27
AP-06	[38,35]	833891.00	822105.75	1.5	6.55	91.95	63.50	27.83	74.86	24.71	15.42	193.93	153.45	37.13
AP-06	[38,35]	833891.00	822105.75	6.35	11.4	91.83	63.36	27.70	74.74	24.56	15.29	193.25	148.43	33.21
AP-06	[38,35]	833891.00	822105.75	10.85	15.9	91.69	63.21	27.59	74.62	24.46	15.19	192.18	145.12	30.11
AP-06	[38,35]	833891.00	822105.75	14.5	19.55	91.61	63.12	27.53	74.54	24.41	15.14	191.27	140.45	28.41
AP-06	[38,35]	833891.00	822105.75	18	23.05	88.96	62.61	27.24	72.12	23.77	14.71	187.13	133.64	24.10
AP-06	[38,35]	833891.00	822105.75	21.5	26.55	88.91	62.56	27.21	72.08	23.75	14.69	186.47	131.61	23.25
AP-07	[38,35]	833873.54	822084.74	1.5	6.55	92.15	63.58	27.95	75.04	24.73	15.52	201.29	163.16	39.63
AP-07	[38,35]	833873.54	822084.74	6.35	11.4	91.92	63.40	27.73	74.83	24.58	15.32	197.02	157.88	33.75
AP-07	[38,35]	833873.54	822084.74	10.85	15.9	91.72	63.23	27.58	74.64	24.47	15.18	192.41	147.29	29.69
AP-07	[38,35]	833873.54	822084.74	14.5	19.55	91.62	63.12	27.51	74.55	24.42	15.12	191.52	140.93	27.97
AP-07	[38,35]	833873.54	822084.74	18	23.05	88.96	62.62	27.23	72.13	23.78	14.70	187.38	132.63	23.80
AP-07	[38,35]	833873.54	822084.74	21.5	26.55	88.91	62.56	27.20	72.08	23.76	14.68	186.70	131.04	23.08
AP-08	[38,35]	833848.83	822105.35	1.5	6.55	92.08	63.40	27.87	74.97	24.61	15.45	201.77	165.67	37.44
AP-08	[38,35]	833848.83	822105.35	6.35	11.4	91.90	63.32	27.73	74.81	24.56	15.31	197.74	160.19	33.63
AP-08	[38,35]	833848.83	822105.35	10.85	15.9	91.72	63.21	27.59	74.65	24.50	15.19	192.04	147.26	30.19
AP-08	[38,35]	833848.83	822105.35	14.5	19.55	91.62	63.14	27.53	74.55	24.45	15.13	190.32	143.22	28.44
AP-08	[38,35]	833848.83	822105.35	18	23.05	88.96	62.64	27.24	72.13	23.80	14.72	186.57	134.13	24.15
AP-08	[38,35]	833848.83	822105.35	21.5	26.55	88.91	62.58	27.21	72.08	23.78	14.69	186.18	130.94	23.33
AP-09	[38,35]	833837.20	822115.02	1.5	6.55	92.09	63.39	27.87	74.98	24.59	15.45	207.16	167.03	37.38
AP-09	[38,35]	833837.20	822115.02	6.35	11.4	91.90	63.31	27.73	74.81	24.55	15.32	197.75	160.93	33.66
AP-09	[38,35]	833837.20	822115.02	10.85	15.9	91.72	63.21	27.60	74.65	24.50	15.20	192.11	150.24	30.33
AP-09	[38,35]	833837.20	822115.02	14.5	19.55	91.62	63.14	27.54	74.55	24.46	15.14	189.81	143.12	28.60
AP-09	[38,35]	833837.20	822115.02	18	23.05	88.97	62.65	27.24	72.13	23.81	14.72	186.13	134.88	24.30
AP-09	[38,35]	833837.20	822115.02	21.5	26.55	88.92	62.59	27.21	72.09	23.78	14.69	185.82	131.81	23.46
AP-10	[38,35]	833825.54	822124.64	1.5	6.55	92.12	63.40	27.89	75.01	24.58	15.46	215.75	168.60	37.87
AP-10	[38,35]	833825.54	822124.64	6.35	11.4	91.90	63.32	27.73	74.81	24.55	15.32	202.23	161.38	33.92
AP-10	[38,35]	833825.54	822124.64	10.85	15.9	91.72	63.22	27.60	74.64	24.50	15.20	192.20	151.53	30.49
AP-10	[38,35]	833825.54	822124.64	14.5	19.55	91.62	63.15	27.54	74.55	24.46	15.14	189.48	144.49	28.75
AP-10	[38,35]	833825.54	822124.64	18	23.05	88.97	62.66	27.25	72.13	23.82	14.72	185.85	135.29	24.45
AP-10	[38,35]	833825.54	822124.64	21.5	26.55	88.92	62.60	27.22	72.09	23.79	14.70	185.59	132.36	23.59
AP-11	[38,35]	833837.29	822138.78	1.5	6.55	91.96	63.32	27.80	74.86	24.56	15.38	196.67	159.69	35.83
AP-11	[38,35]	833837.29	822138.78	6.35	11.4	91.84	63.26	27.72	74.76	24.53	15.31	194.86	155.13	33.62
AP-11	[38,35]	833837.29	822138.78	10.85	15.9	91.71	63.19	27.62	74.63	24.49	15.22	192.06	147.70	30.93
AP-11	[38,35]	833837.29	822138.78	14.5	19.55	91.62	63.13	27.55	74.55	24.45	15.16	189.48	146.05	29.12
AP-11	[38,35]	833837.29	822138.78	18	23.05	88.97	62.64	27.26	72.13	23.81	14.73	185.77	136.35	24.67
AP-11	[38,35]	833837.29	822138.78	21.5	26.55	88.92	62.59	27.22	72.09	23.78	14.70	185.51	132.59	23.70
AP-12	[38,35]	833847.69	822151.30	1.5	6.55	91.90	63.29	27.76	74.81	24.55	15.34	195.64	154.24	35.05
AP-12	[38,35]	833847.69	822151.30	6.35	11.4	91.80	63.25	27.70	74.72	24.53	15.29	193.75	151.93	33.29
AP-12	[38,35]	833847.69	822151.30	10.85	15.9	91.70	63.18	27.62	74.62	24.48	15.22	191.12	148.76	31.01
AP-12	[38,35]	833847.69	822151.30	14.5	19.55	91.62	63.12	27.56	74.55	24.44	15.16	189.36	145.32	29.32
AP-12	[38,35]	833847.69	822151.30	18	23.05	88.97	62.63	27.26	72.14	23.80	14.74	185.70	137.47	24.86
AP-12	[38,35]	833847.69	822151.30	21.5	26.55	88.93	62.59	27.23	72.09	23.78	14.71	185.43	132.25	23.84
AP-13	[38,35]	833866.19	822135.93	1.5	6.55	91.86	63.30	27.74	74.77	24.58	15.33	193.09	150.69	34.40
AP-13	[38,35]	833866.19	822135.93	6.35	11.4	91.79	63.26	27.69	74.71	24.54	15.28	192.12	149.39	32.91
AP-13	[38,35]	833866.19	822135.93	10.85	15.9	91.70	63.19	27.61	74.62	24.48	15.21	190.37	147.05	30.73
AP-13	[38,35]	833866.19	822135.93	14.5	19.55	91.62	63.12	27.55	74.55	24.44	15.15	189.83	144.72	29.06
AP-13	[38,35]	833866.19	822135.93	18	23.05	88.97	62.63	27.25	72.13	23.79	14.73	186.10	137.04	24.62
AP-13	[38,35]	833866.19	822135.93	21.5	26.55	88.92	62.58	27.22	72.09	23.77	14.70	185.76	132.94	23.63
AP-14	[38,35]	833861.54	822130.31	1.5	6.55	91.89	63.31	27.76	74.80	24.58	15.34	194.46	152.79	34.70
AP-14	[38,35]	833861.54	822130.31	6.35	11.4	91.81	63.26	27.70	74.73	24.54	15.29	193.23	150.01	33.05
AP-14	[38,35]	833861.54	822130.31	10.85	15.9	91.70	63.19	27.61	74.63	24.48	15.21	191.08	146.88	30.72
AP-14	[38,35]	833861.54	822130.31	14.5	19.55	91.62	63.12	27.55	74.55	24.44	15.15	189.88	144.82	28.99
AP-14	[38,35]	833861.54	822130.31	18	23.05	88.97	62.63	27.25	72.13	23.80	14.73	186.16	137.18	24.54
AP-14	[38,35]	833861.54	822130.31	21.5	26.55	88.92	62.58	27.22	72.09	23.77	14.70	185.81	132.88	23.57
AP-15	[38,35]	833876.25	822118.01	1.5	6.55	91.89	63.36	27.77	74.80	24.62	15.36	193.11	151.82	35.21
AP-15	[38,35]	833876.25	822118.01	6.35	11.4	91.81	63.30	27.70	74.73	24.56	15.29	191.89	147.60	33.13
AP-15	[38,35]	833876.25	822118.01	10.85	15.9	91.70	63.20	27.60	74.63	24.48	15.20	191.17	145.53	30.50
AP-15	[38,35]	833876.25	822118.01	14.5	19.55	91.62	63.12	27.54	74.55	24.43	15.14	190.63	142.67	28.73
AP-15	[38,35]	833876.25	822118.01	18	23.05	88.96	62.63	27.24	72.13	23.78	14.72	186.76	135.37	24.32
AP-15	[38,35]	833876.25	822118.01	21.5	26.55	88.91	62.58	27.21	72.08	23.76	14.69	186.28	131.66	23.40
TA-01	[38,35]	833893.99	822103.34	29.35	34.4	88.84	62.48	27.16	72.02	23.73	14.65	185.45	126.47	22.00
TA-01	[38,35]	833893.99	822103.34	32.5	37.55	88.82	62.46	27.15	72.00	23.72	14.63	185.21	124.65	21.65
TA-01	[38,35]	833893.99	822103.34	35.65	40.7	86.95	62.11	26.99	70.29	23.32	14.42	168.18	118.85	19.69
TA-01	[38,35]	833893.99	822103.34	38.8	43.85	86.94	62.10	26.98	70.28	23.32	14.41	167.53	117.56	19.43
TA-01	[38,35]	833893.99	822103.34	41.95	47	86.93	62.09	26.97	70.27	23.31	14.41	167.09	116.64	19.22
TA-02	[38,35]	833881.31	822088.08	29.35	34.4	88.84	62.48	27.16	72.02	23.73	14.64	185.56	125.99	21.97
TA-02	[38,35]	833881.31	822088.08	32.5	37.55	88.82	62.46	27.15	72.00	23.73	14.63	185.30	124.72	21.64
TA-02	[38,35]	833881.31	822088.08	35.65	40.7	86.95	62.11	26.99	70.29	23.32	14.42	168.51	119.03	19.69
TA-02	[38,35]	833881.31	822088.08	38.8	43.85	86.94	62.09	26.98	70.28	23.32	14.41	167.78	117.10	19.44
TA-02	[38,35]	833881.31	822088.08	41.95	47	86.93	62.08	26.97	70.27	23.31	14.41	167.27	116.65	19.22
TA-03	[38,35]	833868.63	822072.83	29.35	34.4	88.85	62.47	27.16	72.03	23.74	14.64	185.67	124.93	21.97
TA-03	[38,35]	833868.63	822072.83	32.5	37.55	88.83	62.45	27.15	72.01	23.73	14.63	185.39	123.87	21.65
TA-03	[38,35]	833868.63	822072.83	35.65	40.7	86.96	62.10	26.99	70.30	23.33	14.42	168.85	118.31	19.69
TA-03	[38,35]	833868.63	822072.83	38.8	43.85	86.94	62.09	26.98	70.28	23.32	14.41	168.05	117.42	19.44
TA-03	[38,35]	833868.63	822072.83	41.95	47	86.93	62.08	26.97	70.27	23.32	14.41	167.47	116.65	19.23
TA-04	[38,35]	833854.78	822084.34	29.35	34.4	88.85	62.48	27.16	72.02	23.74	14.65	185.70	125.05	22.04
TA-04	[38,35]	833854.78	822084.34	32.5	37.55	88.83	62.46	27.15	72.00	23.73	14.64	185.43	124.11	21.71
TA-04	[38,35]	833854.78	822084.34	35.65	40.7	86.95	62.11	26.99	70.30	23.33	14.42	169.20	119.06	19.75
TA-04	[38,35]	833854.78	822084.34	38.8	43.85	86.94	62.09	26.98	70.28	23.32	14.41	168.34	117.66	19.49
TA-04	[38,35]	833854.78	822084.34	41.95	47	86.93	62.08	26.98	70.27	23.32	14.41	167.70	116.65	19.27
TA-05	[38,35]	833840.93	822095.85	29.35	34.4	88.85	62.49	27.17	72.02	23.75	14.65	185.54	125.30	22.12
TA-05	[38,35]	833840.93	822095.85	32.5	37.55	88.82	62.46	27.15	72.00	23.74	14.64	185.33	124.79	21.77
TA-05	[38,35]	833840.93	822095.85	35.65	40.7	86.95	62.11	26.99	70.29	23.33	14.42	168.87	117.90	19.80
TA-05	[38,35]	833840.93	822095.85	38.8	43.85	86.94	62.10	26.99	70.28	23.32	14.42	168.14	117.68	19.54
TA-05	[38,35]	833840.93	822095.85	41.95	47	86.93	62.09	26.98	70.27	23.32	14.41	167.59	117.53	19.32
TA-06	[38,35]	833891.00	822105.75	29.35	34.4	88.84	62.49	27.16	72.02	23.73	14.65	185.48	126.64	22.01
TA-06	[38,35]	833891.00	822105.75	32.5	37.55	88.82	62.46	27.15	72.00	23.72	14.63	185.23	124.72	21.66
TA-06	[38,35]	833891.00	822105.75	35.65	40.7	86.95	62.11	26.99	70.29	23.32	14.42	168.28	119.05	19.70
TA-06	[38,35]	833891.00	822105.75	38.8	43.85	86.94	62.10	26.98	70.28	23.32	14.41	167.61	117.55	19.45

Appendix 4-5 - Predicted Pollutant Concentration

Assessment Point	PATH Grid	Easting (m)	Northing (m)	Level (mAG)	Level (mPD)	Concentraion (µg/m³) Daily 1st Maximum RSP	Daily 10th Maximum RSP	Annual RSP	Daily 1st Maximum FSP	Daily 36th Maximum FSP	Annual FSP	Hourly 1st Maximum NO2	Hourly 19th Maximum NO2	Annual NO2
Criteria (AQO)						—	100	50	—	50	35	—	200	40
TA-06	[38,35]	833891.00	822105.75	41.95	47	86.93	62.09	26.97	70.27	23.31	14.41	167.14	116.64	19.23
TA-07	[38,35]	833873.54	822084.74	29.35	34.4	88.84	62.48	27.16	72.02	23.73	14.64	185.62	125.93	21.98
TA-07	[38,35]	833873.54	822084.74	32.5	37.55	88.82	62.46	27.15	72.00	23.73	14.63	185.35	124.22	21.65
TA-07	[38,35]	833873.54	822084.74	35.65	40.7	86.95	62.11	26.99	70.29	23.32	14.42	168.74	117.93	19.70
TA-07	[38,35]	833873.54	822084.74	38.8	43.85	86.94	62.09	26.98	70.28	23.32	14.41	167.96	117.53	19.45
TA-07	[38,35]	833873.54	822084.74	41.95	47	86.93	62.08	26.97	70.27	23.31	14.41	167.40	116.65	19.23
TA-08	[38,35]	833848.83	822105.35	29.35	34.4	88.84	62.49	27.17	72.02	23.74	14.65	185.48	125.29	22.12
TA-08	[38,35]	833848.83	822105.35	32.5	37.55	88.82	62.47	27.15	72.00	23.73	14.64	185.27	124.78	21.77
TA-08	[38,35]	833848.83	822105.35	35.65	40.7	86.95	62.11	26.99	70.29	23.33	14.42	168.61	117.74	19.80
TA-08	[38,35]	833848.83	822105.35	38.8	43.85	86.94	62.10	26.99	70.28	23.32	14.42	167.93	117.59	19.54
TA-08	[38,35]	833848.83	822105.35	41.95	47	86.93	62.09	26.98	70.27	23.32	14.41	167.43	117.48	19.31
TA-09	[38,35]	833837.20	822115.02	29.35	34.4	88.84	62.50	27.17	72.02	23.74	14.65	185.28	126.20	22.19
TA-09	[38,35]	833837.20	822115.02	32.5	37.55	88.82	62.47	27.16	72.00	23.74	14.64	185.12	124.82	21.82
TA-09	[38,35]	833837.20	822115.02	35.65	40.7	86.95	62.12	27.00	70.29	23.33	14.43	167.92	117.68	19.85
TA-09	[38,35]	833837.20	822115.02	38.8	43.85	86.94	62.10	26.99	70.28	23.32	14.42	167.43	117.55	19.58
TA-09	[38,35]	833837.20	822115.02	41.95	47	86.93	62.09	26.98	70.27	23.32	14.41	167.07	117.27	19.35
TA-10	[38,35]	833825.54	822124.64	29.35	34.4	88.84	62.51	27.17	72.02	23.75	14.65	185.13	126.88	22.27
TA-10	[38,35]	833825.54	822124.64	32.5	37.55	88.82	62.48	27.16	72.00	23.74	14.64	184.70	125.08	21.89
TA-10	[38,35]	833825.54	822124.64	35.65	40.7	86.95	62.12	27.00	70.29	23.33	14.43	167.41	117.65	19.90
TA-10	[38,35]	833825.54	822124.64	38.8	43.85	86.94	62.11	26.99	70.28	23.32	14.42	167.05	117.53	19.62
TA-10	[38,35]	833825.54	822124.64	41.95	47	86.93	62.09	26.98	70.27	23.32	14.41	166.79	117.32	19.38
TA-11	[38,35]	833837.29	822138.78	29.35	34.4	88.85	62.51	27.17	72.02	23.74	14.66	184.97	126.64	22.28
TA-11	[38,35]	833837.29	822138.78	32.5	37.55	88.83	62.48	27.16	72.01	23.73	14.64	184.40	125.21	21.89
TA-11	[38,35]	833837.29	822138.78	35.65	40.7	86.96	62.13	27.00	70.30	23.33	14.43	167.17	117.61	19.90
TA-11	[38,35]	833837.29	822138.78	38.8	43.85	86.94	62.11	26.99	70.28	23.32	14.42	166.86	117.50	19.62
TA-11	[38,35]	833837.29	822138.78	41.95	47	86.93	62.09	26.98	70.27	23.32	14.41	166.65	117.42	19.38
TA-12	[38,35]	833847.69	822151.30	29.35	34.4	88.85	62.51	27.17	72.03	23.74	14.66	184.67	128.52	22.32
TA-12	[38,35]	833847.69	822151.30	32.5	37.55	88.83	62.48	27.16	72.01	23.73	14.64	184.16	127.07	21.91
TA-12	[38,35]	833847.69	822151.30	35.65	40.7	86.96	62.13	27.00	70.30	23.33	14.43	166.98	119.05	19.91
TA-12	[38,35]	833847.69	822151.30	38.8	43.85	86.95	62.11	26.99	70.29	23.32	14.42	166.72	117.47	19.62
TA-12	[38,35]	833847.69	822151.30	41.95	47	86.93	62.10	26.98	70.28	23.32	14.41	166.55	117.40	19.38
TA-13	[38,35]	833866.19	822135.93	29.35	34.4	88.85	62.50	27.17	72.02	23.74	14.65	185.20	126.48	22.19
TA-13	[38,35]	833866.19	822135.93	32.5	37.55	88.83	62.48	27.16	72.01	23.73	14.64	185.00	125.32	21.81
TA-13	[38,35]	833866.19	822135.93	35.65	40.7	86.96	62.12	27.00	70.30	23.32	14.42	167.60	119.05	19.82
TA-13	[38,35]	833866.19	822135.93	38.8	43.85	86.94	62.11	26.99	70.29	23.32	14.42	167.17	117.50	19.55
TA-13	[38,35]	833866.19	822135.93	41.95	47	86.93	62.09	26.98	70.27	23.31	14.41	166.86	117.42	19.32
TB-01	[38,35]	833861.54	822130.31	29.35	34.4	88.85	62.50	27.17	72.02	23.74	14.65	185.24	126.06	22.17
TB-01	[38,35]	833861.54	822130.31	32.5	37.55	88.83	62.47	27.15	72.00	23.73	14.64	185.08	125.44	21.80
TB-01	[38,35]	833861.54	822130.31	35.65	40.7	86.96	62.12	27.00	70.30	23.32	14.42	167.74	119.05	19.82
TB-01	[38,35]	833861.54	822130.31	38.8	43.85	86.94	62.11	26.99	70.28	23.32	14.42	167.28	117.51	19.55
TB-01	[38,35]	833861.54	822130.31	41.95	47	86.93	62.09	26.98	70.27	23.31	14.41	166.94	117.43	19.32
TB-02	[38,35]	833876.25	822118.01	29.35	34.4	88.84	62.49	27.16	72.02	23.73	14.65	185.47	126.46	22.09
TB-02	[38,35]	833876.25	822118.01	32.5	37.55	88.83	62.47	27.15	72.00	23.73	14.64	185.25	125.08	21.73
TB-02	[38,35]	833876.25	822118.01	35.65	40.7	86.96	62.12	26.99	70.30	23.32	14.42	168.44	119.39	19.76
TB-02	[38,35]	833876.25	822118.01	38.8	43.85	86.94	62.10	26.98	70.28	23.32	14.41	167.75	117.53	19.50
TB-02	[38,35]	833876.25	822118.01	41.95	47	86.93	62.09	26.98	70.27	23.31	14.41	167.26	116.74	19.27
TB-03	[38,35]	833618.53	822095.91	29.35	34.4	88.86	62.59	27.21	72.03	23.82	14.69	185.79	128.80	23.40
TB-03	[38,35]	833618.53	822095.91	32.5	37.55	88.83	62.56	27.19	72.01	23.80	14.67	185.46	127.74	22.84
TB-03	[38,35]	833618.53	822095.91	35.65	40.7	86.96	62.20	27.03	70.30	23.38	14.45	169.13	120.92	20.69
TB-03	[38,35]	833618.53	822095.91	38.8	43.85	86.95	62.17	27.01	70.29	23.37	14.44	168.36	119.50	20.27
TB-03	[38,35]	833618.53	822095.91	41.95	47	86.93	62.15	27.00	70.27	23.36	14.43	167.81	118.26	19.92
TB-04	[38,35]	833624.49	822078.96	29.35	34.4	88.86	62.59	27.21	72.03	23.81	14.69	185.98	128.07	23.31
TB-04	[38,35]	833624.49	822078.96	32.5	37.55	88.83	62.56	27.19	72.01	23.79	14.67	185.62	127.17	22.77
TB-04	[38,35]	833624.49	822078.96	35.65	40.7	86.96	62.20	27.02	70.30	23.38	14.45	169.76	119.14	20.63
TB-04	[38,35]	833624.49	822078.96	38.8	43.85	86.94	62.17	27.01	70.29	23.37	14.44	168.82	118.56	20.22
TB-04	[38,35]	833624.49	822078.96	41.95	47	86.93	62.15	27.00	70.27	23.35	14.43	168.14	118.05	19.87
TB-05	[38,35]	833630.77	822060.43	29.35	34.4	88.86	62.59	27.20	72.03	23.81	14.68	186.27	127.69	23.23
TB-05	[38,35]	833630.77	822060.43	32.5	37.55	88.83	62.56	27.19	72.01	23.79	14.67	185.87	125.87	22.70
TB-05	[38,35]	833630.77	822060.43	35.65	40.7	86.96	62.20	27.02	70.30	23.37	14.45	170.87	118.71	20.57
TB-05	[38,35]	833630.77	822060.43	38.8	43.85	86.94	62.17	27.01	70.28	23.36	14.44	169.68	117.99	20.17
TB-05	[38,35]	833630.77	822060.43	41.95	47	86.93	62.15	27.00	70.27	23.35	14.42	168.78	117.61	19.82
TB-06	[38,35]	833638.16	822039.43	29.35	34.4	88.86	62.59	27.20	72.04	23.80	14.68	186.67	126.58	23.15
TB-06	[38,35]	833638.16	822039.43	32.5	37.55	88.84	62.56	27.18	72.01	23.78	14.67	186.20	125.80	22.63
TB-06	[38,35]	833638.16	822039.43	35.65	40.7	86.96	62.19	27.02	70.30	23.37	14.45	172.31	119.13	20.51
TB-06	[38,35]	833638.16	822039.43	38.8	43.85	86.94	62.17	27.01	70.29	23.36	14.43	170.80	119.07	20.12
TB-06	[38,35]	833638.16	822039.43	41.95	47	86.93	62.15	26.99	70.27	23.35	14.42	169.62	117.47	19.78
TB-07	[38,35]	833619.68	822033.12	29.35	34.4	88.86	62.59	27.20	72.04	23.80	14.68	186.70	128.55	23.16
TB-07	[38,35]	833619.68	822033.12	32.5	37.55	88.84	62.56	27.18	72.01	23.78	14.67	186.25	125.94	22.65
TB-07	[38,35]	833619.68	822033.12	35.65	40.7	86.96	62.19	27.02	70.30	23.37	14.45	172.50	119.15	20.53
TB-07	[38,35]	833619.68	822033.12	38.8	43.85	86.94	62.17	27.01	70.28	23.36	14.43	171.00	119.11	20.14
TB-07	[38,35]	833619.68	822033.12	41.95	47	86.93	62.15	26.99	70.27	23.35	14.42	169.81	117.47	19.79
TB-08	[38,35]	833602.12	822026.90	29.35	34.4	88.86	62.59	27.20	72.03	23.80	14.68	186.72	128.10	23.17
TB-08	[38,35]	833602.12	822026.90	32.5	37.55	88.83	62.56	27.18	72.01	23.78	14.67	186.28	126.06	22.66
TB-08	[38,35]	833602.12	822026.90	35.65	40.7	86.96	62.20	27.02	70.30	23.37	14.45	172.60	119.68	20.54
TB-08	[38,35]	833602.12	822026.90	38.8	43.85	86.94	62.17	27.01	70.28	23.36	14.43	171.12	118.63	20.14
TB-08	[38,35]	833602.12	822026.90	41.95	47	86.92	62.15	26.99	70.27	23.35	14.42	169.93	116.62	19.80
TB-09	[38,35]	833594.66	822048.19	29.35	34.4	88.86	62.59	27.20	72.03	23.81	14.68	186.41	128.74	23.25
TB-09	[38,35]	833594.66	822048.19	32.5	37.55	88.83	62.56	27.19	72.01	23.79	14.67	186.00	127.43	22.73
TB-09	[38,35]	833594.66	822048.19	35.65	40.7	86.96	62.20	27.02	70.30	23.37	14.45	171.21	119.18	20.60
TB-09	[38,35]	833594.66	822048.19	38.8	43.85	86.94	62.17	27.01	70.28	23.36	14.44	169.96	118.01	20.20
TB-09	[38,35]	833594.66	822048.19	41.95	47	86.92	62.15	27.00	70.27	23.35	14.42	169.00	116.80	19.85
TB-10	[38,35]	833587.75	822068.18	29.35	34.4	88.85	62.59	27.21	72.03	23.81	14.69	186.32	128.17	23.34
TB-10	[38,35]	833587.75	822068.18	32.5	37.55	88.83	62.56	27.19	72.01	23.79	14.67	185.88	127.27	22.80
TB-10	[38,35]	833587.75	822068.18	35.65	40.7	86.96	62.20	27.02	70.30	23.38	14.45	170.50	119.01	20.67
TB-10	[38,35]	833587.75	822068.18	38.8	43.85	86.94	62.17	27.01	70.28	23.37	14.44	169.34	118.46	20.26
TB-10	[38,35]	833587.75	822068.18	41.95	47	86.93	62.15	27.00	70.27	23.36	14.43	168.49	117.42	19.90
TB-11	[38,35]	833582.49	822083.39	29.35	34.4	88.85	62.60	27.21	72.03	23.82	14.69	186.31	127.98	23.43
TB-11	[38,35]	833582.49	822083.39	32.5	37.55	88.83	62.56	27.19	72.01	23.80	14.67	185.83	127.08	22.87
TB-11	[38,35]	833582.49	822083.39	35.65	40.7	86.96	62.20	27.03	70.30	23.38	14.45	170.22	120.61	20.73
TB-11	[38,35]	833582.49	822083.39	38.8	43.85	86.94	62.18	27.01	70.28	23.37	14.44	169.09	119.16	20.31
TB-11	[38,35]	833582.49	822083.39	41.95	47	86.93	62.16	27.00	70.27	23.36	14.43	168.30	117.70	19.95
TB-12	[38,35]	833600.51	822089.65	29.35	34.4	88.85	62.60	27.21	72.03	23.82	14.69	186.02	128.85	23.42
TB-12	[38,35]	833600.51	822089.65	32.5	37.55	88.83	62.56	27.19	72.01	23.80	14.67	185.62	127.04	22.86
TB-12	[38,35]	833600.51	822089.65	35.65	40.7	86.96	62.20	27.03	70.30	23.38	14.45	169.58	120.34	20.71
TB-12	[38,35]	833600.51	822089.65	38.8	43.85	86.94	62.18	27.01	70.28	23.37	14.44	168.66	119.22	20.30
TB-12	[38,35]	833600.51	822089.65	41.95	47	86.93	62.16	27.00	70.27	23.36	14.43	168.00	117.97	19.93
BC-01	[38,35]	833618.53	822095.91	1.5	6.55	92.04	63.65	27.76	74.94	24.79	15.35	197.77	154.67	34.70
BC-01	[38,35]	833618.53	822095.91	8	13.05	91.86	63.48	27.69	74.77	24.71	15.28	196.03	150.17	32.91
BC-01	[38,35]	833618.53	822095.91	11.6	16.65	91.74	63.36	27.64	74.66	24.64	15.24	194.48	147.77	31.55
BC-01	[38,35]	833618.53	822095.91	15.2	20.25	91.64	63.27	27.59	74.57	24.58	15.19	192.90	145.82	30.76

Appendix 4-5 - Predicted Pollutant Concentration

Assessment Point	PATH Grid	Easting (m)	Northing (m)	Level (mAG)	Level (mPD)	Concentraion (µg/m³) Daily 1st Maximum RSP	Daily 10th Maximum RSP	Annual RSP	Daily 1st Maximum FSP	Daily 36th Maximum FSP	Annual FSP	Hourly 1st Maximum NO2	Hourly 19th Maximum NO2	Annual NO2
Criteria (AQO)						–	100	50	–	50	35	–	200	40
BC-01	[38,35]	833618.53	822095.91	18.8	23.85	88.98	62.76	27.30	72.14	23.92	14.77	188.16	134.71	25.97
BC-01	[38,35]	833618.53	822095.91	22.4	27.45	88.92	62.69	27.26	72.09	23.88	14.74	187.07	132.21	24.96
BC-01	[38,35]	833618.53	822095.91	26	31.05	88.88	62.64	27.23	72.06	23.84	14.71	186.29	130.20	24.09
BC-01	[38,35]	833618.53	822095.91	30.5	35.55	88.85	62.58	27.20	72.02	23.81	14.68	185.66	128.38	23.19
BC-01	[38,35]	833618.53	822095.91	35	40.05	88.82	62.54	27.18	72.00	23.78	14.66	185.28	125.85	22.45
BC-02	[38,35]	833624.49	822078.96	1.5	6.55	91.91	63.51	27.70	74.82	24.73	15.29	195.67	152.00	33.13
BC-02	[38,35]	833624.49	822078.96	8	13.05	91.81	63.42	27.66	74.73	24.67	15.25	194.61	149.90	32.00
BC-02	[38,35]	833624.49	822078.96	11.6	16.65	91.72	63.34	27.62	74.65	24.62	15.22	193.61	148.44	30.99
BC-02	[38,35]	833624.49	822078.96	15.2	20.25	91.64	63.27	27.58	74.57	24.57	15.18	192.52	145.94	29.92
BC-02	[38,35]	833624.49	822078.96	18.8	23.85	88.98	62.74	27.29	72.15	23.91	14.77	188.13	134.44	25.75
BC-02	[38,35]	833624.49	822078.96	22.4	27.45	88.93	62.68	27.26	72.10	23.87	14.74	187.22	132.66	24.81
BC-02	[38,35]	833624.49	822078.96	26	31.05	88.89	62.63	27.23	72.06	23.84	14.71	186.50	130.97	23.98
BC-02	[38,35]	833624.49	822078.96	30.5	35.55	88.85	62.58	27.20	72.02	23.80	14.68	185.84	127.71	23.10
BC-02	[38,35]	833624.49	822078.96	35	40.05	88.82	62.54	27.17	72.00	23.78	14.66	185.41	126.30	22.39
BC-03	[38,35]	833630.77	822060.43	1.5	6.55	91.83	63.43	27.66	74.75	24.68	15.26	195.00	150.40	32.17
BC-03	[38,35]	833630.77	822060.43	8	13.05	91.76	63.37	27.63	74.68	24.64	15.23	194.21	149.10	31.33
BC-03	[38,35]	833630.77	822060.43	11.6	16.65	91.70	63.32	27.60	74.63	24.60	15.20	193.44	146.51	30.52
BC-03	[38,35]	833630.77	822060.43	15.2	20.25	91.63	63.26	27.57	74.57	24.55	15.17	192.57	144.03	29.60
BC-03	[38,35]	833630.77	822060.43	18.8	23.85	88.98	62.74	27.28	72.15	23.90	14.76	188.33	133.40	25.53
BC-03	[38,35]	833630.77	822060.43	22.4	27.45	88.93	62.68	27.25	72.10	23.86	14.73	187.51	131.62	24.66
BC-03	[38,35]	833630.77	822060.43	26	31.05	88.89	62.63	27.23	72.06	23.83	14.71	186.81	130.08	23.88
BC-03	[38,35]	833630.77	822060.43	30.5	35.55	88.85	62.58	27.20	72.02	23.80	14.68	186.11	126.52	23.03
BC-03	[38,35]	833630.77	822060.43	35	40.05	88.82	62.53	27.17	72.00	23.78	14.66	185.62	125.42	22.33
BC-04	[38,35]	833638.16	822039.43	1.5	6.55	91.78	63.38	27.64	74.70	24.65	15.23	195.38	148.29	31.51
BC-04	[38,35]	833638.16	822039.43	8	13.05	91.73	63.34	27.61	74.65	24.61	15.21	194.66	147.75	30.81
BC-04	[38,35]	833638.16	822039.43	11.6	16.65	91.68	63.30	27.59	74.61	24.57	15.19	193.95	144.39	30.11
BC-04	[38,35]	833638.16	822039.43	15.2	20.25	91.62	63.25	27.56	74.56	24.53	15.16	193.11	142.31	29.31
BC-04	[38,35]	833638.16	822039.43	18.8	23.85	88.98	62.72	27.28	72.15	23.88	14.75	188.88	132.13	25.33
BC-04	[38,35]	833638.16	822039.43	22.4	27.45	88.93	62.67	27.25	72.10	23.85	14.73	188.03	130.67	24.52
BC-04	[38,35]	833638.16	822039.43	26	31.05	88.89	62.63	27.22	72.07	23.82	14.70	187.27	128.41	23.77
BC-04	[38,35]	833638.16	822039.43	30.5	35.55	88.85	62.58	27.19	72.03	23.79	14.68	186.49	126.26	22.95
BC-04	[38,35]	833638.16	822039.43	35	40.05	88.82	62.53	27.17	72.00	23.77	14.65	185.90	124.41	22.27
BC-05	[38,35]	833619.68	822033.12	1.5	6.55	91.78	63.37	27.63	74.70	24.63	15.23	194.85	149.83	31.43
BC-05	[38,35]	833619.68	822033.12	8	13.05	91.73	63.33	27.61	74.65	24.60	15.21	194.23	148.72	30.74
BC-05	[38,35]	833619.68	822033.12	11.6	16.65	91.68	63.30	27.58	74.61	24.56	15.18	193.61	145.41	30.06
BC-05	[38,35]	833619.68	822033.12	15.2	20.25	91.63	63.25	27.56	74.56	24.53	15.16	192.88	143.01	29.27
BC-05	[38,35]	833619.68	822033.12	18.8	23.85	88.98	62.72	27.28	72.15	23.88	14.75	188.74	132.39	25.30
BC-05	[38,35]	833619.68	822033.12	22.4	27.45	88.94	62.67	27.25	72.10	23.85	14.72	187.98	130.57	24.51
BC-05	[38,35]	833619.68	822033.12	26	31.05	88.89	62.63	27.22	72.07	23.82	14.70	187.27	130.10	23.78
BC-05	[38,35]	833619.68	822033.12	30.5	35.55	88.85	62.58	27.19	72.03	23.79	14.68	186.53	127.23	22.97
BC-05	[38,35]	833619.68	822033.12	35	40.05	88.82	62.53	27.17	72.00	23.77	14.65	185.95	124.09	22.29
BC-06	[38,35]	833602.12	822026.90	1.5	6.55	91.78	63.36	27.63	74.70	24.62	15.23	194.47	149.28	31.45
BC-06	[38,35]	833602.12	822026.90	8	13.05	91.73	63.33	27.61	74.65	24.59	15.20	193.92	148.19	30.73
BC-06	[38,35]	833602.12	822026.90	11.6	16.65	91.68	63.30	27.58	74.61	24.56	15.18	193.36	145.90	30.04
BC-06	[38,35]	833602.12	822026.90	15.2	20.25	91.63	63.26	27.55	74.56	24.52	15.16	192.70	141.97	29.25
BC-06	[38,35]	833602.12	822026.90	18.8	23.85	88.98	62.72	27.27	72.15	23.88	14.75	188.64	132.56	25.29
BC-06	[38,35]	833602.12	822026.90	22.4	27.45	88.94	62.67	27.25	72.10	23.85	14.72	187.93	130.45	24.50
BC-06	[38,35]	833602.12	822026.90	26	31.05	88.89	62.63	27.22	72.06	23.82	14.70	187.27	129.97	23.78
BC-06	[38,35]	833602.12	822026.90	30.5	35.55	88.85	62.58	27.19	72.03	23.79	14.68	186.55	127.14	22.97
BC-06	[38,35]	833602.12	822026.90	35	40.05	88.82	62.54	27.17	71.99	23.77	14.65	185.99	124.33	22.29
BC-07	[38,35]	833594.66	822048.19	1.5	6.55	91.83	63.43	27.66	74.75	24.65	15.25	194.56	150.93	32.05
BC-07	[38,35]	833594.66	822048.19	8	13.05	91.77	63.37	27.62	74.69	24.61	15.22	193.90	149.61	31.20
BC-07	[38,35]	833594.66	822048.19	11.6	16.65	91.70	63.33	27.60	74.63	24.58	15.20	193.26	147.79	30.40
BC-07	[38,35]	833594.66	822048.19	15.2	20.25	91.64	63.27	27.56	74.57	24.54	15.17	192.51	144.32	29.51
BC-07	[38,35]	833594.66	822048.19	18.8	23.85	88.99	62.73	27.28	72.15	23.89	14.76	188.38	133.75	25.48
BC-07	[38,35]	833594.66	822048.19	22.4	27.45	88.93	62.68	27.25	72.10	23.86	14.73	187.62	131.40	24.64
BC-07	[38,35]	833594.66	822048.19	26	31.05	88.39	62.63	27.23	72.06	23.83	14.70	186.95	130.33	23.88
BC-07	[38,35]	833594.66	822048.19	30.5	35.55	88.85	62.58	27.20	72.02	23.80	14.68	186.25	128.30	23.05
BC-07	[38,35]	833594.66	822048.19	35	40.05	88.81	62.54	27.17	71.99	23.78	14.66	185.73	124.83	22.36
BC-08	[38,35]	833587.75	822068.18	1.5	6.55	91.92	63.53	27.69	74.83	24.69	15.29	196.04	152.56	33.02
BC-08	[38,35]	833587.75	822068.18	8	13.05	91.82	63.44	27.65	74.73	24.64	15.25	195.07	150.27	31.88
BC-08	[38,35]	833587.75	822068.18	11.6	16.65	91.73	63.36	27.61	74.65	24.60	15.21	194.14	147.97	30.88
BC-08	[38,35]	833587.75	822068.18	15.2	20.25	91.65	63.28	27.58	74.58	24.56	15.18	193.09	146.04	29.83
BC-08	[38,35]	833587.75	822068.18	18.8	23.85	88.98	62.74	27.29	72.15	23.90	14.76	188.69	134.25	25.70
BC-08	[38,35]	833587.75	822068.18	22.4	27.45	88.93	62.69	27.26	72.10	23.87	14.73	187.73	132.50	24.79
BC-08	[38,35]	833587.75	822068.18	26	31.05	88.89	62.63	27.23	72.06	23.84	14.71	186.92	130.75	23.99
BC-08	[38,35]	833587.75	822068.18	30.5	35.55	88.84	62.58	27.20	72.02	23.80	14.68	186.14	127.81	23.14
BC-08	[38,35]	833587.75	822068.18	35	40.05	88.81	62.54	27.18	71.99	23.78	14.66	185.61	125.78	22.42
BC-09	[38,35]	833582.49	822083.39	1.5	6.55	92.05	63.67	27.75	74.95	24.74	15.34	199.10	155.46	34.39
BC-09	[38,35]	833582.49	822083.39	8	13.05	91.87	63.49	27.68	74.78	24.67	15.27	197.43	150.43	32.65
BC-09	[38,35]	833582.49	822083.39	11.6	16.65	91.74	63.38	27.63	74.67	24.62	15.23	195.88	147.86	31.35
BC-09	[38,35]	833582.49	822083.39	15.2	20.25	91.64	63.28	27.59	74.57	24.57	15.19	194.22	145.91	30.12
BC-09	[38,35]	833582.49	822083.39	18.8	23.85	88.98	62.76	27.30	72.14	23.91	14.77	189.32	134.69	25.89
BC-09	[38,35]	833582.49	822083.39	22.4	27.45	88.92	62.70	27.26	72.09	23.87	14.74	188.02	132.23	24.93
BC-09	[38,35]	833582.49	822083.39	26	31.05	88.88	62.64	27.23	72.06	23.84	14.71	187.00	130.26	24.10
BC-09	[38,35]	833582.49	822083.39	30.5	35.55	88.84	62.59	27.20	72.02	23.81	14.68	186.11	127.58	23.22
BC-09	[38,35]	833582.49	822083.39	35	40.05	88.81	62.54	27.18	71.99	23.78	14.66	185.55	125.81	22.49
BC-10	[38,35]	833600.51	822089.65	1.5	6.55	92.04	63.66	27.75	74.94	24.76	15.34	198.27	154.85	34.48
BC-10	[38,35]	833600.51	822089.65	8	13.05	91.87	63.49	27.69	74.78	24.69	15.28	196.62	150.52	32.74
BC-10	[38,35]	833600.51	822089.65	11.6	16.65	91.74	63.37	27.64	74.66	24.63	15.23	195.10	148.14	31.43
BC-10	[38,35]	833600.51	822089.65	15.2	20.25	91.64	63.28	27.59	74.57	24.58	15.19	193.51	145.87	30.18
BC-10	[38,35]	833600.51	822089.65	18.8	23.85	88.98	62.76	27.30	72.14	23.92	14.77	188.70	134.76	25.93
BC-10	[38,35]	833600.51	822089.65	22.4	27.45	88.92	62.69	27.26	72.09	23.87	14.74	187.51	132.20	24.95
BC-10	[38,35]	833600.51	822089.65	26	31.05	88.88	62.64	27.23	72.06	23.84	14.71	186.62	130.24	24.10
BC-10	[38,35]	833600.51	822089.65	30.5	35.55	88.85	62.58	27.20	72.02	23.81	14.68	185.86	128.44	23.21
BC-10	[38,35]	833600.51	822089.65	35	40.05	88.82	62.54	27.18	71.99	23.78	14.66	185.40	125.66	22.48

Exceedance of Annual NO2 (40 µg/m³)

APPENDIX 4-6

Summary of Annual Averaged NO_2 Concentration (Air Quality)

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height								
		mAG	1.5	6.35	10.85	14.5	18	21.5			
		mPD	6.55	11.4	15.9	19.55	23.05	26.55			
Site A - Podium	AP-01		37.95	33.15							
	AP-02		39.33	33.57							
	AP-03		43.92	33.31							
	AP-04		41.98	33.37							
	AP-05		41.34	33.27							
	AP-06		37.13	33.21	30.11	28.41	24.10	23.25			
	AP-07		39.63	33.75	29.69	27.97	23.80	23.08			
	AP-08		37.44	33.63	30.19	28.44	24.15	23.33			
	AP-09		37.38	33.66	30.33	28.60	24.30	23.46			
	AP-10		37.87	33.92	30.49	28.75	24.45	23.59			
	AP-11		35.83	33.62	30.93	29.12	24.67	23.70			
	AP-12		35.05	33.29	31.01	29.32	24.86	23.84			
	AP-13		34.40	32.91	30.73	29.06	24.62	23.63			
	AP-14		34.70	33.05	30.72	28.99	24.54	23.57			
	AP-15		35.21	33.13	30.50	28.73	24.32	23.40			

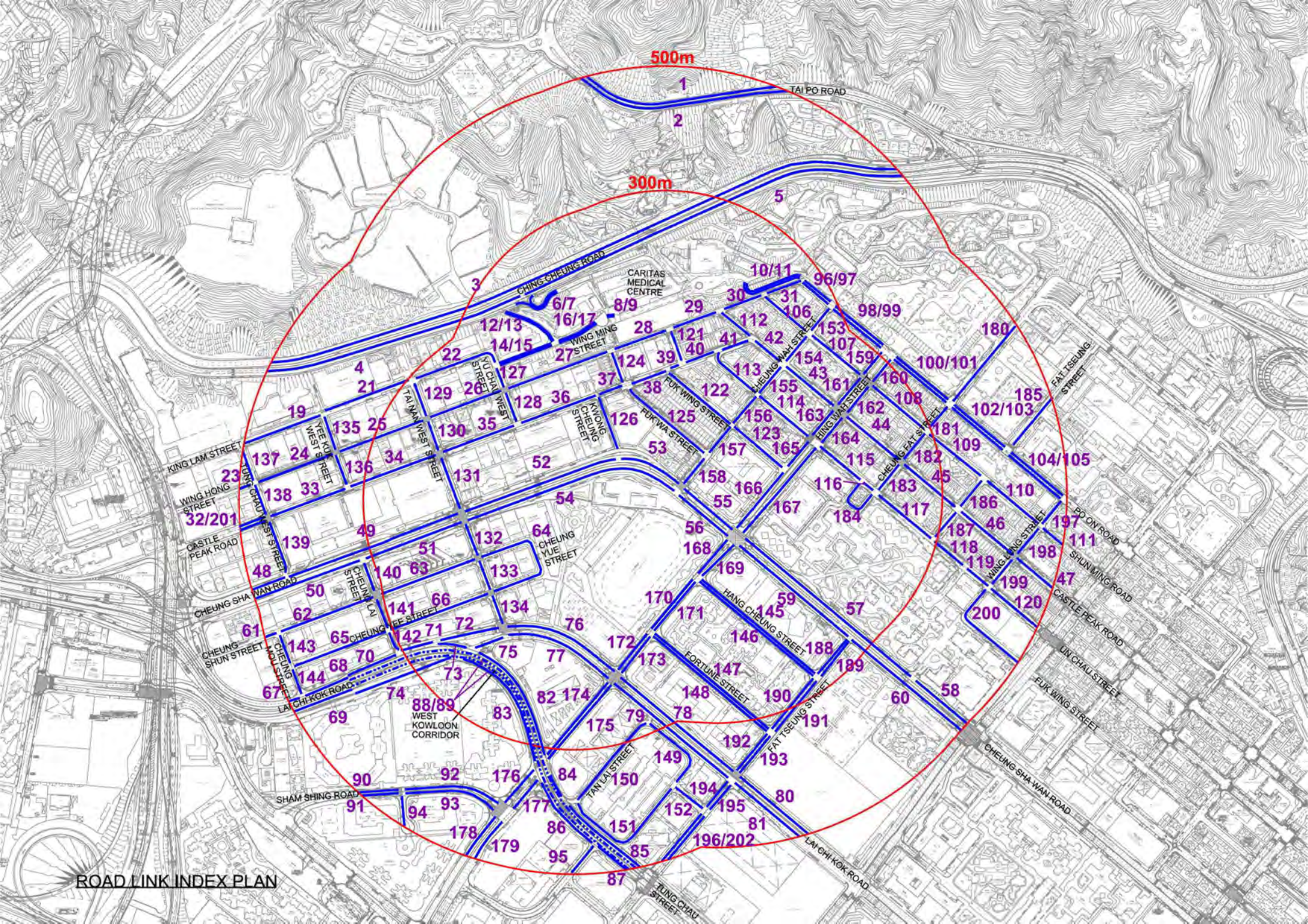
	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height								
		mAG	29.35	32.5	35.65	38.8	41.95				
		mPD	34.4	37.55	40.7	43.85	47				
Site A - Tower A	TA-01		22.00	21.65	19.69	19.43	19.22				
	TA-02		21.97	21.64	19.69	19.44	19.22				
	TA-03		21.97	21.65	19.69	19.44	19.23				
	TA-04		22.04	21.71	19.75	19.49	19.27				
	TA-05		22.12	21.77	19.80	19.54	19.32				
	TA-06		22.01	21.66	19.70	19.45	19.23				
	TA-07		21.98	21.65	19.70	19.45	19.23				
	TA-08		22.12	21.77	19.80	19.54	19.31				
	TA-09		22.19	21.82	19.85	19.58	19.35				
	TA-10		22.27	21.89	19.90	19.62	19.38				
	TA-11		22.28	21.89	19.90	19.62	19.38				
	TA-12		22.32	21.91	19.91	19.62	19.38				
	TA-13		22.19	21.81	19.82	19.55	19.32				
Site A - Tower B	TB-01		22.17	21.80	19.82	19.55	19.32				
	TB-02		22.09	21.73	19.76	19.50	19.27				
	TB-03		23.40	22.84	20.69	20.27	19.92				
	TB-04		23.31	22.77	20.63	20.22	19.87				
	TB-05		23.23	22.70	20.57	20.17	19.82				
	TB-06		23.15	22.63	20.51	20.12	19.78				
	TB-07		23.16	22.65	20.53	20.14	19.79				
	TB-08		23.17	22.66	20.54	20.14	19.80				
	TB-09		23.25	22.73	20.60	20.20	19.85				
	TB-10		23.34	22.80	20.67	20.26	19.90				
	TB-11		23.43	22.87	20.73	20.31	19.95				
	TB-12		23.42	22.86	20.71	20.30	19.93				

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height								
		mAG	1.5	8	11.6	15.2	18.8	22.4	26	30.5	35
		mPD	6.55	13.05	16.65	20.25	23.85	27.45	31.05	35.55	40.05
Site B - G/IC Complex	BC-01		34.70	32.91	31.55	30.26	25.97	24.96	24.09	23.19	22.45
	BC-02		33.13	32.00	30.99	29.92	25.75	24.81	23.98	23.10	22.39
	BC-03		32.17	31.33	30.52	29.60	25.53	24.66	23.88	23.03	22.33
	BC-04		31.51	30.81	30.11	29.31	25.33	24.52	23.77	22.95	22.27
	BC-05		31.43	30.74	30.06	29.27	25.30	24.51	23.78	22.97	22.29
	BC-06		31.45	30.73	30.04	29.25	25.29	24.50	23.78	22.97	22.29
	BC-07		32.05	31.20	30.40	29.51	25.48	24.64	23.88	23.05	22.36
	BC-08		33.02	31.88	30.88	29.83	25.70	24.79	23.99	23.14	22.42
	BC-09		34.39	32.65	31.35	30.12	25.89	24.93	24.10	23.22	22.49
	BC-10		34.48	32.74	31.43	30.18	25.93	24.95	24.10	23.21	22.48

Exceedance of Annual NO2 (40 $\mu g/m^3$)

APPENDIX 5-1

Predicted Traffic Flow at Peak Hour in Year 2049



ROAD LINK INDEX PLAN

Predicted Traffic Flow at Peak Hours of Year 2049

Road ID	Road	Direction	At grade / Flyover	Speed Limit (km/hr)	AM Peak		PM Peak		Within 300m Assessment Boundary
					Traffic	% Heavy	Traffic	% Heavy	
3	Ching Cheung Road	EB	At grade	70	5400	32	4550	35	N
4	Ching Cheung Road	WB	At grade	70	4800	31	5200	29	N
5	Ching Cheung Road	WB	At grade	70	4750	31	5200	29	N
6	Access Road of Caritas Medical Centre	EB	At grade	50	50	4	16	0	Y
7	Access Road of Caritas Medical Centre	WB	At grade	50	18	40	50	4	Y
8	Access Road of Caritas Medical Centre	EB	At grade	20	100	6	50	5	Y
9	Access Road of Caritas Medical Centre	WB	At grade	20	50	16	50	0	Y
10	Access Road of Caritas Medical Centre	EB	At grade	50	200	12	200	12	Y
11	Access Road of Caritas Medical Centre	WB	At grade	50	150	17	100	17	Y
12	Access Road to St. Raphael's Catholic Cemetery	NB	At grade	50	13	25	11	27	Y
13	Access Road to St. Raphael's Catholic Cemetery	SB	At grade	50	10	41	21	43	Y
14	Wing Ming Street	EB	At grade	50	100	9	50	19	Y
15	Wing Ming Street	WB	At grade	50	50	28	50	13	Y
16	Wing Ming Street	EB	At grade	50	100	8	50	15	Y
17	Wing Ming Street	WB	At grade	50	50	26	50	6	Y
21	King Lam Street	WB	At grade	50	250	28	150	27	Y
22	King Lam Street	EB	At grade	50	200	30	250	28	Y
25	Wing Hong Street	WB	At grade	50	200	29	500	27	Y
26	Wing Hong Street	WB	At grade	50	200	37	350	29	Y
27	Wing Hong Street	WB	At grade	50	350	30	450	28	Y
28	Wing Hong Street	WB	At grade	50	150	28	300	27	Y
29	Wing Hong Street	WB	At grade	50	150	37	100	34	Y
30	Wing Hong Street	WB	At grade	50	300	30	450	27	Y
31	Wing Hong Street	WB	At grade	50	100	40	150	32	Y
34	Castle Peak Road	EB	At grade	50	800	29	1150	27	Y
35	Castle Peak Road	EB	At grade	50	1350	30	1200	27	Y
36	Castle Peak Road	EB	At grade	50	1550	29	1600	27	Y
37	Castle Peak Road	EB	At grade	50	1250	38	1150	30	Y
38	Castle Peak Road	EB	At grade	50	1250	40	1200	26	Y
39	Castle Peak Road	EB	At grade	50	950	42	850	29	Y
40	Castle Peak Road	EB	At grade	50	850	42	700	28	Y
41	Castle Peak Road	EB	At grade	50	1000	42	800	29	Y
42	Castle Peak Road	EB	At grade	50	1150	42	1250	29	Y
43	Castle Peak Road	EB	At grade	50	700	47	800	34	Y
44	Castle Peak Road	EB	At grade	50	850	42	900	28	Y
45	Castle Peak Road	EB	At grade	50	600	42	700	29	Y
49	Cheung Sha Wan Road	EB	At grade	50	2500	38	1650	35	Y
51	Cheung Sha Wan Road	WB	At grade	50	2350	43	2250	35	Y
52	Cheung Sha Wan Road	EB	At grade	50	1600	42	1600	35	Y
53	Cheung Sha Wan Road	EB	At grade	50	1850	44	2000	38	Y
54	Cheung Sha Wan Road	WB	At grade	50	1950	46	2050	43	Y
55	Cheung Sha Wan Road	EB	At grade	50	2200	43	2050	35	Y
56	Cheung Sha Wan Road	WB	At grade	50	1150	49	1200	44	Y
57	Cheung Sha Wan Road	EB	At grade	50	1550	29	1250	23	Y
59	Cheung Sha Wan Road	WB	At grade	50	900	32	1150	27	Y
60	Cheung Sha Wan Road	WB	At grade	50	850	47	1050	44	Y
63	Cheung Shun Street	EB	At grade	50	150	28	250	27	Y
64	Cheung Yue Street	EB	At grade	50	150	28	150	27	Y
66	Cheung Yee Street	WB	At grade	50	250	28	350	26	Y
71	Lai Chi Kok Road	EB	At grade	50	1900	36	1800	32	Y
72	Lai Chi Kok Road	EB	At grade	50	850	29	950	25	Y
73	Lai Chi Kok Road	EB	At grade	50	1050	31	850	28	Y
74	Lai Chi Kok Road	WB	At grade	50	1000	31	1000	29	Y
75	Lai Chi Kok Road	WB	At grade	50	700	28	600	26	Y
76	Lai Chi Kok Road	EB	At grade	50	650	31	600	31	Y
77	Lai Chi Kok Road	WB	At grade	50	1350	29	1300	30	Y
78	Lai Chi Kok Road	EB	At grade	50	700	34	550	32	Y
79	Lai Chi Kok Road	WB	At grade	50	1100	28	950	30	Y
82	Tung Chau Street	EB	At grade	50	950	37	900	33	Y
83	Tung Chau Street	WB	At grade	50	400	30	300	30	Y
88	West Kowloon Corridor	EB	Flyover	70	3600	26	3600	12	Y
89	West Kowloon Corridor	WB	Flyover	70	2650	25	3450	12	Y
96	Po On Road	NB	At grade	50	100	24	100	25	N
97	Po On Road	SB	At grade	50	50	42	50	31	N
98	Po On Road	NB	At grade	50	50	25	50	25	N
99	Po On Road	SB	At grade	50	250	42	200	28	N
106	Shun Ming Road	NB	At grade	50	250	25	300	25	Y
107	Shun Ming Road	NB	At grade	50	200	26	100	25	Y
108	Shun Ming Road	NB	At grade	50	250	26	150	25	Y
109	Shun Ming Road	NB	At grade	50	250	25	100	24	Y
112	Kwong Shing Street	SB	At grade	50	150	42	400	28	Y
113	Un Chau Street	NB	At grade	50	150	26	100	25	Y
114	Un Chau Street	NB	At grade	50	800	28	700	27	Y
115	Un Chau Street	NB	At grade	50	700	39	700	31	Y
116	Un Chau Street	NB	At grade	50	750	27	700	27	Y
117	Un Chau Street	NB	At grade	50	700	28	650	27	Y

Predicted Traffic Flow at Peak Hours of Year 2049

Road ID	Road	Direction	At grade / Flyover	Speed Limit (km/hr)	AM Peak		PM Peak		Within 300m Assessment Boundary
					Traffic	% Heavy	Traffic	% Heavy	
118	Un Chau Street	NB	At grade	50	700	28	800	27	Y
121	Tsap Fai Street	NB	At grade	50	100	35	200	42	Y
122	Fuk Wing Street	SB	At grade	50	400	36	500	23	Y
123	Fuk Wing Street	SB	At grade	50	250	16	300	18	Y
124	Fuk Wa Street	NB	At grade	50	200	35	150	41	Y
125	Fuk Wa Street	NB	At grade	50	200	38	200	18	Y
126	Kwong Cheung Street	SB	At grade	50	250	28	400	27	Y
127	Yu Chau West Street	SB	At grade	50	150	27	250	31	Y
128	Yu Chau West Street	SB	At grade	50	200	26	350	30	Y
129	Tai Nan West Street	NB	At grade	50	600	25	550	30	Y
130	Tai Nan West Street	NB	At grade	50	800	25	750	30	Y
131	Tai Nan West Street	NB	At grade	50	1300	26	750	27	Y
132	Tai Nan West Street	NB	At grade	50	800	36	950	26	Y
133	Tai Nan West Street	NB	At grade	50	700	36	800	26	Y
134	Tai Nan West Street	NB	At grade	50	750	24	1050	22	Y
145	Hang Cheung Street	SB	At grade	50	50	33	200	13	Y
146	Hang Cheung Street	NB	At grade	50	24	35	21	9	Y
147	Fortune Street	SB	At grade	50	100	30	50	7	Y
148	Fortune Street	NB	At grade	50	50	29	100	15	Y
149	Tan Lai Street	SB	At grade	50	50	24	50	31	Y
150	Tan Lai Street	NB	At grade	50	50	24	50	31	Y
153	Cheung Wah Street	NB	At grade	50	300	25	200	18	Y
154	Cheung Wah Street	NB	At grade	50	300	25	300	18	Y
155	Cheung Wah Street	SB	At grade	50	250	25	200	18	Y
156	Cheung Wah Street	SB	At grade	50	800	27	700	21	Y
157	Cheung Wah Street	SB	At grade	50	1400	32	950	23	Y
158	Cheung Wah Street	SB	At grade	50	1200	33	900	25	Y
159	Hing Wah Street	NB	At grade	50	50	28	100	30	Y
160	Hing Wah Street	SB	At grade	50	250	32	150	27	Y
161	Hing Wah Street	NB	At grade	50	400	28	350	29	Y
162	Hing Wah Street	SB	At grade	50	500	32	400	25	Y
163	Hing Wah Street	NB	At grade	50	550	30	650	24	Y
164	Hing Wah Street	SB	At grade	50	400	31	350	27	Y
165	Hing Wah Street	NB	At grade	50	400	28	400	27	Y
166	Hing Wah Street	NB	At grade	50	800	19	750	13	Y
167	Hing Wah Street	SB	At grade	50	650	39	600	33	Y
168	Hing Wah Street	NB	At grade	50	350	14	350	10	Y
169	Hing Wah Street	SB	At grade	50	800	12	950	9	Y
170	Hing Wah Street	NB	At grade	50	350	26	400	28	Y
171	Hing Wah Street	SB	At grade	50	700	35	750	24	Y
172	Hing Wah Street	NB	At grade	50	500	26	450	27	Y
173	Hing Wah Street	SB	At grade	50	700	35	750	24	Y
174	Hing Wah Street	NB	At grade	50	700	29	550	30	Y
175	Hing Wah Street	SB	At grade	50	550	33	650	27	Y
181	Cheung Fat Street	NB	At grade	50	50	27	50	29	Y
182	Cheung Fat Street	NB	At grade	50	100	28	50	28	Y
183	Cheung Fat Street	SB	At grade	50	50	31	50	28	Y
184	Un Chau Street	NB	At grade	50	50	34	50	14	Y
187	Fat Tseung Street	NB	At grade	50	250	30	150	31	Y
188	Fat Tseung Street	NB	At grade	50	50	26	50	29	Y
189	Fat Tseung Street	SB	At grade	50	150	32	200	27	Y
190	Fat Tseung Street	NB	At grade	50	50	29	50	29	Y
191	Fat Tseung Street	SB	At grade	50	150	32	200	27	Y

APPENDIX 5-2

Traffic Noise Assessment Results (Base Scenario)

Predicted Traffic Noise Level, dB(A) - (a) Base Scenario

Tower A (Low Zone) - by façade

Floor	Elevation (mPD)	Predited Noise level, dB(A)																
		TAL-01-1	TAL-01-2	TAL-01-3	TAL-02-1	TAL-02-2	TAL-02-3	TAL-03-1	TAL-03-2	TAL-04-1	TAL-04-2	TAL-05-1	TAL-05-2	TAL-05-3	TAL-05-4	TAL-06-1	TAL-06-2	TAL-06-3
1/F	34.1	78	77	77	77	76	76	76	76	76	76	76	76	76	66	68	70	60
2/F	37.25	78	77	76	76	76	76	76	76	76	76	75	75	75	66	69	70	61
3/F	40.4	78	77	76	76	76	76	76	76	75	75	75	75	75	67	69	70	64
4/F	43.55	77	76	76	76	76	76	75	75	75	75	75	75	75	67	69	70	65
5/F	46.7	77	76	76	76	75	75	75	75	75	75	75	75	75	66	68	70	65
6/F	49.85	77	76	76	75	75	75	75	75	75	75	75	75	74	66	68	70	65
7/F	53	77	76	75	75	75	75	75	75	75	75	74	74	74	66	68	70	66
8/F	56.15	77	76	75	75	75	75	75	75	74	74	74	74	74	66	68	69	66
9/F	59.3	76	75	75	75	75	75	75	74	74	74	74	74	74	65	68	69	66
10/F	62.45	76	75	75	75	75	74	74	74	74	74	74	74	74	65	67	69	66
11/F	65.6	76	75	75	75	74	74	74	74	74	74	74	74	74	65	67	69	66
12/F	68.75	76	75	75	74	74	74	74	74	74	74	74	74	73	65	67	69	66
13/F	71.9	76	75	74	74	74	74	74	74	74	74	74	73	73	65	67	68	66
14/F	75.05	76	75	74	74	74	74	74	74	74	74	73	73	73	65	67	68	66
15/F	78.2	75	74	74	74	74	74	74	74	74	73	73	73	73	65	67	68	66
16/F	81.35	75	74	74	74	74	74	74	73	73	73	73	73	73	64	67	68	65
17/F	84.5	75	74	74	74	74	73	73	73	73	73	73	73	73	64	66	68	65
18/F	87.65	75	74	74	73	73	73	73	73	73	73	73	73	73	64	66	68	65
19/F	90.8	75	74	73	73	73	73	73	73	73	73	73	73	73	64	66	68	65
20/F	93.95	75	74	73	73	73	73	73	73	73	73	73	73	73	64	66	67	65
21/F	97.1	74	73	73	73	73	73	73	73	73	73	72	72	72	64	66	67	65
22/F	100.25	74	73	73	73	73	73	73	73	73	72	72	72	72	64	66	67	65
min		74	73	73	73	73	73	73	73	73	72	72	72	72	64	66	67	60
max		78	77	77	77	76	76	76	76	76	76	76	76	76	67	69	70	66

Floor	Elevation (mPD)	Predited Noise level, dB(A)																				
		TAL-06-4	TAL-06-5	TAL-07-1	TAL-07-2	TAL-07-3	TAL-08-1	TAL-08-2	TAL-08-3	TAL-08-4	TAL-08-5	TAL-09-1	TAL-09-2	TAL-10-1	TAL-10-2	TAL-11-1	TAL-11-2	TAL-12-1	TAL-12-2	TAL-13-1	TAL-13-2	TAL-13-3
1/F	34.1	56	48	47	50	50	51	56	68	69	70	71	72	73	74	75	76	77	77	78	78	78
2/F	37.25	57	50	49	52	52	53	57	70	71	72	73	74	75	76	76	77	77	77	78	78	78
3/F	40.4	58	52	51	55	55	55	58	72	73	74	75	76	76	76	76	77	77	77	78	78	78
4/F	43.55	59	54	53	58	58	58	60	73	74	75	75	76	76	76	76	77	77	77	77	78	78
5/F	46.7	59	55	54	59	59	60	61	74	75	75	76	76	76	76	76	77	77	77	77	78	78
6/F	49.85	60	56	56	59	60	62	63	75	75	75	76	76	76	76	76	76	77	77	77	77	77
7/F	53	60	56	56	59	60	63	64	75	75	75	76	76	76	76	76	76	76	77	77	77	77
8/F	56.15	60	56	57	60	60	63	64	75	75	75	75	76	76	76	76	76	76	76	77	77	77
9/F	59.3	60	57	57	60	60	64	65	75	75	75	75	76	76	76	76	76	76	76	77	77	77
10/F	62.45	60	57	57	60	61	64	65	75	75	75	75	75	76	76	76	76	76	76	76	77	77
11/F	65.6	60	57	57	60	61	64	65	74	75	75	75	75	75	75	76	76	76	76	76	77	77
12/F	68.75	60	57	57	60	61	64	65	74	75	75	75	75	75	75	75	76	76	76	76	76	76
13/F	71.9	60	57	57	60	61	64	65	74	74	75	75	75	75	75	75	75	75	76	76	76	76
14/F	75.05	60	57	57	60	61	63	65	74	74	75	75	75	75	75	75	75	75	75	76	76	76
15/F	78.2	60	57	57	60	61	64	65	74	74	74	75	75	75	75	75	75	75	75	76	76	76
16/F	81.35	60	58	58	60	61	64	65	74	74	74	74	75	75	75	75	75	75	75	75	76	76
17/F	84.5	61	58	58	60	61	64	65	74	74	74	74	75	75	75	75	75	75	75	75	76	76
18/F	87.65	61	58	58	60	61	64	65	74	74	74	74	74	75	75	75	75	75	75	75	76	76
19/F	90.8	61	58	58	60	61	64	65	74	74	74	74	74	74	74	74	75	75	75	75	75	75
20/F	93.95	61	58	58	60	61	64	65	73	74	74	74	74	74	74	74	74	75	75	75	75	75
21/F	97.1	61	58	58	60	61	64	65	73	74	74	74	74	74	74	74	74	74	75	75	75	75
22/F	100.25	61	58	58	60	61	64	65	73	73	74	74	74	74	74	74	74	74	74	75	75	75
min		56	48	47	50	50	51	56	68	69	70	71	72	73	74	74	74	74	74	75	75	75
max		61	58	58	60	61	64	65	75	75	75	76	76	76	76	76	77	77	77	78	78	78

Tower A (High Zone) - by façade

Floor	Elevation (mPD)	Predited Noise level, dB(A)																
		TAH-01-1	TAH-01-2	TAH-01-3	TAH-02-1	TAH-02-2	TAH-02-3	TAH-03-1	TAH-03-2	TAH-04-1	TAH-04-2	TAH-05-1	TAH-05-2	TAH-05-3	TAH-05-4	TAH-06-1	TAH-06-2	TAH-06-3
23/F	103.4	74	73	73	73	73	73	73	72	72	72	72	72	72	64	66	67	65
24/F	106.55	74	73	73	73	73	72	72	72	72	72	72	72	72	64	66	67	65
25/F	109.7	74	73	73	73	72	72	72	72	72	72	72	72	72	63	65	67	65
26/F	112.85	74	73	73	72	72	72	72	72	72	72	72	72	72	63	65	67	65
27/F	116	74	73	73	72	72	72	72	72	72	72	72	72	72	63	65	67	65
28/F	119.15	74	73	72	72	72	72	72	72	72	72	72	72	72	63	65	67	65
29/F	122.3	74	73	72	72	72	72	72	72	72	72	72	72	72	63	65	66	65
30/F	125.45	73	72	72	72	72	72	72	72	72	72	72	72	71	63	65	66	65
31/F	128.6	73	72	72	72	72	72	72	72	72	72	71	71	71	63	65	66	65
32/F	131.75	73	72	72	72	72	72	72	72	72	71	71	71	71	63	65	66	65
33/F	134.9	73	72	72	72	72	72	72	71	71	71	71	71	71	63	65	66	65
34/F	138.05	73	72	72	72	72	71	71	71	71	71	71	71	71	63	65	66	65
min		73	72	72	72	72	71	71	71	71	71	71	71	71	63	65	66	65
max		74	73	73	73	73	73	73	72	72	72	72	72	72	64	66	67	65

Floor	Elevation (mPD)	Predited Noise level, dB(A)																				
		TAH-06-4	TAH-06-5	TAH-07-1	TAH-07-2	TAH-07-3	TAH-08-1	TAH-08-2	TAH-08-3	TAH-08-4	TAH-08-5	TAH-09-1	TAH-09-2	TAH-09-3	TAH-10-1	TAH-10-2	TAH-11-1	TAH-11-2	TAH-12-1	TAH-12-2	TAH-12-3	TAH-12-4
23/F	103.4	61	58	58	60	61	64	65	73	73	74	74	74	74	74	74	74	74	74	75	75	75
24/F	106.55	61	58	58	60	61	64	65	73	73	73	74	74	74	74	74	74	74	74	74	75	75
25/F	109.7	61	59	59	60	61	64	65	73	73	73	74	74	74	74	74	74	74	74	74	75	75
26/F	112.85	61	59	59	60	61	64	65	73	73	73	73	74	74	74	74	74	74	74	74	75	75
27/F	116	61	59	59	60	61	64	65	73	73	73	73	73	73	74	74	74	74	74	74	74	75
28/F	119.15	61	59	59	61	61	64	65	73	73	73	73	73	73	73	74	74	74	74	74	74	74
29/F	122.3	61	59	59	61	61	64	65	73	73	73	73	73	73	73	73	73	74	74	74	74	74
30/F	125.45	61	59	59	61	61	64	65	73	73	73	73	73	73	73	73	73	73	74	74	74	74
31/F	128.6	61	59	59	61	61	64	65	73	73	73	73	73	73	73	73	73	73	73	74	74	74
32/F	131.75	61	59	59	61	61	64	65	72	73	73	73	73	73	73	73	73	73	73	74	74	74
33/F	134.9	61	59	60	61	61	64	65	72	73	73	73	73	73	73	73	73	73	73	74	74	74
34/F	138.05	61	60	60	61	61	64	65	72	72	73	73	73	73	73	73	73	73	73	73	74	74
min		61	58	58	60	61	64	65	72	72	73	73	73	73	73	73	73	73	73	73	74	74
max		61	60	60	61	61	64	65	73	73	74	74	74	74	74	74	74	74	74	75	75	75

Tower B - by façade

Floor	Elevation (mPD)	Predited Noise level, dB(A)																
		TB-01-1	TB-01-2	TB-01-3	TB-02-1	TB-02-2	TB-02-3	TB-03-1	TB-03-2	TB-04-1	TB-04-2	TB-05-1	TB-05-2	TB-05-3	TB-05-4	TB-06-1	TB-06-2	TB-06-3
1/F	34.1	79	76	76	76	76	76	76	75	75	75	75	76	76	56	66	69	59
2/F	37.25	79	76	76	76	76	75	75	75	75	75	75	75	75	58	66	69	60
3/F	40.4	79	76	76	76	75	75	75	75	75	75	75	75	75	59	66	69	60
4/F	43.55	78	76	76	75	75	75	75	75	75	75	75	75	75	61	66	68	61
5/F	46.7	78	75	75	75	75	75	75	75	74	75	74	75	75	62	66	69	61
6/F	49.85	78	75	75	75	75	75	74	74	74	74	74	75	75	63	67	69	62
7/F	53	78	75	75	75	75	74	74	74	74	74	74	75	74	64	67	69	62
8/F	56.15	77	75	75	74	74	74	74	74	74	74	74	74	74	64	67	69	63
9/F	59.3	77	75	74	74	74	74	74	74	74	74	74	74	74	64	67	69	63
10/F	62.45	77	74	74	74	74	74	74	73	73	74	73	74	74	64	67	69	64
11/F	65.6	77	74	74	74	74	74	73	73	73	73	73	74	74	64	67	69	64
12/F	68.75	77	74	74	74	74	73	73	73	73	73	73	74	74	64	67	69	65
13/F	71.9	77	74	74	74	73	73	73	73	73	73	73	73	73	64	67	69	65
14/F	75.05	76	74	74	73	73	73	73	73	73	73	73	73	73	64	67	68	65
15/F	78.2	76	73	73	73	73	73	73	72	72	72	72	73	73	64	67	68	65
16/F	81.35	76	73	73	73	73	73	72	72	72	72	72	73	73	64	66	68	66
17/F	84.5	76	73	73	73	73	72	72	72	72	72	72	73	73	64	66	68	66
18/F	87.65	76	73	73	73	72	72	72	72	72	72	72	73	73	63	66	68	66
19/F	90.8	76	73	73	73	72	72	72	72	72	72	72	72	72	63	66	68	66
20/F	93.95	76	73	73	72	72	72	72	72	72	72	72	72	72	63	66	68	66
21/F	97.1	75	73	72	72	72	72	72	72	71	72	72	72	72	63	66	67	66
22/F	100.25	75	73	72	72	72	72	72	71	71	72	71	72	72	63	66	67	66
23/F	103.4	75	72	72	72	72	72	72	71	71	71	71	72	72	63	65	67	66
24/F	106.55	75	72	72	72	72	72	71	71	71	71	71	72	72	63	65	67	66
25/F	109.7	75	72	72	72	72	71	71	71	71	71	71	72	72	63	65	67	66
26/F	112.85	75	72	72	72	72	71	71	71	71	71	71	72	72	63	65	67	66
27/F	116	75	72	72	72	71	71	71	71	71	71	71	72	72	63	65	67	66
28/F	119.15	75	72	72	72	71	71	71	71	71	71	71	72	72	63	65	67	66
29/F	122.3	74	72	72	71	71	71	71	71	71	71	71	72	71	62	65	67	66
30/F	125.45	74	72	72	71	71	71	71	71	71	71	71	71	71	62	65	67	66
31/F	128.6	74	72	71	71	71	71	71	71	71	71	71	71	71	62	65	66	65
32/F	131.75	74	72	71	71	71	71	71	71	71	71	71	71	71	62	65	66	65
33/F	134.9	74	71	71	71	71	71	71	71	71	71	71	71	71	62	65	66	65
34/F	138.05	74	71	71	71	71	71	71	71	71	71	71	71	71	62	64	66	65
min		74	71	71	71	71	71	71	71	71	71	71	71	71	56	64	66	59
max		79	76	76	76	76	76	76	75	75	75	75	76	76	64	67	69	66

Floor	Elevation (mPD)	Predited Noise level, dB(A)																	
		TB-06-4	TB-06-5	TB-07-1	TB-07-2	TB-07-3	TB-08-1	TB-08-2	TB-08-3	TB-09-1	TB-09-2	TB-09-3	TB-10-1	TB-10-2	TB-11-1	TB-11-2	TB-12-1	TB-12-2	TB-12-3
1/F	34.1	57	56	56	55	46	66	67	67	71	72	74	75	77	77	78	78	79	79
2/F	37.25	57	57	56	55	47	68	70	70	74	75	76	76	77	77	78	78	79	79
3/F	40.4	57	57	56	55	48	71	72	71	75	76	76	76	77	77	78	78	78	79
4/F	43.55	58	57	56	56	49	72	73	73	75	76	76	76	77	77	77	78	78	78
5/F	46.7	58	57	56	56	51	73	74	73	76	76	76	76	77	77	77	77	78	78
6/F	49.85	58	57	57	57	53	74	74	73	76	76	76	76	76	77	77	77	78	78
7/F	53	58	58	57	57	54	74	74	73	75	76	76	76	76	76	77	77	78	78
8/F	56.15	59	58	57	58	55	74	74	73	75	75	76	76	76	76	77	77	77	78
9/F	59.3	59	58	58	58	56	74	74	73	75	75	75	76	76	76	76	77	77	77
10/F	62.45	59	58	58	58	56	74	74	73	75	75	75	75	76	76	76	77	77	77
11/F	65.6	60	59	58	59	57	73	74	73	75	75	75	75	76	76	76	76	77	77
12/F	68.75	60	59	59	59	58	73	74	73	75	75	75	75	75	76	76	76	77	77
13/F	71.9	60	59	59	60	58	73	74	73	75	75	75	75	75	75	76	76	77	77
14/F	75.05	61	60	60	61	59	73	74	72	75	75	75	75	75	75	76	76	76	77
15/F	78.2	61	60	60	61	60	73	73	72	74	74	75	75	75	75	76	76	76	76
16/F	81.35	62	61	61	62	60	73	73	72	74	74	74	75	75	75	75	76	76	76
17/F	84.5	62	61	61	62	60	73	73	72	74	74	74	74	75	75	75	76	76	76
18/F	87.65	62	61	61	62	60	73	73	72	74	74	74	74	75	75	75	75	76	76
19/F	90.8	62	62	61	62	61	73	73	72	74	74	74	74	74	75	75	75	76	76
20/F	93.95	62	62	62	62	61	73	73	72	74	74	74	74	74	74	75	75	76	76
21/F	97.1	63	62	62	62	61	72	73	72	74	74	74	74	74	74	75	75	76	76
22/F	100.25	63	62	62	62	61	72	73	72	74	74	74	74	74	74	75	75	75	76
23/F	103.4	63	62	61	62	61	72	73	71	74	73	74	74	74	74	75	75	75	75
24/F	106.55	62	61	61	62	61	72	72	71	73	73	73	74	74	74	74	75	75	75
25/F	109.7	62	61	61	62	61	72	72	71	73	73	73	73	74	74	74	75	75	75
26/F	112.85	62	61	61	62	61	72	72	71	73	73	73	73	74	74	74	74	75	75
27/F	116	62	61	61	62	61	72	72	71	73	73	73	73	73	74	74	74	75	75
28/F	119.15	62	61	61	62	61	72	72	71	73	73	73	73	73	74	74	74	75	75
29/F	122.3	62	61	61	62	61	72	72	71	73	73	73	73	73	73	74	74	75	75
30/F	125.45	62	61	61	62	61	72	72	71	73	73	73	73	73	73	74	74	75	75
31/F	128.6	62	61	61	62	61	72	72	71	73	73	73	73	73	73	74	74	74	75
32/F	131.75	62	61	61	62	61	71	72	71	73	73	73	73	73	73	74	74	74	74
33/F	134.9	62	61	61	62	61	71	72	71	73	73	73	73	73	73	74	74	74	74
34/F	138.05	62	61	61	62	61	71	72	70	73	72	72	73	73	73	73	74	74	74
min		57	56	56	55	46	66	67	67	71	72	72	73	73	73	73	74	74	74
max		63	62	62	62	61	74	74	73	76	76	76	76	77	77	78	78	79	79

Predicted Traffic Noise Level, dB(A) - (a) Base Scenario

Tower A (Low Zone) - by flat

Floor	Elevation (mPD)	Predited Noise level, dB(A)												
		TAL-01	TAL-02	TAL-03	TAL-04	TAL-05	TAL-06	TAL-07	TAL-08	TAL-09	TAL-10	TAL-11	TAL-12	TAL-13
1/F	34.1	78	77	76	76	76	70	50	70	72	74	76	77	78
2/F	37.25	78	76	76	76	75	70	52	72	74	76	77	77	78
3/F	40.4	78	76	76	75	75	70	55	74	76	76	77	77	78
4/F	43.55	77	76	75	75	75	70	58	75	76	76	77	77	78
5/F	46.7	77	76	75	75	75	70	59	75	76	76	77	77	78
6/F	49.85	77	75	75	75	75	70	60	75	76	76	76	77	77
7/F	53	77	75	75	75	74	70	60	75	76	76	76	77	77
8/F	56.15	77	75	75	74	74	69	60	75	76	76	76	76	77
9/F	59.3	76	75	75	74	74	69	60	75	76	76	76	76	77
10/F	62.45	76	75	74	74	74	69	61	75	75	76	76	76	77
11/F	65.6	76	75	74	74	74	69	61	75	75	75	76	76	77
12/F	68.75	76	74	74	74	74	69	61	75	75	75	76	76	76
13/F	71.9	76	74	74	74	74	68	61	75	75	75	75	76	76
14/F	75.05	76	74	74	74	73	68	61	75	75	75	75	75	76
15/F	78.2	75	74	74	74	73	68	61	74	75	75	75	75	76
16/F	81.35	75	74	74	73	73	68	61	74	75	75	75	75	76
17/F	84.5	75	74	73	73	73	68	61	74	75	75	75	75	76
18/F	87.65	75	73	73	73	73	68	61	74	74	75	75	75	76
19/F	90.8	75	73	73	73	73	68	61	74	74	74	75	75	75
20/F	93.95	75	73	73	73	73	67	61	74	74	74	74	75	75
21/F	97.1	74	73	73	73	72	67	61	74	74	74	74	75	75
22/F	100.25	74	73	73	73	72	67	61	74	74	74	74	74	75
min		74	73	73	73	72	67	50	70	72	74	74	74	75
max		78	77	76	76	76	70	61	75	76	76	77	77	78

Tower A (High Zone) - by flat

Floor	Elevation (mPD)	Predited Noise level, dB(A)											
		TAH-01	TAH-02	TAH-03	TAH-04	TAH-05	TAH-06	TAH-07	TAH-08	TAH-09	TAH-10	TAH-11	TAH-12
23/F	103.4	74	73	73	72	72	67	61	74	74	74	74	75
24/F	106.55	74	73	72	72	72	67	61	73	74	74	74	75
25/F	109.7	74	73	72	72	72	67	61	73	74	74	74	75
26/F	112.85	74	72	72	72	72	67	61	73	74	74	74	75
27/F	116	74	72	72	72	72	67	61	73	73	74	74	75
28/F	119.15	74	72	72	72	72	67	61	73	73	74	74	74
29/F	122.3	74	72	72	72	72	66	61	73	73	73	74	74
30/F	125.45	73	72	72	72	72	66	61	73	73	73	73	74
31/F	128.6	73	72	72	72	71	66	61	73	73	73	73	74
32/F	131.75	73	72	72	72	71	66	61	73	73	73	73	74
33/F	134.9	73	72	72	71	71	66	61	73	73	73	73	74
34/F	138.05	73	72	71	71	71	66	61	73	73	73	73	74
min		73	72	71	71	71	66	61	73	73	73	73	74
max		74	73	73	72	72	67	61	74	74	74	74	75

Tower B - by flat

Floor	Elevation (mPD)	Predited Noise level, dB(A)											
		TB-01	TB-02	TB-03	TB-04	TB-05	TB-06	TB-07	TB-08	TB-09	TB-10	TB-11	TB-12
1/F	34.1	79	76	76	75	76	69	56	67	74	77	78	79
2/F	37.25	79	76	75	75	75	69	56	70	76	77	78	79
3/F	40.4	79	76	75	75	75	69	56	72	76	77	78	79
4/F	43.55	78	75	75	75	75	68	56	73	76	77	77	78
5/F	46.7	78	75	75	75	75	69	56	74	76	77	77	78
6/F	49.85	78	75	74	74	75	69	57	74	76	76	77	78
7/F	53	78	75	74	74	75	69	57	74	76	76	77	78
8/F	56.15	77	74	74	74	74	69	58	74	76	76	77	78
9/F	59.3	77	74	74	74	74	69	58	74	75	76	76	77
10/F	62.45	77	74	74	74	74	69	58	74	75	76	76	77
11/F	65.6	77	74	73	73	74	69	59	74	75	76	76	77
12/F	68.75	77	74	73	73	74	69	59	74	75	75	76	77
13/F	71.9	77	74	73	73	73	69	60	74	75	75	76	77
14/F	75.05	76	73	73	73	73	68	61	74	75	75	76	77
15/F	78.2	76	73	73	72	73	68	61	73	75	75	76	76
16/F	81.35	76	73	72	72	73	68	62	73	74	75	75	76
17/F	84.5	76	73	72	72	73	68	62	73	74	75	75	76
18/F	87.65	76	73	72	72	73	68	62	73	74	75	75	76
19/F	90.8	76	73	72	72	72	68	62	73	74	74	75	76
20/F	93.95	76	72	72	72	72	68	62	73	74	74	75	76
21/F	97.1	75	72	72	72	72	67	62	73	74	74	75	76
22/F	100.25	75	72	72	72	72	67	62	73	74	74	75	76
23/F	103.4	75	72	72	71	72	67	62	73	74	74	75	75
24/F	106.55	75	72	71	71	72	67	62	72	73	74	74	75
25/F	109.7	75	72	71	71	72	67	62	72	73	74	74	75
26/F	112.85	75	72	71	71	72	67	62	72	73	74	74	75
27/F	116	75	72	71	71	72	67	62	72	73	73	74	75
28/F	119.15	75	72	71	71	72	67	62	72	73	73	74	75
29/F	122.3	74	71	71	71	72	67	62	72	73	73	74	75
30/F	125.45	74	71	71	71	71	67	62	72	73	73	74	75
31/F	128.6	74	71	71	71	71	66	62	72	73	73	74	75
32/F	131.75	74	71	71	71	71	66	62	72	73	73	74	74
33/F	134.9	74	71	71	71	71	66	62	72	73	73	74	74
34/F	138.05	74	71	71	71	71	66	62	72	73	73	73	74
min		74	71	71	71	71	66	56	67	73	73	73	74
max		79	76	76	75	76	69	62	74	76	77	78	79

APPENDIX 5-3

Proposed Mitigation Measures & Traffic Noise Assessment Results (Mitigated Scenario - With Windows)

Proposed Noise Mitigation

Tower A (Low Zone) - by façade

Floor	Elevation (mPD)	Predited Noise level, dB(A)																																					
		TAL-01-1	TAL-01-2	TAL-01-3	TAL-02-1	TAL-02-2	TAL-02-3	TAL-03-1	TAL-03-2	TAL-04-1	TAL-04-2	TAL-05-1	TAL-05-2	TAL-05-3	TAL-05-4	TAL-06-1	TAL-06-2	TAL-06-3	TAL-06-4	TAL-06-5	TAL-07-1	TAL-07-2	TAL-07-3	TAL-08-1	TAL-08-2	TAL-08-3	TAL-08-4	TAL-08-5	TAL-09-1	TAL-09-2	TAL-10-1	TAL-10-2	TAL-11-1	TAL-11-2	TAL-12-1	TAL-12-2	TAL-13-1	TAL-13-2	TAL-13-3
1/F	34.1	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
2/F	37.25	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
3/F	40.4	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
4/F	43.55	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
5/F	46.7	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
6/F	49.85	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
7/F	53	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
8/F	56.15	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
9/F	59.3	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
10/F	62.45	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
11/F	65.6	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
12/F	68.75	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
13/F	71.9	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
14/F	75.05	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
15/F	78.2	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
16/F	81.35	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
17/F	84.5	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
18/F	87.65	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
19/F	90.8	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
20/F	93.95	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
21/F	97.1	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
22/F	100.25	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW

Tower A (High Zone) - by façade

Floor	Elevation (mPD)	Predited Noise level, dB(A)																																					
		TAH-01-1	TAH-01-2	TAH-01-3	TAH-02-1	TAH-02-2	TAH-02-3	TAH-03-1	TAH-03-2	TAH-04-1	TAH-04-2	TAH-05-1	TAH-05-2	TAH-05-3	TAH-05-4	TAH-06-1	TAH-06-2	TAH-06-3	TAH-06-4	TAH-06-5	TAH-07-1	TAH-07-2	TAH-07-3	TAH-08-1	TAH-08-2	TAH-08-3	TAH-08-4	TAH-08-5	TAH-09-1	TAH-09-2	TAH-09-3	TAH-10-1	TAH-10-2	TAH-11-1	TAH-11-2	TAH-12-1	TAH-12-2	TAH-12-3	TAH-12-4
23/F	103.4	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
24/F	106.55	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
25/F	109.7	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
26/F	112.85	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
27/F	116	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
28/F	119.15	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
29/F	122.3	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
30/F	125.45	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
31/F	128.6	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
32/F	131.75	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
33/F	134.9	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
34/F	138.05	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW

Tower B - by façade

Floor	Elevation (mPD)	Predited Noise level, dB(A)																																		
		TB-01-1	TB-01-2	TB-01-3	TB-02-1	TB-02-2	TB-02-3	TB-03-1	TB-03-2	TB-04-1	TB-04-2	TB-05-1	TB-05-2	TB-05-3	TB-05-4	TB-06-1	TB-06-2	TB-06-3	TB-06-4	TB-06-5	TB-07-1	TB-07-2	TB-07-3	TB-08-1	TB-08-2	TB-08-3	TB-09-1	TB-09-2	TB-09-3	TB-10-1	TB-10-2	TB-11-1	TB-11-2	TB-12-1	TB-12-2	TB-12-3
1/F	34.1	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
2/F	37.25	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
3/F	40.4	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
4/F	43.55	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
5/F	46.7	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
6/F	49.85	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
7/F	53	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
8/F	56.15	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
9/F	59.3	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
10/F	62.45	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
11/F	65.6	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
12/F	68.75	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
13/F	71.9	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
14/F	75.05	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
15/F	78.2	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
16/F	81.35	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
17/F	84.5	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
18/F	87.65	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
19/F	90.8	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
20/F	93.95	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
21/F	97.1	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
22/F	100.25	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
23/F	103.4	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
24/F	106.55	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
25/F	109.7	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
26/F	112.85	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
27/F	116	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
28/F	119.15	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
29/F	122.3	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
30/F	125.45	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
31/F	128.6	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
32/F	131.75	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
33/F	134.9	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
34/F	138.05	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	--	--	--	--	--	--	--	--	--	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW

Noise Correction from the Mitigation, dB(A)

Tower A (Low Zone) - by façade

Floor	Elevation	Predited Noise level, dB(A)																																			
	(mPD)	TAL-01-1	TAL-01-2	TAL-01-3	TAL-02-1	TAL-02-2	TAL-02-3	TAL-03-1	TAL-03-2	TAL-04-1	TAL-04-2	TAL-05-1	TAL-05-2	TAL-05-3	TAL-05-4	TAL-06-1	TAL-06-2	TAL-06-3	TAL-06-4	TAL-06-5	TAL-07-1	TAL-07-2	TAL-07-3	TAL-08-1	TAL-08-2	TAL-08-3	TAL-08-4	TAL-08-5	TAL-09-1	TAL-09-2	TAL-10-1	TAL-10-2	TAL-11-1	TAL-11-2	TAL-12-1	TAL-12-2	TAL-13-1	TAL-13-2	TAL-13-3
1/F	34.1	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
2/F	37.25	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
3/F	40.4	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
4/F	43.55	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
5/F	46.7	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
6/F	49.85	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
7/F	53	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
8/F	56.15	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
9/F	59.3	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
10/F	62.45	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
11/F	65.6	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
12/F	68.75	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
13/F	71.9	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
14/F	75.05	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
15/F	78.2	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
16/F	81.35	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
17/F	84.5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
18/F	87.65	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
19/F	90.8	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
20/F	93.95	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
21/F	97.1	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
22/F	100.25	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5

Tower A (High Zone) - by façade

Floor	Elevation	Predited Noise level, dB(A)																																			
	(mPD)	TAH-01-1	TAH-01-2	TAH-01-3	TAH-02-1	TAH-02-2	TAH-02-3	TAH-03-1	TAH-03-2	TAH-04-1	TAH-04-2	TAH-05-1	TAH-05-2	TAH-05-3	TAH-05-4	TAH-06-1	TAH-06-2	TAH-06-3	TAH-06-4	TAH-06-5	TAH-07-1	TAH-07-2	TAH-07-3	TAH-08-1	TAH-08-2	TAH-08-3	TAH-08-4	TAH-08-5	TAH-09-1	TAH-09-2	TAH-09-3	TAH-10-1	TAH-10-2	TAH-11-1	TAH-11-2	TAH-12-1	TAH-12-2	TAH-12-3	TAH-12-4
23/F	103.4	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
24/F	106.55	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
25/F	109.7	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
26/F	112.85	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
27/F	116	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
28/F	119.15	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
29/F	122.3	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
30/F	125.45	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
31/F	128.6	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
32/F	131.75	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
33/F	134.9	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
34/F	138.05	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5

Tower B - by façade

Floor	Elevation	Predited Noise level, dB(A)																																
	(mPD)	TB-01-1	TB-01-2	TB-01-3	TB-02-1	TB-02-2	TB-02-3	TB-03-1	TB-03-2	TB-04-1	TB-04-2	TB-05-1	TB-05-2	TB-05-3	TB-05-4	TB-06-1	TB-06-2	TB-06-3	TB-06-4	TB-06-5	TB-07-1	TB-07-2	TB-07-3	TB-08-1	TB-08-2	TB-08-3	TB-09-1	TB-09-2	TB-09-3	TB-10-1	TB-10-2	TB-11-1	TB-11-2	TB-12-1	TB-12-2	TB-12-3
1/F	34.1	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
2/F	37.25	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
3/F	40.4	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
4/F	43.55	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
5/F	46.7	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
6/F	49.85	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
7/F	53	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
8/F	56.15	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
9/F	59.3	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
10/F	62.45	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
11/F	65.6	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
12/F	68.75	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
13/F	71.9	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
14/F	75.05	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
15/F	78.2	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
16/F	81.35	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
17/F	84.5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
18/F	87.65	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
19/F	90.8	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
20/F	93.95	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
21/F	97.1	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
22/F	100.25	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
23/F	103.4	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
24/F	106.55	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
25/F	109.7	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
26/F	112.85	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
27/F	116	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
28/F	119.15	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
29/F	122.3	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
30/F	125.45	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
31/F	128.6	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
32/F	131.75	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
33/F	134.9	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
34/F	138.05	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	0	0	0	0	0	0	0	0	0	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5

ID	Description	Correction	
--	Normal Windows	0	dB
AW	Acoustic Windows	-5	dB

Predicted Traffic Noise Level, dB(A) - (b) Mitigated Scenario: Acoustic Windows

Tower A (Low Zone) - by façade

Floor	Elevation	Predited Noise level, dB(A)																																			
	(mPD)	TAL-01-1	TAL-01-2	TAL-01-3	TAL-02-1	TAL-02-2	TAL-02-3	TAL-03-1	TAL-03-2	TAL-04-1	TAL-04-2	TAL-05-1	TAL-05-2	TAL-05-3	TAL-05-4	TAL-06-1	TAL-06-2	TAL-06-3	TAL-06-4	TAL-06-5	TAL-07-1	TAL-07-2	TAL-07-3	TAL-08-1	TAL-08-2	TAL-08-3	TAL-08-4	TAL-08-5	TAL-09-1	TAL-09-2	TAL-10-1	TAL-10-2	TAL-11-1	TAL-11-2	TAL-12-1	TAL-12-2	TAL-13-1	TAL-13-2	TAL-13-3
1/F	34.1	73	72	72	71	71	71	71	71	71	71	71	71	71	66	68	70	60	56	48	47	50	50	51	56	63	64	65	66	67	68	69	70	71	72	72	73	73	73
2/F	37.25	73	72	71	71	71	71	71	71	71	71	70	70	70	66	69	70	61	57	50	49	52	52	53	57	65	66	67	68	69	70	71	71	72	72	72	73	73	73
3/F	40.4	73	72	71	71	71	71	71	71	70	70	70	70	70	67	69	70	64	58	52	51	55	55	55	58	67	68	69	70	71	71	71	71	72	72	72	73	73	73
4/F	43.55	72	71	71	71	71	71	70	70	70	70	70	70	70	67	69	70	65	59	54	53	58	58	58	60	68	69	70	70	71	71	71	71	72	72	72	72	73	73
5/F	46.7	72	71	71	71	70	70	70	70	70	70	70	70	70	66	68	70	65	59	55	54	59	59	60	61	69	70	70	71	71	71	71	71	72	72	72	72	73	73
6/F	49.85	72	71	71	70	70	70	70	70	70	70	70	70	69	66	68	70	65	60	56	56	59	60	62	63	70	70	70	71	71	71	71	71	71	72	72	72	72	72
7/F	53	72	71	70	70	70	70	70	70	70	70	69	69	69	66	68	70	66	60	56	56	59	60	63	64	70	70	70	71	71	71	71	71	71	71	72	72	72	72
8/F	56.15	72	71	70	70	70	70	70	70	69	69	69	69	69	66	68	69	66	60	56	57	60	60	63	64	70	70	70	70	71	71	71	71	71	71	71	72	72	72
9/F	59.3	71	70	70	70	70	70	70	69	69	69	69	69	69	65	68	69	66	60	57	57	60	60	64	65	70	70	70	70	71	71	71	71	71	71	71	72	72	72
10/F	62.45	71	70	70	70	70	69	69	69	69	69	69	69	69	65	67	69	66	60	57	57	60	61	64	65	70	70	70	70	70	71	71	71	71	71	71	71	72	72
11/F	65.6	71	70	70	70	69	69	69	69	69	69	69	69	69	65	67	69	66	60	57	57	60	61	64	65	69	70	70	70	70	70	70	71	71	71	71	71	72	72
12/F	68.75	71	70	70	69	69	69	69	69	69	69	69	69	68	65	67	69	66	60	57	57	60	61	64	65	69	70	70	70	70	70	70	70	71	71	71	71	71	71
13/F	71.9	71	70	69	69	69	69	69	69	69	69	69	68	68	65	67	68	66	60	57	57	60	61	64	65	69	69	70	70	70	70	70	70	70	70	71	71	71	71
14/F	75.05	71	70	69	69	69	69	69	69	69	69	68	68	68	65	67	68	66	60	57	57	60	61	63	65	69	69	70	70	70	70	70	70	70	70	70	71	71	71
15/F	78.2	70	69	69	69	69	69	69	69	69	68	68	68	68	65	67	68	66	60	57	57	60	61	64	65	69	69	69	70	70	70	70	70	70	70	70	71	71	71
16/F	81.35	70	69	69	69	69	69	69	68	68	68	68	68	68	64	67	68	65	60	58	58	60	61	64	65	69	69	69	69	70	70	70	70	70	70	70	70	71	71
17/F	84.5	70	69	69	69	69	68	68	68	68	68	68	68	68	64	66	68	65	61	58	58	60	61	64	65	69	69	69	69	70	70	70	70	70	70	70	70	71	71
18/F	87.65	70	69	69	68	68	68	68	68	68	68	68	68	68	64	66	68	65	61	58	58	60	61	64	65	69	69	69	69	69	70	70	70	70	70	70	70	71	71
19/F	90.8	70	69	68	68	68	68	68	68	68	68	68	68	68	64	66	68	65	61	58	58	60	61	64	65	69	69	69	69	69	69	69	69	70	70	70	70	70	70
20/F	93.95	70	69	68	68	68	68	68	68	68	68	68	68	68	64	66	67	65	61	58	58	60	61	64	65	68	69	69	69	69	69	69	69	69	70	70	70	70	70
21/F	97.1	69	68	68	68	68	68	68	68	68	68	67	67	67	64	66	67	65	61	58	58	60	61	64	65	68	69	69	69	69	69	69	69	69	69	70	70	70	70
22/F	100.25	69	68	68	68	68	68	68	68	68	67	67	67	67	64	66	67	65	61	58	58	60	61	64	65	68	68	69	69	69	69	69	69	68	69	69	70	70	70
min		69	68	68	68	68	68	68	68	68	67	67	67	67	64	66	67	60	56	48	47	50	50	51	56	63	64	65	66	67	68	69	69	69	69	69	70	70	70
max		73	72	72	71	71	71	71	71	71	71	71	71	71	67	69	70	66	61	58	58	60	61	64	65	70	70	70	71	71	71	71	71	72	72	72	73	73	73

Tower A (High Zone) - by façade

Floor	Elevation	Predited Noise level, dB(A)																																				
	(mPD)	TAH-01-1	TAH-01-2	TAH-01-3	TAH-02-1	TAH-02-2	TAH-02-3	TAH-03-1	TAH-03-2	TAH-04-1	TAH-04-2	TAH-05-1	TAH-05-2	TAH-05-3	TAH-05-4	TAH-06-1	TAH-06-2	TAH-06-3	TAH-06-4	TAH-06-5	TAH-07-1	TAH-07-2	TAH-07-3	TAH-08-1	TAH-08-2	TAH-08-3	TAH-08-4	TAH-08-5	TAH-09-1	TAH-09-2	TAH-09-3	TAH-10-1	TAH-10-2	TAH-11-1	TAH-11-2	TAH-12-1	TAH-12-2	TAH-12-3	TAH-12-4
23/F	103.4	69	68	68	68	68	68	68	67	67	67	67	67	67	64	66	67	65	61	58	58	60	61	64	65	68	68	69	69	69	69	69	69	69	69	69	70	70	70
24/F	106.55	69	68	68	68	68	67	67	67	67	67	67	67	67	64	66	67	65	61	58	58	60	61	64	65	68	68	68	69	69	69	69	69	69	69	69	69	70	70
25/F	109.7	69	68	68	68	67	67	67	67	67	67	67	67	67	63	65	67	65	61	59	59	60	61	64	65	68	68	68	69	69	69	69	69	69	69	69	69	70	70
26/F	112.85	69	68	68	67	67	67	67	67	67	67	67	67	67	63	65	67	65	61	59	59	60	61	64	65	68	68	68	68	69	69	69	69	69	69	69	69	70	70
27/F	116	69	68	68	67	67	67	67	67	67	67	67	67	67	63	65	67	65	61	59	59	60	61	64	65	68	68	68	68	68	68	69	69	69	69	69	69	69	70
28/F	119.15	69	68	67	67	67	67	67	67	67	67	67	67	67	63	65	67	65	61	59	59	61	61	64	65	68	68	68	68	68	68	68	69	69	69	69	69	69	69
29/F	122.3	69	68	67	67	67	67	67	67	67	67	67	67	67	63	65	66	65	61	59	59	61	61	64	65	68	68	68	68	68	68	68	68	68	69	69	69	69	69
30/F	125.45	68	67	67	67	67	67	67	67	67	67	67	67	66	63	65	66	65	61	59	59	61	61	64	65	68	68	68	68	68	68	68	68	68	68	69	69	69	69
31/F	128.6	68	67	67	67	67	67	67	67	67	67	66	66	66	63	65	66	65	61	59	59	61	61	64	65	68	68	68	68	68	68	68	68	68	68	68	69	69	69
32/F	131.75	68	67	67	67	67	67	67	67	67	66	66	66	66	63	65	66	65	61	59	59	61	61	64	65	67	68	68	68	68	68	68	68	68	68	68	69	69	69
33/F	134.9	68	67	67	67	67	67	67	66	66	66	66	66	66	63	65	66	65	61	59	60	61	61	64	65	67	68	68	68	68	68	68	68	68	68	68	69	69	69
34/F	138.05	68	67	67	67	67	66	66	66	66	66	66	66	66	63	65	66	65	61	60	60	61	61	64	65	67	67	68	68	68	68	68	68	68	68	68	68	69	69
min		68	67	67	67	67	66	66	66	66	66	66	66	66	63	65	66	65	61	58	58	60	61	64	65	67	67	68	68	68	68	68	68	68	68	68	68	69	69
max		69	68	68	68	68	68	68	67	67	67	67	67	67	64	66	67	65	61	60	60	61	61	64	65	68	68	69	69	69	69	69	69	69	69	69	70	70	70

Tower B - by façade

Floor	Elevation	Predited Noise level, dB(A)																																	
	(mPD)	TB-01-1	TB-01-2	TB-01-3	TB-02-1	TB-02-2	TB-02-3	TB-03-1	TB-03-2	TB-04-1	TB-04-2	TB-05-1	TB-05-2	TB-05-3	TB-05-4	TB-06-1	TB-06-2	TB-06-3	TB-06-4	TB-06-5	TB-07-1	TB-07-2	TB-07-3	TB-08-1	TB-08-2	TB-08-3	TB-09-1	TB-09-2	TB-09-3	TB-10-1	TB-10-2	TB-11-1	TB-11-2	TB-12-1	TB-12-2	TB-12-3
1/F	34.1	74	71	71	71	71	71	71	70	70	70	70	73	71	56	66	69	59	57	56	56	55	46	61	62	62	66	67	69	70	72	72	73	73	74	74
2/F	37.25	74	71	71	71	71	70	70	70	70	70	70	70	70	58	66	69	60	57	57	56	55	47	63	65	65	69	70	71	71	72	72	73	73	74	74
3/F	40.4	74	71	71	71	70	70	70	70	70	70	70	70	70	59	66	69	60	57	57	56	55	48	66	67	66	70	71	71	71	72	72	73	73	73	74
4/F	43.55	73	71	71	70	70	70	70	70	70	70	70	70	70	61	66	68	61	58	57	56	56	49	67	68	68	70	71	71	71	72	72	72	73	73	73
5/F	46.7	73	70	70	70	70	70	70	70	69	70	69	70	70	62	66	69	61	58	57	56	56	51	68	69	68	71	71	71	71	72	72	72	72	73	73
6/F	49.85	73	70	70	70	70	70	69	69	69	69	69	70	70	63	67	69	62	58	57	57	57	53	69	69	68	71	71	71	71	71	72	72	72	73	73
7/F	53	73	70	70	70	70	69	69	69	69	69	69	70	69	64	67	69	62	58	58	57	57	54	69	69	68	70	71	71	71	71	71	72	72	73	73
8/F	56.15	72	70	70	69	69	69	69	69	69	69	69	69	69	64	67	69	63	59	58	57	58	55	69	69	68	70	70	71	71	71	71	72	72	72	73
9/F	59.3	72	70	69	69	69	69	69	69	69	69	69	69	69	64	67	69	63	59	58	58	58	56	69	69	68	70	70	70	71	71	71	71	72	72	72
10/F	62.45	72	69	69	69	69	69	69	68	68	69	68	69	69	64	67	69	64	59	58	58	58	56	69	69	68	70	70	70	70	71	71	71	72	72	72
11/F	65.6	72	69	69	69	69	69	68	68	68	68	68	69	69	64	67	69	64	60	59	58	59	57	68	69	68	70	70	70	70	71	71	71	71	72	72
12/F	68.75	72	69	69	69	69	68	68	68	68	68	68	69	69	64	67	69	65	60	59	59	59	58	68	69	68	70	70	70	70	70	71	71	71	72	72
13/F	71.9	72	69	69	69	68	68	68	68	68	68	68	68	68	64	67	69	65	60	59	59	60	58	68	69	68	70	70	70	70	70	70	71	71	72	72
14/F	75.05	71	69	69	68	68	68	68	68	68	68	68	68	68	64	67	68	65	61	60	60	61	59	68	69	67	70	70	70	70	70	70	71	71	71	72
15/F	78.2	71	68	68	68	68	68	68	67	67	67	67	68	68	64	67	68	65	61	60	60	61	60	68	68	67	69	69	70	70	70	70	71	71	71	71
16/F	81.35	71	68	68	68	68	68	67	67	67	67	67	68	68	64	66	68	66	62	61	61	62	60	68	68	67	69	69	69	70	70	70	70	71	71	71
17/F	84.5	71	68	68	68	68	67	67	67	67	67	67	68	68	64	66	68	66	62	61	61	62	60	68	68	67	69	69	69	69	70	70	70	71	71	71
18/F	87.65	71	68	68	68	67	67	67	67	67	67	67	68	68	63	66	68	66	62	61	61	62	60	68	68	67	69	69	69	69	70	70	70	70	71	71
19/F	90.8	71	68	68	68	67	67	67	67	67	67	67	67	67	63	66	68	66	62	62	61	62	61	68	68	67	69	69	69	69	69	70	70	70	71	71
20/F	93.95	71	68	68	67	67	67	67	67	67	67	67	67	67	63	66	68	66	62	62	62	62	61	68	68	67	69	69	69	69	69	69	70	70	71	71
21/F	97.1	70	68	67	67	67	67	67	67	66	67	67	67	67	63	66	67	66	63	62	62	62	61	67	68	67	69	69	69	69	69	69	70	70	71	71
22/F	100.25	70	68	67	67	67	67	67	66	66	67	66	67	67	63	66	67	66	63	62	62	62	61	67	68	67	69	69	69	69	69	69	70	70	70	71
23/F	103.4	70	67	67	67	67	67	67	66	66	66	66	67	67	63	65	67	66	63	62	61	62	61	67	68	66	69	68	69	69	69	69	70	70	70	70
24/F	106.55	70	67	67	67	67	67	66	66	66	66	66	67	67	63	65	67	66	62	61	61	62	61	67	67	66	68	68	68	69	69	69	69	70	70	70
25/F	109.7	70	67	67	67	67	66	66	66	66	66	66	67	67	63	65	67	66	62	61	61	62	61	67	67	66	68	68	68	68	69	69	69	70	70	70
26/F	112.85	70	67	67	67	67	66	66	66	66	66	66	67	67	63	65	67	66	62	61	61	62	61	67	67	66	68	68	68	68	69	69	69	69	70	70
27/F	116	70	67	67	67	66	66	66	66	66	66	66	67	67	63	65	67	66	62	61	61	62	61	67	67	66	68	68	68	68	68	69	69	69	70	70
28/F	119.15	70	67	67	67	66	66	66	66	66	66	66	67	67	63	65	67	66	62	61	61	62	61	67	67	66	68	68	68	68	68	69	69	69	70	70
29/F	122.3	69	67	67	66	66	66	66	66	66	66	66	67	66	62	65	67	66	62	61	61	62	61	67	67	66	68	68	68	68	68	68	69	69	70	70
30/F	125.45	69	67	67	66	66	66	66	66	66	66	66	66	66	62	65	67	66	62	61	61	62	61	67	67	66	68	68	68	68	68	68	69	69	70	70
31/F	128.6	69	67	66	66	66	66	66	66	66	66	66	66	66	62	65	66	65	62	61	61	62	61	67	67	66	68	68	68	68	68	68	69	69	69	70
32/F	131.75	69	67	66	66	66	66	66	66	66	66	66	66	66	62	65	66	65	62	61	61	62	61	66	67	66	68	68	68	68	68	68	69	69	69	69
33/F	134.9	69	66	66	66	66	66	66	66	66	66	66	66	66	62	65	66	65	62	61	61	62	61	66	67	66	68	68	68	68	68	68	69	69	69	69
34/F	138.05	69	66	66	66	66	66	66	66	66	66	66	66	66	62	64	66	65	62	61	61	62	61	66	67	65	68	67	67	68	68	68	68	69	69	69
min		69	66	66	66	66	66	66	66	66	66	66	66	66	56	64	66	59	57	56	56	55	46	61	62	62	66	67	67	68	68	68	68	69	69	69
max		74	71	71	71	71	71	71	70	70	70	70	73	71	64	67	69	66	63	62	62	62	61	69	69	68	71	71	71	71	72	72	73	73	74	74

Predicted Traffic Noise Level, dB(A) - (b) Mitigated Scenario: Acoustic Windows

Tower A (Low Zone) - by flat

Floor	Elevation (mPD)	Predited Noise level, dB(A)												
		TAL-01	TAL-02	TAL-03	TAL-04	TAL-05	TAL-06	TAL-07	TAL-08	TAL-09	TAL-10	TAL-11	TAL-12	TAL-13
1/F	34.1	73	72	71	71	71	70	50	65	67	69	71	72	73
2/F	37.25	73	71	71	71	70	70	52	67	69	71	72	72	73
3/F	40.4	73	71	71	70	70	70	55	69	71	71	72	72	73
4/F	43.55	72	71	70	70	70	70	58	70	71	71	72	72	73
5/F	46.7	72	71	70	70	70	70	59	70	71	71	72	72	73
6/F	49.85	72	70	70	70	70	70	60	70	71	71	71	71	72
7/F	53	72	70	70	70	69	70	60	70	71	71	71	71	72
8/F	56.15	72	70	70	69	69	69	60	70	71	71	71	71	72
9/F	59.3	71	70	70	69	69	69	60	70	71	71	71	71	72
10/F	62.45	71	70	69	69	69	69	61	70	70	71	71	71	72
11/F	65.6	71	70	69	69	69	69	61	70	70	70	71	71	72
12/F	68.75	71	69	69	69	69	69	61	70	70	70	71	71	71
13/F	71.9	71	69	69	69	69	68	61	70	70	70	70	71	71
14/F	75.05	71	69	69	69	68	68	61	70	70	70	70	70	71
15/F	78.2	70	69	69	69	68	68	61	69	70	70	70	70	71
16/F	81.35	70	69	69	68	68	68	61	69	70	70	70	70	71
17/F	84.5	70	69	68	68	68	68	61	69	70	70	70	70	71
18/F	87.65	70	68	68	68	68	68	61	69	69	70	70	70	71
19/F	90.8	70	68	68	68	68	68	61	69	69	69	70	70	70
20/F	93.95	70	68	68	68	68	67	61	69	69	69	69	70	70
21/F	97.1	69	68	68	68	67	67	61	69	69	69	69	70	70
22/F	100.25	69	68	68	68	67	67	61	69	69	69	69	69	70
min		69	68	68	68	67	67	50	65	67	69	69	69	70
max		73	72	71	71	71	70	61	70	71	71	72	72	73

Tower A (High Zone) - by flat

Floor	Elevation (mPD)	Predited Noise level, dB(A)											
		TAH-01	TAH-02	TAH-03	TAH-04	TAH-05	TAH-06	TAH-07	TAH-08	TAH-09	TAH-10	TAH-11	TAH-12
23/F	103.4	69	68	68	67	67	67	61	69	69	69	69	70
24/F	106.55	69	68	67	67	67	67	61	68	69	69	69	70
25/F	109.7	69	68	67	67	67	67	61	68	69	69	69	70
26/F	112.85	69	67	67	67	67	67	61	68	69	69	69	70
27/F	116	69	67	67	67	67	67	61	68	68	69	69	70
28/F	119.15	69	67	67	67	67	67	61	68	68	69	69	70
29/F	122.3	69	67	67	67	67	66	61	68	68	68	69	69
30/F	125.45	68	67	67	67	67	66	61	68	68	68	69	69
31/F	128.6	68	67	67	67	66	66	61	68	68	68	68	69
32/F	131.75	68	67	67	67	66	66	61	68	68	68	68	69
33/F	134.9	68	67	67	66	66	66	61	68	68	68	68	69
34/F	138.05	68	67	66	66	66	66	61	68	68	68	68	69
min		68	67	66	66	66	66	61	68	68	68	68	69
max		69	68	68	67	67	67	61	69	69	69	69	70

Tower B - by flat

Floor	Elevation (mPD)	Predited Noise level, dB(A)											
		TB-01	TB-02	TB-03	TB-04	TB-05	TB-06	TB-07	TB-08	TB-09	TB-10	TB-11	TB-12
1/F	34.1	74	71	71	70	71	69	56	62	69	72	73	74
2/F	37.25	74	71	70	70	70	69	56	65	71	72	73	74
3/F	40.4	74	71	70	70	70	69	56	67	71	72	73	74
4/F	43.55	73	70	70	70	70	68	56	68	71	72	72	73
5/F	46.7	73	70	70	70	70	69	56	69	71	72	72	73
6/F	49.85	73	70	69	69	70	69	57	69	71	71	72	73
7/F	53	73	70	69	69	70	69	57	69	71	71	72	73
8/F	56.15	72	69	69	69	69	69	58	69	71	71	72	73
9/F	59.3	72	69	69	69	69	69	58	69	70	71	71	72
10/F	62.45	72	69	69	69	69	69	58	69	70	71	71	72
11/F	65.6	72	69	68	68	69	69	59	69	70	71	71	72
12/F	68.75	72	69	68	68	69	69	59	69	70	70	71	72
13/F	71.9	72	69	68	68	68	69	60	69	70	70	71	72
14/F	75.05	71	68	68	68	68	68	61	69	70	70	71	72
15/F	78.2	71	68	68	67	68	68	61	68	70	70	71	71
16/F	81.35	71	68	67	67	68	68	62	68	69	70	70	71
17/F	84.5	71	68	67	67	68	68	62	68	69	70	70	71
18/F	87.65	71	68	67	67	68	68	62	68	69	70	70	71
19/F	90.8	71	68	67	67	67	68	62	68	69	69	70	71
20/F	93.95	71	67	67	67	67	68	62	68	69	69	70	71
21/F	97.1	70	67	67	67	67	67	62	68	69	69	70	71
22/F	100.25	70	67	67	67	67	67	62	68	69	69	70	71
23/F	103.4	70	67	67	66	67	67	62	68	69	69	70	70
24/F	106.55	70	67	66	66	67	67	62	67	68	69	69	70
25/F	109.7	70	67	66	66	67	67	62	67	68	69	69	70
26/F	112.85	70	67	66	66	67	67	62	67	68	69	69	70
27/F	116	70	67	66	66	67	67	62	67	68	68	69	70
28/F	119.15	70	67	66	66	67	67	62	67	68	68	69	70
29/F	122.3	69	66	66	66	67	67	62	67	68	68	69	70
30/F	125.45	69	66	66	66	66	67	62	67	68	68	69	70
31/F	128.6	69	66	66	66	66	66	62	67	68	68	69	70
32/F	131.75	69	66	66	66	66	66	62	67	68	68	69	69
33/F	134.9	69	66	66	66	66	66	62	67	68	68	69	69
34/F	138.05	69	66	66	66	66	66	62	67	68	68	68	69
min		69	66	66	66	66	66	56	62	68	68	68	69
max		74	71	71	70	71	69	62	69	71	72	73	74

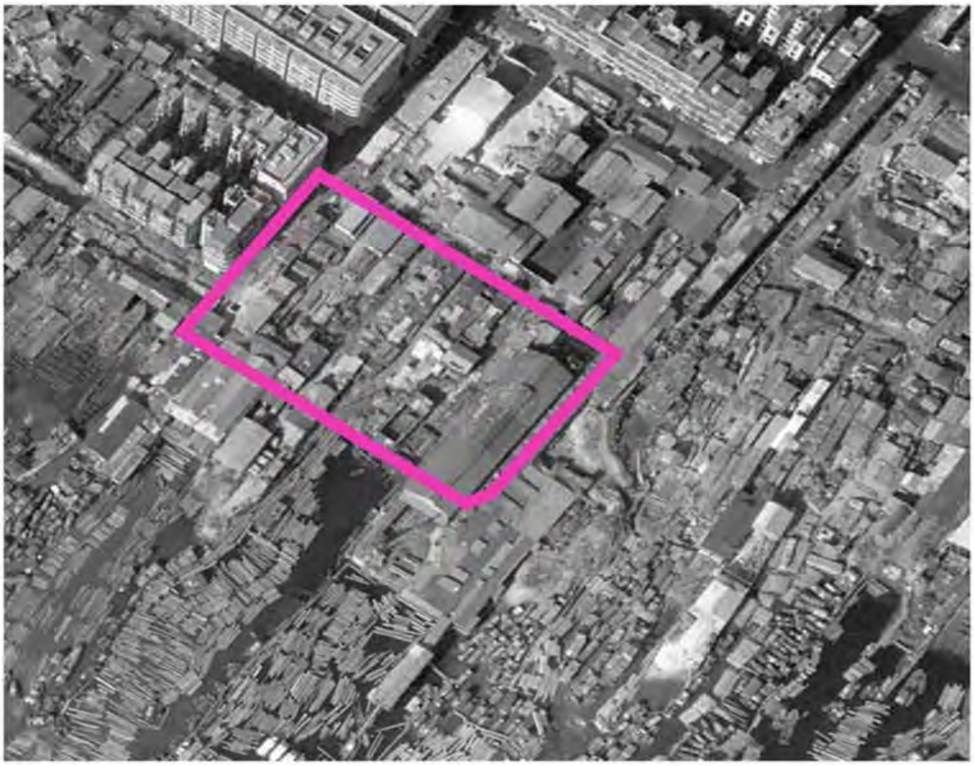
APPENDIX 7-1

Historical Aerial Photos

Year: 1945 **Photo number: 681_5-4110**

Description: The Site was part of the former Cheung Sha Wan (Bay), adjacent to the reclaimed land of Cheung Sha Wan.

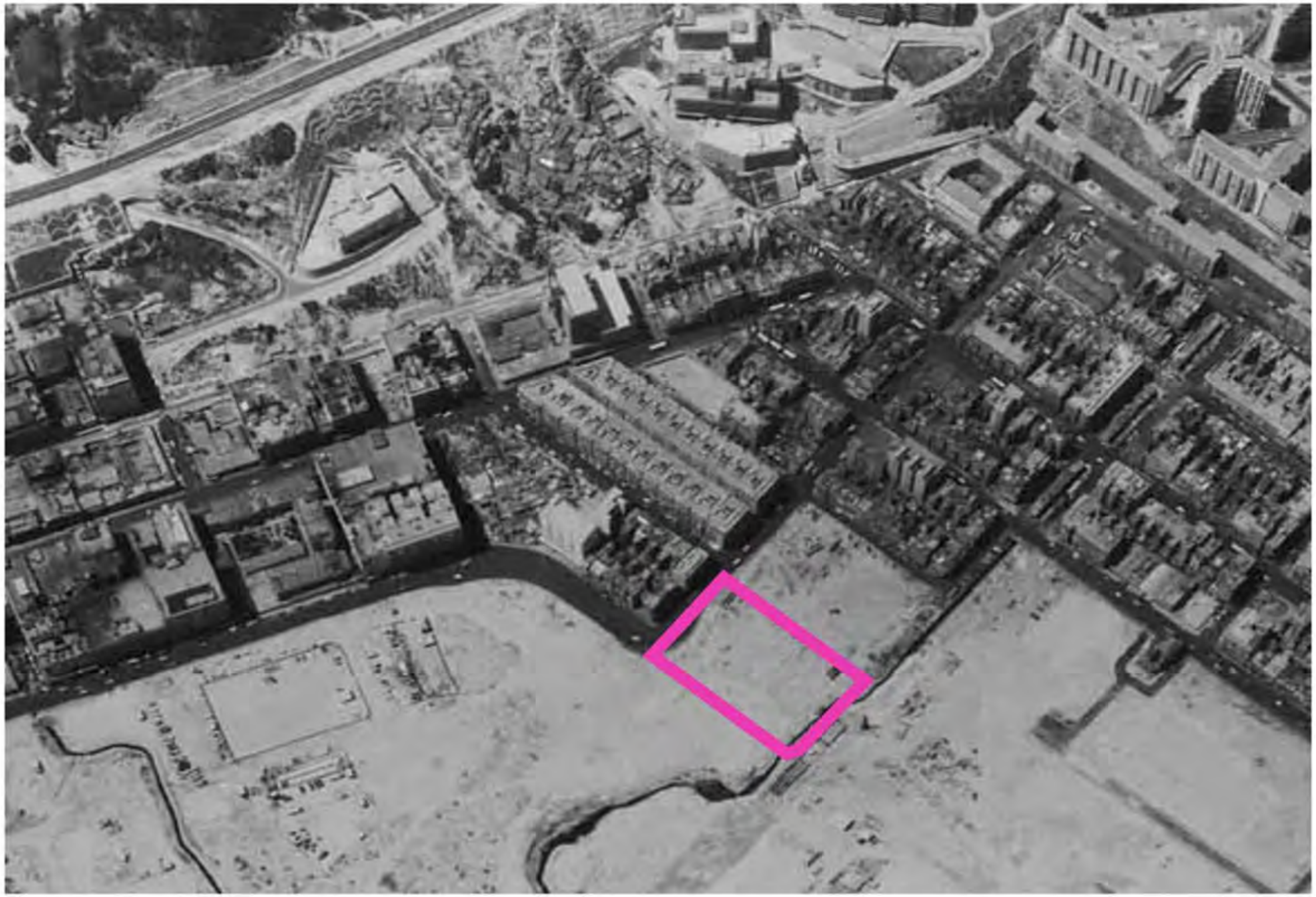
Year: 1963 **Photo number: 1963-5948**



Description: (Top) Aerial view of Cheung Sha Wan. The reclamation of the land at the Site was completed, while the reclamation works of the bay was still in progress. Buildings and temporary structures are also developed in the vicinity of the Site and the coastal area.
(Bottom) Temporary structures assumed to be squatter structures are recorded in the site.

Appendix 7-1 Aerial Photos (Site A)

Year: 1967 **Photo number: 1967-5500**

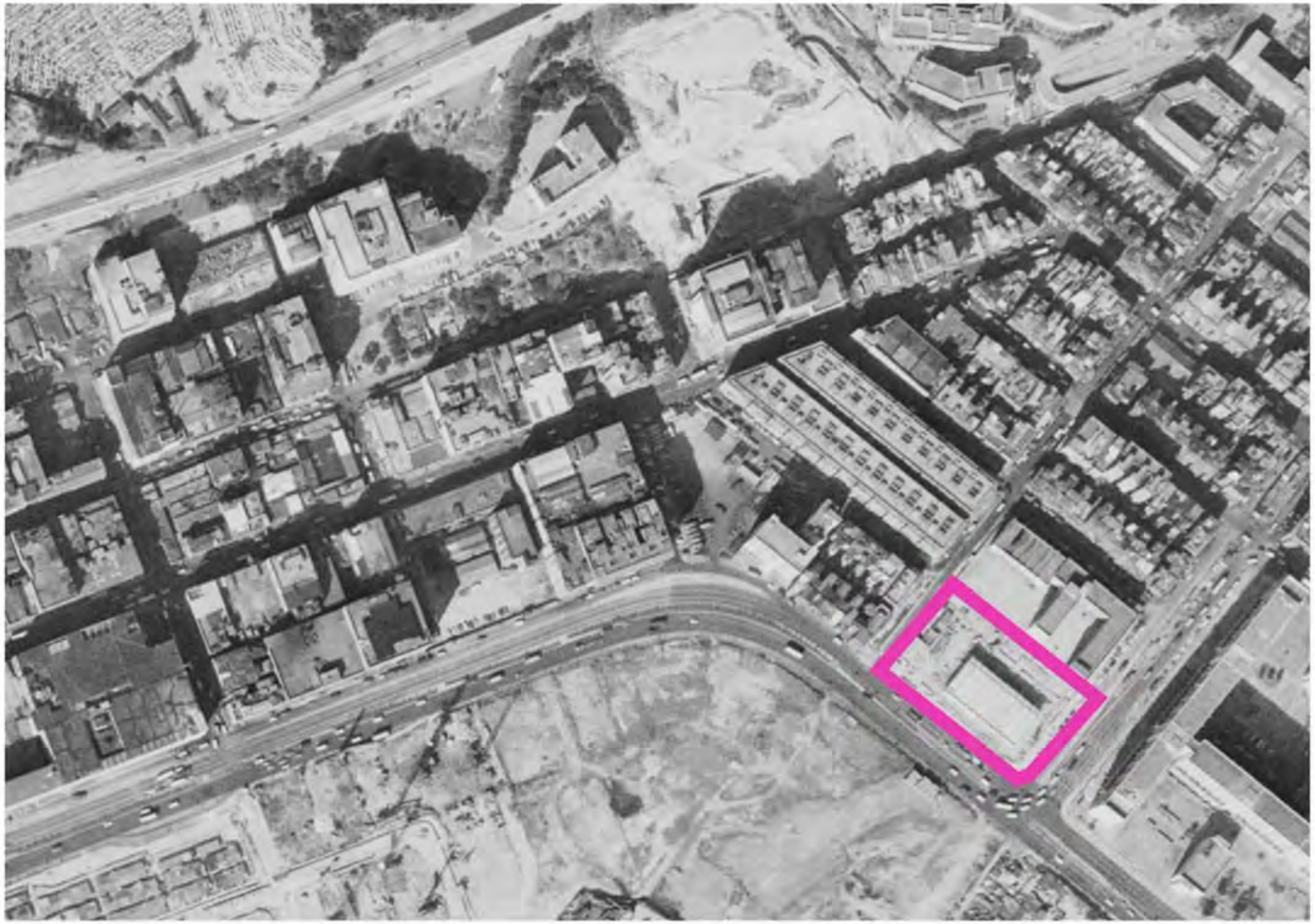


Description: Temporary structures at the Site have been removed, and barren land are observed.

Year: 1968 **Photo number: 1968-1067**

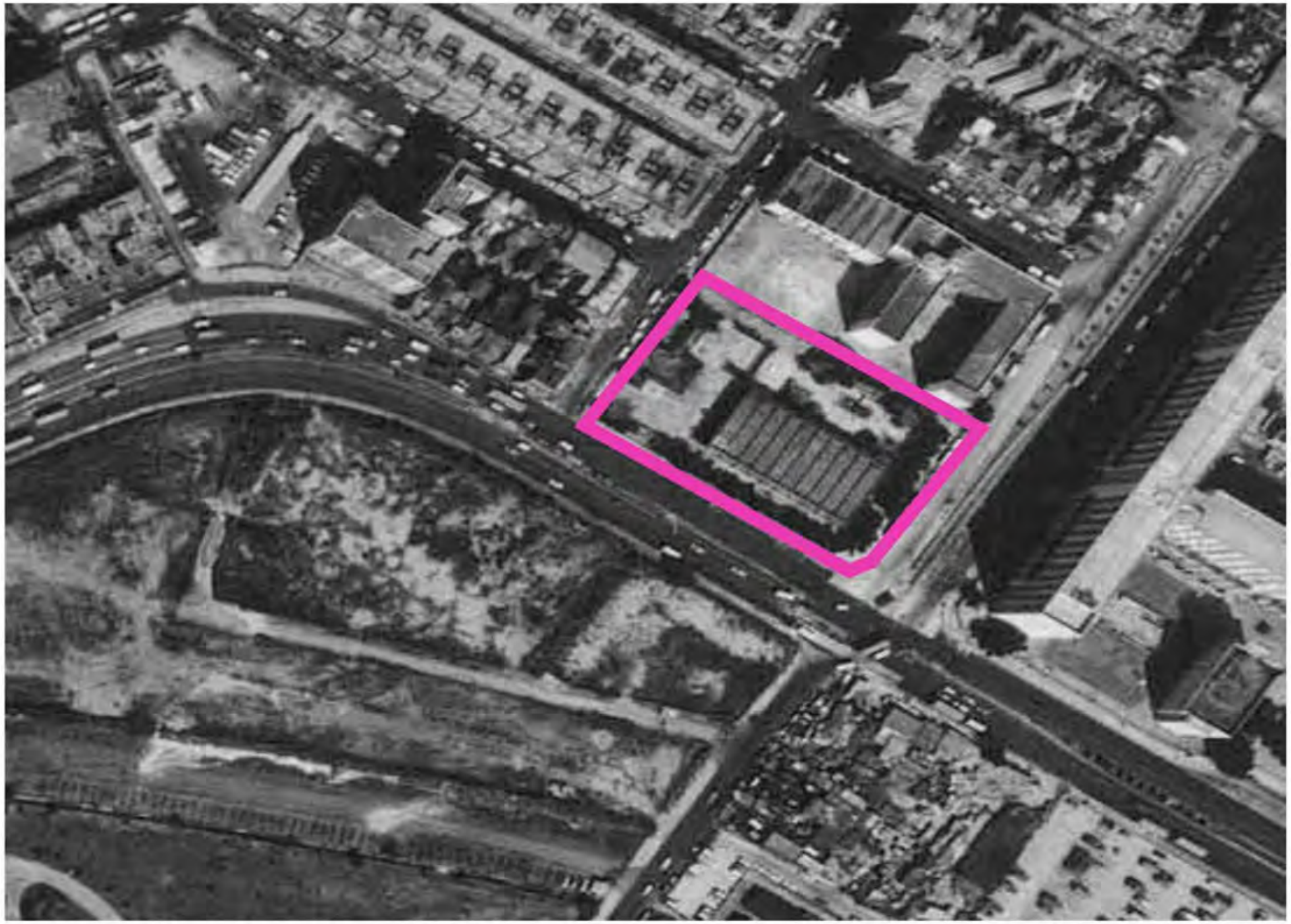
Description: Temporary structures are observed and the land is assumed to be used open area storage of construction materials as piping materials are observed.

Year: 1975 **Photo number: 1975_11994**



Description: The building for the existing Cheung Sha Wan Sports Centre was erected.

Year: 1984 **Photo number: 1984_56990**



Description: No significant change is observed for the building. Some shrubs were grown on the site.

Year: 2000 **Photo number: CN28212**

Description: No major change in the Site is observed.

Year: 2020 **Photo number: E116762C**

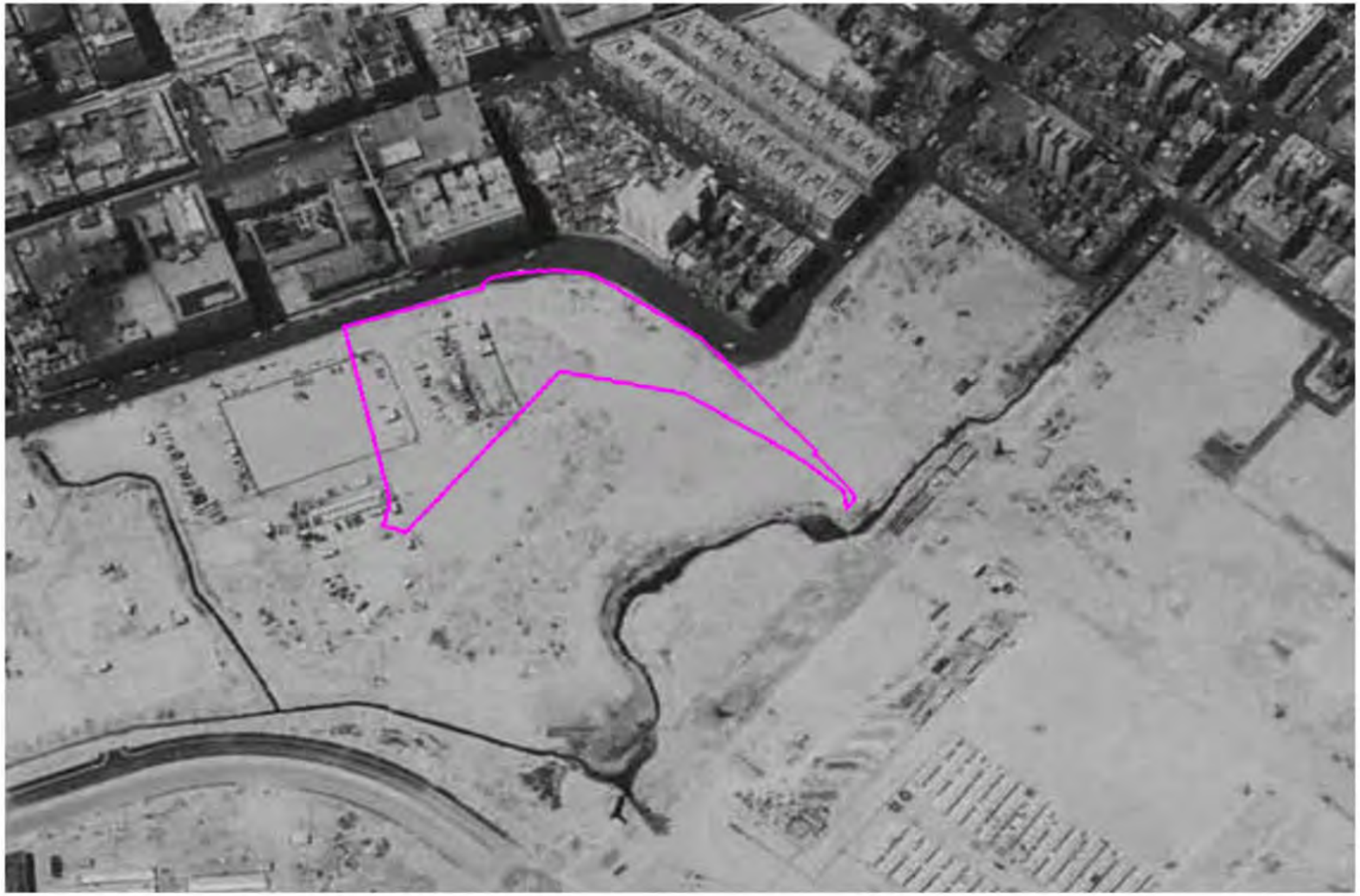
Description: No major change in the Site is observed.

Year: 1945 **Photo number: 681_5-4110**

Description: The Site was part of the former Cheung Sha Wan (Bay).

Appendix 7-1 Aerial Photos (Site B)

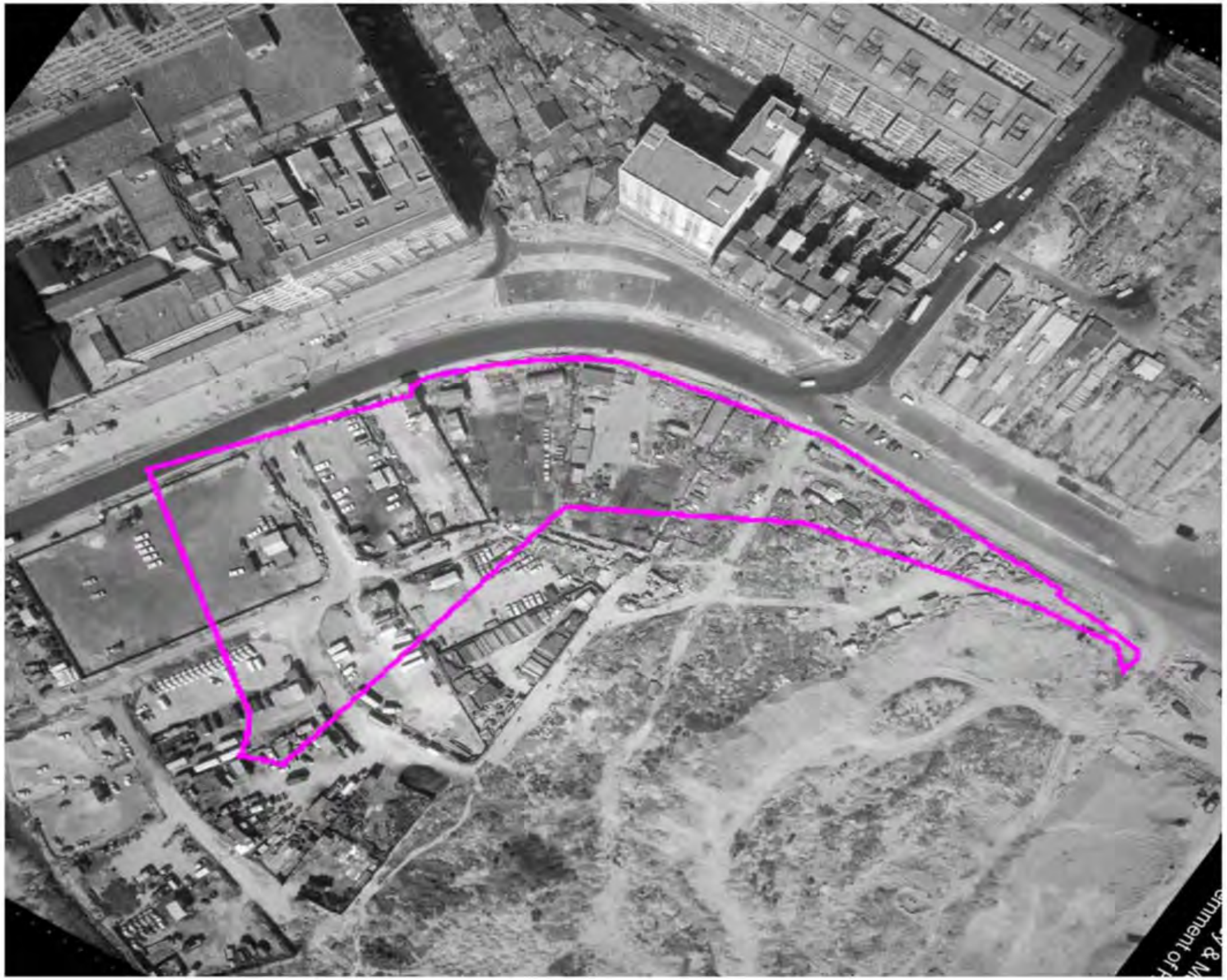
Year: 1967 **Photo number: 1967-5500**



Description: The land of the Site was reclaimed and vehicles in the Site are observed.

Appendix 7-1 Aerial Photos (Site B)

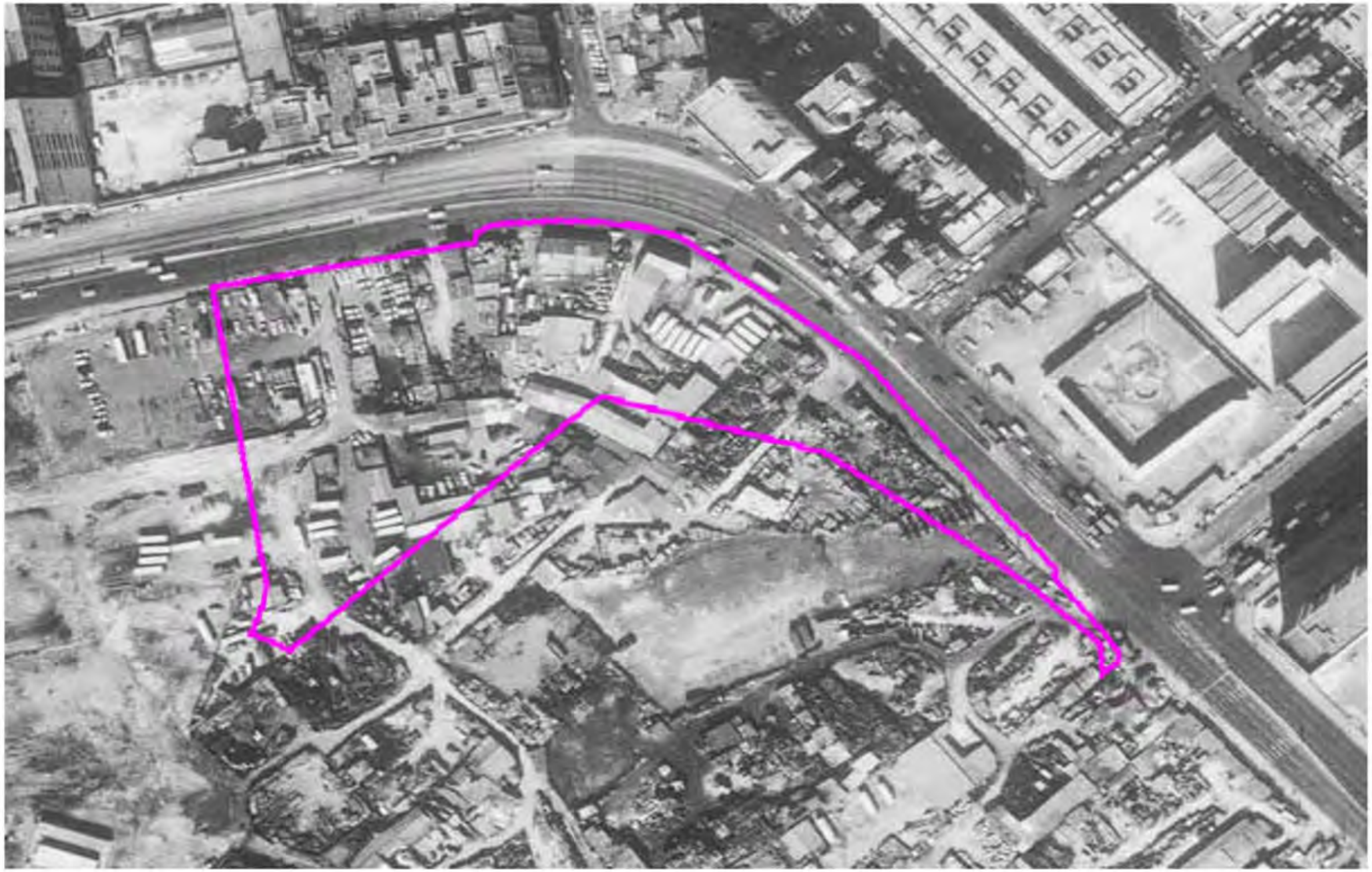
Year: 1968 **Photo number: 1968-1066**



Description: The Site was generally paved. More vehicles and some open area storage of construction materials are recorded in the site.

Appendix 7-1 Aerial Photos (Site B)

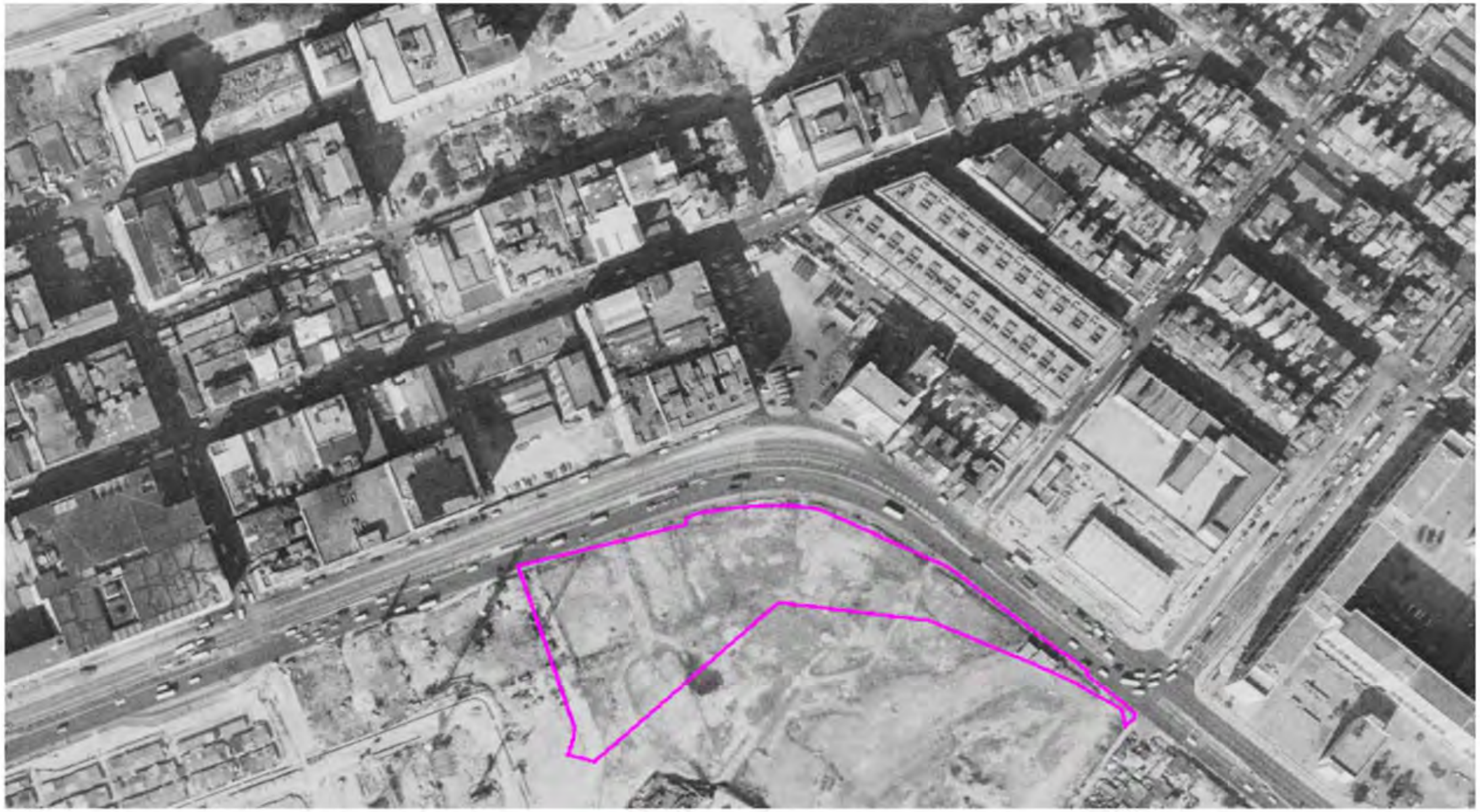
Year: 1973 **Photo number: 06890**



Description: No significant change was recorded.

Appendix 7-1 Aerial Photos (Site B)

Year: 1975 **Photo number: 11994**



Description: The temporary structures and vehicles were removed.

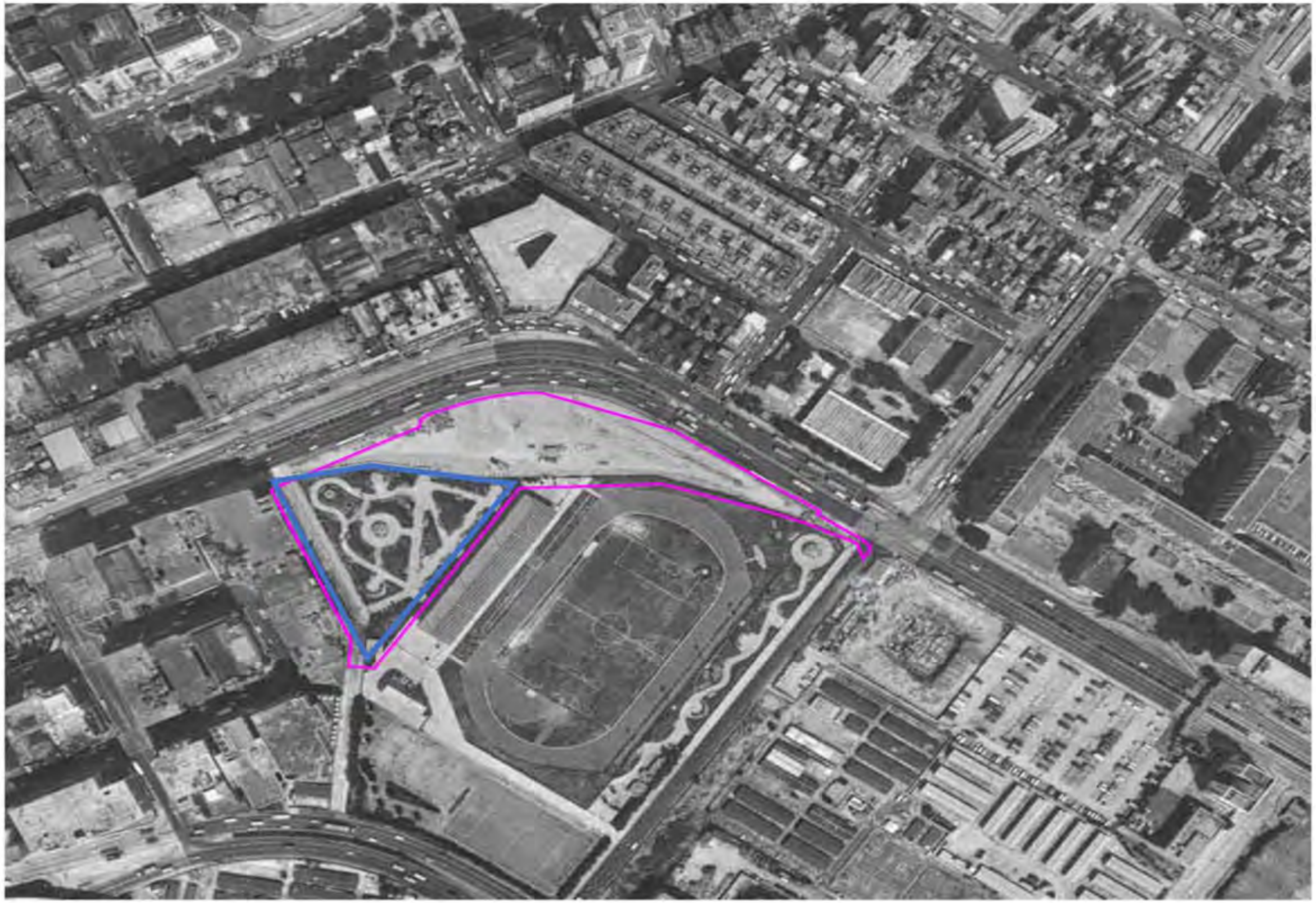
Appendix 7-1 Aerial Photos (Site B)

Year: 1986 **Photo number: A06287**

Description: Apart from some shrubs that were being grown on the Site, no major change in the Site are observed, while the existing Sham Shui Po Sports Ground near the Site was under construction and the development in the surrounding areas was also in progress.

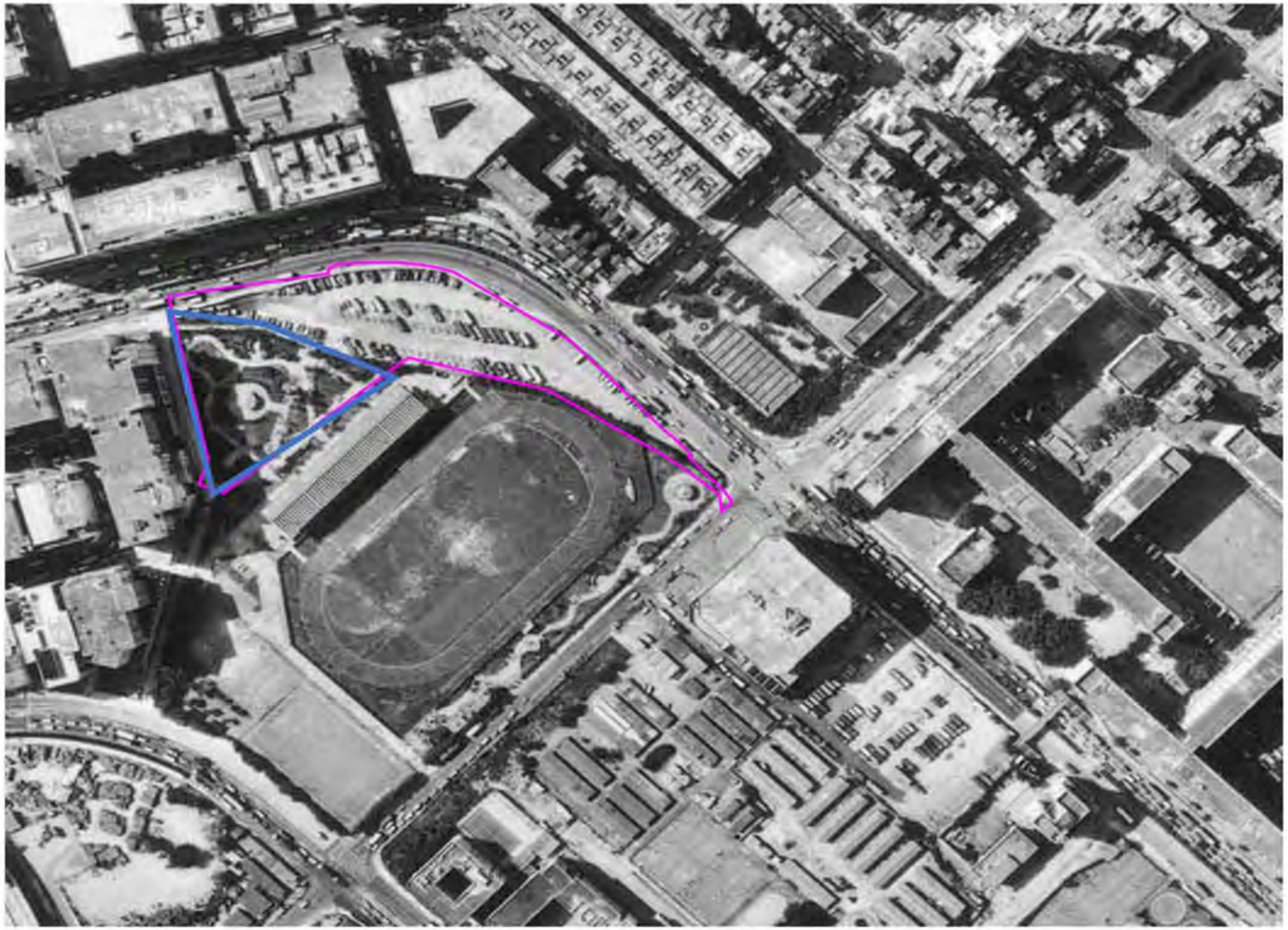
Appendix 7-1 Aerial Photos (Site B)

Year: 1988 **Photo number: A14737**



Description: In the southwest of the Site, the construction of the existing Cheung Sha Wan Path Sitting-out Area (Blue) was substantially completed and the area was fully paved apart from the landscaped areas, while the remaining area of the Site remained unchanged. The construction of Sham Shui Po Sports Ground was completed.

Year: 1993 **Photo number: A35272**



Description: No significant change was recorded in the Cheung Sha Wan Path Sitting-out Area, while the remaining area of the site was occupied by vehicles.

Appendix 7-1 Aerial Photos (Site B)

Year: 2004 **Photo number: CW60261**

Description: The northern boundary of the Cheung Sha Wan Path Sitting-out Area was extended. The remaining area of the Site was fully paved and was occupied by temporary structures, assumed to be site offices, and vehicles.

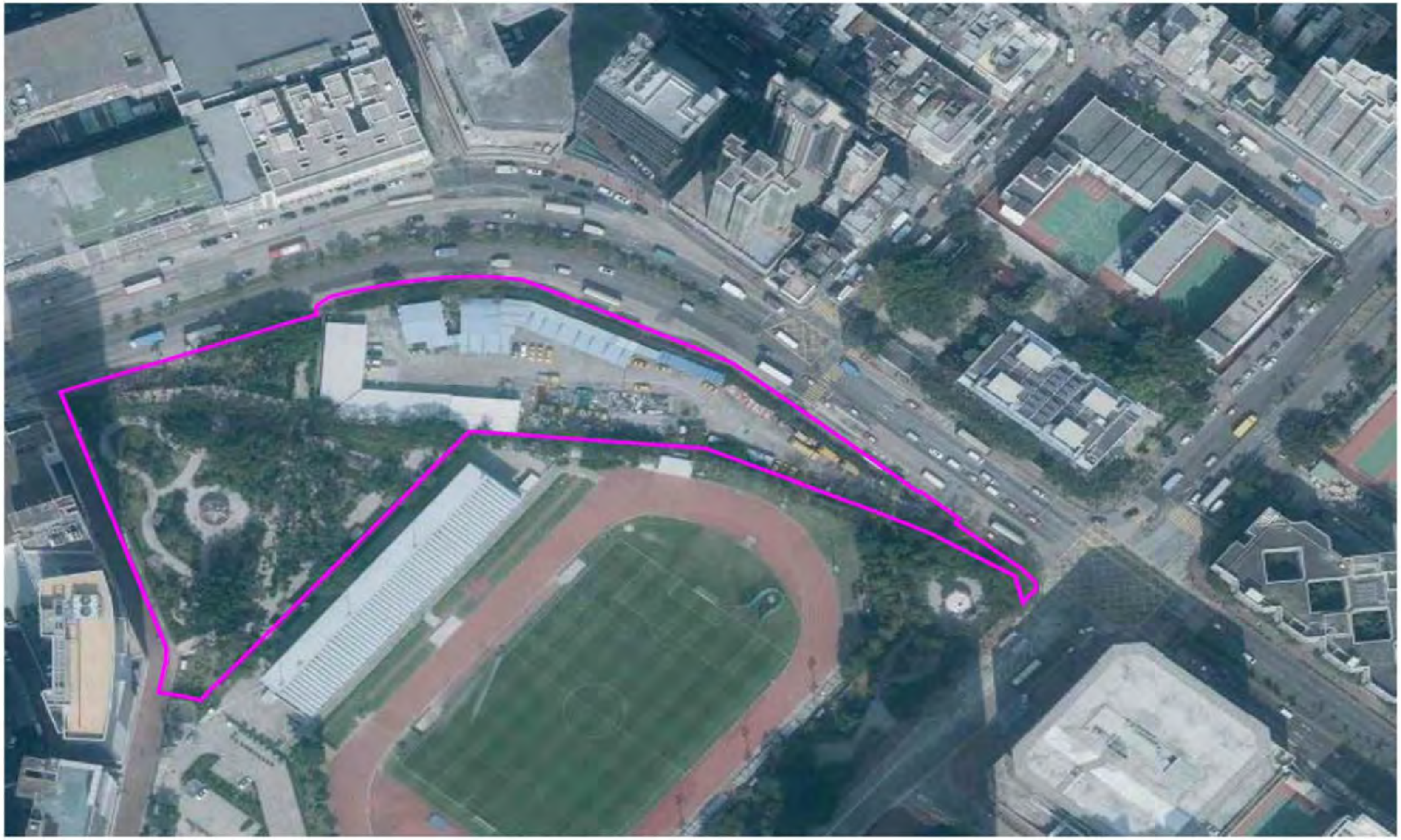
Appendix 7-1 Aerial Photos (Site B)

Year: 2015 **Photo number: CW114351**

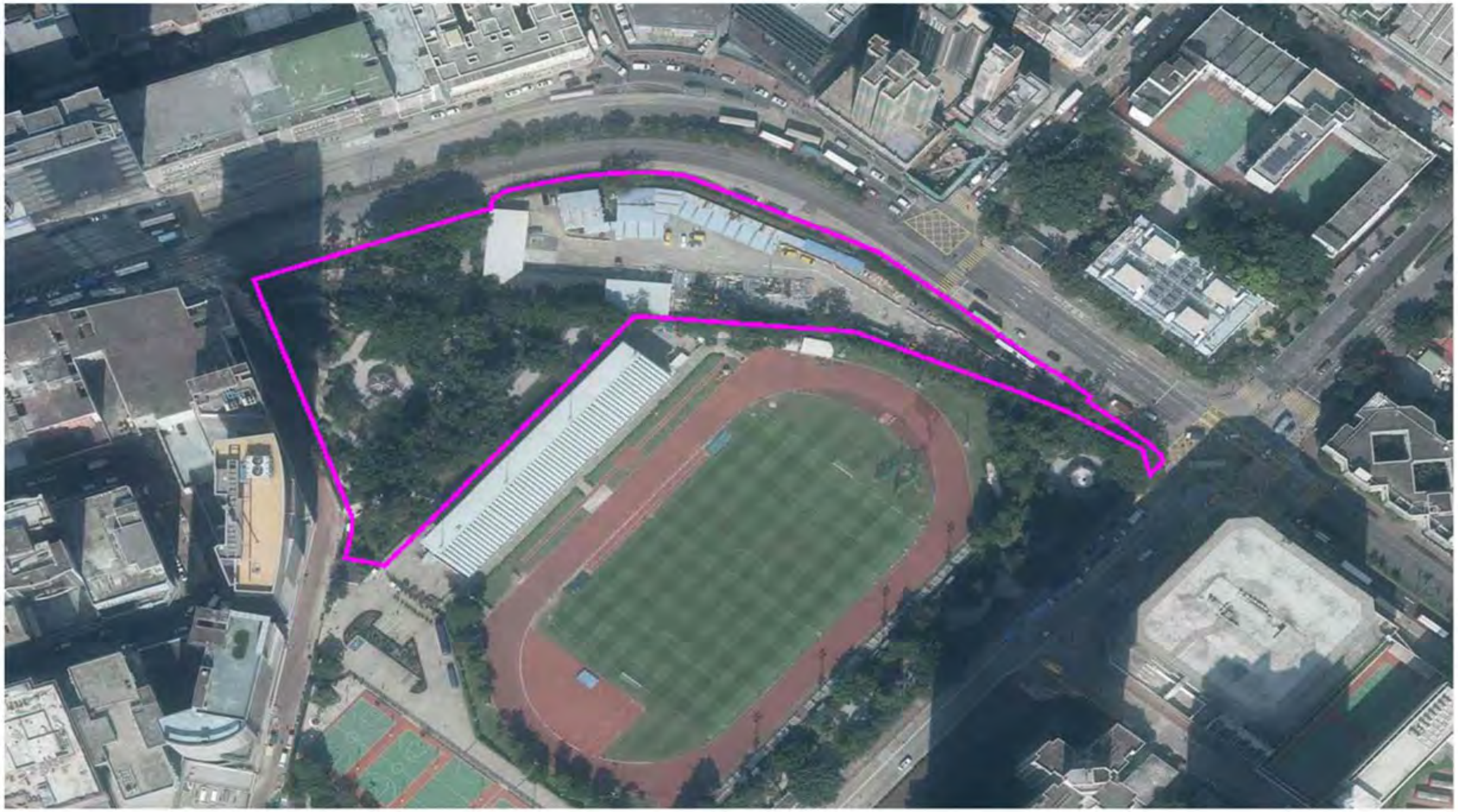
Description: More temporary structures and vehicles were also recorded in the site. Open area storage of construction materials (yellow) are also observed.

Appendix 7-1 Aerial Photos (Site B)

Year: 2019 **Photo number: E053114C**



Description: More temporary structures and vehicles were recorded in the site.



Year: 2020 **Photo number: E116762C**

Description: No significant change is observed.

APPENDIX 7-2

Correspondent from EPD and FSD regarding for Land Contamination Enquires

Subject: Request for Records of Chemical Waste Producers and Chemical Spillage / Leakage Incidents at Sham Shui Po Study Area
Date: Mon, 26 Jul 2021 11:05:02 +0800
From: joescmok@epd.gov.hk
To: info@cinotech.com.hk
CC: wyiu@epd.gov.hk, karinhwwong@epd.gov.hk

Dear Mr Colman Wong,

I refer to the letter signed by KS LEE of Cinotech Consultants Limited dated 14 July 2021 to us for the captioned request.

2. A registry of Chemical Waste Producers in the concerned area is available in the Territory Control Office of the Environmental Protection Department. Please contact our Mr Eric FUNG at 2835 1027 for making an appointment to view the records.

3. This office has no record of previous chemical spillage / leakage incident for the concerned area. You may check with other relevant department(s) for such information as appropriate.

Best regards
Joe MOK
E(RW)51 / EPD
Tel.: 2417 6673

消 防 處
香港九龍尖沙咀東部康莊道1號
消防處總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 **OUR REF.** : (85) in FSD GR 6-5/4 R Pt. 35
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3 August 2021

CINOTECH Consultants Limited
Room 1710, 17/F, Technology Park,
18 On Lai Street, Shatin, N.T.
(Attn: Mr. K S LEE, Technical Director)

Dear Mr. LEE,

Environmental Assessment for Proposed Urban Renewal Authority Development Scheme at Sham Shui Po
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 14.7.2021 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(NG Wing-chit)
for Director of Fire Services

Appendix 7

Air Ventilation Assessment (AVA) Report

Urban Renewal Authority
Development Scheme
Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Air Ventilation Assessment Report (v2.0)

Sep 2021

Approved By

(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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Prepared by	Colman Wong	Colman	23 September 2021
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1 INTRODUCTION

1.1 Project Background

1.1.1 The Urban Renewal Authority (URA) has proposed a Cheung Sha Wan Road / Lai Chi Kok Road Development Scheme (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO).

1.1.2 The Scheme consists of two sites. Site A of the Scheme is broadly bounded by Hing Wah Street to the southeast, Cheung Sha Wan Road to the southwest, Cheung Wah Street to the northwest, and Cheung Sha Wan Catholic Secondary School to the northeast. Site B of the Scheme broadly bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground to the southeast. (**Figure 1-1**). The site areas of the Site A & Site B are 5,197m^2 and 13,857m^2 respectively, subject to site survey and detailed design. According to the *Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37*, Site A is currently zoned for "Government, Institution or Community (G/IC)" with maximum building height of 1 storey and "Open Space (O)". Site B is currently zoned for "Government, Institution or Community (G/IC)" with maximum building height of 1 storey, "Open Space (O)", and shown as "Road". (**Figure 1-2**).

1.1.3 The Scheme is proposed to rezone the Site A into "R(A)" with height restriction of 140mPD with commercial uses always permitted on the lowest two floors of the building. The Scheme is also proposed to rezone the west portion of Site B into G/IC of 95mPD and the rest of Site B into Open Space.

1.1.4 Given the Scheme propose zoning with relaxation of maximum building height up to 140mPD, an Air Ventilation Assessment (AVA) would be prepared to support the submission of a draft Development Scheme Plan (DSP) with its planning proposal to the Town Planning Board (TPB) for consideration.

1.1.5 Cinotech Consultants Limited was commissioned by URA to carry out an Air Ventilation Assessment (AVA) to assess and envisage any potential/adverse air ventilation impact on the implementation of the Scheme as compared to the OZP-compliance notional redevelopment and to recommend mitigation measures when necessary. The AVA study for the assessment area would be conducted in accordance with the recommendations of "*Feasibility Study for Establishment of Air Ventilation Assessment System – Final Report*" by Planning Department in 2005, and "*Technical Circular No. 1/06 on Air Ventilation Assessments*" by HPLB & ETWB in 2006 (Technical Circular). As there is a planned concurrent URA project within the assessment area, the air ventilation performance of the planned development (SSP-017) shall also be included in this assessment (**Figure 1-4**).

1.1.6 In the event that the proposed "Good Design Features" explained in **Sections 1.2.3-1.2.5** below in this AVA report are not adopted in the future design scheme or no other alternative and equivalent design features to be agreed with Planning Department, further AVA study would be conducted by the project proponent for demonstrating that the performance of any future development would not be worse than the scheme adopted in this report.

1.2 The Scheme (SSP-018)

1.2.1 The Scheme involves demolition of existing Cheung Sha Wan Sports Centre (620 Cheung Sha Wan Road); and clearance of existing facilities in Cheung Sha Wan Path Sitting-Out Area, the garden portion of Sham Shui Po Sports Ground, as well as some temporary structures along Cheung Sha Wan Road (Land Lot: GLA-TNK 1723).

1.2.2 The notional layout plan of the proposed development is shown in **Figures 1-2 & 1-3**. The notional design of the Scheme is subject to change in the detailed design stage upon CE in C's approval of the draft DSP. Under current notional design of the Scheme, it proposes to develop two residential towers (Towers A & B) on top of 5-storey podia at Site A which would incorporate GIC/commercial/retail, private clubhouse facilities and podium garden, a basement carpark; and an about 18-storey block with G/IC facilities at Site B which would incorporate a basement carpark.

1.2.3 A maximum building height of 140mPD is proposed for the Site A. In order to provide a large (partially decked) open area which can enhance the air ventilation of pedestrian level, a ~20m setback from Cheung Wah Street and >10m setback from Cheung Sha Wan Road for the western portion of the podium of Site A has been considered in the early stage.

1.2.4 A G/IC block with maximum building height of 95mPD is proposed for the Site B. In order to reduce the potential impact to the local ventilation, the G/IC block is proposed to be built near the western boundary of Site B, in order to provide a large continuous open space in the core region of Site B.

1.2.5 The ~20m setback from Cheung Wah Street for Site A should not only enhance the air ventilation performant of the open area for Site A, instead, it should also facilitate the ventilation in downwind area under SW wind, which is the major prevailing wind direction in summer. The positioning of the G/IC Block in Site B maximises the flow penetration of Site B, by providing large open area for connecting the nearby air pathways, e.g. Hing Wah Street, Cheung Sha Wan Road, Cheung Wah Street & Sham Shui Po Sports Ground. Although the G/IC Block may potentially reduce the ventilation performant near the G/IC Block, it is anticipated that the benefit from the continuous open area will overcome its drawback.

1.3 Planned Redevelopment Project (SSP-017)

1.3.1 As stated in the Planning Report of the DSP submission, a street block at Kim Shin Lane / Fuk Wa Street (namely SSP-017) comprising 90 building blocks of age over 60 with no lifts is identify as a site with imminent redevelopment needs. However, SSP-017 is undesirable for redevelopment because its existing plot ratio is as high as 8.12, hence, the residual plot ratio is 0.88 only. Multiple sub-divided units are also identified. Although SSP-017 has all the quality to demand for redevelopment, its redevelopment potential is low. In this respect, a wider area for planning opportunities have to be explored.

1.3.2 Under a "planning-led" approach in urban renewal works in recent years, URA has identified part of Sham Shui Po as Sham Shui Po Action Area 1 (SSPAA1) for holistic planning of urban renewal works. SSP-018 comprises Sites A and B, both Government land opposite each other across Cheung Sha Wan Road is identified for redevelopment to formulate a comprehensive land-use restructuring together with SSP-017 to create more planning gains at district level. The proposed residential use at Site A of SSP-018 will be able to sustain the proposed redevelopment of SSP-017.

1.3.3 As SSP-017 and SSP-018 are interrelated and are commenced on the same day, the AVA will also consider the cumulative impact of SSP-017 and SSP-018 redevelopment. It is noted that SSP-017 conforms to the existing planning control, it will be implemented under Section 26 of the Urban Renewal Authority Ordinance (URAO) separately; it does not form part of this DSP.

1.3.4 Similar to the Scheme (SSP-018), the development of SSP-017 is still in early stage thus no detailed designed is available, URA planned to development 2 residential towers of 120mPD each with separated podium. The location and the latest notion block plan of the SSP-017 is illustrated in **Figures 1-4 & 1-5**.

1.3.5 URA intends to incorporate air ventilation friendly designs into SSP-017. Similar to Site A of SSP-018, in order to provide a large open area via ground floor setbacks which can enhance the air ventilation of pedestrian level, a ~20m setback from Cheung Wah Street has been considered. Besides, the podiums are 2m - 9m setback from site boundary in south, west and north. Moreover, a new 15m SW-NE pedestrian pathway will be provided in the middle of the site. Although the new buildings will be much taller than the existing buildings, it is anticipated that the benefit from the smaller footprint and the air ventilation friendly designs will overcome its drawback.

1.4 The Baseline Scheme

1.4.1 For the Scheme, a Baseline Scheme fulfilling the Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37, has been used to represent the intended air ventilation performance as permitted in the current OZP. The zonings of OZP No. S/K5/37 are illustrated in **Figure 1-6** for reference. Two 1 storey buildings of 12m tall under existing "G/IC" zone within the boundary of SSP-018 Sites A and B are adopted in the Baseline Scheme to reflect the possible redevelopment.

1.4.2 For the SSP-017 Site, as it is not part of the current DSP, the existing building configuration, i.e. two rows of tenement buildings, has been adopted in Baseline Scheme to reflect the cumulative impact before and after redevelopment. The notional layout of the Baseline Scheme is shown in **Figure 1-7**.

1.5 Design Consideration of the Scheme (SSP-018)

1.5.1 Despite the structures in the Baseline Scheme is much shorter and occupy much less area, their orientation are not optimised for air ventilation, especially for the wind pathways of the major prevailing wind direction under summer (SW wind).

1.5.2 Although the wind pathways will not be completely blocked in the Scheme as there are large open space in both the Sham Shui Po Sport Ground and Site B for the wind pathways, the ventilation performance in the pedestrian level of downstream region should be adversely affected under SW wind.

1.5.3 On the other hand, the buildings of the Scheme are not expected to affect the major wind pathway. Moreover, local ventilation enhancement design such as podium setback will be incorporated into the Scheme. The western portion of podium in Site A will setback from the Cheung Wah Street and Cheung Sha Wan Road to provide a wider open space at grade as stated in **Section 1.2**.

1.5.4 The layouts of the two schemes are illustrated in **Figures 1-8**. Simplified 3D models of the two Schemes are illustrated in **Figures 3-7a, 3-7b & 3-7c.** The air ventilation related design feature of the Baseline Scheme and the Scheme, including the Planned Project (SSP-017), are summarised in **Table 1-1**.

Table 1-1 Summary of the Baseline Scheme and Proposed Scheme

	SSP-017 (Planned Project)	SSP-018 (Current Scheme)
Building Height (Baseline Scheme)	30mAG	12mAG
Building Height (Proposed Scheme)	140mPD (~135mAG)	Site A: 140mPD (~135mAG) Site B: 95mPD (~90mAG)
Air Ventilation Consideration	The podium will be setback from Cheung Wah Street (20m), Fuk Wa Street (5m), Fuk Wing Stret (2m or 9m), & Castle Peak Road (7m) to provide a wider open space and pedestrian pathway at grade. A new 15m SW-NE pedestrian pathway will be provided in the middle of the site.	Site A: The western portion of podium will be setback from the Cheung Wah Street (~20m) and Cheung Sha Wan Road (>10m) to provide a wider open space at grade. Site B: The G/IC building will be located near the west boundary to minimized the potential effect to the local ventilation. The rest of the Site B is open area connecting the nearby wind pathways.

1.6 The Surrounding Environment

1.6.1 The Scheme (SSP-018) and Planned Project (SSP-017) are located in a developed urban area, with a mix of old tenement buildings, newer high-rise residential buildings, industrial buildings. In the south of the Scheme, there is a large open area (Sham Shui Po Sport Ground). Make use of the natural wind from the Sham Shui Po Sport Ground is a key consideration for providing good ventilation at pedestrian level under S-SW wind.

1.7 Objective

1.7.1 The objective of this AVA study is to demonstrate that the air ventilation impact on the surrounding area at the pedestrian level of the Scheme will not worsen, if not better, than the Baseline Scheme, which has adopted the requirement as listed in the *Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37*, by qualitatively comparing the two schemes. This comparison is conducted using the Velocity Ratio (VR) computed by Computational Fluid Dynamics (CFD) models for the two schemes.

1.7.2 It should be noted that the Scheme is a notional design and subject to change at detailed design stage. The results and conclusion in this report is used to compare the air ventilation performance between feasible design under the planning permission of the current OZP and the proposed design under the proposed planning parameters of the Scheme.

2 ASSESSMENT METHODOLOGY

2.1 Introduction

2.1.1 The selection and evaluation of the wind availability data for the upstream wind conditions are described in this section. The following sources of wind data have been reviewed for this AVA study as follows:

- Measurement from Hong Kong Observatory (HKO) weather station.
- Measurement from Wind Tunnel Test in Experimental Site Wind Availability Study[1].
- Simulated results from Meso-Scale Model Regional Atmospheric System (RAMS)[2] in Planning Department website.

2.2 Selection of Wind Data Source

2.2.1 Simulated result of RAMS from Planning Department website is adopted in this AVA study. The reason for the selection of this wind data source is explained in the following paragraphs.

2.2.2 HKO weather stations provided reliable wind data in Hong Kong. The closest HKO weather station to the Site is Sham Shui Po Automatic Weather Station which is located approximately 1.4km away from the Site. The next closest HKO weather stations are in Kowloon City and King's Park which are both more than 3 km away. Since the measurement location of HKO weather station is often at low height or a few meters above roof top, the wind at the weather station is inevitably affected by nearby developments or topography. Its data should be applied with caution specifically when the station is not very close to the Site.

2.2.3 The measurement level of the wind data from the Sham Shui Po Automatic Weather Station is 11 mPD which is far lower than the proposed building of the Scheme (140mPD) and considering that the weather station is located within urban area, it should only be adopted when no other alternatives are preferred. However, the Waglan Island Automatic Weather Station is located in an undisturbed area and its measured wind data can describe the overall wind condition for Hong Kong well. Therefore, the wind data from Waglan Island Automatic Weather Station is often adopted in AVA study.

2.2.4 A series of experimental site wind availability studies for various regions in Hong Kong using wind tunnel experiment have been conducted and some of the reports are available to public. The closest location can be found in "*Experimental Site Wind Availability Data for Mong Kok - Investigation Report WWTF007-2007*". As the site of this development is approximately 1 km away from its study area. The wind data from WWTF003-2007 should only be adopted when no other alternatives are available.

2.2.5 In order to provide a comprehensive set of standardized and reasonably representative site wind availability data for both qualitative and quantitative AVA, a consultancy study was commissioned by the Planning Department. The study adopted meso-scale model RAMS to simulated 10-year wind climate at horizontal resolution of 0.5km x 0.5km, covering the whole Hong Kong. Three levels of nested domains with realistic boundary conditions were adopted to provide reasonable approaching wind condition to the finest level of nesting. To refine the model results, the wind data from various wind stations have been used in RAMS.

[1] https://www.pland.gov.hk/pland_en/info_serv/site_wind/index.html
[2] https://www.pland.gov.hk/pland_en/info_serv/site_wind/site_wind/index.html

2.2.6 When comparing the RAMS to the wind tunnel experiments in the experimental site wind availability studies, the RAMS have the following advantage:

- RAMS covers a much larger upwind area, with terrain height and land surface type, compare to those wind tunnel experiments;
- RAMS considers the atmospheric stability where those wind tunnel experiments do not consider thermal effect;
- RAMS provides wind data for every single grid at various elevation, unlike those wind tunnel experiments that can only provide data at predetermined locations, and HKO's measurements that only provide surface data.

2.2.7 Reference can be made to an AVA study (Project ref. AVR/G/136; Public Housing Development at North West Kowloon Reclamation Site 1 (East)) which is available from the Air Ventilation Assessment Register[3] in Planning Department website. The AVA study (AVG/G/136) is centred at the land slot surrounded by Lai Chi Kok Road, Tonkin Street and Tung Chau Street, which is around 400m south-east from the Scheme. In the study, wind data from grid [76,46] at 500m in RAMS had been adopted.

2.2.8 Considering that the grids from RAMS can cover every part of Hong Kong and the advantages of the RAMS over those wind tunnel experiments, the data of grid [76,46] from RAMS is best suited for this AVA study.

2.3 Adopted Wind Conditions

2.3.1 The wind speed and the vertical wind profiles of grid [76,46] from RAMS[4] have been adopted in order to provide a realistic flow condition.

2.3.2 The wind direction at 500m elevation have been adopted in the analysis of general wind condition of the site, while the vertical wind profiles are adopted as the inlet boundary conditions of the numerical analysis.

2.3.3 It should be noted that the wind profiles from RAMS are grouped into four range of wind directions, therefore, all wind directions within the same 90-degree segment share the same profiles. The boundary layer height is assumed to be 500m, thus the flow velocity at 500m is the free stream flow velocity and the flow above 500m is uniform.

2.3.4 The wind rose at 500m elevation of grid [76,46] and the wind profile from RAMS are illustrated in **Figures 2-1a and 2-1b**. The top 80% of wind directions, which has been assessed in this study, are presented in the **Table 2-1 & Table 2-2**. Detailed occurrence probability for each wind direction and wind speed at 500m elevation are listed in **Appendix 2-1**. The adopted wind profile from 10-500m were extracted from the wind profile curve provided by PlanD (**Figure 2-1b**). The wind profiles for different wind direction, in term of ratio to the free stream flow velocity at different heights, are summarised in **Table 2-3**.

2.3.5 Under annual condition, the major wind direction is East. For around 60% of the time, the wind comes from NE, ENE, E, ESE, or SE (45-135 deg). Around 18% of the wind comes from S, SSW, or SW (180-225deg). The occurrence chance for the rest of wind directions are all below 5% each.

[3] https://www.pland.gov.hk/pland_en/info_serv/ava_register/government.html
[4] https://www.pland.gov.hk/pland_en/info_serv/site_wind/site_wind/index.html

2.3.6 Under summer condition, the major wind direction shifted to South-Western. For around 48% of the time, the wind comes from S, SSW, SW, or WSW (180-247.5 deg). Around 34% of the wind comes from E, ESE, SE, or SSE (90-157.5 deg). The occurrence chance for the rest of wind directions are all below 6% each.

2.3.7 Generally, the major wind direction of concern is the east direction for the whole year and the south-western direction for summer. A good designer should have considered those two major wind directions to reduce the impact of air ventilation to the surrounding area.

Table 2-1 Occurrence Probability for Each Wind Directions and the Average Wind Speed at 500m Elevation (Annual)

Wind Direction	Wind Direction (degree)	Occurrence Probability at 500m elevation
E	90	21.8%
ENE	67.5	12.4%
ESE	112.5	12.4%
NE	45	7.6%
SW	225	6.8%
SSW	202.5	6.7%
SE	135	6.5%
SSE	157.5	4.9%
S	180	4.5%
Sum		**83.6%**

Table 2-2 Occurrence Probability for Each Wind Directions and The Average Wind Speed at 500m Elevation (Summer)

Wind Direction	Wind Direction (degree)	Occurrence Probability at 500m elevation
SW	225	16.9%
SSW	202.5	14.2%
ESE	112.5	9.7%
S	180	9.2%
E	90	8.3%
SSE	157.5	8.2%
SE	135	7.6%
WSW	247.5	7.6%
Sum		**81.7%**

Table 2-3 Vertical Wind Profiles for different Wind Directions

Heights (m)	**Wind Speed (m/s) for different Wind directions (degree from North)**			
	22.5- 112.4°	**112.5-202.4°**	**202.5-292.4°**	**292.5-22.4°**
10	3.58	2.11	2.20	2.87
50	3.88	2.25	2.39	3.10
100	4.33	2.55	2.73	3.85
150	4.86	2.82	3.03	4.17
200	5.44	3.12	3.28	4.29
250	5.92	3.46	3.46	4.13
300	6.31	3.97	3.62	3.97
350	6.67	4.45	3.76	3.85
400	6.95	4.91	3.88	3.88
450	7.22	5.32	4.06	3.94
500 and above	7.32	5.62	4.22	3.97

3 ASSESSMENT METHODOLOGY

3.1 Assessment Tool

3.1.1 The microclimate around the Site for the two Schemes have been assessed by Computational Fluid Dynamics (CFD). Commercial CFD software, Ansys Fluent, has been utilized for calculating the local wind speed. The model solves the algebraic equations by applying the conservation laws of physics to finite volumes of space and time. Realisable k-epsilon with wall model is adopted to handle the flow turbulence.

3.2 Assessment Area and Surround Area

3.2.1 According to the Technical Circular, the Assessment Area of the Scheme should include the Scheme's surrounding up to a perpendicular distance H from the Scheme boundary, H being the height of the tallest building on site. Surrounding Area of up to a perpendicular distance of 2H from the DSP boundary must be included. Since no building is higher than the proposed Tower T1 135mAG (140 mPD) within 135m from the Scheme boundary, areas of not less than 135m and 300m from the Scheme boundary are adopted as the Assessment Area and Surrounding Area, respectively. The Assessment Area and Surrounding Area are illustrated in **Figure 3-1**.

3.3 Test Points

3.3.1 146 perimeter test points (P001-P144) have been used to examine the air ventilation around the Site A (P001-P030), Site B (P031-P104) and SSP-017 (P105-P144). The perimeter test points are evenly spread, with around 10m separation, along the boundary of the Sites. As only locations that exist in both Baseline Scheme and Proposed Scheme should be chosen for a fair comparison, the perimeter test points have been provided surrounding the building structure of Baseline Scenario when necessary. The locations of the perimeter test points are illustrated in **Figure 3-2**.

3.3.2 384 overall test points (O001-O384) have been used to examine the air ventilation of the local area. Overall test points are evenly spread on road surface within the Assessment Area, with around 25m separation, on all roads within the Assessment Area (O001-O275). For very wide roads, i.e. part of Cheung Sha Wan Road and Hing Wah Street, 2 rows of overall test points with at least 15m separation have been provided to balance the weighting of each test point. Besides the roads, overall test points are also placed at open areas where there are frequent access (O276-O384). Test points with 25m separation have been applied for very large open area, i.e. Sham Shui Po Sports Ground and football field. For other open area, the separation is down to 15m due to the limited area. The locations of the perimeter test points are illustrated in **Figure 3-3**.

3.3.3 The ventilation performance between the Baseline Scheme and Proposed Scheme in the neighbourhood, including the effectiveness of the design considerations stated in **Sections 1.3 & 1.5**, can be quantified using the predicted wind speed at the perimeter test points and overall test points. However, the ventilation performance at the open areas within the Scheme is not covered. Therefore, 81 special test points (D01-D81) are provided at the open areas of the Scheme, with ~10m separation at Site A (D01-D19), 15m separation at Site B (D20-D61) and ~10m separation at SSP-017 (D62-D81). The locations of the special test points within the proposed development of the Scheme are illustrated in **Figure 3-4**.

3.3.4 In order to examine the localised ventilation, the spatial averaged VRs have been broken into individual focus zones for 31 road sections, 8 open areas and 5 additional zones within the

Sites for demonstrating the localised ventilation performance. The focus areas are illustrated in **Figures 3-5a, 3-5b & 3-5c** and listed in Table 3-1.

3.3.5 The vertical locations of all test points are 2mAG.

Table 3-1 List of Focus Areas

Road Sections				
R001	Hing Wah Street (O001 - O012)		**R017**	Castle Peak Road (O161 - O182)
R002	Hing Wah Street (O013 - O027)		**R018**	Cheung Yue Street (O183 - O191)
R003	Cheung Wah Street (O028 - O035)		**R019**	Un Chau Street (O192 - O196)
R004	Cheung Sha Wan Path (O036 - O044)		**R020**	Cheung Fat Street (O197 - O199)
R005	Kwong Cheung Street (O045 - O048)		**R021**	Hing Wah Street (O200 - O205)
R006	Tai Nan West Street (O049 - O060)		**R022**	Cheung Wah Street (O206 - O208)
R007	Lai Chi Kok Road (O061 - O069)		**R023**	Tsap Fai Street (O209 - O211)
R008	Fortune Street (O070 - O073)		**R024**	Fuk Wa Street (O212 - O214)
R009	Hang Cheung Street (O074 - O079)		**R025**	Yu Chau West Street (O215 - O220)
R010	Cheung Sha Wan Road (O080 - O091)		**R026**	Tai Nan West Street (O221 - O226)
R011	Cheung Sha Wan Road (O092 - O108)		**R027**	Castle Peak Road (O227 - O239)
R012	Cheung Sha Wan Road (O109 - O130)		**R028**	Kwong Shing Street (O240 - O241)
R013	Fuk Wa Street (O131 - O137)		**R029**	Wing Hong Street (O242 - O262)
R014	Fuk Wing Street (O138 - O142)		**R030**	Wing Ming Street (O263 - O270)
R015	Fuk Wing Street (O143 - O147)		**R031**	King Lam Street (O271 - O275)
R016	Un Chau Street (O148 - O160)			
Open Area				
Z001	Sham Shui Po Sports Ground (O276 - O328)		**Z005**	Un Chau Estate (O354 - O355)
Z002	Hang Chun Court (O329 - O337)		**Z006**	Hing Wah Street Playground (O356 - O370)
Z003	S.K.H. Kei Fook Primary School – Middle (O338 - O343)		**Z007**	Cheung Sha Wan Catholic Secondary School (O371 - O376)
Z004	S.K.H. Kei Fook Primary School – West (O344 - O353)		**Z008**	Wing Hong Street Rest Garden (O377 - O384)
Open Area - Within Scheme Boundary				
A001	Site A – Setback Areas in West (A001 - A014)		**A004**	SSP-017 - Setback Area in West (A062 - A076)
A002	Site A – North-East Area (A015 - A019)		**A005**	SSP-017 - SW/NE pedestrian pathway (A077 - A081)
A003	Site B – Open Area (A020 - A061)			

3.4 Assessed Parameters

3.4.1 According to the Technical Circular, Wind Velocity Ratio (VR) should be used as an indicator of wind performance for the AVA. It is defined as

$$VR = V_P/V_g$$

Where V_g is the wind velocity at the top of boundary layer (at 500m in this AVA) and V_P is the wind velocity at pedestrian level (2m above ground or slab).

3.4.2 To quantitatively assess the air ventilation for the Site and in the surrounding area, two spatial averaged values, namely Site Air Ventilation Assessment (SVR) and Local Air Ventilation Assessment (LVR) will be used.

3.4.3 SVR is the average (weighted by the occurrence probability of the wind directions) of the VRs along the Site boundary (i.e. P001-P144), to quantify the air ventilation of the Site. LVR is the average of the VRs for the whole assessment area (average of all perimeter and overall test points), for quantify the air ventilation of the local region.

3.4.4 It should be noted that the VRs (also SVRs and LVRs) should only be compared between the Baseline Scheme and the Proposed Scheme of the study which have applied identical setting for each parameter, and should not be directly compared with on-site measurement and/or wind tunnel experiment.

3.4.5 Averaged VRs for smaller focus areas (e.g. a street section or open area) will also be presented to examine the effect of the building design to air ventilation of individual regions within the Assessment Area.

3.5 Studied Scenarios

3.5.1 Two scenarios were considered in this study. The first scenario is based on the design of the Baseline Scheme. The other scenario is based on the Proposed Scheme. The results of the scenarios will be compared to draw the conclusion.

3.5.2 In both scenarios, all buildings in the surrounding area and the terrain are included. The terrain information of the surrounding is extracted from - Digital Terrain Model (DTM)[5] of Hong Kong provided by Lands Department and illustrated in **Figure 3-6a**. The buildings (and flyovers) included in the CFD are illustrated in **Figures 3-6b & 3-6c**.

3.5.3 The difference between the two scenarios are the buildings within the Site A, Site B and Site for SSP-017, which are shown in **Figures 1-2, 1-7 & 1-8**. For Site A, the Baseline Scheme have a single 12mPD building, while the Proposed Scheme consist of two 140mPD residential towers (Towers A & B) on top of 6-storey podia. For Site B, the Baseline Scheme have a single 12mPD building, while the Proposed Scheme consist of a 95mPD block with G/IC facilities. For the Site of SSP-017, the Baseline Scheme have two rows of 30m tenement buildings, while the Proposed Scheme consist of 2 residential towers of 120mPD each with separated podium.

3.5.4 The simplified 3D model of the development (SSP-018) adopted in both scenarios are illustrated in **Figures 3-7a & 3-7b** for Baseline Scheme and Proposed Scheme, respectively. The simplified 3D model of the development adopted in SSP-017 Site is illustrated in **Figure 3-7c**.

3.5.5 Both scenarios share the identical boundary conditions and other modelling parameters to have a fair comparison focused on the design between the Proposed Scheme and Baseline Scheme only. The details models' setting will be explained in later paragraphs.

3.6 Computational Domain and Boundary Condition

3.6.1 The global domain size is 4000m (length) x 4000m (width) x 2500m (height) centred at 833700m (E), 822100m (N). The Terrain and buildings within the surrounding area have been included in the model. The distance between the side boundaries of the domain and the buildings are more than 5 times the adopted highest building. The Blockage ratio is less than 3% for all wind directions. **Figure 3-8** shows the computation domain of the Proposed Scheme as an example.

3.6.2 The computation domain has been discretized by triangle and tetrahedral meshes for 2D surfaces and 3D volumes, respectively. The 2D triangle meshes on the surface of buildings and flyovers are mostly in the range of 0.8m – 6m. The 2D triangle meshes on the ground are mostly in the range of 0.8m – 20m. The 3D tetrahedral meshes with size of 0.8m - 80m were used in the discretization of the computation domain. In order to resolve the near ground flow velocity, as the data sampling point is 2m above ground, 6 prism layers with a total thickness of 3.0m were applied on the Ground and building surfaces. The different in size of

[5] Lands Department - Digital Terrain Model (DTM) - https://data.gov.hk/en-data/dataset/hk-landsd-openmap-5m-grid-dtm

neighbourhood grids, also called grid expansion ratio, are less than 30% for the whole domain. Generally, smaller grids were placed near the building surfaces and ground in order to resolve the near surface flow properly. The meshes adopted in the model are illustrated in Figures **3-9** & **3-10**.

3.7 Model Setting

3.7.1 The Realisable k-epsilon model has been used in this study as it can provide better results than the standard k-epsilon model. Wall functions are applied on the solid boundaries, i.e. ground and building facades, to account for the turbulence, generated by flow over surfaces.

3.7.2 SIMPLE algorithm is adopted to handle the velocity-pressure coupling.

3.7.3 Convergence criterion of <1.0E-3 is adopted to control when the iteration will stop. A summary of the model setting can be found in **Table 3-2**.

Table 3-2 Summary of Model Settings

Software	Pre-processing	Ansys Fluent Mesh
	Processing	Ansys Fluent CFD
Domain Size	4000m x 4000m x 2500m (Width x Length x Height)	
Assessment Area	>=1H area	
Surrounding Area	>=2H area	
Boundary Conditions	Inflow boundary	Velocity Inlet with velocity profiles as listed in **Table 2-3**
	Outflow Boundary	Pressure Outlet
	Ground and Building Surfaces	No Slip Condition with Wall Function
Grid Expansion Ratio	< 30%	
Blockage Ratio	< 3%	
Prismatic layer	6 prism layers with a total thickness of 3.0m (0.5m each)	
Turbulence Model	Realisable k-ε turbulence model	
Solving algorithms	SIMPLE algorithm for momentum and pressure coupling	
Convergence criteria	< 1.0E-3	

3.8 List of Models

3.8.1 The wind environment of the site has been discussed in **Section 2.3**. The top 80% wind directions for both annual and summer condition has been adopted in this study (**Table 2-1** & **Table 2-2**). As most of the wind directions in annual and summer are overlapped, only 10 wind directions thus 20 models are required for the two scenarios (**Table 3-3**).

Table 3-3 List of Wind Conditions Included in the AVA Study

Wind Direction		Occurrence Probability (Annual)	Occurrence Probability (Summer)
NE	45	7.6%	
ENE	67.5	12.4%	
E	90	21.8%	8.3%
ESE	112.5	12.4%	9.7%
SE	135	6.5%	7.6%
SSE	157.5	4.9%	8.2%
S	180	4.5%	9.2%
SSW	202.5	6.7%	14.2%
SW	225	6.8%	16.9%
WSW	247.5		7.6%
Total		**83.6%**	**81.7%**

4 ASSESSMENT RESULTS

4.1 Model Results - Spatial Averaged Velocity Ratios

4.1.1 Baseline Scenario and Proposed Scenario (for Baseline Scheme and Proposed Scheme respectively) each with 10 wind directions, as stated in **Table 3-3** have been conducted based on the methodology mentioned in **Section 3**. A summary of the predicted spatial averaged VRs of the test points are presented in **Table 4-1** including the average SVR for all perimeter test points (P Points) and the average LVR for all perimeter and overall test points (P & O Points). The averaged VRs of each focus areas (**Figures 3-5a, 3-5b & 3-5c**) are also presented in **Table 4-1**.

4.1.2 The detailed simulated VRs at individual test points are listed in **Appendix 4-1**. The bar charts for the comparison between the 2 scenarios are also illustrated in **Appendix 4-1**. The contours and vectors of VRs at 2m above ground are illustrated in **Figures 4-1a to 4-1j and Figures 4-2a to 4-2j**, for the assessment area and 4km domain, respectively. The contours of annual/summer weighted averaged VRs are illustrated in **Figures 4-3a & 4-3b**, respectively.

<u>Overall Spatial and Wind Directions Averaged VRs</u>

4.1.3 The SVR and LVR are used for quantifying the change in air ventilation performance of the sites and local area in this study. It should be noted that the SVR and LVR in this study is only valid for comparison between different scheme of the current study, but not applicable for comparing different studies.

4.1.4 Generally, the SVR and LVR are higher in summer condition than that in the annual condition. This is largely due to the open area provided by Site B, the Sham Shui Po Sports Ground (Z001) and the wind pathway provided by the Cheung Sha Wan Road Section (R012) are more favourable for S to WSW wind (180-247.5 deg).

4.1.5 The overall SVR are 0.098 and 0.115 for Baseline Scheme and Proposed Scheme respectively, under annual wind condition. During summer, the SVRs are 0.121 and 0.143 for Baseline Scheme and Proposed Scheme respectively. The SVR of the Proposed Scheme as a whole are better than that of the Baseline Scheme with improvement of SVR 0.018 & 0.022 for Annual and Summer respectively.

4.1.6 The SVR for Site A are 0.076 and 0.103 for Baseline Scheme and Proposed Scheme respectively, under annual wind condition. During summer, the SVRs are 0.105 and 0.140 for Baseline Scheme and Proposed Scheme respectively. The SVR of the Proposed Scheme as a whole are better than that of the Baseline Scheme with improvement of SVR 0.026 & 0.035 for Annual and Summer respectively.

4.1.7 The SVR for Site B are 0.115 and 0.125 for Baseline Scheme and Proposed Scheme respectively, under annual wind condition. During summer, the SVRs are 0.141 and 0.161 for Baseline Scheme and Proposed Scheme respectively. The SVR of the Proposed Scheme as a whole are better than that of the Baseline Scheme with improvement of SVR 0.010 & 0.020 for Annual and Summer respectively.

4.1.8 The SVR for SSP-017's Site are 0.082 and 0.108 for Baseline Scheme and Proposed Scheme respectively, under annual wind condition. During summer, the SVRs are 0.095 and 0.111 for Baseline Scheme and Proposed Scheme respectively. The SVR of the Proposed Scheme as a whole are better than that of the Baseline Scheme with improvement of SVR 0.025 & 0.016 for Annual and Summer respectively.

4.1.9 The LVR are 0.112 and 0.117 for Baseline Scheme and Proposed Scheme respectively, under annual wind condition. During summer, the LVRs are 0.130 and 0.137 for Baseline Scheme and Proposed Scheme respectively. the LVR of the Proposed Scheme are better than that of the Baseline Scheme with smaller improvement of SVR 0.004 & 0.008 for Annual and Summer respectively.

4.1.10 The increases in SVR for each Site under Proposed Scheme implies that ventilation consideration incorporated in the design are effective in general. The slightly increases in LVR implies that the Proposed Scheme is not adversely affecting the pedestrian level's ventilation in average.

Table 4-1 Summary of Spatial Averaged Velocity Ratios

Test Points for the Subject Site and Assessment Area		Baseline		Proposed	
		Annual	Summer	Annual	Summer
Overall					
Site Air Ventilation Assessment (SVR) (All P Points)		0.098	0.121	0.115	0.143
--Site A (P001 - P030)		0.076	0.105	0.103	0.140
--Site B (P031 - P104)		0.115	0.141	0.125	0.161
--SSP-017 (P105 - P144)		0.082	0.095	0.108	0.111
Local Air Ventilation Assessment (LVR) (All P & O Points)		0.112	0.130	0.117	0.137
Road Sections					
R001	Hing Wah Street (O001 - O012)	0.114	0.143	0.107	0.142
R002	Hing Wah Street (O013 - O027)	0.122	0.127	0.132	0.149
R003	Cheung Wah Street (O028 - O035)	0.095	0.112	0.116	0.143
R004	Cheung Sha Wan Path (O036 - O044)	0.159	0.157	0.139	0.140
R005	Kwong Cheung Street (O045 - O048)	0.099	0.123	0.116	0.159
R006	Tai Nan West Street (O049 - O060)	0.156	0.185	0.146	0.175
R007	Lai Chi Kok Road (O061 - O069)	0.182	0.169	0.178	0.165
R008	Fortune Street (O070 - O073)	0.122	0.145	0.109	0.143
R009	Hang Cheung Street (O074 - O079)	0.115	0.132	0.118	0.132
R010	Cheung Sha Wan Road (O080 - O091)	0.148	0.183	0.153	0.191
R011	Cheung Sha Wan Road (O092 - O108)	0.088	0.160	0.114	0.181
R012	Cheung Sha Wan Road (O109 - O130)	0.184	0.271	0.169	0.270
R013	Fuk Wa Street (O131 - O137)	0.096	0.098	0.096	0.090
R014	Fuk Wing Street (O138 - O142)	0.137	0.129	0.142	0.133
R015	Fuk Wing Street (O143 - O147)	0.072	0.078	0.132	0.141
R016	Un Chau Street (O148 - O160)	0.148	0.114	0.149	0.121
R017	Castle Peak Road (O161 - O182)	0.108	0.124	0.111	0.124
R018	Cheung Yue Street (O183 - O191)	0.109	0.109	0.105	0.109
R019	Un Chau Street (O192 - O196)	0.138	0.108	0.129	0.090
R020	Cheung Fat Street (O197 - O199)	0.117	0.097	0.114	0.090
R021	Hing Wah Street (O200 - O205)	0.116	0.112	0.117	0.116
R022	Cheung Wah Street (O206 - O208)	0.081	0.075	0.093	0.101
R023	Tsap Fai Street (O209 - O211)	0.068	0.057	0.072	0.067
R024	Fuk Wa Street (O212 - O214)	0.086	0.079	0.078	0.073
R025	Yu Chau West Street (O215 - O220)	0.084	0.076	0.075	0.069
R026	Tai Nan West Street (O221 - O226)	0.097	0.116	0.088	0.115
R027	Castle Peak Road (O227 - O239)	0.147	0.114	0.152	0.122
R028	Kwong Shing Street (O240 - O241)	0.064	0.065	0.073	0.058
R029	Wing Hong Street (O242 - O262)	0.096	0.106	0.096	0.115
R030	Wing Ming Street (O263 - O270)	0.101	0.091	0.096	0.084
R031	King Lam Street (O271 - O275)	0.085	0.125	0.092	0.141
Open Area					
Z001	Sham Shui Po Sports Ground (O276 - O328)	0.127	0.153	0.115	0.145
Z002	Hang Chun Court (O329 - O337)	0.096	0.141	0.094	0.138

Test Points for the Subject Site and Assessment Area		Baseline		Proposed	
		Annual	Summer	Annual	Summer
Z003	S.K.H. Kei Fook Primary School – Middle (O338 - O343)	0.119	0.076	0.119	0.077
Z004	S.K.H. Kei Fook Primary School – West (O344 - O353)	0.100	0.116	0.092	0.110
Z005	Un Chau Estate (O354 - O355)	0.089	0.072	0.088	0.072
Z006	Hing Wah Street Playground (O356 - O370)	0.072	0.078	0.077	0.082
Z007	Cheung Sha Wan Catholic Secondary School (O371 - O376)	0.048	0.055	0.052	0.062
Z008	Wing Hong Street Rest Garden (O377 - O384)	0.087	0.077	0.082	0.074
Open Area - Within Scheme Boundary					
A001	Site A – Setback Areas in West (D001 - D014)	0.072	0.103	0.104	0.123
A002	Site A – North-East Area (D015 - D019)	0.051	0.049	0.076	0.107
A003	Site B – Open Area (D020 - D061)	0.109	0.113	0.090	0.110
A004	SSP-017 - Setback Area in West (D062 - D076)	0.072	0.071	0.092	0.092
A005	SSP-017 - SW/NE pedestrian pathway (D077 - D081)	0.046	0.067	0.065	0.057

4.2 Localised Spatial and Wind Directions Averaged VRs (Road Section)

4.2.1 For road sections (R001-R031), the change in averaged VRs are in the range of -0.020 to 0.060 under annual condition and in the range of -0.018 to 0.063 under summer condition.

4.2.2 It should be note that although the average VRs for road sections can give general picture of the ventilation performance, the density of the test points are not sufficient to capture the small but sharply change flow, e.g. flow concentration near building corner. Therefore, only significant changes in averaged VRs are presented in this section to give a general idea of the improvement (or drawback) due to the Proposed Scheme to the surrounding.

4.2.3 The road sections with noticeable improvement (VR different >= 0.015 in both annual and summer condition) are Cheung Wah Street Section (R003), Cheung Sha Wan Road Section (R011), & Fuk Wing Street Section (R015). Two out of 3 road sections (R003 & R015) are experiencing lower than average (i.e. LVR) ventilation performance in Baseline Scenario. In the Proposed Scenario, their ventilation performance shapely improve and sometimes higher than the average level. The improvements at R003 & R011 are mainly due to the refined building footprints and the open areas provided in Site A & SSP-017's Site. The poor placement of building partially blocking wind pathways in Baseline Scenario is also related but unlikely the major reason. The improvement in R015 is the result of the building setback and the new at-grade NW-NE pedestrian pathway at the middle of the SSP-017's Site.

4.2.4 The road section with noticeable reduction (VR different <= -0.015 in both annual and summer condition) is Cheung Sha Wan Path (R004) only. It is worth pointing out that the reduction in ventilation performance of R004 is not only due to the blockage of the proposed G/IC Block in Site B, but also due to the less obstructed core region of Site B. For example, under E wind in Baseline Scenario (**Figure 4-1c**), the wind entering the core of Site B is partially blocked by the 12m building in Site B leads to re-circulation, making it hard for the air to penetrate Site B from south and reach the downstream air pathway (R012) under Baseline Scenario. In comparison, the western portion of Site B and R004 are easier to penetrating (relatively less air resistance) under this case. In the Proposed Scenario, the wind in the core of Site B is no longer blocked thus the western portion of Site B and R004 are less attractive (relatively more air resistance). Nevertheless, the averaged VRs of R004 are higher than the LVRs in both annual and summer conditions, making it a reasonable trade-off for improving the poor ventilated areas (R003 & R015).

4.3 Localised Spatial and Wind Directions Averaged VRs (Open Area)

4.3.1 Compare to the road sections, the changes in averaged VRs for open areas (Z001-Z008) are relatively small, which is in the range of -0.012 to 0.005 under annual condition; and in the range of -0.008 to 0.007 under summer condition.

4.3.2 The only noticeable change (averaged VRS either <= -0.010 or >= 0.010) is identified at Sham Shui Po Sports Ground (Z001) with 0.012 reduction under annual condition. Considering the averaged VRs in the Proposed Scenario (0.115 in annual and 0.145 in summer), it is slightly lower than LVR under annual condition (- 0.002) and slightly higher than LVR (+ 0.008) under summer condition. No adverse air ventilation impact is anticipated.

4.4 Localised Spatial and Wind Directions Averaged VRs (Open Area – Sites)

4.4.1 For open area within Site A (A001 & A002), noticeable improvement in ventilation (VR different > 0.020) are identified. The improvement in A001 is strongly related with the improvement in Cheung Wah Street (R003), which is the result of the combined effect of the refined building footprints and the open areas provided in Site A & SSP-017's Site. For A002, although the Baseline Scenario provide more space in Site A, the space in between the building in Site A and the Cheung Sha Wan Catholic Secondary School (Z007) are forming a wake region (slow and recirculating flow region), especially under SSE & S winds (157.5-180 deg) (**Figures 4-1f & 4-1g**). On the other hand, the proposed building in the Site A under Proposed Scenario is not forming wake region under the same wind directions, despite having narrower space, resulting in higher averaged wind speed and VRs.

4.4.2 For open area within Site B (A003), reduction in ventilation performance are identified. Noticeable reduction is only identified in annual condition, which is dominated by ENE-ESE wind (157.5-202.5 deg). Under E wind (**Figure 4-1c**), the proposed G/IC Block is blocking the flow from entering the western portion of Site B.

4.4.3 For the open are within SSP-017 (A004 & A005), the averaged VRs are 0.092 & 0.065 under annual condition; 0.092 & 0.057 under summer condition. No results for Baseline Scenario are available as those open areas in Proposed Scheme are mostly occupied in Baseline Scenario. Therefore, reference has been made to the open area in Site A (A001 & A002) under Baseline Scenario for comparison. Compare to the A001 in Baseline Scenario, the averaged VRs of A004 is higher by 0.020 under annual condition and lower by 0.011 under summer condition. Compare to the A002 in Baseline Scenario, the averaged VRs of A005 is higher by 0.014 under annual condition and higher by 0.009 under summer condition. Although this is not a fair quantitative comparison, it shows the averaged VRs of open area in SSP-017 in the Proposed Scenario are in the same ballpark of that in Site A under Baseline Scenario, which should be within reasonable range which no adverse impact is anticipated.

4.5 Effectiveness of the Design Consideration

4.5.1 The design considerations of the Scheme and SSP-017 are stated in **Sections 1.3 & 1.5**. From the increased SVR and LVR in the Proposed Scenario, it is known that the design of the SSP-017 & SSP-018 are favourable for air ventilation at the Sites' boundaries and in the assessment area in average.

4.5.2 For localised region, the ventilation of Cheung Wah Street Section (R003) is benefited from building setback of Site A and Site of SSP-017; the Cheung Sha Wan Road Section (R011) is benefited from the better building deposition in Site A & Site B; the Fuk Wing Street Section (R015) is benefited from the new open area in SSP-017.

4.5.3 However, it is inevitable that some region will be adversely affected. By the cautious notional design, notable adverse effect is only limited to Cheung Sha Wan Path (R004), and its ventilation is above average even in the Proposed Scenario. Therefore, no insurmountable adverse impact is anticipated from the current notional design.

5 CONCLUSIONS

5.1.1 The Urban Renewal Authority (URA) has proposed a Cheung Sha Wan Road / Lai Chi Kok Road Development Scheme (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO). An Air Ventilation Assessment (AVA) has been conducted in accordance with the recommendations of "Feasibility Study for Establishment of Air Ventilation Assessment System – Final Report" by Planning Department, and "Technical Circular No. 1/06 on Air Ventilation Assessments" by HPLB & ETWB to support the submission of a draft Development Scheme Plan (DSP) with its planning proposal to the Town Planning Board (TPB) for consideration. A planned concurrent URA project (SSP-017) within the assessment area, which is not part of this DSP, is also included in the current assessment.

5.1.2 The microclimate around the Site for the two scenarios, i.e. the Baseline Scheme (i.e. OZP-compliance development) and the Proposed Schemes (the proposed development of the draft DSP), have been assessed by Computational Fluid Dynamics (CFD) using well proven CFD code. The model settings have been compared to previous studies to ensure the reliability of the model results.

5.1.3 The models result suggested that the averaged air ventilation performance of the Proposed Scheme is better than that of the Baseline Scheme in both annual and summer conditions in average.

5.1.4 The most significant improvement compare to the Baseline Scheme can be found along the Site Boundary, and the Cheung Wah Street Section (R003), Cheung Sha Wan Road Section (R011), and Fuk Wing Street Section (R015). Their improvements are mainly due to the refined building footprints, the open area provided as well as the better building disposition of the Sites. Although noticeable deterioration has been identified in Cheung Sha Wan Path (R004), the averaged VRs of R004 are higher than the LVRs in both annual and summer conditions, making a reasonable trade-off for improving the poor ventilated areas (R003 & R015).

5.1.5 In the event that the Proposed Scheme in this AVA report, including building disposition and setback, are not adopted in the future design scheme or no other alternative and equivalent design features to be agreed with Planning Department, further AVA study would be conducted by the project proponent in accordance with the joint Housing Planning and Lands Bureau - Environment, Transport and Works Bureau Technical Circular No. 1/06 on Air Ventilation Assessments (or its latest version) for demonstrating that the performance of any future development would not be worse than the scheme adopted in this report.

APPENDIX 2-1

Wind Data at grid [76,46] form RAMS

Occurrence Probability at 500m elevation (Annual)

e_01299	Wind_direction	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
V_infinity(m/s)	Sum	0.018	0.043	0.076	0.124	0.218	0.124	0.065	0.049	0.045	0.067	0.068	0.033	0.027	0.015	0.014	0.012
00_to_01	0.027	0.001	0.002	0.002	0.002	0.004	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.001
01_to_02	0.064	0.003	0.005	0.006	0.007	0.008	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.004	0.002	0.002	0.003
02_to_03	0.088	0.004	0.005	0.008	0.01	0.012	0.005	0.004	0.004	0.005	0.005	0.006	0.005	0.006	0.002	0.003	0.003
03_to_04	0.101	0.003	0.004	0.008	0.013	0.017	0.006	0.006	0.007	0.006	0.006	0.008	0.006	0.005	0.003	0.002	0.002
04_to_05	0.11	0.002	0.004	0.008	0.016	0.021	0.009	0.006	0.006	0.007	0.008	0.008	0.005	0.004	0.002	0.002	0.001
05_to_06	0.115	0.001	0.003	0.008	0.016	0.025	0.014	0.008	0.007	0.006	0.009	0.009	0.004	0.002	0.002	0.001	0.001
06_to_07	0.108	0.001	0.003	0.007	0.015	0.026	0.015	0.008	0.006	0.004	0.007	0.008	0.003	0.001	0.001	0.001	0
07_to_08	0.098	0.001	0.003	0.006	0.013	0.023	0.017	0.007	0.005	0.005	0.007	0.007	0.002	0.001	0.001	0.001	0
08_to_09	0.084	0.001	0.003	0.006	0.011	0.023	0.014	0.006	0.003	0.003	0.006	0.006	0.001	0	0	0	0
09_to_10	0.064	0	0.002	0.005	0.008	0.018	0.011	0.005	0.002	0.002	0.005	0.003	0.001	0	0	0	0
10_to_11	0.047	0	0.002	0.004	0.005	0.014	0.009	0.003	0.002	0.001	0.004	0.003	0.001	0	0	0	0
11_to_12	0.032	0	0.002	0.002	0.002	0.009	0.007	0.002	0.001	0	0.002	0.003	0	0	0	0	0
12_to_13	0.021	0	0.001	0.002	0.002	0.006	0.004	0.001	0.001	0	0.001	0.001	0	0	0	0	0
13_to_14	0.014	0	0.001	0.001	0.001	0.004	0.003	0.001	0	0	0.001	0.001	0	0	0	0	0
14_to_15	0.009	0	0.001	0.001	0.001	0.002	0.002	0	0	0	0	0	0	0	0	0	0
15_to_16	0.005	0	0.001	0.001	0.001	0.002	0.001	0	0	0	0	0	0	0	0	0	0
16_to_17	0.004	0	0.001	0	0	0.001	0.001	0	0	0	0	0	0	0	0	0	0
17_to_18	0.002	0	0	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0
18_to_19	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19_to_20	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20_to_21	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21_to_22	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22_to_23	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23_to_24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Occurrence Probability at 500m elevation (Summer)

e_01299	Wind_direction	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
V_infinity(m/s)	Sum	0.009	0.01	0.015	0.028	0.083	0.097	0.076	0.082	0.092	0.142	0.169	0.076	0.053	0.03	0.022	0.012
00_to_01	0.02	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.001	0.002	0.001	0.001	0.001	0.003	0.001	0.001	0.001
01_to_02	0.058	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.005	0.005	0.006	0.005	0.005	0.006	0.002	0.002	0.002
02_to_03	0.094	0.003	0.002	0.003	0.003	0.004	0.005	0.006	0.007	0.009	0.009	0.014	0.01	0.011	0.003	0.003	0.002
03_to_04	0.114	0.001	0.001	0.001	0.002	0.006	0.004	0.008	0.011	0.011	0.013	0.019	0.014	0.01	0.006	0.004	0.002
04_to_05	0.116	0.001	0	0.001	0.003	0.007	0.007	0.008	0.011	0.011	0.015	0.02	0.013	0.008	0.005	0.004	0.001
05_to_06	0.116	0.001	0	0.001	0.003	0.009	0.011	0.008	0.01	0.012	0.018	0.022	0.01	0.006	0.004	0.002	0.001
06_to_07	0.101	0.001	0	0	0.001	0.009	0.011	0.007	0.009	0.01	0.015	0.021	0.007	0.003	0.003	0.003	0.001
07_to_08	0.094	0	0	0.001	0.001	0.008	0.013	0.008	0.008	0.011	0.015	0.017	0.005	0.002	0.002	0.001	0
08_to_09	0.076	0	0.001	0	0.002	0.009	0.009	0.006	0.006	0.008	0.012	0.015	0.004	0.001	0.001	0.001	0
09_to_10	0.055	0	0.001	0	0.001	0.005	0.008	0.005	0.004	0.005	0.011	0.009	0.003	0.001	0.001	0.001	0
10_to_11	0.045	0	0.001	0.001	0.001	0.005	0.006	0.004	0.004	0.002	0.01	0.008	0.002	0.001	0	0	0
11_to_12	0.034	0	0	0.001	0.001	0.004	0.005	0.002	0.003	0.001	0.007	0.007	0.001	0.001	0	0	0
12_to_13	0.024	0	0	0.001	0.001	0.003	0.004	0.002	0.002	0.001	0.004	0.004	0.001	0	0	0	0
13_to_14	0.017	0	0	0.001	0.001	0.001	0.003	0.002	0.001	0.001	0.003	0.003	0.001	0	0	0	0
14_to_15	0.012	0	0	0	0.001	0.002	0.003	0.001	0	0.001	0.002	0.001	0.001	0	0	0	0
15_to_16	0.007	0	0	0	0	0.003	0.001	0	0	0.001	0	0.001	0	0	0	0	0
16_to_17	0.005	0	0	0	0	0.001	0.001	0	0	0.001	0	0	0	0	0	0	0
17_to_18	0.003	0	0	0	0	0.001	0	0	0	0.001	0	0	0	0	0	0	0
18_to_19	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19_to_20	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20_to_21	0.001	0	0	0	0	0	0.001	0	0	0	0	0	0	0	0	0	0
21_to_22	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22_to_23	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23_to_24	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX 4-1

Detailed Simulated Results

Wind Velocity Ratio, Base Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
P001	833906.48	822110.14		0.078	0.137	0.139	0.154	0.092	0.063	0.088	0.060	0.053	0.118		0.111	0.090
P002	833900.24	822102.33		0.088	0.129	0.119	0.135	0.072	0.054	0.107	0.056	0.070	0.083		0.103	0.084
P003	833894.00	822094.52		0.080	0.111	0.095	0.106	0.062	0.044	0.114	0.078	0.066	0.104		0.089	0.082
P004	833890.92	822084.84		0.133	0.152	0.110	0.140	0.070	0.064	0.181	0.156	0.097	0.159		0.123	0.123
P005	833884.53	822077.14		0.166	0.156	0.089	0.136	0.058	0.062	0.147	0.158	0.125	0.204		0.120	0.126
P006	833874.36	822071.19		0.127	0.124	0.033	0.098	0.052	0.049	0.055	0.102	0.192	0.247		0.087	0.111
P007	833864.49	822068.98		0.080	0.098	0.026	0.056	0.062	0.101	0.160	0.056	0.283	0.269		0.084	0.137
P008	833854.52	822072.47		0.030	0.058	0.033	0.037	0.040	0.131	0.220	0.042	0.301	0.246		0.076	0.142
P009	833846.90	822078.91		0.015	0.025	0.028	0.054	0.027	0.114	0.204	0.067	0.284	0.237		0.069	0.139
P010	833839.86	822084.83		0.015	0.022	0.022	0.055	0.035	0.111	0.197	0.060	0.284	0.254		0.066	0.138
P011	833831.48	822091.12		0.015	0.025	0.016	0.049	0.028	0.118	0.193	0.106	0.294	0.275		0.069	0.148
P012	833823.50	822098.43		0.027	0.045	0.021	0.050	0.017	0.123	0.184	0.188	0.299	0.283		0.080	0.164
P013	833819.20	822105.01		0.049	0.085	0.024	0.053	0.028	0.100	0.138	0.241	0.263	0.254		0.088	0.157
P014	833813.78	822113.32		0.029	0.081	0.009	0.050	0.044	0.069	0.092	0.231	0.276	0.294		0.078	0.153
P015	833806.08	822119.70		0.017	0.075	0.019	0.053	0.044	0.045	0.069	0.202	0.263	0.289		0.073	0.141
P016	833799.61	822125.07		0.022	0.068	0.036	0.058	0.045	0.045	0.051	0.214	0.255	0.269		0.077	0.140
P017	833806.02	822132.74		0.016	0.064	0.031	0.056	0.078	0.043	0.028	0.253	0.057	0.044		0.062	0.084
P018	833812.47	822140.39		0.028	0.054	0.031	0.048	0.106	0.091	0.050	0.244	0.051	0.041		0.066	0.090
P019	833818.91	822148.04		0.023	0.056	0.036	0.029	0.121	0.125	0.046	0.226	0.057	0.069		0.066	0.094
P020	833825.35	822155.68		0.054	0.083	0.053	0.011	0.125	0.148	0.047	0.205	0.062	0.110		0.075	0.097
P021	833831.80	822163.33		0.103	0.101	0.077	0.026	0.119	0.157	0.122	0.189	0.062	0.131		0.093	0.109
P022	833836.66	822168.33		0.103	0.087	0.087	0.030	0.104	0.152	0.166	0.211	0.047	0.129		0.096	0.115
P023	833844.35	822161.93		0.104	0.036	0.073	0.014	0.070	0.073	0.132	0.108	0.064	0.034		0.067	0.073
P024	833852.03	822155.53		0.081	0.025	0.054	0.042	0.086	0.086	0.079	0.208	0.108	0.057		0.073	0.100
P025	833859.71	822149.12		0.077	0.037	0.065	0.049	0.073	0.062	0.089	0.149	0.067	0.123		0.068	0.087
P026	833867.39	822142.72		0.070	0.044	0.066	0.051	0.058	0.041	0.084	0.041	0.033	0.060		0.055	0.051
P027	833875.07	822136.32		0.057	0.049	0.050	0.049	0.051	0.021	0.050	0.022	0.046	0.084		0.046	0.044
P028	833882.75	822129.92		0.057	0.058	0.042	0.063	0.051	0.016	0.040	0.014	0.061	0.085		0.047	0.046
P029	833890.44	822123.51		0.053	0.055	0.050	0.064	0.049	0.019	0.052	0.031	0.053	0.081		0.050	0.049
P030	833898.12	822117.11		0.029	0.044	0.028	0.042	0.036	0.020	0.048	0.032	0.061	0.060		0.037	0.042
P031	833851.44	822040.71		0.155	0.119	0.070	0.129	0.203	0.215	0.179	0.055	0.129	0.217		0.122	0.140
P032	833846.06	822032.53		0.168	0.113	0.057	0.134	0.142	0.137	0.095	0.081	0.096	0.227		0.105	0.114
P033	833840.32	822041.06		0.132	0.116	0.064	0.115	0.179	0.176	0.133	0.111	0.101	0.211		0.112	0.129
P034	833832.12	822046.78		0.089	0.110	0.072	0.098	0.176	0.179	0.140	0.180	0.095	0.194		0.111	0.138
P035	833823.92	822052.51		0.051	0.098	0.073	0.091	0.161	0.182	0.146	0.216	0.085	0.158		0.107	0.138
P036	833815.73	822058.23		0.030	0.087	0.071	0.086	0.139	0.184	0.153	0.229	0.079	0.128		0.101	0.134
P037	833806.62	822062.36		0.027	0.080	0.065	0.085	0.110	0.177	0.146	0.233	0.064	0.108		0.095	0.125
P038	833797.51	822066.50		0.036	0.079	0.055	0.086	0.084	0.174	0.140	0.224	0.047	0.102		0.088	0.115
P039	833788.41	822070.63		0.041	0.083	0.047	0.088	0.070	0.169	0.125	0.210	0.035	0.116		0.083	0.107
P040	833779.30	822074.76		0.042	0.086	0.046	0.089	0.066	0.159	0.101	0.185	0.030	0.132		0.079	0.099
P041	833770.19	822078.90		0.040	0.087	0.052	0.090	0.061	0.146	0.074	0.152	0.025	0.146		0.075	0.090
P042	833761.09	822083.03		0.038	0.079	0.057	0.088	0.046	0.127	0.043	0.120	0.023	0.161		0.068	0.079
P043	833750.74	822085.73		0.034	0.066	0.061	0.087	0.078	0.090	0.050	0.105	0.027	0.168		0.066	0.078
P044	833740.78	822086.56		0.032	0.059	0.067	0.086	0.130	0.057	0.079	0.100	0.035	0.169		0.070	0.084
P045	833730.81	822087.38		0.031	0.055	0.071	0.083	0.143	0.074	0.111	0.098	0.040	0.164		0.075	0.091
P046	833720.85	822088.21		0.036	0.051	0.068	0.076	0.103	0.106	0.138	0.104	0.049	0.155		0.074	0.094
P047	833710.88	822089.03		0.054	0.048	0.058	0.066	0.060	0.060	0.086	0.118	0.055	0.135		0.064	0.079
P048	833700.91	822089.86		0.114	0.047	0.062	0.057	0.068	0.042	0.052	0.116	0.056	0.110		0.066	0.071
P049	833690.95	822090.68		0.153	0.052	0.143	0.053	0.052	0.052	0.064	0.125	0.053	0.113		0.092	0.081
P050	833684.22	822083.21		0.159	0.058	0.185	0.029	0.044	0.055	0.070	0.169	0.076	0.160		0.106	0.100
P051	833677.77	822075.56		0.157	0.073	0.204	0.016	0.040	0.063	0.078	0.179	0.070	0.098		0.112	0.096
P052	833671.33	822067.91		0.157	0.078	0.213	0.012	0.036	0.068	0.087	0.189	0.069	0.061		0.115	0.096
P053	833664.89	822060.26		0.157	0.078	0.219	0.022	0.034	0.067	0.095	0.198	0.067	0.037		0.119	0.097
P054	833658.45	822052.62		0.154	0.079	0.225	0.031	0.041	0.062	0.103	0.204	0.064	0.027		0.123	0.099
P055	833652.00	822044.97		0.148	0.079	0.231	0.032	0.055	0.057	0.120	0.206	0.059	0.048		0.126	0.104
P056	833645.56	822037.32		0.140	0.079	0.234	0.035	0.056	0.058	0.125	0.203	0.055	0.061		0.126	0.105
P057	833639.12	822029.67		0.127	0.080	0.235	0.052	0.055	0.064	0.120	0.197	0.051	0.063		0.127	0.106
P058	833632.67	822022.03		0.124	0.084	0.226	0.098	0.093	0.051	0.096	0.192	0.050	0.055		0.132	0.108
P059	833626.22	822014.39		0.148	0.093	0.207	0.163	0.215	0.166	0.141	0.190	0.051	0.042		0.159	0.140
P060	833619.77	822006.74		0.223	0.094	0.192	0.203	0.284	0.264	0.298	0.191	0.053	0.033		0.188	0.177
P061	833611.41	822001.06		0.216	0.084	0.173	0.223	0.268	0.271	0.316	0.186	0.047	0.039		0.183	0.178
P062	833602.43	822002.93		0.178	0.074	0.125	0.248	0.267	0.294	0.346	0.174	0.043	0.026		0.171	0.177
P063	833604.44	822013.68		0.183	0.080	0.148	0.249	0.292	0.318	0.377	0.152	0.041	0.023		0.181	0.183
P064	833598.77	822022.34		0.167	0.075	0.121	0.244	0.283	0.327	0.392	0.106	0.028	0.040		0.167	0.172
P065	833595.43	822031.77		0.146	0.073	0.123	0.214	0.251	0.298	0.352	0.056	0.011	0.069		0.149	0.149
P066	833592.10	822041.20		0.115	0.078	0.139	0.200	0.232	0.279	0.321	0.020	0.007	0.095		0.142	0.137
P067	833588.77	822050.63		0.089	0.086	0.151	0.195	0.223	0.269	0.297	0.024	0.025	0.115		0.142	0.140
P068	833585.44	822060.05		0.129	0.094	0.169	0.195	0.218	0.261	0.274	0.053	0.043	0.125		0.154	0.147
P069	833582.11	822069.48		0.079	0.103	0.198	0.190	0.210	0.248	0.231	0.061	0.053	0.120		0.155	0.146
P070	833578.78	822078.91		0.071	0.118	0.229	0.194	0.213	0.245	0.190	0.070	0.059	0.107		0.164	0.146
P071	833575.53	822088.37		0.063	0.137	0.246	0.202	0.225	0.248	0.169	0.069	0.059	0.085		0.172	0.146
P072	833576.05	822098.37		0.113	0.151	0.253	0.209	0.235	0.254	0.155	0.142	0.130	0.140		0.193	0.180
P073	833581.96	822106.63		0.138	0.136	0.248	0.184	0.208	0.225	0.151	0.326	0.312	0.315		0.213	0.256
P074	833591.37	822110.01		0.128	0.116	0.244	0.150	0.185	0.190	0.134	0.309	0.311	0.316		0.197	0.241
P075	833600.78	822113.40		0.123	0.104	0.236	0.119	0.171	0.158	0.130	0.318	0.337	0.344		0.188	0.241
P076	833610.19	822116.78		0.114	0.094	0.226	0.085	0.159	0.131	0.117	0.307	0.342	0.349		0.174	0.231
P077	833619.60	822120.16		0.107	0.085	0.212	0.052	0.144	0.104	0.106	0.309	0.358	0.364		0.162	0.225
P078	833629.01	822123.54		0.097	0.078	0.200	0.037	0.131	0.080	0.094	0.305	0.366	0.370		0.152	0.219
P079	833638.42	822126.92		0.087	0.071	0.187	0.029	0.117	0.049	0.073	0.296	0.371	0.372		0.141	0.209
P080	833647.06	822133.14		0.076	0.064	0.171	0.038	0.098	0.031	0.058	0.293	0.381	0.377		0.134	0.205
P081	833656.06	822137.54		0.059	0.061	0.159	0.035	0.080	0.047	0.058	0.270	0.368	0.353		0.125	0.195
P082	833665.90	822139.90		0.042	0.059	0.150	0.029	0.044	0.056	0.059	0.201	0.302	0.268		0.106	0.157
P083	833673.66	822146.21		0.088	0.050	0.110	0.029	0.014	0.090	0.068	0.257	0.399	0.370		0.111	0.194
P084	833683.40	822148.45		0.094	0.018	0.036	0.019	0.019	0.104	0.073	0.202	0.355	0.352		0.080	0.168
P085	833693.40	822148.18		0.082	0.009	0.051	0.019	0.025	0.123	0.065	0.089	0.244	0.283		0.064	0.122
P086	833703.38	822147.62		0.105	0.010	0.059	0.035	0.030	0.142	0.038	0.062	0.231	0.272		0.068	0.115
P087	833712.77	822144.13		0.105	0.009	0.070	0.047	0.029	0.146	0.073	0.037	0.212	0.253		0.071	0.112
P088	833722.15	822140.28		0.079	0.011	0.076	0.056	0.032	0.141	0.118	0.037	0.218	0.254		0.075	0.120
P089	833730.70	822136.10		0.044	0.017	0.077	0.065	0.034	0.140	0.148	0.046	0.229	0.266		0.077	0.129
P090	833739.69	822131.73		0.021	0.024	0.068	0.074	0.035	0.141	0.166	0.068	0.240	0.280		0.079	0.139
P091	833748.73	822127.25		0.030	0.014	0.045	0.082	0.033	0.145	0.175	0.086	0.251	0.297		0.077	0.146
P092	833757.74	822122.93		0.036	0.011	0.016	0.087	0.030	0.151	0.177	0.108	0.276	0.323		0.074	0.156
P093	833766.11	822118.19		0.035	0.022	0.014	0.081	0.023	0.152	0.179	0.111	0.294	0.344		0.075	0.161
P094	833773.72	822111.90		0.022	0.029	0.025	0.049	0.009	0.126	0.171	0.066	0.283	0.341		0.066	0.143
P095	833780.92	822105.74		0.048	0.066	0.037	0.050	0.023	0.139	0.177	0.065	0.259	0.321		0.077	0.140
P096	833783.82	822099.70		0.054	0.079	0.033	0.059	0.032	0.155	0.181	0.112	0.211	0.257		0.082	0.136

Wind Velocity Ratio, Base Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
P097	833790.30	822092.06		0.033	0.082	0.022	0.062	0.022	0.168	0.185	0.161	0.179	0.218		0.079	0.135
P098	833798.07	822085.76		0.024	0.077	0.022	0.062	0.028	0.179	0.192	0.193	0.166	0.198		0.080	0.138
P099	833805.83	822079.45		0.023	0.061	0.037	0.062	0.050	0.191	0.196	0.209	0.152	0.160		0.085	0.140
P100	833813.59	822073.15		0.022	0.053	0.052	0.064	0.079	0.197	0.198	0.219	0.145	0.126		0.091	0.142
P101	833821.67	822067.40		0.019	0.061	0.061	0.068	0.111	0.205	0.203	0.214	0.139	0.098		0.097	0.143
P102	833828.02	822058.82		0.036	0.087	0.069	0.079	0.152	0.204	0.187	0.201	0.124	0.136		0.106	0.145
P103	833835.80	822052.54		0.076	0.104	0.069	0.090	0.185	0.214	0.188	0.160	0.123	0.174		0.114	0.147
P104	833843.58	822046.26		0.122	0.116	0.066	0.108	0.198	0.213	0.180	0.093	0.125	0.201		0.117	0.140
P105	833859.73	822218.10		0.083	0.077	0.113	0.101	0.115	0.160	0.230	0.126	0.127	0.129		0.115	0.136
P106	833853.32	822210.43		0.035	0.058	0.080	0.071	0.083	0.157	0.213	0.116	0.148	0.101		0.092	0.124
P107	833846.97	822202.70		0.042	0.044	0.079	0.068	0.088	0.163	0.191	0.130	0.147	0.113		0.090	0.126
P108	833840.62	822194.97		0.029	0.043	0.091	0.081	0.110	0.171	0.178	0.153	0.140	0.113		0.096	0.132
P109	833834.27	822187.25		0.034	0.026	0.054	0.055	0.102	0.160	0.106	0.132	0.121	0.097		0.073	0.106
P110	833827.92	822179.52		0.103	0.076	0.073	0.023	0.110	0.159	0.121	0.139	0.110	0.100		0.088	0.106
P111	833820.19	822185.86		0.101	0.080	0.106	0.058	0.105	0.142	0.182	0.137	0.027	0.084		0.097	0.099
P112	833812.46	822192.20		0.081	0.065	0.126	0.074	0.137	0.190	0.220	0.144	0.028	0.092		0.108	0.117
P113	833804.73	822198.54		0.060	0.041	0.136	0.086	0.153	0.216	0.234	0.133	0.029	0.100		0.110	0.125
P114	833796.99	822204.88		0.046	0.023	0.140	0.093	0.152	0.224	0.240	0.114	0.048	0.122		0.109	0.130
P115	833789.26	822211.22		0.037	0.027	0.141	0.096	0.143	0.221	0.242	0.081	0.075	0.139		0.108	0.131
P116	833781.53	822217.57		0.034	0.039	0.145	0.097	0.145	0.221	0.243	0.101	0.057	0.126		0.111	0.130
P117	833773.79	822223.91		0.031	0.047	0.148	0.095	0.147	0.218	0.244	0.097	0.115	0.151		0.117	0.144
P118	833766.06	822230.25		0.025	0.055	0.151	0.088	0.138	0.215	0.246	0.074	0.129	0.138		0.116	0.140
P119	833758.33	822236.59		0.018	0.065	0.157	0.085	0.134	0.218	0.251	0.087	0.126	0.130		0.119	0.142
P120	833750.60	822242.93		0.023	0.077	0.162	0.098	0.142	0.223	0.255	0.095	0.074	0.080		0.122	0.132
P121	833742.86	822249.27		0.029	0.086	0.159	0.097	0.136	0.218	0.250	0.074	0.081	0.092		0.121	0.129
P122	833735.13	822255.61		0.037	0.091	0.153	0.081	0.122	0.208	0.242	0.072	0.081	0.096		0.116	0.123
P123	833727.40	822261.95		0.039	0.093	0.144	0.063	0.107	0.196	0.231	0.067	0.067	0.086		0.107	0.111
P124	833719.66	822268.29		0.039	0.087	0.124	0.051	0.093	0.183	0.212	0.056	0.045	0.074		0.094	0.095
P125	833711.93	822274.63		0.055	0.066	0.086	0.037	0.072	0.158	0.178	0.033	0.070	0.042		0.075	0.080
P126	833704.20	822280.97		0.062	0.034	0.117	0.064	0.093	0.132	0.143	0.097	0.082	0.103		0.088	0.101
P127	833712.40	822286.84		0.047	0.027	0.116	0.063	0.100	0.057	0.049	0.122	0.034	0.135		0.075	0.081
P128	833721.80	822290.25		0.038	0.014	0.105	0.042	0.097	0.042	0.074	0.118	0.022	0.139		0.064	0.075
P129	833731.20	822293.66		0.047	0.030	0.091	0.028	0.089	0.020	0.083	0.116	0.036	0.139		0.061	0.073
P130	833740.60	822297.07		0.052	0.043	0.087	0.018	0.086	0.027	0.064	0.072	0.034	0.115		0.057	0.059
P131	833750.00	822300.48		0.064	0.067	0.075	0.024	0.079	0.017	0.065	0.055	0.043	0.107		0.058	0.056
P132	833759.40	822303.89		0.086	0.093	0.058	0.056	0.075	0.049	0.055	0.040	0.078	0.093		0.066	0.063
P133	833768.34	822299.96		0.060	0.063	0.019	0.071	0.077	0.089	0.055	0.058	0.069	0.044		0.055	0.061
P134	833776.02	822293.62		0.046	0.043	0.009	0.034	0.085	0.091	0.093	0.087	0.078	0.071		0.048	0.070
P135	833783.71	822287.22		0.071	0.064	0.008	0.014	0.092	0.079	0.115	0.100	0.082	0.091		0.053	0.075
P136	833791.40	822280.83		0.090	0.076	0.010	0.016	0.096	0.062	0.125	0.100	0.074	0.101		0.056	0.074
P137	833799.09	822274.43		0.103	0.081	0.019	0.009	0.096	0.048	0.130	0.092	0.061	0.106		0.057	0.070
P138	833806.78	822268.04		0.109	0.081	0.038	0.012	0.093	0.033	0.128	0.080	0.057	0.107		0.061	0.067
P139	833814.46	822261.64		0.111	0.078	0.052	0.018	0.085	0.023	0.111	0.063	0.048	0.108		0.061	0.061
P140	833822.15	822255.25		0.112	0.074	0.059	0.023	0.075	0.010	0.075	0.037	0.040	0.114		0.057	0.051
P141	833829.84	822248.85		0.112	0.068	0.054	0.020	0.060	0.019	0.054	0.013	0.037	0.126		0.050	0.043
P142	833837.53	822242.46		0.109	0.061	0.032	0.017	0.041	0.026	0.063	0.036	0.032	0.143		0.043	0.045
P143	833845.22	822236.06		0.107	0.056	0.027	0.024	0.036	0.044	0.050	0.053	0.030	0.159		0.043	0.049
P144	833852.90	822229.67		0.108	0.050	0.053	0.049	0.066	0.039	0.051	0.048	0.026	0.171		0.055	0.057
O001	833688.64	821827.88		0.182	0.222	0.226	0.204	0.291	0.161	0.118	0.246	0.206	0.178		0.214	0.206
O002	833704.79	821846.97		0.164	0.047	0.035	0.074	0.099	0.109	0.064	0.167	0.200	0.045		0.089	0.114
O003	833720.93	821866.06		0.151	0.050	0.055	0.072	0.118	0.091	0.066	0.139	0.161	0.076		0.089	0.106
O004	833737.08	821885.14		0.120	0.037	0.096	0.053	0.123	0.094	0.089	0.200	0.157	0.134		0.098	0.127
O005	833753.23	821904.23		0.143	0.030	0.112	0.048	0.116	0.155	0.158	0.263	0.223	0.194		0.120	0.171
O006	833769.37	821923.32		0.153	0.027	0.134	0.081	0.101	0.096	0.093	0.297	0.255	0.265		0.128	0.182
O007	833785.52	821942.41		0.152	0.030	0.093	0.056	0.045	0.062	0.059	0.299	0.214	0.296		0.102	0.157
O008	833801.66	821961.49		0.142	0.030	0.050	0.066	0.055	0.089	0.122	0.265	0.127	0.268		0.088	0.138
O009	833817.81	821980.58		0.189	0.020	0.116	0.061	0.042	0.117	0.077	0.236	0.113	0.232		0.105	0.132
O010	833833.95	821999.67		0.203	0.034	0.125	0.108	0.059	0.052	0.046	0.172	0.075	0.235		0.102	0.109
O011	833850.10	822018.75		0.200	0.080	0.049	0.147	0.038	0.045	0.037	0.099	0.075	0.235		0.086	0.089
O012	833866.40	822037.71		0.152	0.108	0.098	0.146	0.237	0.258	0.247	0.156	0.154	0.231		0.149	0.183
O013	833882.70	822056.66		0.160	0.136	0.062	0.134	0.090	0.090	0.170	0.112	0.207	0.221		0.118	0.142
O014	833907.00	822070.77		0.183	0.145	0.098	0.125	0.101	0.092	0.077	0.165	0.149	0.215		0.125	0.132
O015	833923.30	822089.72		0.128	0.146	0.124	0.137	0.103	0.090	0.071	0.160	0.158	0.221		0.129	0.137
O016	833939.61	822108.68		0.079	0.137	0.123	0.135	0.104	0.100	0.073	0.167	0.100	0.196		0.119	0.125
O017	833955.91	822127.63		0.095	0.094	0.112	0.104	0.111	0.113	0.073	0.186	0.075	0.182		0.107	0.119
O018	833972.19	822146.60		0.104	0.094	0.148	0.119	0.123	0.117	0.085	0.187	0.079	0.204		0.122	0.130
O019	833988.31	822165.71		0.079	0.083	0.151	0.103	0.087	0.084	0.092	0.220	0.093	0.137		0.116	0.124
O020	834004.42	822184.83		0.136	0.184	0.166	0.115	0.025	0.073	0.078	0.216	0.094	0.131		0.135	0.118
O021	833894.10	822079.37		0.169	0.166	0.116	0.152	0.098	0.078	0.163	0.170	0.131	0.205		0.138	0.141
O022	833910.40	822098.32		0.112	0.160	0.137	0.160	0.114	0.080	0.137	0.127	0.103	0.174		0.133	0.127
O023	833926.70	822117.28		0.091	0.135	0.127	0.140	0.112	0.086	0.116	0.131	0.058	0.198		0.118	0.115
O024	833943.00	822136.23		0.115	0.098	0.084	0.092	0.103	0.105	0.117	0.182	0.066	0.179		0.101	0.115
O025	833959.29	822155.20		0.122	0.136	0.207	0.158	0.138	0.128	0.112	0.214	0.108	0.189		0.159	0.155
O026	833975.40	822174.31		0.097	0.096	0.103	0.065	0.095	0.083	0.073	0.233	0.081	0.196		0.101	0.119
O027	833991.52	822193.42		0.113	0.149	0.105	0.075	0.044	0.070	0.059	0.234	0.060	0.176		0.105	0.107
O028	833795.28	822131.96		0.021	0.058	0.045	0.064	0.063	0.068	0.028	0.234	0.168	0.175		0.075	0.120
O029	833811.13	822151.29		0.028	0.026	0.028	0.040	0.123	0.113	0.038	0.138	0.079	0.018		0.055	0.077
O030	833826.98	822170.63		0.109	0.099	0.082	0.036	0.135	0.185	0.129	0.165	0.097	0.117		0.100	0.118
O031	833842.83	822189.96		0.047	0.062	0.080	0.085	0.106	0.170	0.163	0.151	0.101	0.100		0.094	0.120
O032	833858.68	822209.29		0.035	0.093	0.076	0.070	0.081	0.162	0.227	0.090	0.138	0.081		0.094	0.117
O033	833874.53	822228.63		0.090	0.098	0.118	0.118	0.127	0.167	0.223	0.138	0.089	0.090		0.121	0.130
O034	833890.38	822247.96		0.142	0.127	0.084	0.070	0.093	0.142	0.196	0.093	0.105	0.045		0.106	0.104
O035	833906.23	822267.29		0.141	0.119	0.138	0.091	0.077	0.104	0.135	0.081	0.124	0.103		0.116	0.107
O036	833578.89	821900.02		0.290	0.140	0.228	0.078	0.219	0.167	0.088	0.127	0.085	0.231		0.167	0.141
O037	833583.56	821924.58		0.264	0.118	0.158	0.130	0.213	0.254	0.196	0.139	0.038	0.054		0.158	0.136
O038	833588.23	821949.14		0.204	0.112	0.070	0.203	0.181	0.224	0.209	0.147	0.088	0.060		0.141	0.143
O039	833592.90	821973.70		0.165	0.130	0.037	0.252	0.218	0.258	0.269	0.176	0.276	0.304		0.164	0.226
O040	833597.57	821998.26		0.160	0.068	0.086	0.246	0.240	0.274	0.321	0.171	0.036	0.020		0.152	0.163
O041	833598.99	822023.72		0.167	0.075	0.124	0.239	0.280	0.323	0.387	0.100	0.026	0.044		0.166	0.170
O042	833590.77	822047.33		0.102	0.084	0.150	0.198	0.228	0.274	0.306	0.017	0.017	0.108		0.143	0.138
O043	833582.55	822070.94		0.083	0.105	0.205	0.191	0.213	0.249	0.221	0.063	0.053	0.120		0.157	0.146
O044	833574.33	822094.55		0.090	0.149	0.250	0.209	0.234	0.253	0.164	0.066	0.059	0.073		0.179	0.146
O045	833682.05	822190.77		0.181	0.028	0.107	0.149	0.188	0.201	0.134	0.192	0.165	0.146		0.133	0.162
O046	833673.60	822214.34		0.158	0.038	0.064	0.134	0.141	0.147	0.098	0.170	0.141	0.152		0.106	0.134
O047	833665.14	822237.88		0.094	0.053	0.045	0.114	0.110	0.103	0.065	0.162	0.147	0.164		0.088	0.120
O048	833656.27	822261.04		0.062	0.034	0.081	0.065	0.059	0.034	0.081	0.095	0.081	0.099		0.067	0.076

Wind Velocity Ratio, Base Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O049	833500.99	821903.86		0.197	0.222	0.141	0.253	0.270	0.297	0.314	0.145	0.290	0.271		0.216	0.245
O050	833492.37	821927.33		0.235	0.262	0.212	0.269	0.340	0.407	0.233	0.174	0.304	0.253		0.257	0.269
O051	833483.75	821950.80		0.144	0.160	0.161	0.209	0.252	0.276	0.146	0.139	0.181	0.210		0.179	0.190
O052	833475.14	821974.27		0.067	0.116	0.077	0.203	0.256	0.241	0.105	0.221	0.180	0.257		0.146	0.191
O053	833466.52	821997.74		0.066	0.095	0.031	0.193	0.219	0.204	0.074	0.236	0.236	0.381		0.128	0.200
O054	833457.93	822021.22		0.227	0.106	0.063	0.149	0.130	0.106	0.067	0.135	0.091	0.328		0.113	0.127
O055	833449.35	822044.69		0.206	0.094	0.033	0.117	0.092	0.093	0.079	0.115	0.109	0.210		0.093	0.106
O056	833440.76	822068.17		0.297	0.139	0.166	0.147	0.210	0.151	0.191	0.437	0.296	0.167		0.207	0.243
O057	833432.17	822091.65		0.246	0.163	0.190	0.199	0.281	0.252	0.215	0.328	0.360	0.331		0.229	0.281
O058	833423.59	822115.13		0.098	0.043	0.080	0.065	0.103	0.059	0.032	0.200	0.177	0.084		0.089	0.114
O059	833415.00	822138.61		0.152	0.075	0.132	0.121	0.176	0.129	0.015	0.169	0.176	0.160		0.127	0.139
O060	833406.41	822162.09		0.099	0.033	0.115	0.064	0.153	0.108	0.034	0.075	0.169	0.163		0.093	0.111
O061	833681.54	821817.30		0.190	0.306	0.306	0.325	0.280	0.190	0.161	0.264	0.191	0.215		0.269	0.238
O062	833662.17	821833.11		0.202	0.289	0.283	0.282	0.156	0.155	0.209	0.261	0.114	0.160		0.240	0.200
O063	833642.63	821848.71		0.214	0.261	0.252	0.244	0.074	0.099	0.127	0.104	0.059	0.228		0.191	0.137
O064	833622.52	821863.55		0.234	0.228	0.169	0.213	0.162	0.117	0.077	0.104	0.108	0.349		0.171	0.151
O065	833601.27	821876.72		0.249	0.206	0.114	0.186	0.206	0.172	0.105	0.036	0.116	0.371		0.155	0.147
O066	833577.88	821885.56		0.247	0.181	0.183	0.152	0.218	0.156	0.082	0.105	0.101	0.367		0.167	0.155
O067	833553.62	821891.61		0.190	0.148	0.092	0.182	0.115	0.042	0.191	0.018	0.071	0.347		0.119	0.118
O068	833528.63	821891.21		0.191	0.139	0.071	0.210	0.149	0.166	0.290	0.032	0.165	0.332		0.140	0.166
O069	833503.70	821889.31		0.179	0.171	0.159	0.180	0.179	0.211	0.301	0.124	0.244	0.268		0.182	0.206
O070	833809.89	821828.55		0.085	0.030	0.103	0.178	0.256	0.275	0.318	0.110	0.064	0.077		0.132	0.158
O071	833790.74	821844.62		0.129	0.021	0.100	0.149	0.173	0.171	0.212	0.076	0.097	0.038		0.112	0.122
O072	833771.59	821860.69		0.162	0.024	0.135	0.107	0.137	0.196	0.194	0.224	0.229	0.060		0.138	0.173
O073	833752.44	821876.76		0.120	0.033	0.121	0.068	0.058	0.076	0.089	0.240	0.193	0.038		0.106	0.129
O074	833921.77	821884.63		0.266	0.154	0.242	0.140	0.301	0.252	0.195	0.132	0.055	0.124		0.195	0.162
O075	833902.62	821900.70		0.041	0.062	0.103	0.163	0.331	0.184	0.047	0.035	0.155	0.189		0.118	0.140
O076	833883.47	821916.77		0.069	0.060	0.058	0.110	0.149	0.074	0.125	0.143	0.154	0.183		0.093	0.128
O077	833864.32	821932.84		0.074	0.019	0.036	0.029	0.154	0.142	0.103	0.118	0.143	0.078		0.070	0.104
O078	833845.17	821948.91		0.097	0.067	0.129	0.036	0.122	0.190	0.180	0.085	0.219	0.110		0.113	0.138
O079	833826.02	821964.98		0.087	0.039	0.122	0.041	0.098	0.182	0.166	0.099	0.143	0.123		0.098	0.122
O080	833977.41	821941.96		0.097	0.092	0.048	0.028	0.036	0.065	0.124	0.271	0.120	0.158		0.084	0.119
O081	833958.94	821956.75		0.036	0.089	0.075	0.027	0.074	0.131	0.167	0.297	0.074	0.178		0.092	0.133
O082	833940.69	821974.35		0.165	0.157	0.122	0.072	0.159	0.249	0.273	0.374	0.111	0.183		0.162	0.197
O083	833922.85	821992.06		0.231	0.153	0.188	0.103	0.261	0.307	0.318	0.350	0.100	0.133		0.200	0.216
O084	833904.56	822007.36		0.175	0.108	0.167	0.098	0.269	0.307	0.316	0.327	0.140	0.095		0.183	0.215
O085	833885.34	822024.21		0.087	0.052	0.141	0.116	0.262	0.292	0.300	0.280	0.165	0.212		0.159	0.218
O086	833989.52	821957.37		0.155	0.176	0.125	0.042	0.101	0.074	0.143	0.321	0.075	0.157		0.131	0.137
O087	833970.62	821972.70		0.146	0.191	0.180	0.061	0.145	0.191	0.230	0.358	0.168	0.188		0.175	0.199
O088	833951.96	821988.58		0.216	0.127	0.195	0.100	0.253	0.291	0.310	0.358	0.161	0.197		0.199	0.233
O089	833932.78	822004.73		0.208	0.041	0.145	0.120	0.226	0.228	0.204	0.119	0.159	0.248		0.145	0.173
O090	833915.11	822020.59		0.169	0.034	0.119	0.114	0.235	0.245	0.220	0.135	0.187	0.259		0.139	0.183
O091	833895.99	822036.28		0.072	0.020	0.069	0.063	0.207	0.242	0.260	0.187	0.213	0.184		0.113	0.181
O092	833853.32	822049.51		0.132	0.119	0.065	0.114	0.201	0.235	0.228	0.076	0.166	0.204		0.125	0.155
O093	833833.90	822065.25		0.026	0.070	0.060	0.063	0.124	0.211	0.222	0.176	0.181	0.134		0.101	0.152
O094	833814.39	822080.88		0.024	0.043	0.043	0.053	0.046	0.188	0.213	0.208	0.213	0.194		0.088	0.156
O095	833795.09	822096.77		0.030	0.081	0.024	0.054	0.012	0.160	0.201	0.161	0.258	0.285		0.084	0.157
O096	833775.85	822112.73		0.026	0.037	0.032	0.046	0.012	0.126	0.174	0.073	0.301	0.352		0.071	0.150
O097	833754.94	822126.43		0.039	0.017	0.024	0.084	0.037	0.148	0.172	0.111	0.289	0.331		0.078	0.160
O098	833732.40	822140.31		0.038	0.028	0.069	0.066	0.047	0.139	0.127	0.082	0.282	0.309		0.084	0.149
O099	833704.92	822150.52		0.088	0.019	0.052	0.042	0.042	0.140	0.046	0.098	0.311	0.320		0.078	0.144
O100	833863.35	822062.10		0.111	0.116	0.022	0.090	0.099	0.153	0.204	0.069	0.265	0.238		0.101	0.149
O101	833844.65	822078.70		0.013	0.031	0.024	0.051	0.025	0.127	0.213	0.081	0.286	0.234		0.070	0.142
O102	833825.21	822094.42		0.013	0.026	0.021	0.047	0.014	0.130	0.198	0.162	0.309	0.289		0.075	0.163
O103	833805.84	822110.23		0.018	0.080	0.011	0.049	0.029	0.096	0.152	0.183	0.332	0.338		0.081	0.168
O104	833785.64	822124.96		0.034	0.050	0.063	0.067	0.041	0.116	0.095	0.189	0.402	0.414		0.100	0.195
O105	833766.05	822140.48		0.077	0.022	0.065	0.040	0.060	0.096	0.042	0.200	0.418	0.418		0.096	0.191
O106	833746.17	822155.62		0.057	0.046	0.053	0.028	0.076	0.072	0.078	0.174	0.386	0.379		0.090	0.177
O107	833723.15	822168.33		0.073	0.046	0.038	0.020	0.066	0.099	0.098	0.148	0.318	0.288		0.080	0.152
O108	833700.02	822176.18		0.039	0.049	0.086	0.021	0.047	0.091	0.131	0.166	0.340	0.266		0.093	0.163
O109	833684.50	822152.29		0.115	0.029	0.038	0.023	0.026	0.105	0.085	0.244	0.407	0.380		0.093	0.191
O110	833664.88	822149.89		0.066	0.056	0.147	0.044	0.055	0.076	0.080	0.283	0.414	0.382		0.129	0.212
O111	833641.28	822141.66		0.072	0.062	0.166	0.064	0.096	0.033	0.069	0.332	0.430	0.423		0.143	0.231
O112	833617.67	822133.44		0.114	0.074	0.194	0.058	0.109	0.080	0.067	0.378	0.437	0.443		0.163	0.249
O113	833594.06	822125.22		0.151	0.095	0.217	0.094	0.131	0.130	0.110	0.408	0.431	0.437		0.190	0.271
O114	833570.45	822116.99		0.202	0.140	0.209	0.182	0.191	0.211	0.194	0.443	0.442	0.439		0.230	0.313
O115	833546.84	822108.77		0.230	0.109	0.070	0.091	0.194	0.120	0.260	0.476	0.443	0.423		0.179	0.291
O116	833523.23	822100.55		0.261	0.093	0.095	0.064	0.210	0.120	0.228	0.511	0.445	0.404		0.185	0.293
O117	833499.62	822092.33		0.284	0.112	0.134	0.104	0.235	0.157	0.201	0.531	0.429	0.380		0.208	0.303
O118	833476.01	822084.10		0.303	0.135	0.163	0.141	0.243	0.174	0.203	0.524	0.404	0.331		0.226	0.302
O119	833452.40	822075.88		0.315	0.148	0.179	0.157	0.238	0.176	0.217	0.474	0.367	0.258		0.229	0.284
O120	833676.62	822177.18		0.069	0.048	0.153	0.044	0.104	0.066	0.166	0.244	0.415	0.340		0.134	0.216
O121	833660.27	822164.97		0.051	0.052	0.142	0.050	0.090	0.033	0.126	0.290	0.455	0.409		0.133	0.229
O122	833636.67	822156.74		0.056	0.052	0.151	0.098	0.087	0.068	0.095	0.324	0.466	0.443		0.147	0.247
O123	833613.06	822148.52		0.093	0.049	0.159	0.108	0.062	0.064	0.034	0.354	0.466	0.451		0.150	0.245
O124	833589.45	822140.30		0.134	0.061	0.160	0.092	0.068	0.065	0.085	0.366	0.453	0.437		0.156	0.247
O125	833565.84	822132.07		0.197	0.105	0.147	0.135	0.141	0.146	0.189	0.374	0.436	0.412		0.187	0.273
O126	833542.23	822123.85		0.242	0.157	0.131	0.186	0.241	0.243	0.269	0.384	0.419	0.391		0.219	0.302
O127	833518.62	822115.63		0.254	0.163	0.144	0.177	0.275	0.259	0.276	0.399	0.402	0.383		0.227	0.306
O128	833495.01	822107.40		0.249	0.162	0.167	0.177	0.289	0.259	0.261	0.405	0.389	0.390		0.232	0.307
O129	833471.40	822099.18		0.267	0.168	0.187	0.186	0.292	0.259	0.255	0.418	0.435	0.380		0.246	0.321
O130	833447.79	822090.96		0.282	0.171	0.195	0.192	0.291	0.255	0.249	0.450	0.440	0.354		0.253	0.326
O131	833818.29	822180.88		0.107	0.087	0.104	0.057	0.106	0.148	0.169	0.117	0.038	0.054		0.097	0.094
O132	833798.99	822196.77		0.054	0.038	0.128	0.091	0.140	0.201	0.211	0.105	0.037	0.029		0.103	0.109
O133	833779.70	822212.67		0.031	0.038	0.137	0.097	0.129	0.205	0.225	0.119	0.091	0.077		0.110	0.130
O134	833760.40	822228.57		0.026	0.057	0.141	0.076	0.097	0.195	0.229	0.074	0.040	0.050		0.099	0.103
O135	833741.11	822244.46		0.015	0.084	0.150	0.055	0.113	0.206	0.235	0.032	0.035	0.035		0.100	0.096
O136	833721.81	822260.36		0.048	0.093	0.134	0.022	0.072	0.180	0.209	0.021	0.032	0.041		0.088	0.079
O137	833702.52	822276.26		0.048	0.032	0.096	0.053	0.072	0.143	0.135	0.049	0.061	0.051		0.072	0.078
O138	833949.25	822153.86		0.109	0.138	0.217	0.166	0.131	0.115	0.099	0.178	0.127	0.122		0.158	0.145
O139	833930.31	822170.04		0.058	0.102	0.254	0.195	0.132	0.078	0.058	0.116	0.068	0.043		0.148	0.114
O140	833911.51	822185.72		0.111	0.066	0.210	0.182	0.136	0.072	0.062	0.164	0.081	0.091		0.139	0.124
O141	833892.39	822202.46		0.117	0.031	0.154	0.153	0.122	0.044	0.069	0.175	0.118	0.156		0.117	0.127
O142	833873.39	822216.84		0.136	0.073	0.127	0.133	0.127	0.137	0.218	0.142	0.087	0.174		0.124	0.138
O143	833855.40	822235.72		0.103	0.037	0.111	0.098	0.131	0.029	0.075	0.096	0.027	0.160		0.084	0.084
O144	833836.08	822251.59		0.107	0.058	0.109	0.080	0.127	0.042	0.075	0.060	0.034	0.121		0.083	0.074

Wind Velocity Ratio, Base Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O145	833816.77	822267.46		0.102	0.069	0.059	0.057	0.126	0.012	0.145	0.101	0.056	0.087		0.074	0.079
O146	833797.45	822283.34		0.089	0.069	0.032	0.026	0.118	0.036	0.130	0.118	0.067	0.081		0.064	0.078
O147	833778.14	822299.21		0.048	0.044	0.020	0.057	0.097	0.090	0.094	0.103	0.061	0.056		0.056	0.073
O148	834090.83	822123.29		0.264	0.261	0.275	0.122	0.125	0.124	0.128	0.174	0.166	0.256		0.204	0.169
O149	834071.61	822139.27		0.326	0.299	0.366	0.172	0.133	0.126	0.106	0.178	0.122	0.135		0.242	0.163
O150	834052.38	822155.25		0.315	0.293	0.365	0.187	0.127	0.130	0.088	0.165	0.081	0.082		0.237	0.147
O151	834033.15	822171.23		0.239	0.246	0.277	0.156	0.078	0.095	0.057	0.122	0.059	0.138		0.183	0.116
O152	834013.92	822187.21		0.168	0.194	0.189	0.102	0.020	0.057	0.057	0.163	0.085	0.167		0.136	0.107
O153	833994.70	822203.18		0.110	0.140	0.154	0.070	0.020	0.091	0.047	0.209	0.119	0.162		0.117	0.116
O154	833975.47	822219.16		0.131	0.160	0.244	0.159	0.126	0.097	0.032	0.129	0.156	0.146		0.163	0.137
O155	833956.24	822235.14		0.108	0.129	0.224	0.142	0.144	0.105	0.028	0.101	0.108	0.129		0.144	0.119
O156	833937.01	822251.12		0.090	0.103	0.215	0.143	0.144	0.104	0.016	0.077	0.047	0.135		0.129	0.100
O157	833917.68	822266.96		0.071	0.050	0.197	0.134	0.124	0.087	0.116	0.030	0.086	0.112		0.116	0.103
O158	833898.34	822282.81		0.024	0.018	0.174	0.119	0.099	0.078	0.032	0.021	0.047	0.039		0.087	0.070
O159	833879.00	822298.65		0.033	0.028	0.159	0.106	0.097	0.079	0.036	0.027	0.049	0.010		0.085	0.066
O160	833859.66	822314.49		0.040	0.017	0.138	0.092	0.095	0.081	0.041	0.030	0.073	0.029		0.079	0.070
O161	833891.02	822356.46		0.086	0.060	0.023	0.014	0.022	0.046	0.038	0.047	0.070	0.014		0.041	0.039
O162	833866.62	822346.88		0.053	0.063	0.021	0.025	0.031	0.015	0.028	0.023	0.040	0.045		0.033	0.029
O163	833841.56	822336.85		0.059	0.035	0.077	0.048	0.058	0.052	0.047	0.048	0.073	0.042		0.058	0.057
O164	833818.06	822328.33		0.052	0.035	0.045	0.058	0.023	0.031	0.052	0.066	0.105	0.024		0.050	0.058
O165	833794.55	822319.81		0.105	0.122	0.048	0.078	0.048	0.066	0.095	0.039	0.124	0.031		0.077	0.071
O166	833771.05	822311.28		0.080	0.081	0.021	0.078	0.048	0.075	0.042	0.074	0.107	0.095		0.061	0.072
O167	833747.55	822302.76		0.053	0.066	0.085	0.019	0.089	0.021	0.075	0.049	0.068	0.103		0.061	0.062
O168	833724.05	822294.24		0.029	0.021	0.106	0.040	0.100	0.039	0.085	0.124	0.023	0.137		0.066	0.077
O169	833700.54	822285.72		0.067	0.057	0.150	0.069	0.122	0.121	0.123	0.146	0.097	0.149		0.107	0.120
O170	833677.04	822277.20		0.096	0.056	0.174	0.093	0.068	0.039	0.087	0.176	0.148	0.167		0.115	0.125
O171	833653.54	822268.68		0.088	0.054	0.157	0.098	0.035	0.047	0.129	0.170	0.145	0.179		0.109	0.126
O172	833630.03	822260.16		0.078	0.061	0.147	0.072	0.030	0.077	0.116	0.201	0.183	0.219		0.109	0.140
O173	833606.53	822251.63		0.105	0.070	0.121	0.046	0.017	0.040	0.057	0.224	0.219	0.256		0.101	0.138
O174	833583.03	822243.11		0.104	0.063	0.127	0.101	0.085	0.070	0.061	0.233	0.240	0.267		0.119	0.162
O175	833559.53	822234.59		0.087	0.045	0.143	0.174	0.162	0.143	0.140	0.233	0.250	0.264		0.145	0.197
O176	833536.02	822226.07		0.063	0.018	0.161	0.243	0.223	0.196	0.192	0.266	0.265	0.263		0.168	0.233
O177	833512.52	822217.55		0.186	0.152	0.196	0.296	0.260	0.223	0.218	0.234	0.202	0.228		0.215	0.230
O178	833489.02	822209.03		0.175	0.106	0.155	0.260	0.234	0.188	0.180	0.225	0.180	0.214		0.182	0.204
O179	833465.51	822200.51		0.152	0.113	0.126	0.242	0.208	0.170	0.157	0.192	0.118	0.139		0.159	0.167
O180	833442.01	822191.98		0.162	0.126	0.103	0.218	0.178	0.152	0.140	0.183	0.110	0.148		0.146	0.152
O181	833418.51	822183.46		0.147	0.125	0.067	0.175	0.126	0.110	0.125	0.156	0.092	0.146		0.118	0.124
O182	833395.73	822175.47		0.157	0.135	0.109	0.157	0.147	0.102	0.105	0.155	0.192	0.207		0.137	0.151
O183	833494.09	821958.10		0.164	0.086	0.219	0.035	0.102	0.080	0.058	0.142	0.066	0.039		0.123	0.092
O184	833517.46	821966.97		0.219	0.108	0.242	0.090	0.155	0.102	0.094	0.087	0.097	0.045		0.150	0.110
O185	833540.83	821975.85		0.228	0.114	0.229	0.113	0.150	0.112	0.117	0.049	0.119	0.075		0.152	0.115
O186	833564.20	821984.73		0.167	0.107	0.170	0.122	0.158	0.092	0.080	0.094	0.150	0.086		0.135	0.120
O187	833555.88	822008.30		0.160	0.045	0.202	0.023	0.144	0.043	0.064	0.155	0.082	0.083		0.114	0.100
O188	833547.55	822031.88		0.109	0.030	0.161	0.047	0.109	0.050	0.082	0.135	0.046	0.068		0.094	0.086
O189	833522.79	822032.20		0.018	0.014	0.068	0.059	0.039	0.057	0.100	0.206	0.145	0.059		0.070	0.106
O190	833499.37	822023.69		0.072	0.017	0.032	0.023	0.062	0.032	0.039	0.222	0.233	0.155		0.066	0.121
O191	833476.02	822014.76		0.176	0.042	0.017	0.019	0.071	0.015	0.053	0.237	0.253	0.233		0.078	0.133
O192	834092.69	822110.48		0.162	0.201	0.190	0.074	0.113	0.118	0.138	0.142	0.112	0.212		0.149	0.134
O193	834076.69	822091.28		0.110	0.151	0.165	0.105	0.134	0.151	0.146	0.018	0.041	0.065		0.123	0.091
O194	834061.01	822091.66		0.280	0.214	0.257	0.165	0.123	0.090	0.042	0.018	0.051	0.084		0.171	0.092
O195	834055.01	822106.10		0.276	0.081	0.112	0.080	0.064	0.086	0.066	0.111	0.105	0.189		0.109	0.101
O196	834071.23	822125.12		0.114	0.157	0.175	0.086	0.140	0.139	0.118	0.141	0.090	0.090		0.136	0.120
O197	834105.89	822119.29		0.100	0.134	0.116	0.027	0.040	0.046	0.073	0.085	0.101	0.129		0.088	0.079
O198	834121.82	822138.55		0.208	0.092	0.074	0.101	0.085	0.100	0.078	0.019	0.082	0.081		0.092	0.074
O199	834137.43	822158.08		0.278	0.159	0.166	0.183	0.178	0.214	0.173	0.136	0.064	0.067		0.171	0.139
O200	834012.42	822196.28		0.100	0.113	0.118	0.044	0.034	0.087	0.069	0.214	0.090	0.149		0.099	0.107
O201	834028.88	822215.10		0.167	0.108	0.186	0.093	0.072	0.088	0.031	0.209	0.101	0.077		0.131	0.113
O202	834045.22	822234.02		0.226	0.142	0.184	0.123	0.082	0.149	0.059	0.192	0.108	0.024		0.150	0.121
O203	833996.82	822210.06		0.130	0.111	0.098	0.092	0.033	0.101	0.031	0.178	0.136	0.129		0.103	0.109
O204	834013.53	822228.65		0.133	0.116	0.044	0.071	0.067	0.080	0.008	0.215	0.037	0.144		0.082	0.086
O205	834030.03	822247.44		0.193	0.094	0.156	0.067	0.113	0.108	0.069	0.214	0.164	0.109		0.131	0.134
O206	833917.51	822281.83		0.131	0.108	0.091	0.081	0.100	0.093	0.108	0.065	0.080	0.029		0.094	0.080
O207	833931.03	822298.32		0.127	0.110	0.035	0.028	0.045	0.064	0.104	0.038	0.128	0.054		0.067	0.067
O208	833945.00	822315.47		0.107	0.087	0.099	0.049	0.042	0.056	0.090	0.053	0.134	0.064		0.082	0.078
O209	833787.58	822327.31		0.146	0.166	0.050	0.053	0.090	0.051	0.082	0.067	0.111	0.085		0.087	0.077
O210	833779.01	822348.53		0.114	0.119	0.048	0.056	0.097	0.047	0.095	0.080	0.027	0.031		0.073	0.058
O211	833771.18	822369.01		0.060	0.028	0.052	0.037	0.066	0.029	0.032	0.043	0.021	0.033		0.042	0.037
O212	833693.07	822293.82		0.080	0.089	0.103	0.090	0.115	0.117	0.146	0.109	0.081	0.085		0.100	0.104
O213	833685.07	822315.42		0.075	0.077	0.073	0.106	0.087	0.045	0.117	0.044	0.029	0.024		0.074	0.062
O214	833677.37	822334.97		0.108	0.105	0.065	0.104	0.097	0.057	0.091	0.050	0.064	0.076		0.083	0.073
O215	833521.31	822229.48		0.112	0.112	0.096	0.171	0.159	0.136	0.131	0.132	0.127	0.143		0.125	0.136
O216	833514.08	822251.08		0.105	0.125	0.043	0.048	0.053	0.059	0.044	0.072	0.067	0.043		0.067	0.056
O217	833506.10	822272.25		0.195	0.194	0.012	0.059	0.058	0.080	0.085	0.078	0.077	0.091		0.084	0.069
O218	833496.89	822298.04		0.157	0.225	0.025	0.012	0.033	0.020	0.055	0.166	0.100	0.049		0.084	0.069
O219	833488.27	822321.50		0.144	0.140	0.046	0.079	0.047	0.062	0.024	0.099	0.063	0.043		0.079	0.061
O220	833483.05	822335.87		0.141	0.096	0.021	0.080	0.052	0.068	0.023	0.079	0.042	0.172		0.063	0.064
O221	833396.79	822183.39		0.126	0.086	0.083	0.087	0.127	0.078	0.059	0.062	0.198	0.206		0.098	0.116
O222	833388.48	822204.90		0.060	0.044	0.038	0.028	0.057	0.031	0.034	0.091	0.113	0.088		0.051	0.067
O223	833380.97	822225.99		0.084	0.061	0.066	0.064	0.031	0.041	0.052	0.091	0.095	0.103		0.066	0.072
O224	833371.73	822252.01		0.093	0.066	0.085	0.130	0.095	0.120	0.045	0.271	0.170	0.047		0.112	0.137
O225	833362.73	822275.33		0.073	0.060	0.061	0.127	0.096	0.118	0.029	0.178	0.150	0.019		0.093	0.109
O226	833356.43	822295.67		0.366	0.315	0.026	0.057	0.040	0.060	0.087	0.322	0.356	0.373		0.161	0.193
O227	834133.62	822168.09		0.329	0.186	0.205	0.185	0.188	0.206	0.163	0.151	0.085	0.070		0.193	0.150
O228	834114.86	822184.62		0.331	0.193	0.250	0.184	0.165	0.180	0.133	0.146	0.124	0.110		0.203	0.157
O229	834095.37	822200.27		0.328	0.198	0.282	0.214	0.192	0.202	0.134	0.118	0.125	0.094		0.218	0.163
O230	834076.20	822216.32		0.312	0.188	0.287	0.216	0.193	0.207	0.118	0.083	0.140	0.065		0.215	0.156
O231	834057.16	822232.52		0.282	0.168	0.267	0.201	0.168	0.202	0.088	0.077	0.164	0.037		0.199	0.148
O232	834037.68	822248.19		0.199	0.093	0.209	0.118	0.094	0.159	0.067	0.215	0.172	0.081		0.155	0.148
O233	834018.66	822264.41		0.080	0.021	0.239	0.123	0.083	0.166	0.038	0.055	0.184	0.037		0.128	0.118
O234	833999.13	822280.02		0.104	0.060	0.198	0.114	0.072	0.146	0.017	0.072	0.095	0.032		0.116	0.092
O235	833979.88	822295.97		0.179	0.125	0.215	0.141	0.095	0.157	0.011	0.046	0.059	0.031		0.137	0.087
O236	833960.60	822311.88		0.154	0.103	0.174	0.121	0.085	0.146	0.034	0.025	0.051	0.019		0.115	0.075
O237	833942.31	822328.92		0.119	0.045	0.125	0.098	0.057	0.122	0.020	0.018	0.078	0.032		0.085	0.066
O238	833922.90	822344.68		0.102	0.047	0.088	0.077	0.051	0.112	0.028	0.039	0.089	0.008		0.073	0.063
O239	833903.43	822360.37		0.074	0.113	0.037	0.051	0.056	0.113	0.029	0.060	0.106	0.005		0.066	0.062
O240	833885.66	822377.51		0.057	0.137	0.041	0.015	0.067	0.113	0.021	0.070	0.119	0.038		0.067	0.066

Wind Velocity Ratio, Base Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O241	833866.22	822391.65		0.078	0.101	0.033	0.042	0.040	0.092	0.036	0.056	0.115	0.046		0.061	0.063
O242	833851.35	822407.57		0.136	0.121	0.087	0.064	0.086	0.072	0.096	0.046	0.103	0.047		0.091	0.076
O243	833827.89	822398.95		0.115	0.094	0.051	0.019	0.099	0.032	0.118	0.067	0.062	0.020		0.067	0.059
O244	833804.30	822390.67		0.125	0.105	0.047	0.045	0.099	0.056	0.125	0.077	0.106	0.034		0.078	0.077
O245	833780.78	822382.18		0.109	0.082	0.025	0.029	0.051	0.032	0.057	0.075	0.076	0.074		0.054	0.056
O246	833757.33	822373.51		0.067	0.036	0.063	0.009	0.066	0.033	0.057	0.061	0.031	0.076		0.047	0.047
O247	833734.04	822364.43		0.049	0.024	0.054	0.020	0.067	0.039	0.079	0.075	0.014	0.097		0.044	0.052
O248	833710.59	822355.78		0.030	0.042	0.082	0.015	0.093	0.081	0.106	0.079	0.042	0.115		0.060	0.072
O249	833687.02	822347.45		0.132	0.119	0.084	0.037	0.104	0.109	0.113	0.104	0.109	0.146		0.095	0.100
O250	833663.42	822339.18		0.249	0.180	0.063	0.109	0.135	0.113	0.043	0.161	0.157	0.183		0.127	0.126
O251	833639.95	822330.58		0.268	0.191	0.056	0.050	0.109	0.051	0.090	0.218	0.199	0.203		0.125	0.135
O252	833616.38	822322.23		0.242	0.177	0.047	0.069	0.090	0.086	0.113	0.261	0.234	0.213		0.129	0.156
O253	833593.28	822312.67		0.220	0.126	0.034	0.038	0.060	0.109	0.127	0.290	0.266	0.245		0.116	0.167
O254	833569.92	822303.77		0.177	0.135	0.080	0.021	0.033	0.124	0.133	0.233	0.212	0.231		0.113	0.147
O255	833546.38	822295.35		0.234	0.184	0.046	0.056	0.016	0.094	0.074	0.040	0.034	0.205		0.086	0.064
O256	833522.92	822286.72		0.239	0.172	0.019	0.089	0.018	0.043	0.036	0.041	0.045	0.209		0.078	0.058
O257	833499.46	822278.09		0.203	0.235	0.029	0.045	0.040	0.111	0.053	0.244	0.205	0.264		0.116	0.138
O258	833475.98	822269.49		0.210	0.141	0.021	0.024	0.016	0.088	0.055	0.254	0.216	0.270		0.096	0.136
O259	833452.58	822260.70		0.247	0.182	0.031	0.053	0.041	0.076	0.036	0.248	0.213	0.282		0.112	0.138
O260	833429.26	822251.69		0.287	0.206	0.051	0.148	0.074	0.016	0.009	0.229	0.197	0.290		0.133	0.140
O261	833405.77	822243.13		0.265	0.181	0.048	0.187	0.068	0.063	0.028	0.114	0.135	0.281		0.122	0.117
O262	833381.89	822234.73		0.200	0.131	0.063	0.172	0.045	0.058	0.050	0.222	0.266	0.302		0.129	0.164
O263	833661.30	822392.32		0.117	0.083	0.018	0.033	0.022	0.030	0.052	0.084	0.052	0.082		0.050	0.050
O264	833639.45	822380.18		0.214	0.176	0.026	0.013	0.049	0.052	0.043	0.127	0.064	0.037		0.079	0.058
O265	833617.91	822367.49		0.249	0.220	0.037	0.084	0.091	0.116	0.033	0.061	0.041	0.040		0.101	0.060
O266	833594.76	822358.04		0.226	0.229	0.068	0.132	0.153	0.172	0.050	0.170	0.078	0.045		0.136	0.110
O267	833571.50	822348.88		0.194	0.086	0.081	0.123	0.108	0.134	0.087	0.078	0.102	0.097		0.105	0.100
O268	833548.06	822340.20		0.114	0.101	0.101	0.145	0.136	0.145	0.075	0.149	0.150	0.057		0.120	0.125
O269	833524.81	822331.01		0.174	0.060	0.105	0.133	0.103	0.113	0.036	0.138	0.170	0.081		0.113	0.118
O270	833501.49	822321.99		0.221	0.090	0.080	0.096	0.065	0.065	0.039	0.126	0.169	0.166		0.103	0.109
O271	833471.89	822335.41		0.079	0.137	0.034	0.091	0.060	0.094	0.009	0.162	0.051	0.243		0.078	0.092
O272	833448.29	822327.15		0.078	0.011	0.027	0.022	0.016	0.046	0.033	0.077	0.142	0.283		0.043	0.084
O273	833425.53	822318.81		0.023	0.059	0.024	0.017	0.011	0.037	0.059	0.204	0.224	0.328		0.060	0.128
O274	833401.62	822309.78		0.192	0.177	0.019	0.021	0.021	0.020	0.027	0.293	0.240	0.329		0.099	0.143
O275	833378.55	822301.33		0.341	0.301	0.014	0.031	0.030	0.026	0.050	0.365	0.323	0.358		0.146	0.180
O276	833677.38	821849.60		0.197	0.109	0.160	0.083	0.247	0.143	0.198	0.325	0.197	0.078		0.168	0.190
O277	833693.33	821868.85		0.192	0.051	0.070	0.065	0.166	0.131	0.150	0.257	0.211	0.188		0.119	0.166
O278	833709.27	821888.11		0.167	0.053	0.074	0.042	0.155	0.133	0.125	0.212	0.218	0.238		0.110	0.158
O279	833725.22	821907.36		0.109	0.051	0.141	0.043	0.165	0.146	0.138	0.220	0.213	0.275		0.124	0.173
O280	833741.17	821926.61		0.094	0.052	0.181	0.076	0.164	0.164	0.163	0.248	0.211	0.327		0.143	0.195
O281	833757.11	821945.87		0.122	0.056	0.149	0.097	0.141	0.122	0.118	0.274	0.219	0.367		0.137	0.192
O282	833773.06	821965.12		0.136	0.064	0.095	0.071	0.080	0.077	0.081	0.293	0.203	0.369		0.112	0.170
O283	833789.01	821984.38		0.141	0.076	0.064	0.074	0.044	0.074	0.073	0.304	0.168	0.345		0.101	0.155
O284	833804.95	822003.63		0.142	0.093	0.097	0.092	0.041	0.037	0.036	0.287	0.121	0.301		0.106	0.135
O285	833820.90	822022.88		0.139	0.110	0.103	0.110	0.055	0.050	0.035	0.237	0.073	0.257		0.106	0.118
O286	833658.41	821865.88		0.220	0.091	0.165	0.108	0.190	0.139	0.203	0.231	0.109	0.264		0.154	0.171
O287	833674.35	821885.13		0.220	0.039	0.116	0.073	0.202	0.151	0.210	0.281	0.138	0.284		0.136	0.182
O288	833690.30	821904.38		0.205	0.055	0.157	0.029	0.192	0.166	0.188	0.278	0.151	0.303		0.141	0.183
O289	833706.25	821923.64		0.145	0.062	0.201	0.037	0.199	0.177	0.176	0.249	0.173	0.323		0.150	0.190
O290	833722.19	821942.89		0.066	0.071	0.196	0.079	0.204	0.192	0.186	0.243	0.193	0.341		0.152	0.202
O291	833738.14	821962.15		0.045	0.082	0.156	0.105	0.180	0.165	0.162	0.252	0.197	0.346		0.141	0.197
O292	833754.09	821981.40		0.051	0.097	0.095	0.087	0.136	0.085	0.084	0.258	0.191	0.357		0.113	0.168
O293	833770.03	822000.65		0.051	0.109	0.059	0.078	0.088	0.044	0.042	0.271	0.169	0.347		0.095	0.147
O294	833785.98	822019.91		0.051	0.116	0.080	0.096	0.063	0.031	0.047	0.277	0.126	0.311		0.099	0.137
O295	833801.93	822039.16		0.049	0.112	0.088	0.105	0.118	0.082	0.060	0.259	0.058	0.239		0.102	0.127
O296	833639.43	821882.15		0.244	0.080	0.138	0.119	0.138	0.123	0.171	0.132	0.105	0.310		0.134	0.146
O297	833655.38	821901.41		0.247	0.030	0.165	0.093	0.180	0.150	0.218	0.186	0.084	0.302		0.140	0.162
O298	833671.33	821920.66		0.238	0.047	0.211	0.047	0.200	0.177	0.231	0.241	0.100	0.306		0.156	0.181
O299	833687.27	821939.92		0.192	0.062	0.218	0.035	0.218	0.195	0.221	0.256	0.082	0.298		0.156	0.180
O300	833703.22	821959.17		0.108	0.078	0.202	0.070	0.228	0.209	0.210	0.244	0.086	0.254		0.152	0.178
O301	833719.17	821978.42		0.047	0.093	0.147	0.104	0.212	0.200	0.195	0.237	0.140	0.203		0.141	0.178
O302	833735.11	821997.68		0.044	0.106	0.077	0.097	0.172	0.156	0.160	0.233	0.166	0.206		0.118	0.163
O303	833751.06	822016.93		0.053	0.112	0.050	0.089	0.114	0.085	0.091	0.228	0.156	0.233		0.097	0.139
O304	833767.01	822036.18		0.053	0.109	0.072	0.102	0.078	0.058	0.053	0.226	0.113	0.248		0.095	0.124
O305	833782.95	822055.44		0.049	0.097	0.070	0.103	0.099	0.119	0.070	0.226	0.041	0.197		0.092	0.114
O306	833620.46	821898.43		0.260	0.066	0.165	0.104	0.182	0.145	0.125	0.060	0.071	0.265		0.132	0.124
O307	833636.40	821917.69		0.263	0.019	0.214	0.108	0.169	0.149	0.193	0.096	0.073	0.267		0.144	0.144
O308	833652.35	821936.94		0.261	0.029	0.227	0.089	0.185	0.173	0.240	0.144	0.127	0.244		0.160	0.169
O309	833668.30	821956.19		0.232	0.050	0.224	0.054	0.211	0.196	0.249	0.190	0.062	0.203		0.157	0.161
O310	833684.24	821975.45		0.130	0.071	0.196	0.064	0.232	0.210	0.233	0.222	0.027	0.103		0.146	0.150
O311	833700.19	821994.70		0.053	0.087	0.101	0.093	0.230	0.211	0.214	0.213	0.066	0.064		0.122	0.145
O312	833716.14	822013.95		0.041	0.096	0.039	0.093	0.208	0.194	0.194	0.203	0.125	0.068		0.106	0.143
O313	833732.08	822033.21		0.047	0.098	0.053	0.089	0.158	0.141	0.160	0.189	0.137	0.102		0.102	0.134
O314	833748.03	822052.46		0.051	0.094	0.076	0.101	0.081	0.074	0.102	0.171	0.101	0.149		0.091	0.111
O315	833763.98	822071.72		0.045	0.088	0.066	0.096	0.054	0.116	0.047	0.155	0.045	0.172		0.078	0.092
O316	833601.30	821914.50		0.266	0.062	0.225	0.104	0.225	0.206	0.189	0.100	0.064	0.148		0.160	0.142
O317	833617.25	821933.75		0.262	0.024	0.221	0.145	0.211	0.188	0.199	0.056	0.085	0.167		0.156	0.143
O318	833633.19	821953.00		0.266	0.030	0.224	0.143	0.198	0.182	0.223	0.063	0.165	0.169		0.165	0.162
O319	833649.14	821972.26		0.255	0.024	0.222	0.109	0.194	0.186	0.241	0.096	0.078	0.149		0.154	0.146
O320	833665.09	821991.51		0.081	0.046	0.115	0.096	0.205	0.191	0.231	0.118	0.066	0.119		0.113	0.132
O321	833681.03	822010.77		0.035	0.062	0.033	0.073	0.222	0.202	0.220	0.151	0.067	0.138		0.090	0.131
O322	833696.98	822030.02		0.031	0.069	0.047	0.060	0.222	0.202	0.204	0.141	0.092	0.142		0.093	0.133
O323	833712.93	822049.27		0.031	0.070	0.067	0.085	0.206	0.183	0.190	0.126	0.108	0.140		0.099	0.133
O324	833728.87	822068.53		0.033	0.075	0.081	0.088	0.172	0.119	0.160	0.114	0.096	0.159		0.094	0.119
O325	833598.23	821949.98		0.219	0.074	0.133	0.207	0.233	0.258	0.266	0.185	0.056	0.088		0.163	0.168
O326	833614.17	821969.23		0.238	0.079	0.181	0.205	0.238	0.228	0.270	0.152	0.192	0.236		0.185	0.206
O327	833630.12	821988.48		0.272	0.060	0.191	0.142	0.193	0.179	0.195	0.049	0.038	0.067		0.148	0.117
O328	833705.99	822080.08		0.045	0.055	0.050	0.039	0.053	0.041	0.050	0.096	0.086	0.151		0.055	0.073
O329	833853.65	821865.50		0.083	0.051	0.086	0.027	0.056	0.118	0.089	0.063	0.326	0.144		0.089	0.131
O330	833840.40	821873.52		0.067	0.048	0.083	0.050	0.086	0.198	0.167	0.089	0.400	0.215		0.109	0.179
O331	833849.95	821885.09		0.100	0.064	0.117	0.046	0.056	0.166	0.151	0.093	0.341	0.231		0.113	0.164
O332	833859.49	821896.66		0.057	0.069	0.142	0.052	0.024	0.094	0.124	0.037	0.214	0.130		0.094	0.109
O333	833829.02	821883.22		0.065	0.024	0.060	0.044	0.106	0.215	0.183	0.052	0.317	0.158		0.092	0.153
O334	833838.81	821894.58		0.083	0.046	0.083	0.075	0.063	0.197	0.185	0.064	0.327	0.189		0.105	0.160
O335	833848.60	821905.94		0.080	0.085	0.172	0.090	0.037	0.108	0.141	0.108	0.354	0.205		0.132	0.169
O336	833818.75	821889.74		0.044	0.005	0.068	0.027	0.040	0.130	0.121	0.135	0.154	0.102		0.067	0.105

Wind Velocity Ratio, Base Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O337	833828.51	821901.13		0.043	0.016	0.038	0.024	0.055	0.146	0.132	0.070	0.165	0.078		0.059	0.095
O338	833932.47	821892.35		0.258	0.165	0.232	0.199	0.284	0.175	0.109	0.055	0.052	0.042		0.185	0.128
O339	833941.87	821904.03		0.213	0.143	0.181	0.082	0.050	0.090	0.076	0.044	0.012	0.049		0.118	0.065
O340	833951.27	821915.72		0.129	0.088	0.086	0.079	0.104	0.104	0.079	0.045	0.011	0.033		0.082	0.060
O341	833919.84	821903.19		0.225	0.133	0.182	0.124	0.170	0.038	0.023	0.023	0.017	0.036		0.126	0.066
O342	833929.72	821914.47		0.189	0.105	0.175	0.122	0.123	0.063	0.074	0.043	0.005	0.035		0.118	0.070
O343	833939.60	821925.76		0.113	0.060	0.101	0.112	0.125	0.088	0.079	0.044	0.008	0.033		0.086	0.065
O344	833900.99	821917.58		0.123	0.093	0.117	0.042	0.078	0.026	0.062	0.063	0.123	0.067		0.088	0.076
O345	833910.39	821929.27		0.131	0.088	0.109	0.067	0.115	0.049	0.080	0.055	0.175	0.106		0.098	0.099
O346	833919.79	821940.96		0.118	0.089	0.104	0.059	0.115	0.042	0.071	0.035	0.184	0.130		0.093	0.097
O347	833929.19	821952.65		0.101	0.079	0.072	0.057	0.083	0.024	0.029	0.042	0.167	0.144		0.075	0.083
O348	833938.59	821964.34		0.108	0.093	0.045	0.065	0.101	0.168	0.162	0.232	0.155	0.142		0.103	0.142
O349	833890.50	821926.82		0.105	0.066	0.089	0.083	0.120	0.116	0.149	0.182	0.212	0.069		0.111	0.141
O350	833900.14	821938.31		0.081	0.033	0.147	0.069	0.119	0.145	0.177	0.183	0.159	0.062		0.116	0.139
O351	833909.78	821949.80		0.074	0.036	0.149	0.040	0.109	0.153	0.182	0.179	0.145	0.028		0.110	0.130
O352	833919.42	821961.29		0.065	0.054	0.116	0.048	0.089	0.158	0.168	0.188	0.109	0.029		0.101	0.119
O353	833929.07	821972.79		0.074	0.091	0.087	0.100	0.071	0.181	0.189	0.270	0.052	0.076		0.110	0.132
O354	834031.20	822022.99		0.145	0.159	0.136	0.062	0.056	0.068	0.137	0.153	0.021	0.026		0.111	0.082
O355	834044.19	822038.46		0.072	0.067	0.085	0.032	0.037	0.107	0.114	0.098	0.010	0.029		0.067	0.061
O356	833968.40	822059.06		0.164	0.068	0.095	0.060	0.063	0.093	0.116	0.102	0.053	0.148		0.088	0.087
O357	833978.02	822070.57		0.178	0.044	0.032	0.013	0.023	0.049	0.127	0.101	0.039	0.136		0.056	0.064
O358	833987.63	822082.09		0.165	0.056	0.033	0.033	0.019	0.039	0.042	0.072	0.038	0.160		0.052	0.053
O359	833997.25	822093.60		0.123	0.067	0.069	0.047	0.046	0.076	0.041	0.076	0.048	0.185		0.066	0.070
O360	834006.87	822105.11		0.037	0.025	0.072	0.049	0.038	0.041	0.058	0.084	0.060	0.158		0.053	0.069
O361	833959.48	822066.78		0.107	0.088	0.100	0.061	0.066	0.093	0.123	0.131	0.052	0.145		0.090	0.094
O362	833969.16	822078.24		0.131	0.089	0.049	0.033	0.036	0.068	0.099	0.118	0.029	0.127		0.067	0.068
O363	833978.84	822089.70		0.113	0.088	0.043	0.045	0.023	0.051	0.033	0.097	0.045	0.144		0.059	0.060
O364	833988.52	822101.16		0.058	0.072	0.075	0.062	0.039	0.059	0.032	0.089	0.065	0.158		0.065	0.072
O365	833998.20	822112.62		0.043	0.031	0.064	0.049	0.033	0.038	0.053	0.131	0.074	0.139		0.057	0.076
O366	833947.28	822077.33		0.082	0.115	0.115	0.094	0.083	0.096	0.102	0.173	0.054	0.112		0.104	0.103
O367	833957.20	822088.58		0.088	0.126	0.095	0.093	0.072	0.094	0.073	0.158	0.071	0.103		0.099	0.097
O368	833967.11	822099.84		0.068	0.118	0.092	0.097	0.058	0.076	0.029	0.156	0.082	0.111		0.092	0.091
O369	833977.03	822111.09		0.050	0.094	0.097	0.096	0.044	0.048	0.023	0.159	0.080	0.116		0.085	0.088
O370	833986.95	822122.35		0.068	0.034	0.047	0.037	0.016	0.015	0.047	0.171	0.082	0.098		0.054	0.073
O371	833898.29	822137.37		0.044	0.045	0.068	0.054	0.031	0.028	0.060	0.042	0.037	0.058		0.050	0.046
O372	833908.77	822148.17		0.034	0.025	0.047	0.031	0.022	0.020	0.050	0.021	0.030	0.029		0.033	0.031
O373	833870.30	822151.60		0.035	0.033	0.067	0.049	0.057	0.049	0.077	0.101	0.025	0.046		0.055	0.059
O374	833880.63	822162.47		0.025	0.022	0.046	0.037	0.028	0.039	0.082	0.118	0.025	0.016		0.043	0.052
O375	833856.97	822161.59		0.021	0.015	0.046	0.058	0.060	0.082	0.060	0.189	0.087	0.068		0.060	0.089
O376	833867.44	822172.33		0.022	0.018	0.055	0.054	0.011	0.040	0.092	0.069	0.054	0.040		0.045	0.054
O377	833611.59	822332.37		0.117	0.092	0.049	0.089	0.097	0.044	0.023	0.107	0.075	0.045		0.076	0.070
O378	833635.20	822340.59		0.225	0.157	0.060	0.107	0.134	0.063	0.030	0.133	0.124	0.117		0.112	0.101
O379	833658.54	822349.55		0.201	0.142	0.079	0.117	0.144	0.134	0.075	0.085	0.101	0.128		0.115	0.105
O380	833675.53	822355.49		0.111	0.082	0.046	0.071	0.075	0.071	0.101	0.063	0.055	0.103		0.070	0.070
O381	833668.22	822374.10		0.080	0.049	0.040	0.015	0.061	0.024	0.073	0.024	0.045	0.055		0.043	0.041
O382	833645.34	822364.03		0.194	0.150	0.056	0.079	0.111	0.126	0.030	0.087	0.092	0.047		0.098	0.080
O383	833622.17	822354.63		0.193	0.160	0.049	0.105	0.129	0.121	0.026	0.076	0.076	0.031		0.101	0.076
O384	833605.61	822348.74		0.117	0.112	0.047	0.094	0.112	0.102	0.023	0.105	0.052	0.025		0.082	0.071
D001	833820.29	822111.30		0.047	0.083	0.016	0.048	0.043	0.069	0.065	0.249	0.213	0.235		0.076	0.135
D002	833812.49	822117.56		0.024	0.079	0.008	0.050	0.051	0.058	0.068	0.223	0.231	0.267		0.071	0.136
D003	833804.69	822123.81		0.017	0.072	0.026	0.055	0.052	0.035	0.045	0.217	0.210	0.226		0.070	0.125
D004	833826.88	822118.83		0.043	0.077	0.009	0.037	0.056	0.082	0.066	0.207	0.138	0.212		0.064	0.110
D005	833819.07	822125.08		0.034	0.076	0.010	0.046	0.072	0.079	0.064	0.252	0.080	0.105		0.064	0.098
D006	833811.27	822131.34		0.024	0.067	0.025	0.052	0.081	0.057	0.041	0.252	0.055	0.044		0.063	0.086
D007	833825.66	822132.61		0.036	0.075	0.021	0.034	0.086	0.104	0.074	0.259	0.042	0.055		0.066	0.092
D008	833817.85	822138.87		0.029	0.064	0.031	0.040	0.102	0.098	0.056	0.256	0.042	0.054		0.067	0.092
D009	833832.24	822140.14		0.048	0.079	0.049	0.017	0.093	0.106	0.042	0.251	0.042	0.080		0.071	0.091
D010	833824.43	822146.39		0.036	0.073	0.044	0.020	0.113	0.125	0.042	0.244	0.039	0.090		0.070	0.094
D011	833838.82	822147.67		0.080	0.080	0.064	0.011	0.092	0.101	0.081	0.229	0.054	0.088		0.078	0.095
D012	833831.02	822153.92		0.073	0.092	0.063	0.009	0.114	0.136	0.071	0.219	0.032	0.121		0.079	0.096
D013	833845.40	822155.20		0.106	0.052	0.066	0.022	0.086	0.090	0.106	0.191	0.081	0.044		0.077	0.092
D014	833837.60	822161.45		0.112	0.092	0.080	0.020	0.095	0.122	0.136	0.176	0.043	0.111		0.087	0.097
D015	833899.34	822107.40		0.062	0.089	0.094	0.098	0.049	0.036	0.070	0.030	0.060	0.045		0.075	0.059
D016	833891.53	822113.66		0.029	0.035	0.036	0.045	0.042	0.010	0.032	0.025	0.054	0.067		0.036	0.039
D017	833883.73	822119.91		0.047	0.050	0.041	0.067	0.046	0.014	0.042	0.024	0.058	0.078		0.046	0.046
D018	833875.93	822126.16		0.053	0.053	0.044	0.063	0.045	0.018	0.052	0.026	0.060	0.079		0.048	0.048
D019	833868.12	822132.42		0.066	0.048	0.056	0.051	0.049	0.027	0.076	0.030	0.053	0.075		0.051	0.051
D020	833614.22	822011.42		0.206	0.090	0.193	0.220	0.291	0.286	0.329	0.171	0.046	0.028		0.190	0.181
D021	833625.42	822023.08		0.169	0.094	0.226	0.169	0.225	0.146	0.107	0.171	0.048	0.040		0.163	0.134
D022	833610.74	822026.16		0.187	0.088	0.200	0.216	0.288	0.295	0.326	0.123	0.034	0.046		0.184	0.172
D023	833634.39	822032.59		0.160	0.088	0.238	0.106	0.117	0.051	0.093	0.180	0.050	0.047		0.141	0.109
D024	833643.45	822044.01		0.168	0.083	0.233	0.072	0.102	0.035	0.074	0.185	0.054	0.031		0.132	0.100
D025	833653.10	822055.85		0.168	0.078	0.223	0.051	0.082	0.033	0.057	0.184	0.058	0.033		0.124	0.093
D026	833638.45	822059.59		0.184	0.088	0.233	0.108	0.158	0.075	0.064	0.129	0.038	0.053		0.140	0.101
D027	833662.47	822068.39		0.157	0.074	0.210	0.028	0.059	0.045	0.064	0.169	0.058	0.084		0.113	0.091
D028	833647.41	822072.72		0.165	0.081	0.219	0.071	0.132	0.054	0.070	0.111	0.031	0.080		0.123	0.089
D029	833632.58	822075.81		0.163	0.092	0.234	0.116	0.186	0.112	0.117	0.069	0.018	0.075		0.141	0.102
D030	833672.90	822082.91		0.143	0.064	0.193	0.025	0.038	0.057	0.068	0.144	0.052	0.130		0.102	0.087
D031	833658.24	822085.88		0.140	0.070	0.197	0.024	0.097	0.029	0.036	0.095	0.037	0.068		0.100	0.069
D032	833643.46	822088.68		0.135	0.081	0.213	0.062	0.148	0.070	0.093	0.051	0.056	0.063		0.118	0.087
D033	833628.53	822090.95		0.129	0.092	0.232	0.104	0.184	0.119	0.135	0.046	0.077	0.097		0.140	0.113
D034	833818.77	822061.95		0.028	0.077	0.067	0.079	0.130	0.196	0.174	0.223	0.102	0.112		0.100	0.138
D035	833809.59	822067.11		0.025	0.068	0.059	0.077	0.100	0.194	0.172	0.227	0.087	0.083		0.093	0.129
D036	833799.96	822072.88		0.031	0.073	0.043	0.077	0.067	0.183	0.165	0.215	0.082	0.112		0.085	0.121
D037	833770.99	822080.33		0.040	0.087	0.049	0.088	0.062	0.150	0.082	0.150	0.025	0.138		0.075	0.090
D038	833765.27	822090.10		0.035	0.074	0.038	0.079	0.053	0.146	0.086	0.108	0.047	0.120		0.066	0.082
D039	833751.16	822091.77		0.034	0.049	0.044	0.080	0.086	0.107	0.040	0.099	0.037	0.143		0.060	0.075
D040	833736.50	822092.92		0.039	0.045	0.058	0.080	0.129	0.059	0.066	0.098	0.036	0.135		0.065	0.078
D041	833721.74	822093.94		0.059	0.043	0.061	0.075	0.074	0.091	0.114	0.107	0.040	0.120		0.068	0.082
D042	833705.95	822094.71		0.120	0.041	0.052	0.067	0.068	0.043	0.058	0.106	0.038	0.106		0.063	0.067
D043	833688.13	822096.51		0.136	0.052	0.162	0.057	0.045	0.049	0.056	0.116	0.057	0.100		0.094	0.080
D044	833673.32	822098.89		0.119	0.056	0.173	0.041	0.044	0.047	0.042	0.116	0.111	0.095		0.097	0.088
D045	833658.51	822101.28		0.114	0.066	0.183	0.022	0.096	0.028	0.031	0.107	0.152	0.112		0.103	0.097
D046	833643.70	822103.66		0.108	0.076	0.203	0.032	0.138	0.058	0.085	0.118	0.191	0.161		0.123	0.128
D047	833628.89	822106.04		0.105	0.086	0.219	0.067	0.162	0.104	0.126	0.153	0.223	0.213		0.145	0.163
D048	833614.39	822102.19		0.110	0.099	0.237	0.115	0.190	0.150	0.134	0.137	0.178	0.196		0.160	0.164

Wind Velocity Ratio, Base Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
D049	833599.89	822098.34		0.114	0.111	0.252	0.158	0.207	0.199	0.128	0.119	0.132	0.162		0.171	0.161
D050	833585.40	822094.49		0.100	0.130	0.253	0.191	0.223	0.240	0.122	0.080	0.076	0.104		0.173	0.146
D051	833776.49	822095.36		0.043	0.083	0.022	0.070	0.059	0.162	0.156	0.107	0.117	0.082		0.073	0.100
D052	833761.81	822098.45		0.043	0.018	0.012	0.066	0.073	0.148	0.116	0.089	0.105	0.084		0.056	0.089
D053	833747.13	822101.53		0.057	0.020	0.014	0.067	0.092	0.115	0.081	0.106	0.113	0.079		0.058	0.088
D054	833732.45	822104.61		0.084	0.023	0.028	0.068	0.069	0.082	0.071	0.106	0.131	0.047		0.061	0.083
D055	833717.77	822107.70		0.106	0.020	0.032	0.066	0.036	0.085	0.093	0.070	0.156	0.112		0.062	0.088
D056	833703.09	822110.78		0.097	0.017	0.098	0.063	0.052	0.076	0.089	0.046	0.192	0.195		0.079	0.106
D057	833688.41	822113.86		0.087	0.042	0.117	0.056	0.039	0.071	0.076	0.132	0.232	0.261		0.094	0.133
D058	833673.73	822116.95		0.086	0.043	0.123	0.042	0.038	0.054	0.065	0.189	0.259	0.286		0.098	0.147
D059	833659.05	822120.03		0.090	0.061	0.164	0.020	0.084	0.029	0.049	0.197	0.279	0.279		0.112	0.153
D060	833644.37	822123.11		0.087	0.070	0.185	0.019	0.115	0.037	0.065	0.256	0.335	0.334		0.132	0.188
D061	833663.64	822132.67		0.058	0.059	0.155	0.016	0.057	0.029	0.066	0.195	0.279	0.265		0.105	0.149
D062	833825.69	822190.69		--	--	--	--	--	--	--	--	--	--		--	--
D063	833832.10	822198.36		--	--	--	--	--	--	--	--	--	--		--	--
D064	833838.51	822206.04		0.067	0.021	0.095	0.068	0.098	0.063	0.144	0.085	0.032	0.025		0.072	0.073
D065	833844.92	822213.71		--	--	--	--	--	--	--	--	--	--		--	--
D066	833851.33	822221.39		--	--	--	--	--	--	--	--	--	--		--	--
D067	833817.23	822197.22		--	--	--	--	--	--	--	--	--	--		--	--
D068	833823.77	822204.78		--	--	--	--	--	--	--	--	--	--		--	--
D069	833830.31	822212.35		0.052	0.020	0.100	0.086	0.087	0.062	0.160	0.049	0.030	0.009		0.072	0.068
D070	833836.85	822219.91		--	--	--	--	--	--	--	--	--	--		--	--
D071	833843.39	822227.48		--	--	--	--	--	--	--	--	--	--		--	--
D072	833835.66	822233.82		--	--	--	--	--	--	--	--	--	--		--	--
D073	833827.93	822240.17		--	--	--	--	--	--	--	--	--	--		--	--
D074	833820.21	822246.51		--	--	--	--	--	--	--	--	--	--		--	--
D075	833812.48	822252.86		--	--	--	--	--	--	--	--	--	--		--	--
D076	833805.65	822257.88		--	--	--	--	--	--	--	--	--	--		--	--
D077	833772.09	822234.97		--	--	--	--	--	--	--	--	--	--		--	--
D078	833778.67	822242.50		--	--	--	--	--	--	--	--	--	--		--	--
D079	833785.26	822250.02		0.013	0.028	0.035	0.045	0.065	0.046	0.158	0.022	0.087	0.089		0.046	0.067
D080	833791.84	822257.55		--	--	--	--	--	--	--	--	--	--		--	--
D081	833798.42	822265.08		--	--	--	--	--	--	--	--	--	--		--	--

Wind Velocity Ratio, Proposed Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
P001	833906.48	822110.14		0.074	0.114	0.114	0.162	0.042	0.149	0.114	0.158	0.047	0.126		0.112	0.111
P002	833900.24	822102.33		0.132	0.120	0.089	0.147	0.038	0.195	0.169	0.216	0.058	0.142		0.120	0.131
P003	833894.00	822094.52		0.111	0.137	0.077	0.142	0.036	0.154	0.122	0.205	0.041	0.187		0.110	0.119
P004	833890.92	822084.84		0.140	0.171	0.086	0.149	0.054	0.136	0.115	0.184	0.062	0.270		0.121	0.128
P005	833884.53	822077.14		0.148	0.179	0.083	0.150	0.061	0.150	0.132	0.156	0.050	0.276		0.121	0.125
P006	833874.36	822071.19		0.139	0.176	0.078	0.155	0.077	0.176	0.148	0.106	0.112	0.278		0.124	0.135
P007	833864.49	822068.98		0.076	0.089	0.044	0.084	0.117	0.161	0.144	0.042	0.322	0.274		0.100	0.157
P008	833854.52	822072.47		0.015	0.048	0.013	0.037	0.137	0.140	0.134	0.029	0.330	0.211		0.073	0.140
P009	833846.90	822078.91		0.027	0.054	0.011	0.039	0.126	0.149	0.144	0.064	0.333	0.230		0.078	0.150
P010	833839.86	822084.83		0.050	0.052	0.019	0.032	0.122	0.166	0.161	0.088	0.333	0.245		0.084	0.159
P011	833831.48	822091.12		0.060	0.054	0.035	0.017	0.128	0.180	0.176	0.126	0.333	0.261		0.092	0.170
P012	833823.50	822098.43		0.031	0.050	0.047	0.008	0.128	0.182	0.180	0.159	0.352	0.295		0.095	0.184
P013	833819.20	822105.01		0.114	0.066	0.037	0.011	0.122	0.179	0.179	0.176	0.345	0.306		0.103	0.185
P014	833813.78	822113.32		0.188	0.153	0.116	0.048	0.143	0.214	0.221	0.216	0.321	0.325		0.156	0.211
P015	833806.08	822119.70		0.141	0.147	0.072	0.039	0.118	0.151	0.166	0.205	0.272	0.287		0.125	0.175
P016	833799.61	822125.07		0.087	0.122	0.050	0.033	0.096	0.102	0.135	0.153	0.279	0.282		0.100	0.154
P017	833806.02	822132.74		0.093	0.132	0.036	0.016	0.123	0.134	0.136	0.248	0.026	0.053		0.086	0.099
P018	833812.47	822140.39		0.084	0.151	0.029	0.039	0.170	0.212	0.192	0.326	0.035	0.066		0.108	0.136
P019	833818.91	822148.04		0.092	0.158	0.046	0.037	0.206	0.263	0.237	0.388	0.056	0.041		0.129	0.164
P020	833825.35	822155.68		0.103	0.146	0.099	0.023	0.220	0.279	0.256	0.385	0.096	0.035		0.146	0.180
P021	833831.80	822163.33		0.084	0.123	0.101	0.060	0.211	0.272	0.227	0.336	0.044	0.052		0.136	0.162
P022	833836.66	822168.33		0.094	0.117	0.077	0.071	0.212	0.276	0.235	0.315	0.035	0.041		0.130	0.156
P023	833844.35	822161.93		0.024	0.051	0.026	0.043	0.129	0.148	0.084	0.221	0.049	0.067		0.068	0.099
P024	833852.03	822155.53		0.075	0.079	0.059	0.030	0.035	0.111	0.168	0.225	0.087	0.161		0.082	0.115
P025	833859.71	822149.12		0.073	0.054	0.056	0.033	0.062	0.190	0.214	0.153	0.069	0.061		0.080	0.105
P026	833867.39	822142.72		0.079	0.064	0.054	0.035	0.090	0.237	0.257	0.094	0.090	0.083		0.086	0.113
P027	833875.07	822136.32		0.067	0.068	0.026	0.048	0.078	0.223	0.227	0.054	0.103	0.131		0.074	0.106
P028	833882.75	822129.92		0.047	0.059	0.034	0.058	0.084	0.240	0.237	0.096	0.061	0.090		0.077	0.107
P029	833890.44	822123.51		0.043	0.061	0.056	0.061	0.096	0.243	0.253	0.166	0.066	0.063		0.091	0.123
P030	833898.12	822117.11		0.079	0.045	0.038	0.040	0.093	0.182	0.206	0.194	0.035	0.046		0.077	0.104
P031	833851.44	822040.71		0.150	0.175	0.123	0.141	0.236	0.236	0.204	0.085	0.224	0.297		0.161	0.187
P032	833846.06	822032.53		0.152	0.175	0.106	0.140	0.172	0.205	0.171	0.053	0.199	0.313		0.143	0.163
P033	833840.32	822041.06		0.130	0.144	0.103	0.118	0.208	0.220	0.190	0.071	0.221	0.279		0.140	0.171
P034	833832.12	822046.78		0.086	0.075	0.082	0.083	0.208	0.208	0.186	0.142	0.227	0.239		0.121	0.173
P035	833823.92	822052.51		0.053	0.045	0.068	0.053	0.210	0.201	0.187	0.191	0.224	0.194		0.109	0.172
P036	833815.73	822058.23		0.095	0.069	0.057	0.033	0.198	0.192	0.182	0.218	0.212	0.151		0.110	0.164
P037	833806.62	822062.36		0.151	0.094	0.060	0.026	0.180	0.185	0.178	0.232	0.192	0.137		0.116	0.157
P038	833797.51	822066.50		0.077	0.076	0.082	0.023	0.148	0.174	0.170	0.221	0.179	0.117		0.106	0.148
P039	833788.41	822070.63		0.056	0.028	0.073	0.026	0.109	0.180	0.180	0.171	0.190	0.125		0.090	0.139
P040	833779.30	822074.76		0.045	0.016	0.073	0.031	0.022	0.103	0.126	0.181	0.156	0.098		0.072	0.110
P041	833770.19	822078.90		0.031	0.110	0.079	0.038	0.034	0.083	0.112	0.182	0.120	0.119		0.083	0.104
P042	833761.09	822083.03		0.037	0.106	0.080	0.043	0.082	0.073	0.106	0.167	0.098	0.105		0.084	0.099
P043	833750.74	822085.73		0.040	0.079	0.082	0.042	0.134	0.068	0.100	0.149	0.078	0.103		0.081	0.095
P044	833740.78	822086.56		0.042	0.055	0.079	0.036	0.170	0.077	0.105	0.143	0.060	0.096		0.078	0.094
P045	833730.81	822087.38		0.041	0.037	0.072	0.035	0.188	0.121	0.148	0.150	0.048	0.090		0.079	0.102
P046	833720.85	822088.21		0.046	0.039	0.058	0.031	0.160	0.143	0.174	0.163	0.037	0.070		0.076	0.101
P047	833710.88	822089.03		0.067	0.053	0.039	0.021	0.083	0.089	0.113	0.182	0.028	0.054		0.062	0.078
P048	833700.91	822089.86		0.126	0.067	0.056	0.026	0.090	0.068	0.081	0.198	0.020	0.074		0.073	0.079
P049	833690.95	822090.68		0.187	0.124	0.134	0.058	0.189	0.170	0.205	0.215	0.015	0.093		0.133	0.127
P050	833684.22	822083.21		0.180	0.132	0.143	0.070	0.230	0.215	0.252	0.225	0.017	0.051		0.147	0.141
P051	833677.77	822075.56		0.165	0.136	0.150	0.082	0.261	0.250	0.285	0.189	0.030	0.050		0.154	0.150
P052	833671.33	822067.91		0.152	0.137	0.160	0.095	0.286	0.279	0.309	0.183	0.039	0.070		0.163	0.163
P053	833664.89	822060.26		0.133	0.139	0.169	0.103	0.305	0.302	0.327	0.184	0.047	0.087		0.170	0.175
P054	833658.45	822052.62		0.107	0.138	0.179	0.117	0.310	0.311	0.330	0.178	0.053	0.098		0.173	0.180
P055	833652.00	822044.97		0.077	0.144	0.206	0.146	0.313	0.316	0.332	0.188	0.060	0.102		0.184	0.191
P056	833645.56	822037.32		0.096	0.141	0.226	0.187	0.292	0.292	0.312	0.222	0.076	0.095		0.197	0.200
P057	833639.12	822029.67		0.120	0.108	0.196	0.169	0.213	0.207	0.220	0.231	0.083	0.069		0.169	0.169
P058	833632.67	822022.03		0.077	0.083	0.167	0.156	0.153	0.138	0.143	0.186	0.075	0.044		0.135	0.132
P059	833626.22	822014.39		0.063	0.078	0.145	0.162	0.132	0.113	0.091	0.144	0.065	0.030		0.118	0.109
P060	833619.77	822006.74		0.136	0.080	0.139	0.175	0.127	0.116	0.073	0.121	0.052	0.026		0.121	0.101
P061	833611.41	822001.06		0.141	0.078	0.129	0.191	0.119	0.126	0.089	0.088	0.027	0.032		0.117	0.094
P062	833602.43	822002.93		0.091	0.080	0.095	0.208	0.114	0.144	0.121	0.095	0.010	0.022		0.108	0.094
P063	833604.44	822013.68		0.088	0.082	0.103	0.189	0.114	0.142	0.110	0.101	0.025	0.025		0.108	0.095
P064	833598.77	822022.34		0.097	0.117	0.094	0.227	0.192	0.227	0.214	0.144	0.063	0.057		0.141	0.144
P065	833595.43	822031.77		0.094	0.148	0.128	0.272	0.256	0.287	0.280	0.141	0.089	0.085		0.175	0.180
P066	833592.10	822041.20		0.086	0.150	0.164	0.267	0.264	0.283	0.282	0.127	0.097	0.100		0.183	0.185
P067	833588.77	822050.63		0.086	0.153	0.191	0.267	0.275	0.285	0.285	0.116	0.105	0.117		0.191	0.190
P068	833585.44	822060.05		0.093	0.153	0.212	0.261	0.277	0.283	0.282	0.106	0.107	0.133		0.196	0.191
P069	833582.11	822069.48		0.093	0.147	0.223	0.242	0.260	0.271	0.269	0.086	0.097	0.146		0.190	0.182
P070	833578.78	822078.91		0.071	0.143	0.238	0.226	0.245	0.257	0.263	0.082	0.084	0.161		0.185	0.176
P071	833575.53	822088.37		0.031	0.143	0.248	0.210	0.223	0.236	0.263	0.076	0.076	0.155		0.178	0.167
P072	833576.05	822098.37		0.093	0.098	0.180	0.120	0.120	0.126	0.179	0.139	0.130	0.162		0.136	0.143
P073	833581.96	822106.63		0.122	0.046	0.053	0.060	0.119	0.111	0.071	0.295	0.316	0.320		0.110	0.189
P074	833591.37	822110.01		0.120	0.047	0.033	0.087	0.156	0.153	0.078	0.283	0.334	0.333		0.114	0.202
P075	833600.78	822113.40		0.124	0.057	0.038	0.104	0.172	0.175	0.059	0.291	0.357	0.352		0.124	0.214
P076	833610.19	822116.78		0.132	0.059	0.040	0.106	0.168	0.177	0.062	0.284	0.368	0.360		0.126	0.216
P077	833619.60	822120.16		0.140	0.057	0.037	0.097	0.156	0.171	0.096	0.278	0.375	0.364		0.125	0.217
P078	833629.01	822123.54		0.145	0.052	0.034	0.079	0.141	0.160	0.146	0.271	0.377	0.366		0.122	0.217
P079	833638.42	822126.92		0.145	0.051	0.029	0.058	0.131	0.152	0.182	0.282	0.397	0.391		0.120	0.225
P080	833647.06	822133.14		0.140	0.051	0.047	0.037	0.123	0.142	0.196	0.294	0.415	0.411		0.124	0.232
P081	833656.06	822137.54		0.131	0.054	0.071	0.043	0.119	0.131	0.191	0.285	0.417	0.411		0.129	0.232
P082	833665.90	822139.90		0.120	0.058	0.081	0.057	0.120	0.119	0.178	0.264	0.408	0.400		0.129	0.226
P083	833673.66	822146.21		0.103	0.059	0.100	0.075	0.112	0.097	0.152	0.269	0.416	0.402		0.133	0.227
P084	833683.40	822148.45		0.084	0.063	0.100	0.083	0.101	0.087	0.131	0.250	0.405	0.387		0.128	0.216
P085	833693.40	822148.18		0.083	0.069	0.100	0.089	0.092	0.096	0.125	0.227	0.390	0.372		0.126	0.208
P086	833703.38	822147.62		0.078	0.075	0.098	0.095	0.084	0.108	0.124	0.208	0.378	0.363		0.125	0.202
P087	833712.77	822144.13		0.083	0.081	0.096	0.097	0.088	0.121	0.130	0.178	0.363	0.359		0.124	0.196
P088	833722.15	822140.28		0.091	0.081	0.094	0.098	0.104	0.133	0.138	0.137	0.347	0.357		0.122	0.189
P089	833730.70	822136.10		0.099	0.068	0.092	0.098	0.114	0.141	0.145	0.095	0.327	0.354		0.117	0.179
P090	833739.69	822131.73		0.100	0.050	0.088	0.096	0.114	0.148	0.148	0.069	0.307	0.352		0.110	0.171
P091	833748.73	822127.25		0.085	0.034	0.083	0.092	0.098	0.153	0.155	0.070	0.287	0.348		0.102	0.165
P092	833757.74	822122.93		0.060	0.041	0.080	0.086	0.077	0.158	0.166	0.058	0.277	0.348		0.097	0.160
P093	833766.11	822118.19		0.041	0.063	0.079	0.078	0.070	0.158	0.171	0.040	0.271	0.345		0.095	0.154
P094	833773.72	822111.90		0.035	0.094	0.082	0.068	0.072	0.155	0.173	0.034	0.247	0.329		0.095	0.146
P095	833780.92	822105.74		0.044	0.117	0.103	0.056	0.090	0.158	0.174	0.037	0.227	0.308		0.104	0.143
P096	833783.82	822099.70		0.043	0.115	0.126	0.046	0.093	0.164	0.176	0.051	0.198	0.263		0.107	0.138

Wind Velocity Ratio, Proposed Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
P097	833790.30	822092.06		0.057	0.054	0.045	0.022	0.128	0.181	0.189	0.048	0.178	0.208		0.077	0.123
P098	833798.07	822085.76		0.143	0.105	0.051	0.006	0.140	0.160	0.161	0.093	0.135	0.183		0.090	0.114
P099	833805.83	822079.45		0.188	0.130	0.085	0.014	0.157	0.163	0.163	0.220	0.150	0.112		0.121	0.139
P100	833813.59	822073.15		0.139	0.096	0.079	0.014	0.188	0.181	0.176	0.217	0.196	0.084		0.118	0.151
P101	833821.67	822067.40		0.060	0.069	0.076	0.019	0.207	0.187	0.179	0.202	0.227	0.095		0.110	0.159
P102	833828.02	822058.82		0.040	0.046	0.076	0.041	0.220	0.194	0.182	0.177	0.234	0.152		0.108	0.166
P103	833835.80	822052.54		0.077	0.057	0.089	0.073	0.230	0.204	0.187	0.125	0.238	0.214		0.119	0.172
P104	833843.58	822046.26		0.125	0.131	0.104	0.113	0.232	0.218	0.193	0.074	0.234	0.262		0.141	0.175
P105	833859.73	822218.10		0.140	0.098	0.053	0.081	0.155	0.167	0.151	0.275	0.086	0.085		0.112	0.136
P106	833853.32	822210.43		0.123	0.104	0.067	0.078	0.168	0.181	0.147	0.287	0.116	0.053		0.120	0.145
P107	833846.97	822202.70		0.083	0.106	0.086	0.097	0.177	0.193	0.184	0.288	0.137	0.047		0.129	0.160
P108	833840.62	822194.97		0.035	0.104	0.090	0.101	0.182	0.209	0.215	0.283	0.142	0.062		0.129	0.168
P109	833834.27	822187.25		0.071	0.100	0.093	0.102	0.200	0.250	0.256	0.280	0.124	0.060		0.137	0.174
P110	833827.92	822179.52		0.093	0.101	0.108	0.094	0.268	0.337	0.318	0.307	0.093	0.072		0.155	0.196
P111	833820.19	822185.86		0.107	0.063	0.081	0.088	0.109	0.045	0.060	0.032	0.101	0.073		0.078	0.073
P112	833812.46	822192.20		0.101	0.050	0.041	0.070	0.131	0.130	0.091	0.026	0.095	0.070		0.070	0.079
P113	833804.73	822198.54		0.076	0.057	0.066	0.072	0.126	0.022	0.024	0.033	0.075	0.061		0.064	0.059
P114	833796.99	822204.88		0.044	0.056	0.099	0.103	0.069	0.018	0.013	0.069	0.046	0.045		0.070	0.057
P115	833789.26	822211.22		0.017	0.052	0.121	0.129	0.057	0.041	0.035	0.129	0.058	0.035		0.084	0.079
P116	833781.53	822217.57		0.014	0.041	0.135	0.149	0.079	0.090	0.040	0.072	0.039	0.067		0.087	0.079
P117	833773.79	822223.91		0.079	0.025	0.145	0.161	0.099	0.056	0.034	0.109	0.103	0.128		0.103	0.105
P118	833766.06	822230.25		0.098	0.062	0.149	0.158	0.053	0.036	0.041	0.135	0.148	0.171		0.111	0.117
P119	833758.33	822236.59		0.033	0.076	0.154	0.153	0.041	0.098	0.051	0.129	0.130	0.115		0.110	0.113
P120	833750.60	822242.93		0.062	0.047	0.166	0.162	0.087	0.040	0.010	0.112	0.130	0.108		0.109	0.106
P121	833742.86	822249.27		0.066	0.050	0.177	0.161	0.041	0.027	0.013	0.097	0.122	0.101		0.107	0.097
P122	833735.13	822255.61		0.083	0.046	0.182	0.155	0.034	0.037	0.020	0.081	0.121	0.092		0.107	0.094
P123	833727.40	822261.95		0.130	0.032	0.182	0.149	0.032	0.049	0.031	0.077	0.144	0.105		0.111	0.100
P124	833719.66	822268.29		0.132	0.066	0.174	0.143	0.035	0.082	0.051	0.071	0.158	0.118		0.117	0.108
P125	833711.93	822274.63		0.110	0.092	0.149	0.129	0.032	0.077	0.074	0.035	0.136	0.098		0.107	0.093
P126	833704.20	822280.97		0.096	0.077	0.127	0.114	0.044	0.080	0.070	0.101	0.096	0.058		0.098	0.089
P127	833712.40	822286.84		0.103	0.087	0.064	0.060	0.068	0.076	0.072	0.137	0.080	0.067		0.079	0.082
P128	833721.80	822290.25		0.099	0.102	0.068	0.042	0.077	0.071	0.076	0.141	0.056	0.082		0.078	0.079
P129	833731.20	822293.66		0.082	0.112	0.085	0.058	0.092	0.085	0.078	0.150	0.043	0.098		0.087	0.086
P130	833740.60	822297.07		0.061	0.115	0.092	0.063	0.105	0.097	0.083	0.155	0.072	0.111		0.093	0.098
P131	833750.00	822300.48		0.042	0.117	0.127	0.083	0.131	0.128	0.109	0.153	0.100	0.113		0.110	0.118
P132	833759.40	822303.89		0.032	0.122	0.155	0.112	0.150	0.149	0.139	0.142	0.119	0.113		0.127	0.133
P133	833768.34	822299.96		0.056	0.097	0.163	0.124	0.150	0.149	0.136	0.075	0.114	0.093		0.123	0.121
P134	833776.02	822293.62		0.030	0.028	0.157	0.128	0.132	0.137	0.119	0.050	0.035	0.031		0.098	0.089
P135	833783.71	822287.22		0.053	0.026	0.152	0.130	0.123	0.134	0.118	0.085	0.065	0.047		0.103	0.102
P136	833791.40	822280.83		0.076	0.026	0.155	0.141	0.123	0.142	0.138	0.115	0.058	0.042		0.111	0.109
P137	833799.09	822274.43		0.091	0.048	0.154	0.145	0.117	0.144	0.154	0.120	0.081	0.049		0.119	0.118
P138	833806.78	822268.04		0.079	0.059	0.154	0.145	0.109	0.143	0.172	0.101	0.067	0.064		0.117	0.114
P139	833814.46	822261.64		0.078	0.047	0.160	0.154	0.117	0.154	0.202	0.060	0.093	0.089		0.120	0.122
P140	833822.15	822255.25		0.093	0.026	0.166	0.163	0.130	0.168	0.222	0.032	0.115	0.103		0.124	0.129
P141	833829.84	822248.85		0.111	0.030	0.172	0.169	0.147	0.181	0.234	0.040	0.121	0.104		0.132	0.137
P142	833837.53	822242.46		0.126	0.064	0.163	0.159	0.162	0.175	0.232	0.058	0.120	0.100		0.137	0.138
P143	833845.22	822236.06		0.139	0.092	0.119	0.114	0.153	0.138	0.208	0.121	0.106	0.098		0.124	0.129
P144	833852.90	822229.67		0.144	0.099	0.071	0.079	0.131	0.114	0.186	0.182	0.072	0.097		0.105	0.117
O001	833688.64	821827.88		0.059	0.244	0.208	0.227	0.301	0.151	0.109	0.244	0.193	0.199		0.203	0.204
O002	833704.79	821846.97		0.067	0.045	0.024	0.075	0.108	0.101	0.059	0.141	0.176	0.040		0.073	0.103
O003	833720.93	821866.06		0.094	0.041	0.051	0.080	0.116	0.082	0.056	0.142	0.156	0.135		0.081	0.110
O004	833737.08	821885.14		0.106	0.044	0.071	0.069	0.111	0.096	0.085	0.188	0.147	0.213		0.091	0.128
O005	833753.23	821904.23		0.120	0.045	0.036	0.043	0.116	0.145	0.144	0.252	0.204	0.267		0.095	0.161
O006	833769.37	821923.32		0.115	0.052	0.079	0.072	0.090	0.095	0.079	0.281	0.202	0.326		0.105	0.164
O007	833785.52	821942.41		0.110	0.069	0.090	0.091	0.049	0.072	0.061	0.269	0.080	0.363		0.096	0.136
O008	833801.66	821961.49		0.101	0.080	0.077	0.088	0.056	0.095	0.104	0.232	0.074	0.353		0.094	0.133
O009	833817.81	821980.58		0.125	0.085	0.083	0.084	0.043	0.109	0.082	0.186	0.108	0.322		0.096	0.127
O010	833833.95	821999.67		0.149	0.108	0.028	0.099	0.050	0.056	0.040	0.120	0.135	0.330		0.081	0.109
O011	833850.10	822018.75		0.156	0.146	0.046	0.139	0.053	0.072	0.056	0.083	0.145	0.338		0.098	0.116
O012	833866.40	822037.71		0.135	0.170	0.138	0.148	0.256	0.254	0.217	0.158	0.227	0.330		0.173	0.210
O013	833882.70	822056.66		0.179	0.183	0.073	0.139	0.083	0.095	0.082	0.092	0.255	0.328		0.128	0.150
O014	833907.00	822070.77		0.191	0.180	0.102	0.118	0.063	0.153	0.187	0.177	0.230	0.364		0.145	0.179
O015	833923.30	822089.72		0.141	0.158	0.137	0.131	0.102	0.123	0.175	0.158	0.229	0.352		0.147	0.179
O016	833939.61	822108.68		0.133	0.135	0.137	0.130	0.101	0.111	0.195	0.170	0.126	0.255		0.136	0.151
O017	833955.91	822127.63		0.134	0.083	0.130	0.108	0.117	0.090	0.227	0.192	0.066	0.198		0.122	0.137
O018	833972.19	822146.60		0.111	0.078	0.154	0.117	0.134	0.085	0.232	0.200	0.102	0.165		0.131	0.148
O019	833988.31	822165.71		0.077	0.067	0.142	0.099	0.096	0.060	0.249	0.216	0.106	0.040		0.119	0.132
O020	834004.42	822184.83		0.100	0.189	0.155	0.101	0.049	0.091	0.239	0.210	0.044	0.156		0.135	0.128
O021	833894.10	822079.37		0.178	0.186	0.099	0.147	0.063	0.167	0.162	0.175	0.101	0.330		0.137	0.150
O022	833910.40	822098.32		0.125	0.158	0.143	0.159	0.061	0.162	0.149	0.181	0.098	0.280		0.141	0.150
O023	833926.70	822117.28		0.101	0.122	0.144	0.140	0.093	0.130	0.206	0.173	0.130	0.242		0.136	0.155
O024	833943.00	822136.23		0.140	0.085	0.108	0.086	0.115	0.082	0.262	0.200	0.070	0.228		0.116	0.140
O025	833959.29	822155.20		0.123	0.114	0.204	0.155	0.162	0.085	0.269	0.223	0.138	0.215		0.166	0.180
O026	833975.40	822174.31		0.110	0.090	0.102	0.067	0.112	0.059	0.232	0.244	0.042	0.153		0.108	0.126
O027	833991.52	822193.42		0.087	0.159	0.101	0.070	0.100	0.073	0.223	0.241	0.066	0.116		0.117	0.127
O028	833795.28	822131.96		0.047	0.107	0.051	0.020	0.066	0.042	0.080	0.179	0.140	0.138		0.074	0.100
O029	833811.13	822151.29		0.033	0.112	0.033	0.045	0.212	0.279	0.235	0.316	0.052	0.071		0.110	0.155
O030	833826.98	822170.63		0.093	0.115	0.119	0.078	0.240	0.307	0.275	0.310	0.045	0.061		0.148	0.174
O031	833842.83	822189.96		0.056	0.106	0.079	0.086	0.191	0.246	0.223	0.327	0.135	0.061		0.133	0.176
O032	833858.68	822209.29		0.115	0.094	0.052	0.069	0.163	0.196	0.119	0.291	0.113	0.067		0.111	0.142
O033	833874.53	822228.63		0.067	0.086	0.101	0.099	0.167	0.187	0.173	0.240	0.105	0.046		0.121	0.143
O034	833890.38	822247.96		0.098	0.113	0.085	0.064	0.131	0.157	0.177	0.219	0.075	0.028		0.110	0.120
O035	833906.23	822267.29		0.127	0.110	0.119	0.094	0.089	0.114	0.188	0.195	0.115	0.083		0.122	0.130
O036	833578.89	821900.02		0.210	0.119	0.073	0.087	0.208	0.154	0.059	0.070	0.048	0.226		0.107	0.102
O037	833583.56	821924.58		0.176	0.029	0.095	0.140	0.177	0.210	0.096	0.072	0.034	0.048		0.106	0.099
O038	833588.23	821949.14		0.103	0.044	0.068	0.204	0.136	0.172	0.110	0.068	0.074	0.062		0.102	0.106
O039	833592.90	821973.70		0.081	0.100	0.120	0.245	0.171	0.200	0.170	0.094	0.276	0.294		0.154	0.197
O040	833597.57	821998.26		0.083	0.076	0.076	0.213	0.105	0.141	0.126	0.097	0.010	0.015		0.102	0.092
O041	833598.99	822023.72		0.103	0.121	0.095	0.231	0.202	0.236	0.222	0.145	0.067	0.060		0.145	0.149
O042	833590.77	822047.33		0.088	0.149	0.182	0.262	0.264	0.275	0.274	0.119	0.101	0.110		0.186	0.184
O043	833582.55	822070.94		0.092	0.144	0.224	0.236	0.254	0.263	0.262	0.075	0.094	0.148		0.186	0.177
O044	833574.33	822094.55		0.065	0.132	0.232	0.181	0.183	0.195	0.238	0.084	0.077	0.130		0.164	0.151
O045	833682.05	822190.77		0.170	0.033	0.023	0.153	0.263	0.300	0.279	0.216	0.194	0.171		0.135	0.200
O046	833673.60	822214.34		0.183	0.049	0.027	0.141	0.206	0.271	0.217	0.187	0.125	0.149		0.120	0.162
O047	833665.14	822237.88		0.160	0.070	0.083	0.121	0.168	0.246	0.175	0.180	0.164	0.177		0.129	0.164
O048	833656.27	822261.04		0.087	0.052	0.032	0.077	0.103	0.203	0.124	0.103	0.121	0.103		0.080	0.109

Wind Velocity Ratio, Proposed Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O049	833500.99	821903.86		0.200	0.237	0.213	0.269	0.267	0.296	0.312	0.129	0.288	0.267		0.237	0.250
O050	833492.37	821927.33		0.222	0.275	0.295	0.287	0.325	0.408	0.243	0.153	0.284	0.244		0.278	0.271
O051	833483.75	821950.80		0.122	0.168	0.187	0.224	0.228	0.264	0.135	0.126	0.134	0.198		0.179	0.177
O052	833475.14	821974.27		0.054	0.132	0.158	0.224	0.233	0.220	0.101	0.226	0.122	0.245		0.163	0.185
O053	833466.52	821997.74		0.044	0.108	0.068	0.206	0.189	0.162	0.036	0.224	0.220	0.404		0.130	0.191
O054	833457.93	822021.22		0.189	0.097	0.042	0.150	0.100	0.067	0.083	0.153	0.102	0.353		0.102	0.128
O055	833449.35	822044.69		0.172	0.102	0.020	0.110	0.074	0.056	0.099	0.127	0.116	0.217		0.086	0.105
O056	833440.76	822068.17		0.240	0.095	0.084	0.157	0.181	0.160	0.139	0.440	0.287	0.174		0.171	0.228
O057	833432.17	822091.65		0.201	0.132	0.116	0.188	0.230	0.213	0.086	0.322	0.353	0.325		0.186	0.246
O058	833423.59	822115.13		0.082	0.043	0.021	0.083	0.060	0.038	0.061	0.200	0.175	0.095		0.072	0.108
O059	833415.00	822138.61		0.123	0.077	0.048	0.113	0.107	0.061	0.066	0.162	0.173	0.154		0.094	0.120
O060	833406.41	822162.09		0.066	0.036	0.025	0.059	0.077	0.031	0.079	0.072	0.163	0.154		0.058	0.089
O061	833681.54	821817.30		0.065	0.319	0.278	0.342	0.275	0.191	0.163	0.266	0.188	0.213		0.254	0.237
O062	833662.17	821833.11		0.081	0.303	0.263	0.305	0.143	0.169	0.218	0.255	0.068	0.171		0.225	0.192
O063	833642.63	821848.71		0.103	0.277	0.243	0.271	0.056	0.112	0.112	0.092	0.066	0.245		0.184	0.138
O064	833622.52	821863.55		0.131	0.231	0.215	0.233	0.153	0.098	0.030	0.069	0.112	0.355		0.171	0.145
O065	833601.27	821876.72		0.164	0.200	0.167	0.193	0.200	0.149	0.055	0.050	0.107	0.370		0.157	0.145
O066	833577.88	821885.56		0.180	0.189	0.122	0.154	0.211	0.145	0.043	0.072	0.084	0.361		0.139	0.133
O067	833553.62	821891.61		0.158	0.173	0.122	0.185	0.143	0.037	0.170	0.034	0.059	0.344		0.129	0.121
O068	833528.63	821891.21		0.164	0.150	0.123	0.219	0.143	0.155	0.281	0.038	0.166	0.329		0.154	0.171
O069	833503.70	821889.31		0.168	0.192	0.188	0.186	0.173	0.205	0.311	0.100	0.230	0.261		0.189	0.202
O070	833809.89	821828.55		0.054	0.016	0.047	0.191	0.274	0.290	0.328	0.114	0.057	0.055		0.118	0.156
O071	833790.74	821844.62		0.088	0.013	0.039	0.168	0.203	0.197	0.242	0.073	0.077	0.105		0.098	0.128
O072	833771.59	821860.69		0.123	0.013	0.104	0.141	0.155	0.198	0.193	0.206	0.208	0.083		0.129	0.170
O073	833752.44	821876.76		0.086	0.012	0.089	0.101	0.054	0.057	0.074	0.223	0.164	0.050		0.091	0.118
O074	833921.77	821884.63		0.246	0.154	0.245	0.144	0.297	0.239	0.158	0.124	0.039	0.138		0.189	0.154
O075	833902.62	821900.70		0.054	0.055	0.110	0.160	0.301	0.147	0.036	0.036	0.146	0.199		0.114	0.132
O076	833883.47	821916.77		0.083	0.066	0.101	0.105	0.135	0.083	0.115	0.106	0.152	0.228		0.102	0.128
O077	833864.32	821932.84		0.054	0.014	0.096	0.029	0.138	0.145	0.105	0.117	0.137	0.162		0.082	0.116
O078	833845.17	821948.91		0.113	0.077	0.179	0.031	0.111	0.191	0.167	0.091	0.208	0.185		0.126	0.146
O079	833826.02	821964.98		0.084	0.047	0.128	0.053	0.038	0.182	0.154	0.084	0.130	0.200		0.095	0.118
O080	833977.41	821941.96		0.116	0.089	0.055	0.027	0.035	0.073	0.133	0.265	0.119	0.163		0.087	0.120
O081	833958.94	821956.75		0.035	0.097	0.100	0.024	0.067	0.140	0.169	0.285	0.061	0.190		0.098	0.132
O082	833940.69	821974.35		0.178	0.156	0.178	0.051	0.158	0.251	0.270	0.358	0.133	0.170		0.174	0.200
O083	833922.85	821992.06		0.218	0.128	0.197	0.103	0.259	0.293	0.296	0.340	0.140	0.123		0.197	0.219
O084	833904.56	822007.36		0.152	0.092	0.188	0.101	0.274	0.299	0.285	0.320	0.201	0.083		0.188	0.224
O085	833885.34	822024.21		0.155	0.086	0.172	0.118	0.280	0.297	0.268	0.282	0.242	0.276		0.185	0.242
O086	833989.52	821957.37		0.179	0.178	0.149	0.046	0.097	0.085	0.140	0.311	0.091	0.154		0.141	0.141
O087	833970.62	821972.70		0.114	0.186	0.203	0.081	0.150	0.194	0.224	0.346	0.208	0.193		0.182	0.210
O088	833951.96	821988.58		0.205	0.088	0.208	0.114	0.253	0.281	0.293	0.345	0.193	0.255		0.198	0.243
O089	833932.78	822004.73		0.194	0.054	0.122	0.116	0.219	0.213	0.185	0.108	0.193	0.304		0.139	0.176
O090	833915.11	822020.59		0.153	0.024	0.102	0.110	0.236	0.236	0.185	0.123	0.244	0.326		0.132	0.192
O091	833895.99	822036.28		0.120	0.032	0.063	0.066	0.226	0.231	0.182	0.178	0.273	0.235		0.119	0.188
O092	833853.32	822049.51		0.142	0.163	0.100	0.133	0.247	0.207	0.182	0.075	0.254	0.268		0.151	0.181
O093	833833.90	822065.25		0.041	0.052	0.069	0.028	0.221	0.189	0.176	0.151	0.260	0.125		0.105	0.161
O094	833814.39	822080.88		0.141	0.096	0.087	0.011	0.179	0.179	0.177	0.212	0.228	0.186		0.121	0.166
O095	833795.09	822096.77		0.128	0.104	0.087	0.038	0.152	0.192	0.201	0.042	0.245	0.276		0.113	0.153
O096	833775.85	822112.73		0.039	0.098	0.081	0.067	0.081	0.156	0.174	0.032	0.265	0.339		0.098	0.151
O097	833754.94	822126.43		0.072	0.037	0.078	0.090	0.088	0.160	0.168	0.067	0.296	0.356		0.100	0.168
O098	833732.40	822140.31		0.089	0.069	0.084	0.099	0.113	0.152	0.152	0.115	0.340	0.358		0.117	0.187
O099	833704.92	822150.52		0.081	0.072	0.093	0.095	0.084	0.117	0.126	0.207	0.375	0.356		0.123	0.201
O100	833863.35	822062.10		0.134	0.159	0.066	0.137	0.171	0.173	0.150	0.039	0.322	0.259		0.134	0.171
O101	833844.65	822078.70		0.034	0.056	0.015	0.035	0.140	0.157	0.151	0.078	0.334	0.224		0.082	0.155
O102	833825.21	822094.42		0.034	0.055	0.050	0.009	0.139	0.185	0.181	0.157	0.352	0.285		0.098	0.185
O103	833805.84	822110.23		0.182	0.153	0.141	0.048	0.150	0.194	0.206	0.197	0.403	0.381		0.166	0.230
O104	833785.64	822124.96		0.056	0.096	0.068	0.060	0.083	0.128	0.160	0.061	0.432	0.424		0.109	0.192
O105	833766.05	822140.48		0.036	0.061	0.044	0.073	0.107	0.181	0.183	0.135	0.416	0.424		0.108	0.211
O106	833746.17	822155.62		0.037	0.067	0.037	0.082	0.127	0.188	0.179	0.145	0.369	0.382		0.107	0.202
O107	833723.15	822168.33		0.046	0.052	0.063	0.075	0.110	0.166	0.154	0.145	0.306	0.287		0.102	0.175
O108	833700.02	822176.18		0.061	0.034	0.058	0.086	0.110	0.175	0.137	0.171	0.329	0.270		0.105	0.182
O109	833684.50	822152.29		0.069	0.059	0.098	0.086	0.094	0.081	0.120	0.253	0.407	0.385		0.125	0.215
O110	833664.88	822149.89		0.104	0.049	0.097	0.075	0.104	0.097	0.155	0.296	0.434	0.417		0.134	0.236
O111	833641.28	822141.66		0.137	0.044	0.076	0.052	0.112	0.130	0.189	0.331	0.443	0.436		0.135	0.248
O112	833617.67	822133.44		0.154	0.054	0.057	0.067	0.158	0.173	0.180	0.362	0.444	0.443		0.144	0.262
O113	833594.06	822125.22		0.162	0.066	0.049	0.102	0.198	0.203	0.120	0.390	0.440	0.443		0.153	0.270
O114	833570.45	822116.99		0.200	0.086	0.129	0.110	0.207	0.198	0.084	0.429	0.446	0.446		0.184	0.283
O115	833546.84	822108.77		0.205	0.105	0.044	0.134	0.238	0.218	0.079	0.470	0.450	0.438		0.175	0.289
O116	833523.23	822100.55		0.222	0.077	0.039	0.126	0.227	0.196	0.061	0.509	0.451	0.423		0.170	0.288
O117	833499.62	822092.33		0.242	0.084	0.074	0.145	0.224	0.189	0.085	0.529	0.436	0.403		0.186	0.294
O118	833476.01	822084.10		0.257	0.100	0.091	0.161	0.216	0.184	0.110	0.522	0.409	0.357		0.194	0.288
O119	833452.40	822075.88		0.261	0.101	0.095	0.167	0.204	0.180	0.146	0.477	0.362	0.261		0.190	0.265
O120	833676.62	822177.18		0.045	0.024	0.057	0.059	0.082	0.087	0.082	0.248	0.401	0.344		0.100	0.197
O121	833660.27	822164.97		0.074	0.030	0.081	0.088	0.059	0.051	0.095	0.288	0.446	0.409		0.117	0.220
O122	833636.67	822156.74		0.103	0.024	0.090	0.107	0.092	0.101	0.171	0.307	0.460	0.434		0.137	0.249
O123	833613.06	822148.52		0.126	0.043	0.088	0.110	0.158	0.166	0.227	0.324	0.461	0.439		0.155	0.271
O124	833589.45	822140.30		0.144	0.070	0.077	0.122	0.217	0.225	0.223	0.341	0.459	0.436		0.168	0.285
O125	833565.84	822132.07		0.187	0.095	0.067	0.143	0.252	0.255	0.189	0.357	0.442	0.419		0.179	0.287
O126	833542.23	822123.85		0.221	0.133	0.134	0.173	0.276	0.272	0.203	0.373	0.426	0.404		0.213	0.301
O127	833518.62	822115.63		0.215	0.142	0.122	0.183	0.278	0.267	0.192	0.387	0.399	0.402		0.211	0.296
O128	833495.01	822107.40		0.209	0.136	0.125	0.190	0.273	0.257	0.180	0.397	0.381	0.411		0.209	0.293
O129	833471.40	822099.18		0.224	0.134	0.128	0.196	0.264	0.247	0.167	0.412	0.431	0.422		0.215	0.304
O130	833447.79	822090.96		0.235	0.132	0.123	0.202	0.253	0.235	0.130	0.451	0.442	0.390		0.215	0.304
O131	833818.29	822180.88		0.102	0.053	0.075	0.077	0.099	0.075	0.072	0.042	0.083	0.057		0.074	0.072
O132	833798.99	822196.77		0.072	0.068	0.073	0.070	0.109	0.027	0.017	0.022	0.061	0.060		0.064	0.052
O133	833779.70	822212.67		0.047	0.055	0.138	0.149	0.097	0.134	0.090	0.087	0.072	0.119		0.103	0.105
O134	833760.40	822228.57		0.069	0.064	0.155	0.153	0.021	0.017	0.021	0.149	0.180	0.154		0.109	0.117
O135	833741.11	822244.46		0.096	0.078	0.183	0.157	0.029	0.028	0.027	0.099	0.127	0.105		0.115	0.099
O136	833721.81	822260.36		0.150	0.036	0.192	0.134	0.015	0.070	0.056	0.079	0.161	0.117		0.116	0.108
O137	833702.52	822276.26		0.090	0.074	0.140	0.106	0.032	0.049	0.072	0.052	0.108	0.062		0.094	0.080
O138	833949.25	822153.86		0.096	0.117	0.212	0.163	0.152	0.062	0.236	0.201	0.133	0.187		0.161	0.168
O139	833930.31	822170.04		0.099	0.067	0.236	0.198	0.146	0.096	0.149	0.083	0.096	0.045		0.149	0.126
O140	833911.51	822185.72		0.144	0.043	0.200	0.188	0.150	0.108	0.204	0.108	0.058	0.036		0.142	0.124
O141	833892.39	822202.46		0.154	0.035	0.153	0.166	0.126	0.088	0.249	0.103	0.032	0.017		0.123	0.110
O142	833873.39	822216.84		0.153	0.083	0.131	0.154	0.124	0.144	0.237	0.159	0.088	0.059		0.134	0.136
O143	833855.40	822235.72		0.141	0.094	0.081	0.106	0.100	0.088	0.214	0.173	0.106	0.103		0.111	0.125
O144	833836.08	822251.59		0.116	0.037	0.186	0.167	0.183	0.195	0.273	0.157	0.143	0.111		0.154	0.173

Wind Velocity Ratio, Proposed Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O145	833816.77	822267.46		0.080	0.057	0.185	0.170	0.170	0.180	0.248	0.156	0.080	0.066		0.145	0.150
O146	833797.45	822283.34		0.077	0.044	0.173	0.164	0.165	0.169	0.208	0.144	0.080	0.045		0.135	0.139
O147	833778.14	822299.21		0.038	0.041	0.164	0.145	0.157	0.152	0.172	0.057	0.087	0.054		0.116	0.116
O148	834090.83	822123.29		0.258	0.253	0.271	0.103	0.113	0.120	0.136	0.157	0.065	0.235		0.188	0.140
O149	834071.61	822139.27		0.302	0.286	0.357	0.155	0.134	0.140	0.125	0.156	0.060	0.139		0.229	0.148
O150	834052.38	822155.25		0.280	0.282	0.352	0.168	0.118	0.139	0.093	0.142	0.059	0.084		0.222	0.136
O151	834033.15	822171.23		0.201	0.241	0.270	0.138	0.074	0.118	0.043	0.106	0.056	0.141		0.173	0.111
O152	834013.92	822187.21		0.131	0.193	0.185	0.089	0.032	0.089	0.198	0.154	0.058	0.168		0.138	0.118
O153	833994.70	822203.18		0.081	0.140	0.144	0.066	0.076	0.074	0.190	0.220	0.092	0.133		0.121	0.128
O154	833975.47	822219.16		0.065	0.145	0.233	0.167	0.157	0.150	0.136	0.098	0.135	0.089		0.160	0.142
O155	833956.24	822235.14		0.044	0.118	0.219	0.158	0.167	0.142	0.135	0.097	0.107	0.030		0.147	0.128
O156	833937.01	822251.12		0.032	0.094	0.210	0.161	0.161	0.130	0.121	0.083	0.074	0.071		0.135	0.118
O157	833917.68	822266.96		0.114	0.045	0.194	0.151	0.144	0.106	0.083	0.043	0.115	0.066		0.125	0.108
O158	833898.34	822282.81		0.043	0.016	0.167	0.130	0.139	0.107	0.062	0.037	0.123	0.023		0.103	0.097
O159	833879.00	822298.65		0.074	0.024	0.150	0.116	0.141	0.113	0.100	0.067	0.104	0.032		0.103	0.101
O160	833859.66	822314.49		0.071	0.015	0.135	0.115	0.144	0.119	0.099	0.069	0.078	0.059		0.096	0.097
O161	833891.02	822356.46		0.047	0.061	0.067	0.043	0.071	0.081	0.061	0.038	0.025	0.019		0.056	0.047
O162	833866.62	822346.88		0.058	0.058	0.018	0.016	0.026	0.040	0.065	0.033	0.073	0.023		0.038	0.040
O163	833841.56	822336.85		0.106	0.028	0.083	0.078	0.093	0.078	0.057	0.052	0.079	0.058		0.073	0.071
O164	833818.06	822328.33		0.104	0.035	0.070	0.036	0.080	0.082	0.113	0.014	0.104	0.092		0.065	0.072
O165	833794.55	822319.81		0.094	0.133	0.034	0.031	0.038	0.055	0.083	0.049	0.124	0.097		0.067	0.069
O166	833771.05	822311.28		0.043	0.102	0.099	0.090	0.100	0.095	0.113	0.139	0.134	0.117		0.100	0.115
O167	833747.55	822302.76		0.040	0.108	0.144	0.105	0.140	0.136	0.128	0.161	0.097	0.116		0.120	0.127
O168	833724.05	822294.24		0.088	0.101	0.100	0.063	0.103	0.077	0.097	0.157	0.037	0.092		0.092	0.089
O169	833700.54	822285.72		0.098	0.075	0.123	0.114	0.057	0.107	0.051	0.161	0.063	0.099		0.100	0.098
O170	833677.04	822277.20		0.116	0.090	0.061	0.046	0.066	0.072	0.067	0.183	0.086	0.141		0.081	0.095
O171	833653.54	822268.68		0.142	0.092	0.069	0.069	0.087	0.146	0.090	0.184	0.118	0.168		0.099	0.120
O172	833630.03	822260.16		0.156	0.096	0.077	0.056	0.077	0.064	0.066	0.207	0.159	0.214		0.100	0.124
O173	833606.53	822251.63		0.189	0.109	0.084	0.031	0.035	0.031	0.036	0.234	0.208	0.255		0.102	0.130
O174	833583.03	822243.11		0.182	0.098	0.104	0.085	0.079	0.073	0.046	0.240	0.236	0.266		0.122	0.156
O175	833559.53	822234.59		0.153	0.066	0.121	0.154	0.154	0.143	0.104	0.244	0.251	0.260		0.144	0.189
O176	833536.02	822226.07		0.118	0.024	0.141	0.215	0.206	0.191	0.142	0.277	0.270	0.262		0.162	0.223
O177	833512.52	822217.55		0.192	0.149	0.173	0.272	0.234	0.203	0.147	0.244	0.197	0.217		0.199	0.212
O178	833489.02	822209.03		0.187	0.111	0.161	0.238	0.185	0.169	0.140	0.233	0.175	0.206		0.175	0.190
O179	833465.51	822200.51		0.173	0.114	0.151	0.215	0.150	0.143	0.128	0.206	0.117	0.131		0.157	0.156
O180	833442.01	822191.98		0.184	0.124	0.142	0.190	0.123	0.125	0.099	0.200	0.112	0.147		0.148	0.144
O181	833418.51	822183.46		0.172	0.119	0.120	0.149	0.091	0.105	0.053	0.179	0.100	0.154		0.125	0.121
O182	833395.73	822175.47		0.184	0.126	0.105	0.131	0.081	0.100	0.048	0.171	0.193	0.224		0.126	0.140
O183	833494.09	821958.10		0.140	0.096	0.174	0.054	0.137	0.121	0.110	0.152	0.092	0.036		0.124	0.110
O184	833517.46	821966.97		0.186	0.117	0.212	0.110	0.173	0.141	0.131	0.104	0.044	0.029		0.146	0.109
O185	833540.83	821975.85		0.187	0.123	0.204	0.137	0.190	0.156	0.151	0.059	0.090	0.053		0.153	0.121
O186	833564.20	821984.73		0.133	0.109	0.172	0.132	0.134	0.070	0.066	0.085	0.149	0.084		0.130	0.114
O187	833555.88	822008.30		0.146	0.048	0.186	0.021	0.038	0.019	0.068	0.141	0.085	0.088		0.098	0.085
O188	833547.55	822031.88		0.113	0.022	0.146	0.050	0.030	0.020	0.066	0.136	0.070	0.079		0.083	0.078
O189	833522.79	822032.20		0.039	0.005	0.047	0.065	0.058	0.034	0.079	0.202	0.165	0.044		0.067	0.103
O190	833499.37	822023.69		0.063	0.011	0.018	0.020	0.073	0.035	0.062	0.221	0.243	0.099		0.063	0.119
O191	833476.02	822014.76		0.134	0.019	0.037	0.036	0.077	0.014	0.057	0.230	0.263	0.217		0.080	0.138
O192	834092.69	822110.48		0.166	0.203	0.195	0.075	0.100	0.115	0.143	0.139	0.039	0.216		0.144	0.118
O193	834076.69	822091.28		0.172	0.151	0.161	0.098	0.127	0.143	0.150	0.023	0.016	0.032		0.124	0.081
O194	834061.01	822091.66		0.251	0.210	0.245	0.153	0.120	0.086	0.044	0.021	0.009	0.041		0.160	0.077
O195	834055.01	822106.10		0.266	0.074	0.110	0.083	0.055	0.060	0.056	0.102	0.037	0.160		0.098	0.079
O196	834071.23	822125.12		0.098	0.155	0.171	0.071	0.095	0.092	0.098	0.125	0.037	0.111		0.118	0.095
O197	834105.89	822119.29		0.086	0.124	0.112	0.030	0.035	0.045	0.074	0.075	0.041	0.102		0.078	0.062
O198	834121.82	822138.55		0.228	0.080	0.078	0.101	0.093	0.104	0.082	0.027	0.028	0.053		0.090	0.064
O199	834137.43	822158.08		0.258	0.156	0.166	0.186	0.177	0.222	0.174	0.132	0.101	0.036		0.172	0.144
O200	834012.42	822196.28		0.078	0.112	0.114	0.035	0.045	0.045	0.229	0.211	0.047	0.124		0.098	0.108
O201	834028.88	822215.10		0.159	0.107	0.169	0.086	0.051	0.019	0.208	0.201	0.030	0.042		0.122	0.103
O202	834045.22	822234.02		0.226	0.152	0.186	0.133	0.084	0.139	0.178	0.186	0.125	0.058		0.161	0.140
O203	833996.82	822210.06		0.119	0.104	0.086	0.092	0.038	0.066	0.164	0.197	0.094	0.099		0.101	0.111
O204	834013.53	822228.65		0.118	0.110	0.035	0.068	0.054	0.035	0.185	0.222	0.048	0.083		0.084	0.097
O205	834030.03	822247.44		0.184	0.098	0.157	0.075	0.114	0.082	0.181	0.215	0.166	0.043		0.137	0.140
O206	833917.51	822281.83		0.131	0.105	0.108	0.085	0.126	0.105	0.189	0.161	0.092	0.067		0.115	0.118
O207	833931.03	822298.32		0.125	0.106	0.030	0.022	0.065	0.069	0.167	0.138	0.121	0.083		0.077	0.094
O208	833945.00	822315.47		0.102	0.084	0.094	0.043	0.051	0.054	0.137	0.096	0.140	0.048		0.086	0.090
O209	833787.58	822327.31		0.120	0.182	0.055	0.044	0.074	0.080	0.088	0.118	0.103	0.091		0.092	0.086
O210	833779.01	822348.53		0.075	0.126	0.076	0.054	0.092	0.078	0.039	0.059	0.070	0.032		0.077	0.063
O211	833771.18	822369.01		0.015	0.045	0.052	0.039	0.083	0.060	0.025	0.052	0.066	0.052		0.048	0.054
O212	833693.07	822293.82		0.061	0.085	0.110	0.143	0.088	0.098	0.072	0.112	0.092	0.103		0.101	0.102
O213	833685.07	822315.42		0.032	0.076	0.027	0.134	0.074	0.059	0.055	0.030	0.042	0.013		0.059	0.053
O214	833677.37	822334.97		0.084	0.121	0.037	0.117	0.055	0.067	0.041	0.066	0.057	0.067		0.073	0.064
O215	833521.31	822229.48		0.110	0.121	0.090	0.146	0.137	0.130	0.105	0.137	0.131	0.137		0.118	0.128
O216	833514.08	822251.08		0.114	0.128	0.019	0.040	0.036	0.028	0.024	0.066	0.061	0.044		0.056	0.044
O217	833506.10	822272.25		0.173	0.197	0.008	0.039	0.055	0.056	0.061	0.076	0.076	0.099		0.076	0.061
O218	833496.89	822298.04		0.137	0.200	0.029	0.013	0.021	0.028	0.028	0.151	0.113	0.054		0.078	0.067
O219	833488.27	822321.50		0.141	0.077	0.048	0.076	0.043	0.045	0.031	0.068	0.066	0.044		0.067	0.056
O220	833483.05	822335.87		0.128	0.080	0.017	0.064	0.039	0.042	0.031	0.055	0.064	0.170		0.054	0.059
O221	833396.79	822183.39		0.137	0.094	0.061	0.083	0.058	0.062	0.018	0.086	0.198	0.212		0.087	0.105
O222	833388.48	822204.90		0.054	0.035	0.037	0.012	0.009	0.008	0.031	0.105	0.099	0.069		0.041	0.056
O223	833380.97	822225.99		0.080	0.057	0.039	0.052	0.048	0.046	0.068	0.100	0.105	0.141		0.061	0.079
O224	833371.73	822252.01		0.083	0.070	0.037	0.115	0.081	0.096	0.076	0.256	0.182	0.047		0.096	0.130
O225	833362.73	822275.33		0.061	0.056	0.017	0.120	0.099	0.081	0.056	0.201	0.167	0.027		0.081	0.112
O226	833356.43	822295.67		0.353	0.322	0.018	0.056	0.047	0.038	0.114	0.346	0.400	0.376		0.165	0.207
O227	834133.62	822168.09		0.303	0.185	0.208	0.190	0.181	0.215	0.166	0.147	0.119	0.036		0.195	0.155
O228	834114.86	822184.62		0.318	0.200	0.257	0.187	0.164	0.191	0.142	0.143	0.125	0.076		0.207	0.156
O229	834095.37	822200.27		0.309	0.198	0.277	0.213	0.185	0.206	0.139	0.116	0.124	0.087		0.215	0.161
O230	834076.20	822216.32		0.292	0.187	0.280	0.214	0.187	0.212	0.115	0.074	0.126	0.084		0.208	0.152
O231	834057.16	822232.52		0.266	0.169	0.258	0.198	0.166	0.204	0.085	0.072	0.130	0.073		0.192	0.142
O232	834037.68	822248.19		0.198	0.101	0.204	0.141	0.097	0.151	0.183	0.212	0.150	0.048		0.162	0.155
O233	834018.66	822264.41		0.098	0.017	0.233	0.140	0.114	0.150	0.067	0.044	0.178	0.062		0.132	0.124
O234	833999.13	822280.02		0.117	0.059	0.202	0.124	0.101	0.124	0.071	0.087	0.083	0.061		0.123	0.103
O235	833979.88	822295.97		0.178	0.124	0.217	0.148	0.123	0.135	0.071	0.091	0.061	0.047		0.147	0.105
O236	833960.60	822311.88		0.151	0.107	0.174	0.131	0.119	0.126	0.044	0.059	0.094	0.033		0.126	0.095
O237	833942.31	822328.92		0.101	0.044	0.133	0.103	0.102	0.119	0.035	0.053	0.095	0.067		0.094	0.086
O238	833922.90	822344.68		0.077	0.039	0.113	0.094	0.099	0.125	0.048	0.038	0.091	0.032		0.084	0.078
O239	833903.43	822360.37		0.043	0.111	0.108	0.089	0.115	0.137	0.066	0.046	0.070	0.025		0.092	0.078
O240	833885.66	822377.51		0.046	0.141	0.088	0.057	0.107	0.138	0.049	0.028	0.079	0.047		0.084	0.070

Wind Velocity Ratio, Proposed Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O241	833866.22	822391.65		0.072	0.106	0.062	0.019	0.082	0.126	0.031	0.014	0.049	0.014		0.062	0.046
O242	833851.35	822407.57		0.110	0.134	0.054	0.037	0.059	0.097	0.080	0.105	0.087	0.084		0.080	0.078
O243	833827.89	822398.95		0.062	0.089	0.057	0.011	0.015	0.024	0.065	0.114	0.108	0.090		0.059	0.069
O244	833804.30	822390.67		0.051	0.105	0.058	0.016	0.011	0.073	0.054	0.138	0.109	0.118		0.066	0.080
O245	833780.78	822382.18		0.040	0.079	0.047	0.012	0.020	0.059	0.057	0.139	0.099	0.130		0.057	0.077
O246	833757.33	822373.51		0.022	0.019	0.096	0.057	0.092	0.102	0.036	0.126	0.104	0.129		0.072	0.095
O247	833734.04	822364.43		0.051	0.014	0.081	0.048	0.077	0.079	0.036	0.127	0.084	0.136		0.065	0.085
O248	833710.59	822355.78		0.055	0.055	0.079	0.046	0.083	0.070	0.012	0.127	0.074	0.143		0.068	0.080
O249	833687.02	822347.45		0.030	0.139	0.067	0.036	0.086	0.069	0.029	0.150	0.126	0.167		0.081	0.097
O250	833663.42	822339.18		0.169	0.213	0.067	0.088	0.101	0.094	0.105	0.180	0.166	0.182		0.124	0.130
O251	833639.95	822330.58		0.196	0.224	0.030	0.019	0.073	0.042	0.109	0.231	0.211	0.201		0.111	0.131
O252	833616.38	822322.23		0.179	0.210	0.037	0.057	0.074	0.037	0.118	0.276	0.253	0.224		0.123	0.156
O253	833593.28	822312.67		0.205	0.168	0.027	0.029	0.058	0.037	0.129	0.297	0.281	0.248		0.115	0.163
O254	833569.92	822303.77		0.153	0.160	0.069	0.026	0.041	0.078	0.132	0.231	0.223	0.234		0.111	0.145
O255	833546.38	822295.35		0.201	0.219	0.054	0.035	0.035	0.080	0.135	0.032	0.042	0.212		0.091	0.070
O256	833522.92	822286.72		0.209	0.212	0.035	0.067	0.057	0.075	0.145	0.035	0.057	0.220		0.094	0.079
O257	833499.46	822278.09		0.190	0.227	0.029	0.023	0.067	0.080	0.130	0.244	0.201	0.268		0.115	0.144
O258	833475.98	822269.49		0.220	0.160	0.016	0.011	0.043	0.045	0.108	0.257	0.217	0.279		0.100	0.139
O259	833452.58	822260.70		0.243	0.185	0.021	0.046	0.064	0.053	0.062	0.253	0.212	0.289		0.111	0.141
O260	833429.26	822251.69		0.273	0.205	0.024	0.129	0.119	0.087	0.014	0.238	0.197	0.292		0.131	0.148
O261	833405.77	822243.13		0.248	0.173	0.006	0.170	0.142	0.092	0.068	0.120	0.153	0.286		0.117	0.130
O262	833381.89	822234.73		0.182	0.114	0.035	0.160	0.143	0.039	0.038	0.251	0.276	0.309		0.124	0.173
O263	833661.30	822392.32		0.100	0.104	0.015	0.034	0.014	0.019	0.058	0.077	0.068	0.067		0.051	0.049
O264	833639.45	822380.18		0.177	0.207	0.034	0.011	0.023	0.034	0.051	0.109	0.048	0.029		0.076	0.048
O265	833617.91	822367.49		0.201	0.241	0.048	0.090	0.062	0.077	0.055	0.047	0.057	0.031		0.101	0.058
O266	833594.76	822358.04		0.191	0.247	0.077	0.127	0.107	0.110	0.055	0.146	0.100	0.043		0.130	0.100
O267	833571.50	822348.88		0.176	0.076	0.064	0.118	0.079	0.094	0.056	0.114	0.079	0.078		0.092	0.087
O268	833548.06	822340.20		0.118	0.048	0.088	0.138	0.091	0.095	0.048	0.163	0.134	0.052		0.100	0.109
O269	833524.81	822331.01		0.174	0.091	0.096	0.130	0.070	0.061	0.015	0.163	0.173	0.091		0.110	0.112
O270	833501.49	822321.99		0.214	0.130	0.079	0.099	0.033	0.019	0.029	0.152	0.189	0.170		0.107	0.109
O271	833471.89	822335.41		0.073	0.096	0.018	0.082	0.075	0.077	0.066	0.067	0.096	0.238		0.065	0.087
O272	833448.29	822327.15		0.091	0.012	0.025	0.014	0.069	0.065	0.079	0.109	0.183	0.275		0.056	0.108
O273	833425.53	822318.81		0.026	0.055	0.022	0.013	0.047	0.051	0.090	0.260	0.249	0.322		0.071	0.150
O274	833401.62	822309.78		0.186	0.183	0.030	0.022	0.017	0.021	0.098	0.322	0.270	0.330		0.111	0.163
O275	833378.55	822301.33		0.333	0.309	0.034	0.030	0.023	0.026	0.120	0.378	0.349	0.355		0.158	0.196
O276	833677.38	821849.60		0.063	0.117	0.131	0.104	0.248	0.129	0.196	0.336	0.156	0.118		0.150	0.185
O277	833693.33	821868.85		0.057	0.052	0.032	0.082	0.160	0.114	0.139	0.250	0.179	0.241		0.095	0.158
O278	833709.27	821888.11		0.074	0.069	0.052	0.057	0.156	0.119	0.112	0.206	0.185	0.290		0.096	0.152
O279	833725.22	821907.36		0.090	0.086	0.029	0.032	0.160	0.138	0.131	0.219	0.185	0.317		0.093	0.156
O280	833741.17	821926.61		0.113	0.104	0.038	0.066	0.167	0.168	0.163	0.241	0.192	0.351		0.112	0.177
O281	833757.11	821945.87		0.131	0.118	0.062	0.091	0.142	0.134	0.104	0.271	0.191	0.379		0.121	0.177
O282	833773.06	821965.12		0.145	0.132	0.048	0.100	0.079	0.067	0.069	0.292	0.128	0.392		0.108	0.152
O283	833789.01	821984.38		0.148	0.134	0.043	0.083	0.045	0.075	0.070	0.291	0.043	0.369		0.095	0.127
O284	833804.95	822003.63		0.143	0.141	0.049	0.082	0.060	0.029	0.030	0.272	0.126	0.345		0.099	0.132
O285	833820.90	822022.88		0.129	0.135	0.031	0.098	0.051	0.082	0.069	0.203	0.191	0.312		0.099	0.140
O286	833658.41	821865.88		0.092	0.073	0.137	0.107	0.186	0.128	0.196	0.222	0.109	0.290		0.130	0.167
O287	833674.35	821885.13		0.077	0.051	0.052	0.095	0.195	0.130	0.200	0.289	0.123	0.297		0.109	0.174
O288	833690.30	821904.38		0.065	0.080	0.045	0.044	0.185	0.145	0.178	0.282	0.108	0.314		0.100	0.162
O289	833706.25	821923.64		0.058	0.101	0.055	0.029	0.198	0.160	0.164	0.249	0.118	0.327		0.102	0.160
O290	833722.19	821942.89		0.059	0.115	0.069	0.071	0.208	0.185	0.177	0.243	0.134	0.329		0.118	0.174
O291	833738.14	821962.15		0.077	0.121	0.082	0.097	0.197	0.175	0.165	0.251	0.176	0.324		0.130	0.184
O292	833754.09	821981.40		0.090	0.112	0.091	0.102	0.163	0.117	0.110	0.260	0.138	0.300		0.121	0.162
O293	833770.03	822000.65		0.102	0.099	0.094	0.081	0.110	0.057	0.057	0.275	0.048	0.288		0.101	0.126
O294	833785.98	822019.91		0.115	0.077	0.094	0.048	0.081	0.066	0.062	0.279	0.114	0.277		0.099	0.134
O295	833801.93	822039.16		0.118	0.065	0.060	0.047	0.109	0.160	0.136	0.257	0.190	0.240		0.104	0.160
O296	833639.43	821882.15		0.124	0.065	0.139	0.125	0.118	0.107	0.140	0.099	0.106	0.308		0.115	0.134
O297	833655.38	821901.41		0.112	0.049	0.086	0.106	0.162	0.122	0.195	0.161	0.068	0.301		0.104	0.141
O298	833671.33	821920.66		0.104	0.069	0.095	0.067	0.182	0.146	0.210	0.233	0.096	0.299		0.115	0.161
O299	833687.27	821939.92		0.096	0.082	0.125	0.043	0.207	0.170	0.207	0.260	0.092	0.276		0.125	0.167
O300	833703.22	821959.17		0.057	0.085	0.154	0.073	0.230	0.193	0.201	0.253	0.050	0.210		0.133	0.162
O301	833719.17	821978.42		0.037	0.078	0.165	0.102	0.232	0.204	0.197	0.247	0.122	0.138		0.143	0.174
O302	833735.11	821997.68		0.036	0.067	0.160	0.107	0.216	0.186	0.182	0.243	0.117	0.109		0.137	0.165
O303	833751.06	822016.93		0.040	0.066	0.144	0.085	0.172	0.111	0.116	0.241	0.039	0.146		0.112	0.129
O304	833767.01	822036.18		0.037	0.070	0.132	0.041	0.096	0.080	0.054	0.242	0.090	0.147		0.096	0.116
O305	833782.95	822055.44		0.061	0.066	0.109	0.022	0.110	0.167	0.147	0.234	0.152	0.124		0.104	0.141
O306	833620.46	821898.43		0.153	0.040	0.136	0.111	0.162	0.101	0.075	0.043	0.058	0.250		0.102	0.103
O307	833636.40	821917.69		0.139	0.031	0.119	0.107	0.127	0.100	0.129	0.047	0.067	0.254		0.096	0.107
O308	833652.35	821936.94		0.132	0.044	0.165	0.098	0.150	0.130	0.179	0.103	0.141	0.223		0.125	0.143
O309	833668.30	821956.19		0.133	0.052	0.204	0.079	0.184	0.160	0.209	0.179	0.098	0.171		0.142	0.154
O310	833684.24	821975.45		0.081	0.049	0.216	0.089	0.223	0.188	0.221	0.229	0.045	0.090		0.146	0.154
O311	833700.19	821994.70		0.056	0.039	0.193	0.108	0.245	0.208	0.218	0.232	0.085	0.097		0.146	0.167
O312	833716.14	822013.95		0.055	0.043	0.155	0.108	0.242	0.205	0.207	0.227	0.074	0.128		0.134	0.162
O313	833732.08	822033.21		0.053	0.060	0.129	0.085	0.216	0.164	0.174	0.215	0.054	0.167		0.117	0.143
O314	833748.03	822052.46		0.049	0.082	0.117	0.044	0.163	0.074	0.086	0.202	0.069	0.194		0.097	0.117
O315	833763.98	822071.72		0.038	0.101	0.097	0.028	0.069	0.116	0.123	0.188	0.098	0.154		0.090	0.112
O316	833601.30	821914.50		0.171	0.022	0.087	0.107	0.194	0.162	0.154	0.097	0.057	0.133		0.102	0.114
O317	833617.25	821933.75		0.152	0.033	0.175	0.141	0.165	0.126	0.155	0.081	0.076	0.164		0.126	0.125
O318	833633.19	821953.00		0.151	0.042	0.215	0.143	0.139	0.111	0.138	0.037	0.160	0.165		0.138	0.133
O319	833649.14	821972.26		0.158	0.046	0.230	0.128	0.144	0.129	0.149	0.056	0.071	0.122		0.137	0.118
O320	833665.09	821991.51		0.044	0.043	0.192	0.134	0.191	0.172	0.195	0.111	0.089	0.131		0.132	0.142
O321	833681.03	822010.77		0.034	0.034	0.115	0.124	0.233	0.206	0.227	0.167	0.094	0.178		0.120	0.159
O322	833696.98	822030.02		0.042	0.021	0.089	0.107	0.251	0.217	0.234	0.171	0.074	0.210		0.111	0.158
O323	833712.93	822049.27		0.050	0.039	0.075	0.078	0.244	0.200	0.216	0.174	0.061	0.229		0.103	0.148
O324	833728.87	822068.53		0.047	0.058	0.076	0.041	0.216	0.150	0.172	0.174	0.050	0.171		0.092	0.124
O325	833598.23	821949.98		0.127	0.057	0.138	0.206	0.182	0.200	0.130	0.121	0.043	0.091		0.133	0.128
O326	833614.17	821969.23		0.156	0.072	0.185	0.198	0.159	0.140	0.114	0.122	0.184	0.220		0.154	0.164
O327	833630.12	821988.48		0.175	0.058	0.179	0.143	0.114	0.084	0.064	0.042	0.023	0.066		0.115	0.079
O328	833705.99	822080.08		0.048	0.049	0.035	0.015	0.067	0.063	0.078	0.189	0.019	0.100		0.053	0.073
O329	833853.65	821865.50		0.086	0.053	0.068	0.026	0.060	0.117	0.082	0.085	0.331	0.158		0.087	0.134
O330	833840.40	821873.52		0.069	0.050	0.082	0.051	0.082	0.200	0.156	0.090	0.397	0.214		0.109	0.177
O331	833849.95	821885.09		0.109	0.067	0.095	0.048	0.049	0.171	0.146	0.090	0.329	0.220		0.107	0.158
O332	833859.49	821896.66		0.083	0.061	0.124	0.059	0.019	0.092	0.115	0.035	0.215	0.122		0.091	0.105
O333	833829.02	821883.22		0.062	0.021	0.081	0.056	0.111	0.218	0.172	0.050	0.318	0.160		0.099	0.156
O334	833838.81	821894.58		0.095	0.046	0.058	0.081	0.052	0.205	0.177	0.054	0.307	0.182		0.097	0.151
O335	833848.60	821905.94		0.111	0.081	0.143	0.094	0.035	0.114	0.136	0.094	0.351	0.186		0.126	0.162
O336	833818.75	821889.74		0.045	0.009	0.081	0.020	0.035	0.129	0.109	0.133	0.151	0.109		0.069	0.104

Wind Velocity Ratio, Proposed Case

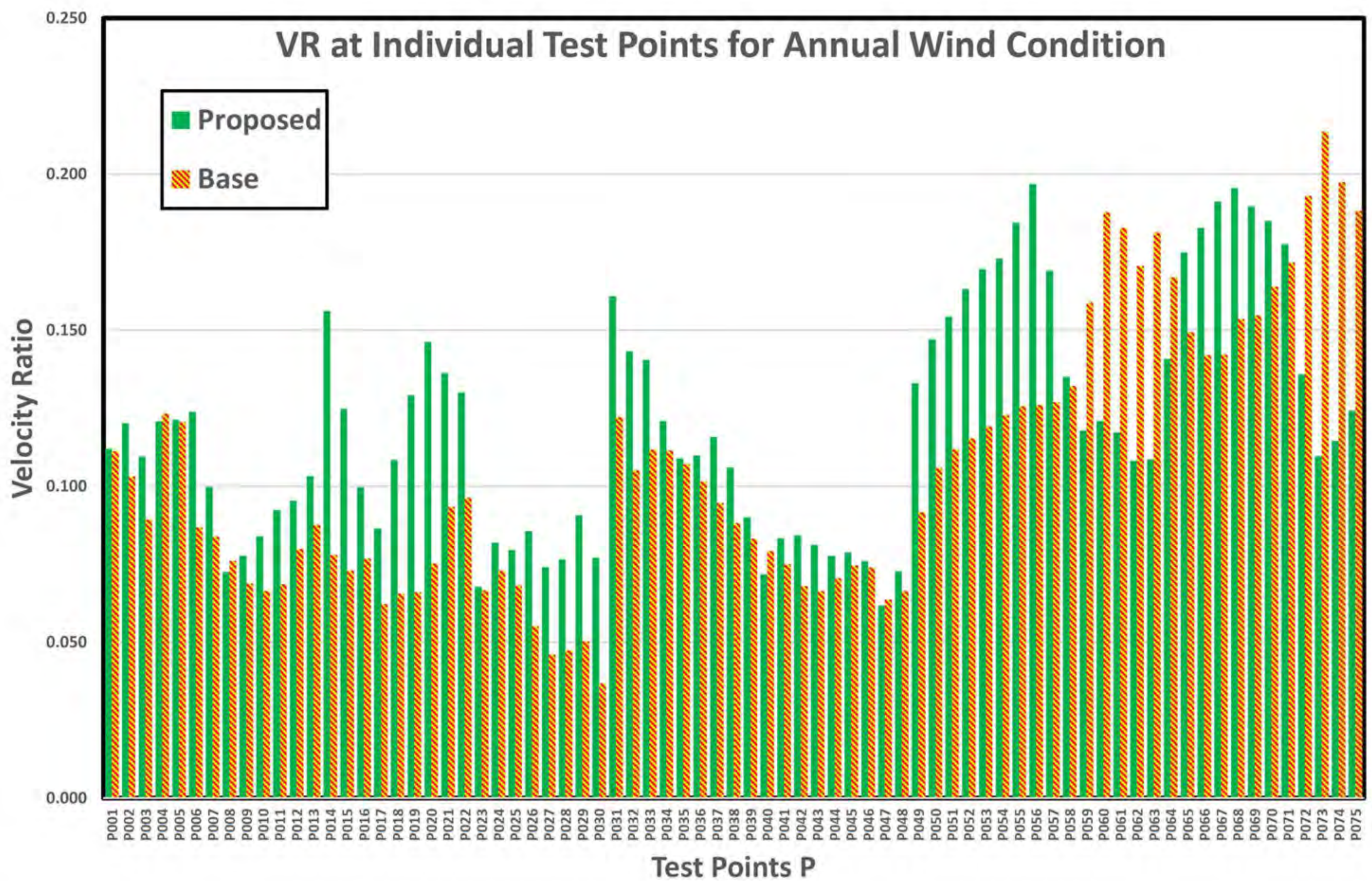
Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
O337	833828.51	821901.13		0.044	0.013	0.056	0.024	0.047	0.151	0.125	0.071	0.159	0.085		0.062	0.095
O338	833932.47	821892.35		0.240	0.167	0.236	0.199	0.259	0.145	0.083	0.050	0.047	0.038		0.179	0.118
O339	833941.87	821904.03		0.204	0.144	0.190	0.074	0.058	0.096	0.074	0.033	0.036	0.053		0.120	0.069
O340	833951.27	821915.72		0.124	0.083	0.091	0.078	0.103	0.115	0.080	0.033	0.018	0.041		0.082	0.062
O341	833919.84	821903.19		0.196	0.138	0.187	0.122	0.142	0.028	0.024	0.018	0.022	0.035		0.122	0.063
O342	833929.72	821914.47		0.171	0.117	0.181	0.122	0.114	0.072	0.075	0.030	0.048	0.038		0.122	0.078
O343	833939.60	821925.76		0.102	0.064	0.106	0.110	0.115	0.097	0.078	0.032	0.041	0.045		0.087	0.071
O344	833900.99	821917.58		0.108	0.088	0.097	0.050	0.093	0.036	0.056	0.031	0.106	0.096		0.079	0.071
O345	833910.39	821929.27		0.077	0.073	0.055	0.076	0.132	0.068	0.069	0.023	0.158	0.108		0.076	0.088
O346	833919.79	821940.96		0.052	0.078	0.045	0.064	0.128	0.056	0.056	0.016	0.168	0.115		0.069	0.084
O347	833929.19	821952.65		0.049	0.068	0.072	0.048	0.087	0.036	0.033	0.039	0.159	0.082		0.067	0.076
O348	833938.59	821964.34		0.079	0.101	0.098	0.048	0.102	0.177	0.162	0.216	0.164	0.069		0.113	0.139
O349	833890.50	821926.82		0.098	0.067	0.090	0.092	0.139	0.138	0.140	0.146	0.218	0.093		0.112	0.142
O350	833900.14	821938.31		0.081	0.034	0.123	0.078	0.136	0.165	0.163	0.148	0.164	0.056		0.110	0.134
O351	833909.78	821949.80		0.070	0.040	0.089	0.049	0.121	0.176	0.169	0.149	0.142	0.053		0.095	0.123
O352	833919.42	821961.29		0.074	0.062	0.064	0.038	0.092	0.182	0.165	0.163	0.105	0.051		0.086	0.111
O353	833929.07	821972.79		0.081	0.102	0.109	0.082	0.069	0.187	0.192	0.255	0.056	0.049		0.115	0.128
O354	834031.20	822022.99		0.139	0.166	0.132	0.056	0.054	0.065	0.139	0.147	0.015	0.020		0.109	0.078
O355	834044.19	822038.46		0.072	0.059	0.083	0.027	0.045	0.115	0.110	0.100	0.030	0.025		0.067	0.065
O356	833968.40	822059.06		0.147	0.103	0.096	0.049	0.079	0.054	0.066	0.099	0.088	0.185		0.089	0.088
O357	833978.02	822070.57		0.158	0.098	0.042	0.017	0.070	0.030	0.116	0.087	0.068	0.157		0.068	0.072
O358	833987.63	822082.09		0.151	0.082	0.057	0.032	0.043	0.065	0.103	0.079	0.056	0.182		0.069	0.074
O359	833997.25	822093.60		0.107	0.057	0.080	0.051	0.013	0.074	0.025	0.118	0.039	0.201		0.066	0.073
O360	834006.87	822105.11		0.039	0.041	0.083	0.058	0.031	0.071	0.073	0.074	0.028	0.164		0.058	0.067
O361	833959.48	822066.78		0.097	0.113	0.063	0.041	0.085	0.037	0.092	0.125	0.084	0.180		0.079	0.089
O362	833969.16	822078.24		0.122	0.123	0.028	0.019	0.088	0.052	0.078	0.105	0.061	0.150		0.067	0.072
O363	833978.84	822089.70		0.107	0.116	0.063	0.037	0.062	0.076	0.093	0.081	0.049	0.163		0.074	0.074
O364	833988.52	822101.16		0.065	0.088	0.094	0.071	0.024	0.091	0.076	0.071	0.030	0.177		0.073	0.073
O365	833998.20	822112.62		0.056	0.040	0.080	0.059	0.019	0.084	0.109	0.075	0.015	0.156		0.060	0.068
O366	833947.28	822077.33		0.077	0.129	0.081	0.067	0.095	0.060	0.149	0.164	0.066	0.153		0.095	0.104
O367	833957.20	822088.58		0.099	0.141	0.064	0.065	0.102	0.070	0.120	0.142	0.054	0.132		0.090	0.092
O368	833967.11	822099.84		0.094	0.132	0.092	0.084	0.093	0.089	0.124	0.137	0.045	0.129		0.098	0.096
O369	833977.03	822111.09		0.078	0.097	0.114	0.101	0.056	0.105	0.132	0.135	0.064	0.134		0.100	0.103
O370	833986.95	822122.35		0.072	0.034	0.068	0.045	0.021	0.083	0.146	0.147	0.065	0.125		0.067	0.089
O371	833898.29	822137.37		0.066	0.064	0.073	0.064	0.059	0.122	0.155	0.081	0.094	0.067		0.078	0.090
O372	833908.77	822148.17		0.043	0.034	0.040	0.036	0.063	0.122	0.175	0.077	0.088	0.060		0.059	0.083
O373	833870.30	822151.60		0.059	0.073	0.033	0.049	0.037	0.067	0.080	0.038	0.070	0.110		0.052	0.060
O374	833880.63	822162.47		0.034	0.026	0.023	0.030	0.035	0.091	0.078	0.039	0.044	0.033		0.036	0.046
O375	833856.97	822161.59		0.056	0.044	0.048	0.046	0.055	0.092	0.089	0.042	0.022	0.060		0.051	0.052
O376	833867.44	822172.33		0.040	0.031	0.013	0.047	0.026	0.082	0.054	0.033	0.039	0.032		0.034	0.040
O377	833611.59	822332.37		0.083	0.092	0.046	0.081	0.077	0.065	0.022	0.099	0.072	0.036		0.070	0.066
O378	833635.20	822340.59		0.160	0.180	0.065	0.074	0.111	0.099	0.028	0.155	0.138	0.117		0.109	0.105
O379	833658.54	822349.55		0.124	0.168	0.077	0.115	0.101	0.097	0.050	0.112	0.120	0.131		0.108	0.102
O380	833675.53	822355.49		0.042	0.097	0.037	0.046	0.036	0.037	0.082	0.064	0.069	0.107		0.055	0.061
O381	833668.22	822374.10		0.056	0.068	0.025	0.038	0.021	0.019	0.065	0.044	0.056	0.068		0.042	0.044
O382	833645.34	822364.03		0.134	0.177	0.064	0.083	0.049	0.047	0.016	0.106	0.102	0.055		0.092	0.072
O383	833622.17	822354.63		0.154	0.184	0.063	0.099	0.084	0.087	0.033	0.097	0.080	0.035		0.100	0.075
O384	833605.61	822348.74		0.097	0.135	0.052	0.090	0.076	0.077	0.031	0.107	0.070	0.021		0.082	0.069
D001	833820.29	822111.30		0.114	0.065	0.019	0.028	0.105	0.167	0.163	0.175	0.211	0.236		0.087	0.146
D002	833812.49	822117.56		0.183	0.161	0.137	0.044	0.130	0.191	0.198	0.229	0.207	0.248		0.150	0.178
D003	833804.69	822123.81		0.120	0.138	0.048	0.030	0.110	0.130	0.149	0.205	0.185	0.207		0.104	0.142
D004	833826.88	822118.83		0.019	0.019	0.009	0.029	0.045	0.100	0.099	0.159	0.043	0.091		0.042	0.075
D005	833819.07	822125.08		0.159	0.151	0.137	0.046	0.127	0.195	0.181	0.304	0.058	0.107		0.140	0.146
D006	833811.27	822131.34		0.133	0.158	0.037	0.020	0.132	0.165	0.163	0.288	0.029	0.055		0.102	0.114
D007	833825.66	822132.61		0.106	0.127	0.126	0.037	0.050	0.038	0.104	0.075	0.125	0.147		0.095	0.090
D008	833817.85	822138.87		0.164	0.167	0.066	0.036	0.164	0.208	0.163	0.355	0.054	0.068		0.129	0.145
D009	833832.24	822140.14		0.066	0.103	0.091	0.019	0.033	0.062	0.158	0.092	0.129	0.097		0.080	0.090
D010	833824.43	822146.39		0.162	0.162	0.115	0.024	0.194	0.221	0.131	0.372	0.064	0.036		0.142	0.151
D011	833838.82	822147.67		0.092	0.089	0.035	0.012	0.054	0.046	0.141	0.086	0.069	0.102		0.060	0.069
D012	833831.02	822153.92		0.127	0.137	0.105	0.008	0.201	0.228	0.159	0.342	0.097	0.016		0.133	0.152
D013	833845.40	822155.20		0.108	0.124	0.069	0.033	0.074	0.038	0.117	0.170	0.058	0.119		0.084	0.087
D014	833837.60	822161.45		0.094	0.068	0.048	0.055	0.200	0.252	0.139	0.306	0.019	0.049		0.103	0.132
D015	833899.34	822107.40		0.114	0.064	0.052	0.111	0.060	0.188	0.184	0.201	0.047	0.076		0.095	0.115
D016	833891.53	822113.66		0.077	0.052	0.042	0.047	0.108	0.253	0.266	0.139	0.059	0.073		0.086	0.119
D017	833883.73	822119.91		0.030	0.042	0.026	0.046	0.106	0.267	0.285	0.116	0.059	0.089		0.076	0.117
D018	833875.93	822126.16		0.056	0.042	0.015	0.040	0.094	0.239	0.256	0.086	0.075	0.098		0.069	0.107
D019	833868.12	822132.42		0.052	0.047	0.021	0.035	0.064	0.156	0.166	0.027	0.090	0.072		0.055	0.076
D020	833614.22	822011.42		0.117	0.076	0.135	0.173	0.111	0.114	0.073	0.051	0.038	0.020		0.109	0.083
D021	833625.42	822023.08		0.043	0.080	0.163	0.159	0.130	0.122	0.125	0.054	0.048	0.031		0.114	0.096
D022	833610.74	822026.16		0.029	0.034	0.121	0.089	0.038	0.043	0.054	0.022	0.018	0.015		0.064	0.046
D023	833634.39	822032.59		0.071	0.110	0.197	0.180	0.205	0.203	0.227	0.067	0.048	0.061		0.150	0.134
D024	833643.45	822044.01		0.101	0.078	0.106	0.087	0.191	0.200	0.233	0.188	0.055	0.069		0.120	0.135
D025	833653.10	822055.85		0.118	0.081	0.078	0.082	0.225	0.239	0.277	0.185	0.046	0.080		0.120	0.143
D026	833638.45	822059.59		0.078	0.047	0.040	0.066	0.095	0.084	0.051	0.096	0.020	0.076		0.059	0.063
D027	833662.47	822068.39		0.151	0.097	0.068	0.080	0.243	0.249	0.287	0.205	0.036	0.061		0.126	0.145
D028	833647.41	822072.72		0.128	0.031	0.039	0.089	0.058	0.076	0.130	0.133	0.025	0.072		0.068	0.077
D029	833632.58	822075.81		0.061	0.031	0.021	0.054	0.108	0.091	0.079	0.033	0.020	0.090		0.046	0.055
D030	833672.90	822082.91		0.166	0.108	0.064	0.061	0.215	0.214	0.260	0.214	0.018	0.026		0.119	0.128
D031	833658.24	822085.88		0.155	0.046	0.042	0.087	0.137	0.162	0.214	0.148	0.012	0.040		0.089	0.100
D032	833643.46	822088.68		0.121	0.028	0.037	0.099	0.085	0.101	0.083	0.056	0.015	0.069		0.062	0.062
D033	833628.53	822090.95		0.070	0.026	0.026	0.093	0.078	0.073	0.085	0.053	0.026	0.075		0.052	0.060
D034	833818.77	822061.95		0.076	0.069	0.068	0.028	0.206	0.190	0.181	0.210	0.215	0.123		0.110	0.161
D035	833809.59	822067.11		0.154	0.100	0.067	0.020	0.184	0.182	0.176	0.225	0.178	0.104		0.116	0.150
D036	833799.96	822072.88		0.107	0.095	0.080	0.014	0.135	0.150	0.149	0.210	0.085	0.097		0.098	0.117
D037	833770.99	822080.33		0.030	0.112	0.076	0.038	0.030	0.071	0.103	0.181	0.123	0.114		0.081	0.101
D038	833765.27	822090.10		0.031	0.109	0.074	0.046	0.051	0.054	0.087	0.161	0.119	0.148		0.079	0.099
D039	833751.16	822091.77		0.038	0.071	0.084	0.052	0.125	0.067	0.104	0.139	0.093	0.131		0.082	0.100
D040	833736.50	822092.92		0.043	0.035	0.079	0.045	0.171	0.094	0.122	0.139	0.070	0.115		0.079	0.102
D041	833721.74	822093.94		0.063	0.032	0.063	0.038	0.149	0.135	0.166	0.159	0.051	0.084		0.078	0.103
D042	833705.95	822094.71		0.126	0.074	0.054	0.029	0.080	0.076	0.099	0.180	0.041	0.051		0.074	0.080
D043	833688.13	822096.51		0.177	0.121	0.101	0.041	0.177	0.165	0.205	0.185	0.037	0.073		0.119	0.118
D044	833673.32	822098.89		0.163	0.090	0.040	0.049	0.167	0.174	0.226	0.133	0.056	0.046		0.097	0.107
D045	833658.51	822101.28		0.151	0.057	0.035	0.075	0.138	0.161	0.212	0.072	0.079	0.066		0.086	0.100
D046	833643.70	822103.66		0.133	0.042	0.035	0.098	0.119	0.142	0.126	0.036	0.096	0.092		0.077	0.089
D047	833628.89	822106.04		0.118	0.046	0.036	0.114	0.128	0.142	0.044	0.053	0.115	0.087		0.078	0.089
D048	833614.39	822102.19		0.094	0.048	0.040	0.105	0.135	0.138	0.079	0.060	0.055	0.062		0.074	0.079

Wind Velocity Ratio, Proposed Case

Tes Point			Wind direction (Degree)	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average (Annual)	Average (Summer)
			Wind direction	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW			
ID	Easting (m)	Northing (m)	Probability (Annual)	7.6%	12.4%	21.8%	12.4%	6.5%	4.9%	4.5%	6.7%	6.8%		83.6%		
			Probability (Summer)			8.3%	9.7%	7.6%	8.2%	9.2%	14.2%	16.9%	7.6%	81.7%		
D049	833599.89	822098.34		0.069	0.029	0.028	0.067	0.108	0.098	0.070	0.094	0.057	0.065		0.058	0.073
D050	833585.40	822094.49		0.054	0.019	0.045	0.042	0.061	0.061	0.043	0.101	0.051	0.063		0.048	0.060
D051	833776.49	822095.36		0.021	0.122	0.080	0.034	0.011	0.058	0.046	0.050	0.141	0.187		0.068	0.079
D052	833761.81	822098.45		0.030	0.087	0.093	0.056	0.060	0.068	0.088	0.101	0.138	0.212		0.081	0.104
D053	833747.13	822101.53		0.044	0.042	0.098	0.066	0.127	0.075	0.109	0.113	0.125	0.206		0.085	0.114
D054	833732.45	822104.61		0.078	0.020	0.091	0.064	0.148	0.102	0.131	0.125	0.122	0.197		0.088	0.121
D055	833717.77	822107.70		0.128	0.055	0.077	0.060	0.104	0.114	0.145	0.126	0.132	0.190		0.092	0.119
D056	833703.09	822110.78		0.156	0.107	0.080	0.054	0.106	0.099	0.133	0.102	0.162	0.197		0.101	0.119
D057	833688.41	822113.86		0.152	0.105	0.075	0.042	0.146	0.134	0.181	0.092	0.203	0.210		0.108	0.137
D058	833673.73	822116.95		0.148	0.082	0.042	0.034	0.149	0.152	0.209	0.105	0.252	0.247		0.102	0.154
D059	833659.05	822120.03		0.145	0.062	0.027	0.042	0.138	0.155	0.212	0.148	0.306	0.298		0.104	0.177
D060	833644.37	822123.11		0.145	0.052	0.027	0.060	0.129	0.152	0.189	0.221	0.354	0.344		0.112	0.202
D061	833663.64	822132.67		0.133	0.062	0.062	0.040	0.130	0.136	0.197	0.241	0.389	0.386		0.123	0.217
D062	833825.69	822190.69		0.102	0.087	0.100	0.115	0.121	0.040	0.113	0.068	0.112	0.068		0.098	0.093
D063	833832.10	822198.36		0.041	0.090	0.091	0.111	0.122	0.061	0.147	0.120	0.125	0.057		0.098	0.108
D064	833838.51	822206.04		0.024	0.098	0.081	0.099	0.142	0.087	0.163	0.152	0.123	0.065		0.100	0.118
D065	833844.92	822213.71		0.104	0.109	0.075	0.087	0.154	0.123	0.164	0.186	0.094	0.042		0.109	0.119
D066	833851.33	822221.39		0.145	0.107	0.061	0.060	0.151	0.134	0.156	0.212	0.050	0.078		0.103	0.113
D067	833817.23	822197.22		0.098	0.071	0.071	0.103	0.122	0.134	0.086	0.115	0.120	0.066		0.094	0.105
D068	833823.77	822204.78		0.015	0.068	0.069	0.100	0.034	0.116	0.051	0.019	0.113	0.054		0.067	0.071
D069	833830.31	822212.35		0.032	0.060	0.036	0.061	0.093	0.038	0.057	0.029	0.059	0.034		0.050	0.050
D070	833836.85	822219.91		0.046	0.089	0.064	0.083	0.145	0.079	0.131	0.046	0.045	0.028		0.077	0.072
D071	833843.39	822227.48		0.150	0.109	0.095	0.104	0.160	0.131	0.183	0.097	0.057	0.067		0.112	0.106
D072	833835.66	822233.82		0.138	0.086	0.137	0.137	0.121	0.150	0.182	0.029	0.074	0.063		0.118	0.103
D073	833827.93	822240.17		0.120	0.051	0.140	0.147	0.077	0.142	0.132	0.049	0.074	0.061		0.108	0.097
D074	833820.21	822246.51		0.102	0.032	0.124	0.134	0.047	0.121	0.101	0.060	0.069	0.057		0.093	0.086
D075	833812.48	822252.86		0.077	0.037	0.109	0.120	0.028	0.101	0.065	0.044	0.067	0.057		0.079	0.072
D076	833805.65	822257.88		0.047	0.057	0.095	0.103	0.020	0.085	0.038	0.025	0.076	0.075		0.069	0.063
D077	833772.09	822234.97		0.111	0.076	0.114	0.131	0.073	0.045	0.049	0.084	0.079	0.109		0.095	0.085
D078	833778.67	822242.50		0.114	0.089	0.036	0.037	0.019	0.017	0.029	0.025	0.039	0.034		0.048	0.030
D079	833785.26	822250.02		0.122	0.098	0.057	0.033	0.013	0.022	0.042	0.027	0.098	0.077		0.060	0.050
D080	833791.84	822257.55		0.090	0.087	0.021	0.038	0.024	0.015	0.044	0.026	0.101	0.088		0.048	0.049
D081	833798.42	822265.08		0.079	0.066	0.091	0.083	0.033	0.078	0.055	0.050	0.096	0.079		0.075	0.072

Summary of Spatial Averaged Velocity Ratio

ID	Location	Base		Proposed	
	Overall	**Annual**	**Summer**	**Annual**	**Summer**
SVR	**Site Air Ventilation Assessment (SVR) (All P Points)**	0.098	0.121	0.115	0.143
	--Site A (P001 - P030)	0.076	0.105	0.103	0.140
	--Site B (P031 - P104)	0.115	0.141	0.125	0.161
	--SSP-017 (P105 - P144)	0.082	0.095	0.108	0.111
LVR	**Local Air Ventilation Assessment (LVR) (All P & O Points)**	0.112	0.130	0.117	0.137
	Road Sections	**Annual**	**Summer**	**Annual**	**Summer**
R001	Hing Wah Street (O001 - O012)	0.114	0.143	0.107	0.142
R002	Hing Wah Street (O013 - O027)	0.122	0.127	0.132	0.149
R003	Cheung Wah Street (O028 - O035)	0.095	0.112	0.116	0.143
R004	Cheung Sha Wan Path (O036 - O044)	0.159	0.157	0.139	0.140
R005	Kwong Cheung Street (O045 - O048)	0.099	0.123	0.116	0.159
R006	Tai Nan West Street (O049 - O060)	0.156	0.185	0.146	0.175
R007	Lai Chi Kok Road (O061 - O069)	0.182	0.169	0.178	0.165
R008	Fortune Street (O070 - O073)	0.122	0.145	0.109	0.143
R009	Hang Cheung Street (O074 - O079)	0.115	0.132	0.118	0.132
R010	Cheung Sha Wan Road (O080 - O091)	0.148	0.183	0.153	0.191
R011	Cheung Sha Wan Road (O092 - O108)	0.088	0.160	0.114	0.181
R012	Cheung Sha Wan Road (O109 - O130)	0.184	0.271	0.169	0.270
R013	Fuk Wa Street (O131 - O137)	0.096	0.098	0.096	0.090
R014	Fuk Wing Street (O138 - O142)	0.137	0.129	0.142	0.133
R015	Fuk Wing Street (O143 - O147)	0.072	0.078	0.132	0.141
R016	Un Chau Street (O148 - O160)	0.148	0.114	0.149	0.121
R017	Castle Peak Road (O161 - O182)	0.108	0.124	0.111	0.124
R018	Cheung Yue Street (O183 - O191)	0.109	0.109	0.105	0.109
R019	Un Chau Street (O192 - O196)	0.138	0.108	0.129	0.090
R020	Cheung Fat Street (O197 - O199)	0.117	0.097	0.114	0.090
R021	Hing Wah Street (O200 - O205)	0.116	0.112	0.117	0.116
R022	Cheung Wah Street (O206 - O208)	0.081	0.075	0.093	0.101
R023	Tsap Fai Street (O209 - O211)	0.068	0.057	0.072	0.067
R024	Fuk Wa Street (O212 - O214)	0.086	0.079	0.078	0.073
R025	Yu Chau West Street (O215 - O220)	0.084	0.076	0.075	0.069
R026	Tai Nan West Street (O221 - O226)	0.097	0.116	0.088	0.115
R027	Castle Peak Road (O227 - O239)	0.147	0.114	0.152	0.122
R028	Kwong Shing Street (O240 - O241)	0.064	0.065	0.073	0.058
R029	Wing Hong Street (O242 - O262)	0.096	0.106	0.096	0.115
R030	Wing Ming Street (O263 - O270)	0.101	0.091	0.096	0.084
R031	King Lam Street (O271 - O275)	0.085	0.125	0.092	0.141
	Open Area	**Annual**	**Summer**	**Annual**	**Summer**
Z001	Sham Shui Po Sports Ground (O276 - O328)	0.127	0.153	0.115	0.145
Z002	Hang Chun Court (O329 - O337)	0.096	0.141	0.094	0.138
Z003	S.K.H. Kei Fook Primary School – Middle (O338 - O343)	0.119	0.076	0.119	0.077
Z004	S.K.H. Kei Fook Primary School – West (O344 - O353)	0.100	0.116	0.092	0.110
Z005	Un Chau Estate (O354 - O355)	0.089	0.072	0.088	0.072
Z006	Hing Wah Street Playground (O356 - O370)	0.072	0.078	0.077	0.082
Z007	Cheung Sha Wan Catholic Secondary School (O371 - O376)	0.048	0.055	0.052	0.062
Z008	Wing Hong Street Rest Garden (O377 - O384)	0.087	0.077	0.082	0.074
	Open Area - Within Scheme Boundary	**Annual**	**Summer**	**Annual**	**Summer**
A001	Site A – Setback Areas in West (D001 - D014)	0.072	0.103	0.104	0.123
A002	Site A – North-East Area (D015 - D019)	0.051	0.049	0.076	0.107
A003	Site B – Open Area (D020 - D061)	0.109	0.113	0.090	0.110
A004	SSP-017 - Setback Area in West (D062 - D076)	--	--	0.092	0.092
A005	SSP-017 - SW/NE pedestrian pathway (D077 - D081)	--	--	0.065	0.057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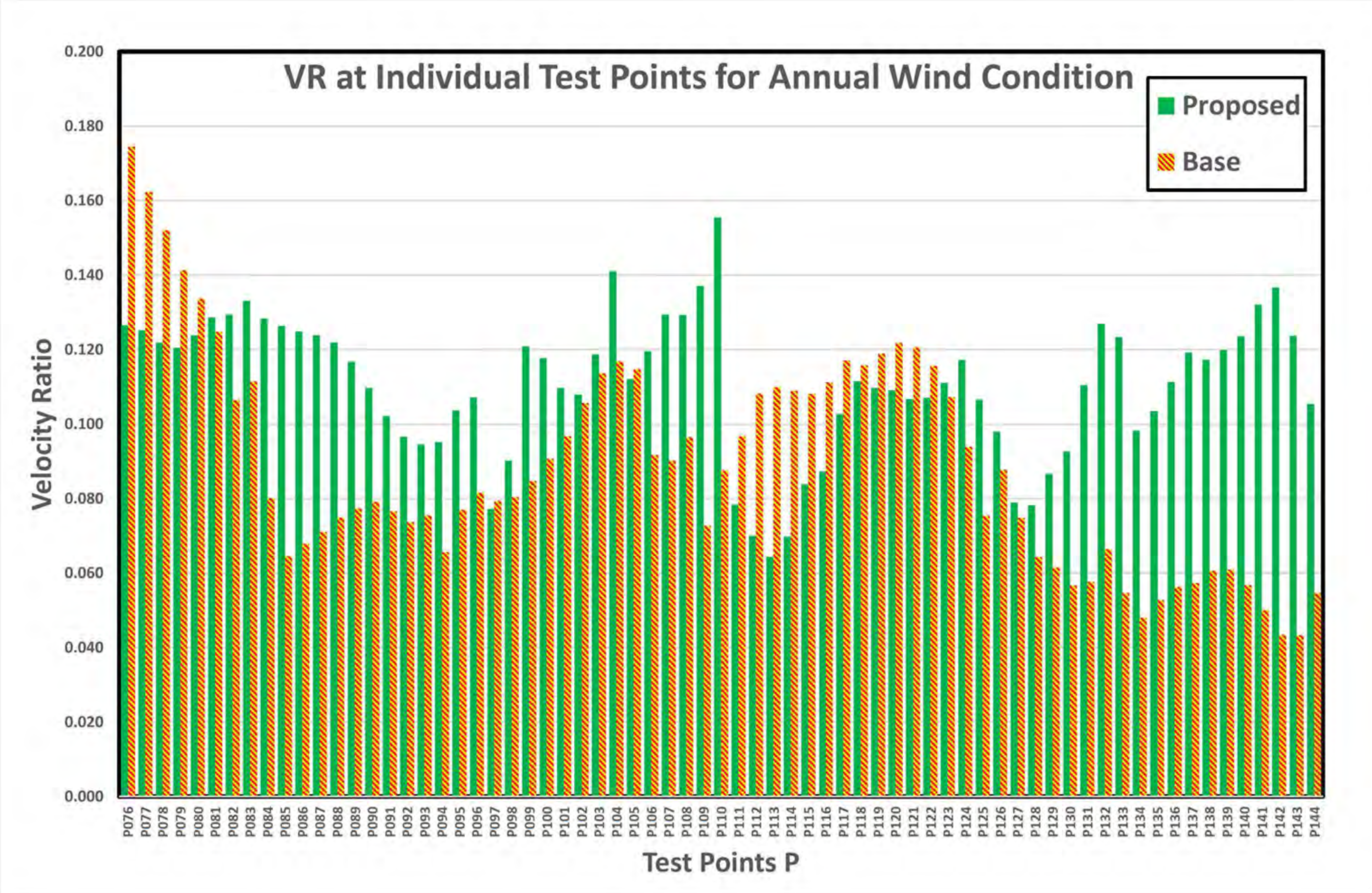
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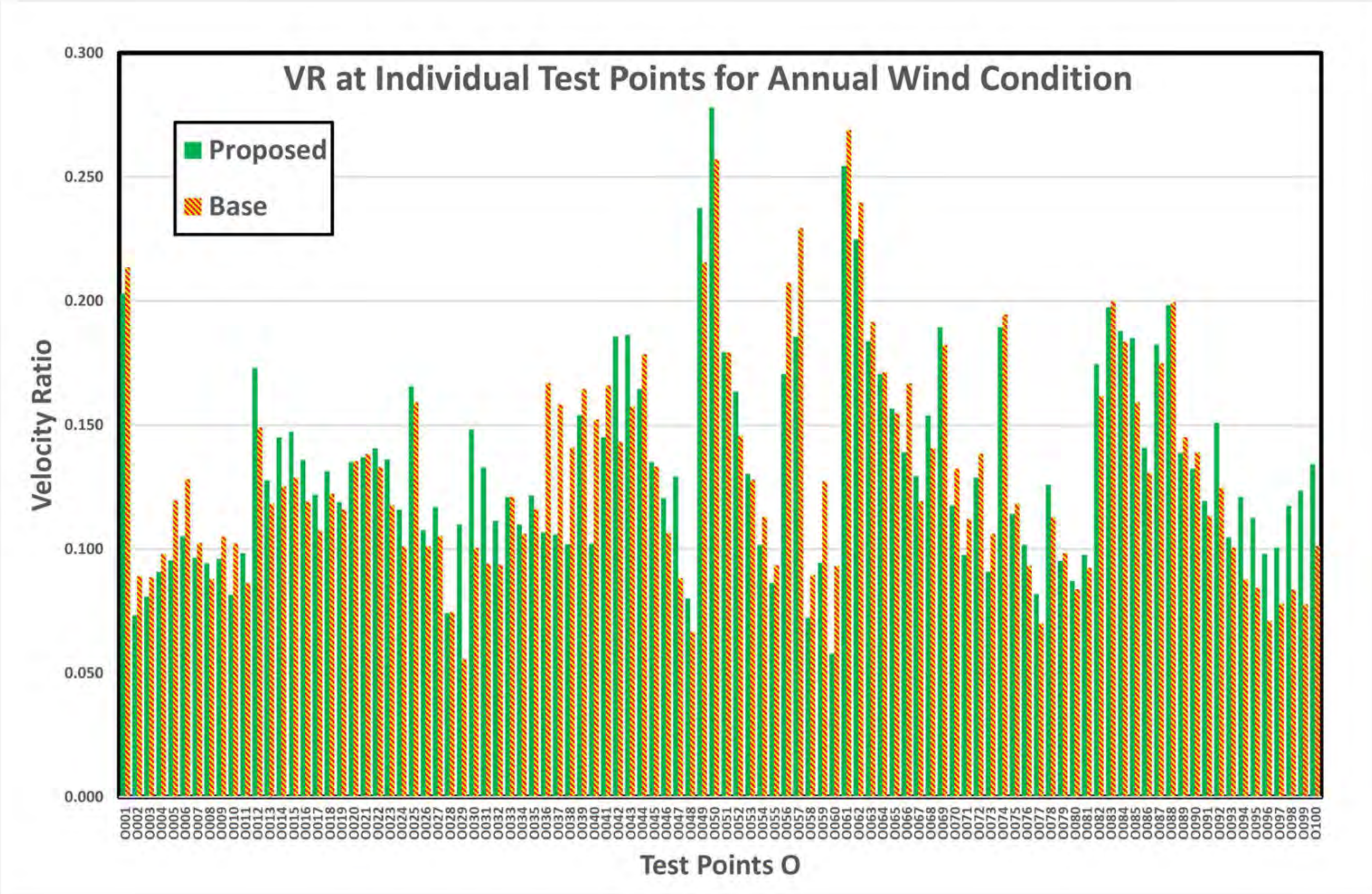
Test Points P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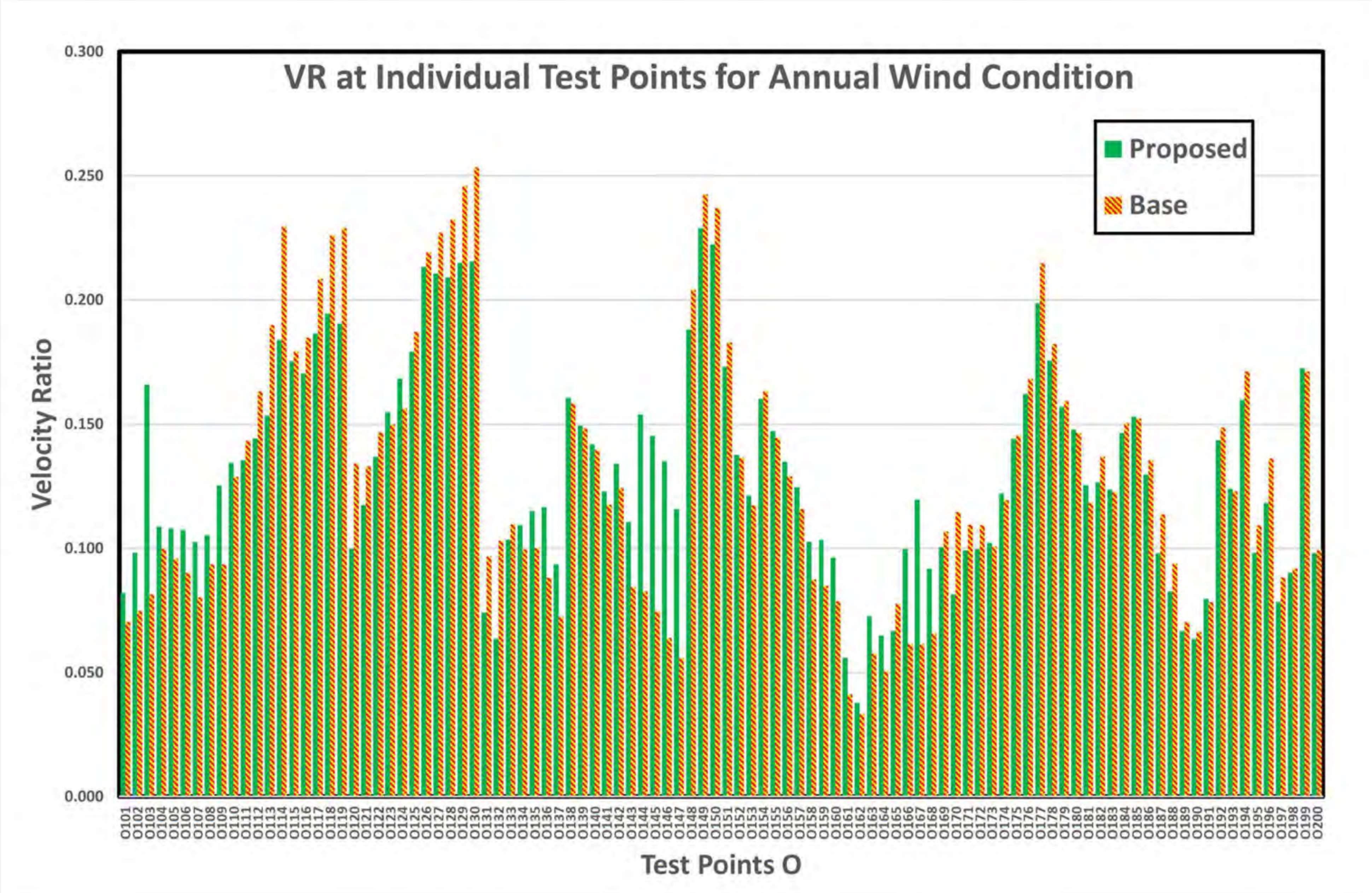
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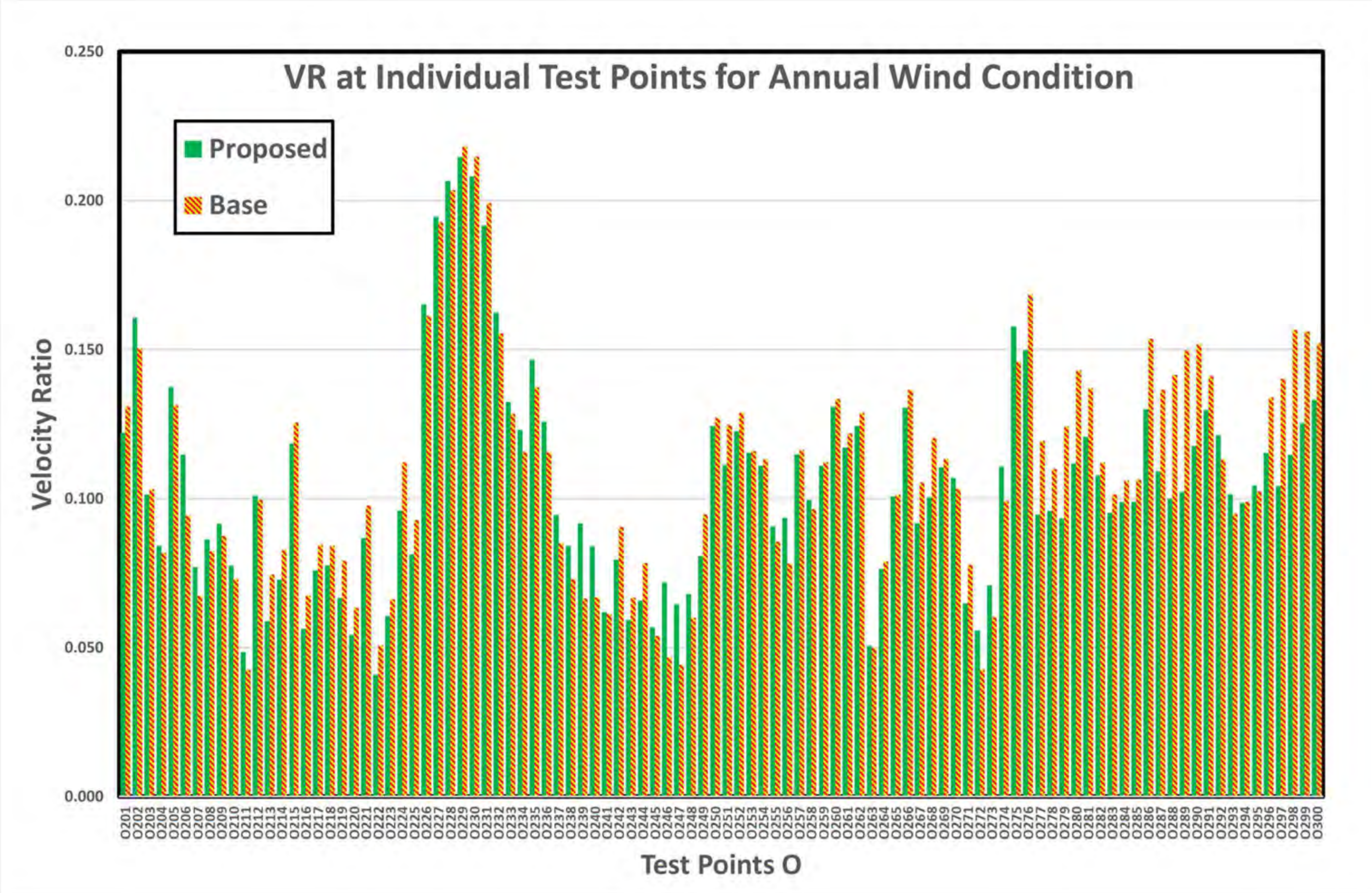

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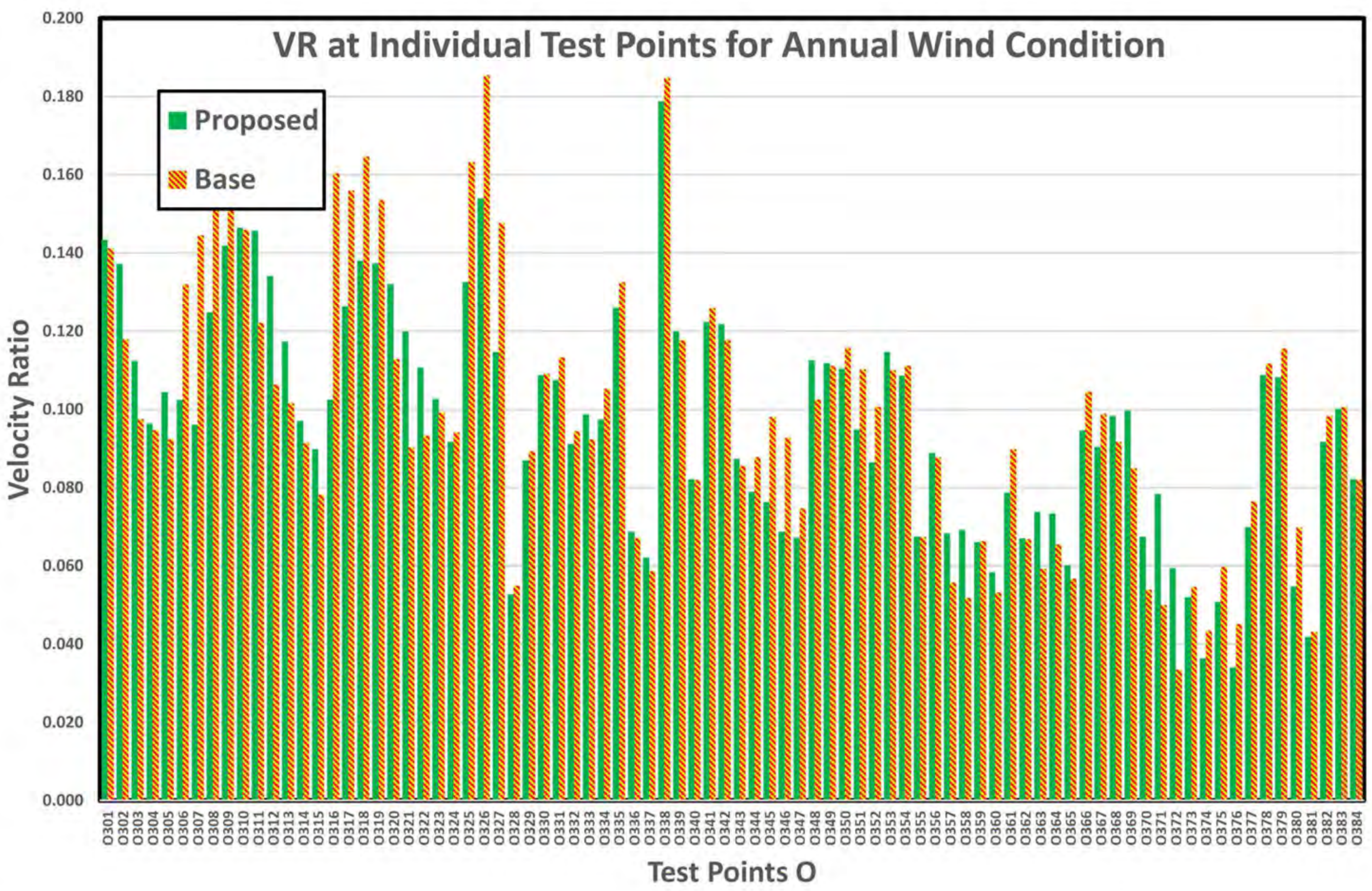
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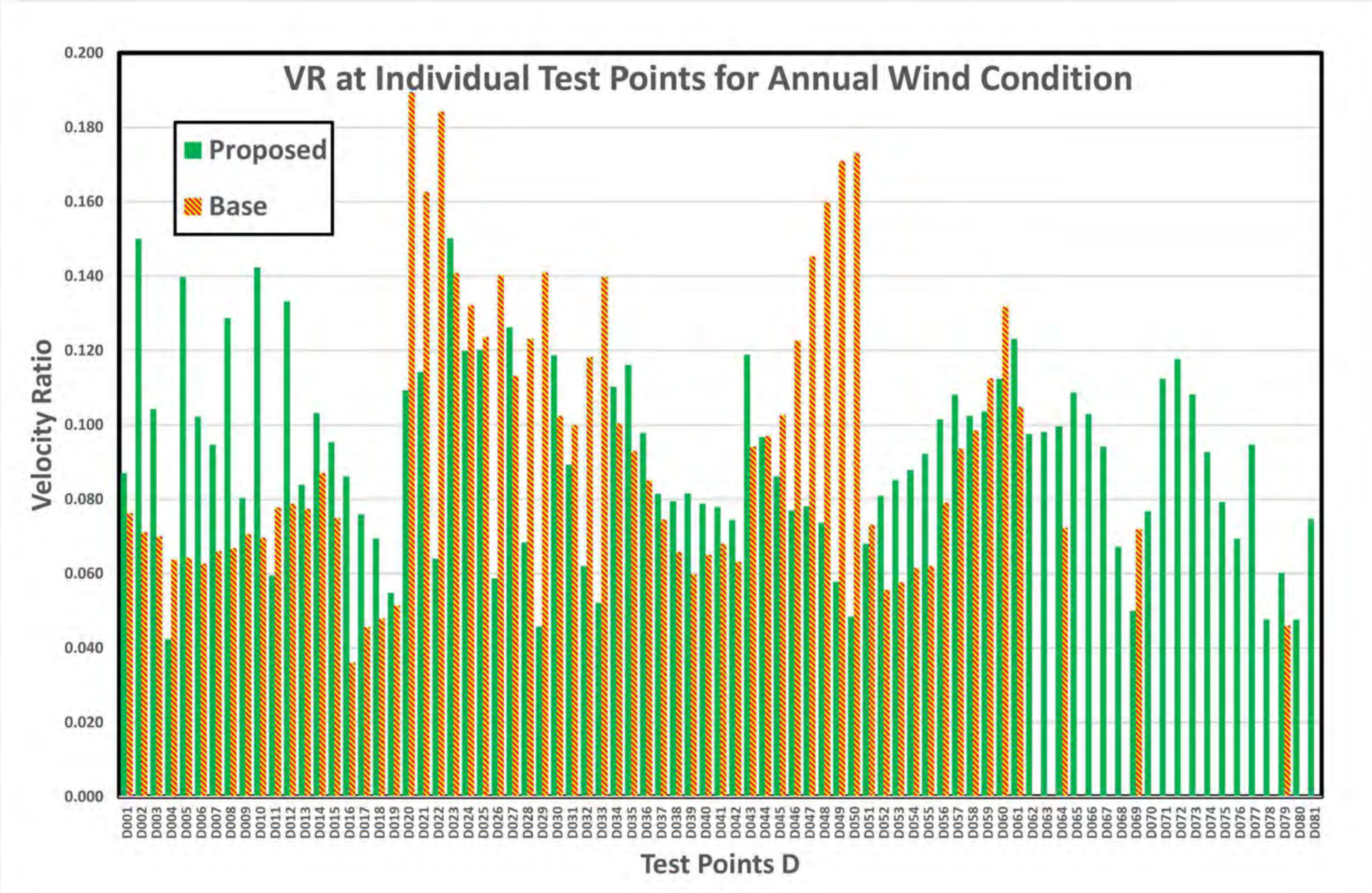
Velocity Ratio
Test Points O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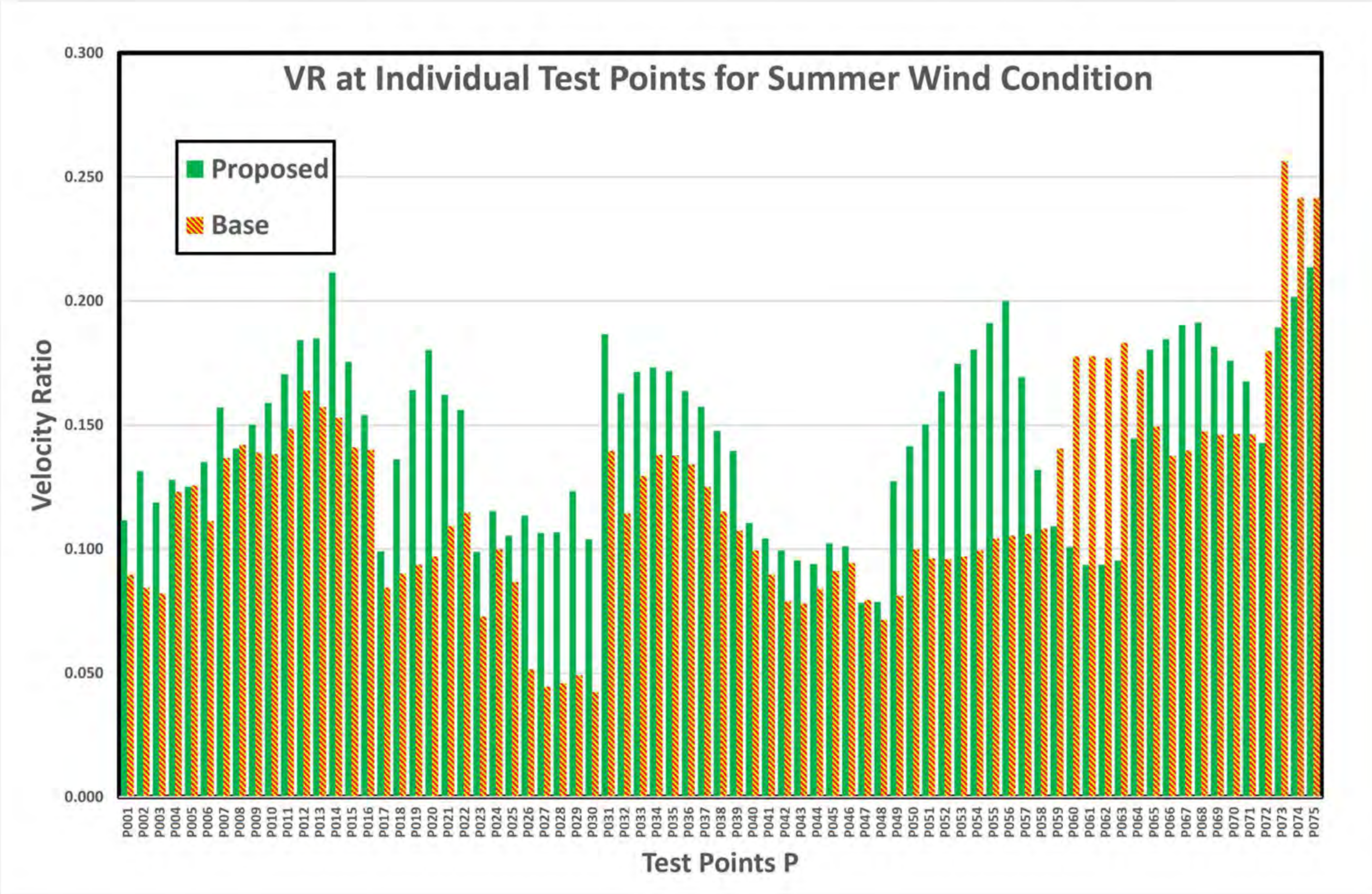
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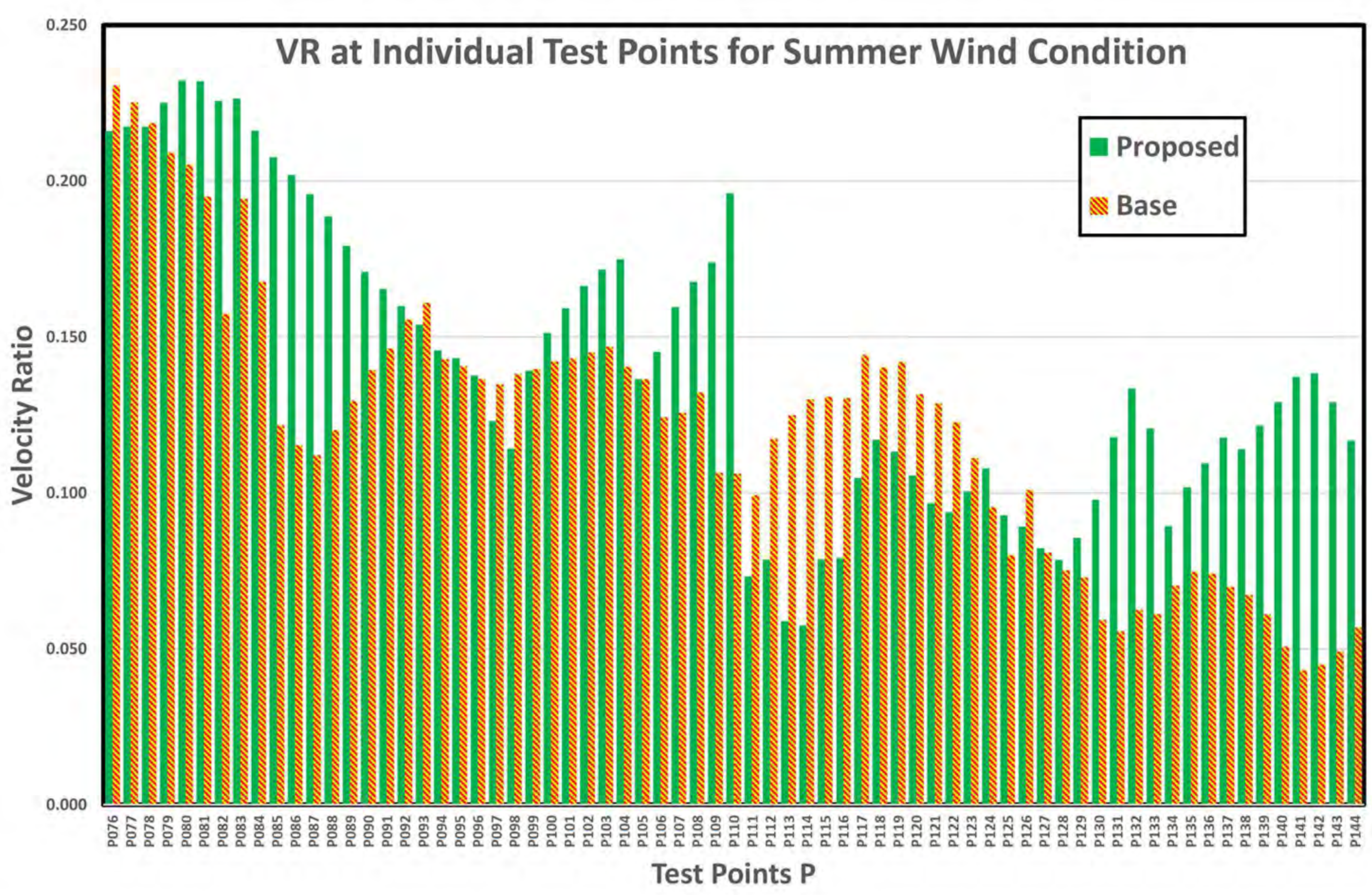
Test Points P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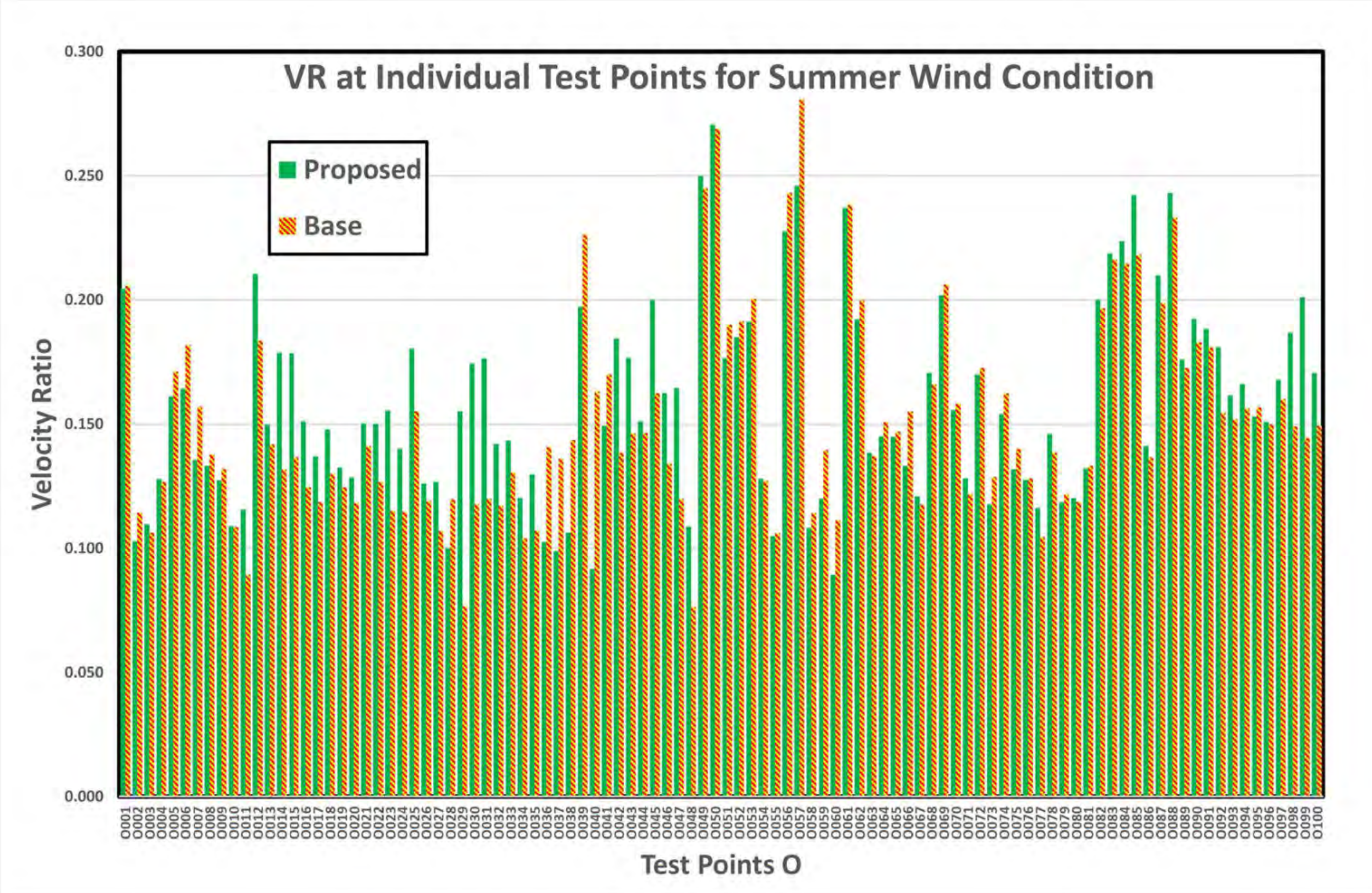
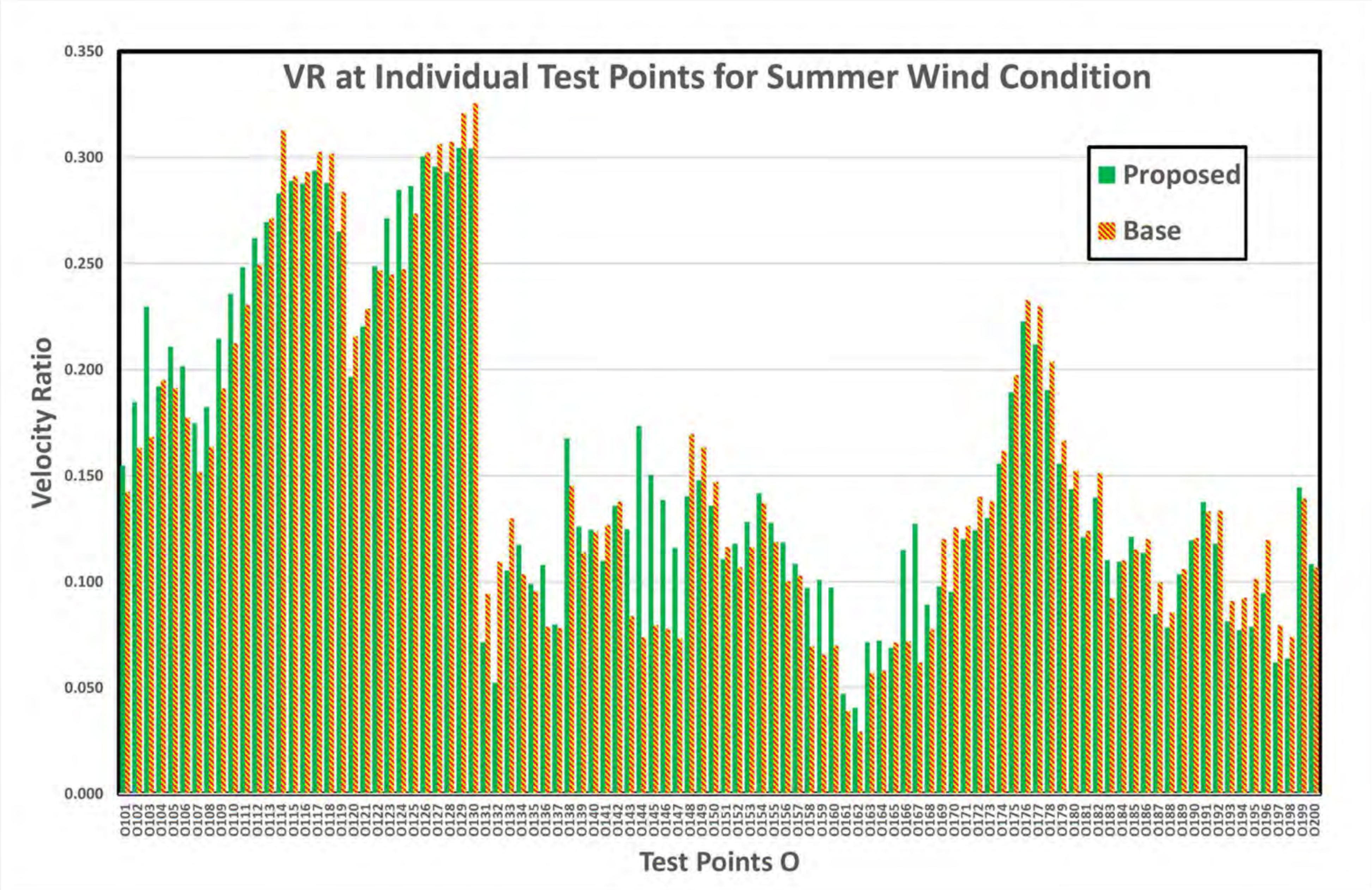
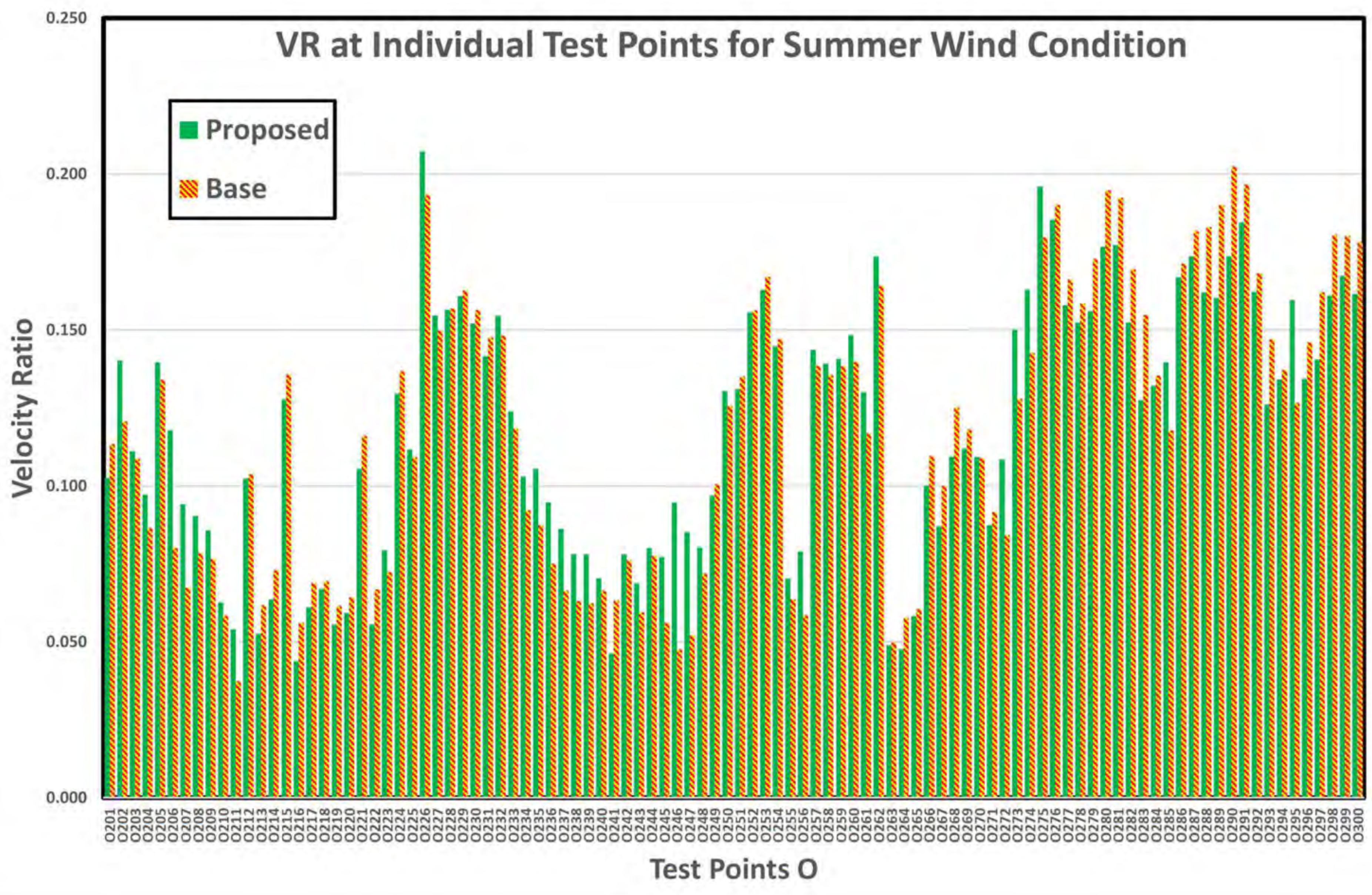
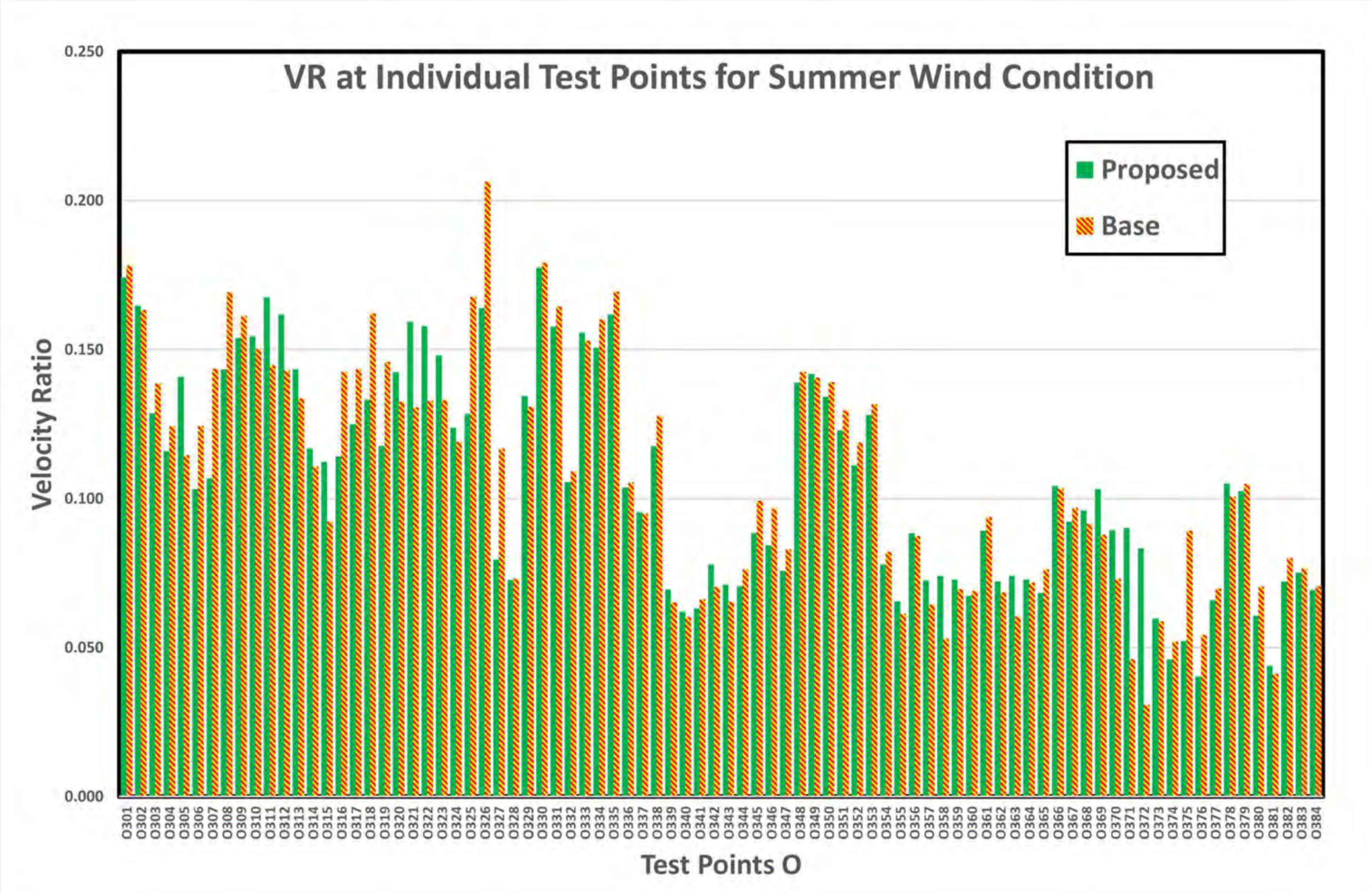
P076 P077 P078 P079 P080 P081 P082 P083 P084 P085 P086 P087 P088 P089 P090 P091 P092 P093 P094 P095 P096 P097 P098 P099 P100 P101 P102 P103 P104 P105 P106 P107 P108 P109 P110 P111 P112 P113 P114 P115 P116 P117 P118 P119 P120 P121 P122 P123 P124 P125 P126 P127 P128 P129 P130 P131 P132 P133 P134 P135 P136 P137 P138 P139 P140 P141 P142 P143 P144
Test Points P


VR at Individual Test Points for Summer Wind Condition
Proposed
Base
Velocity Ratio
0.300
0.250
0.200
0.150
0.100
0.050
0.000
Test Points O
O001 – O100

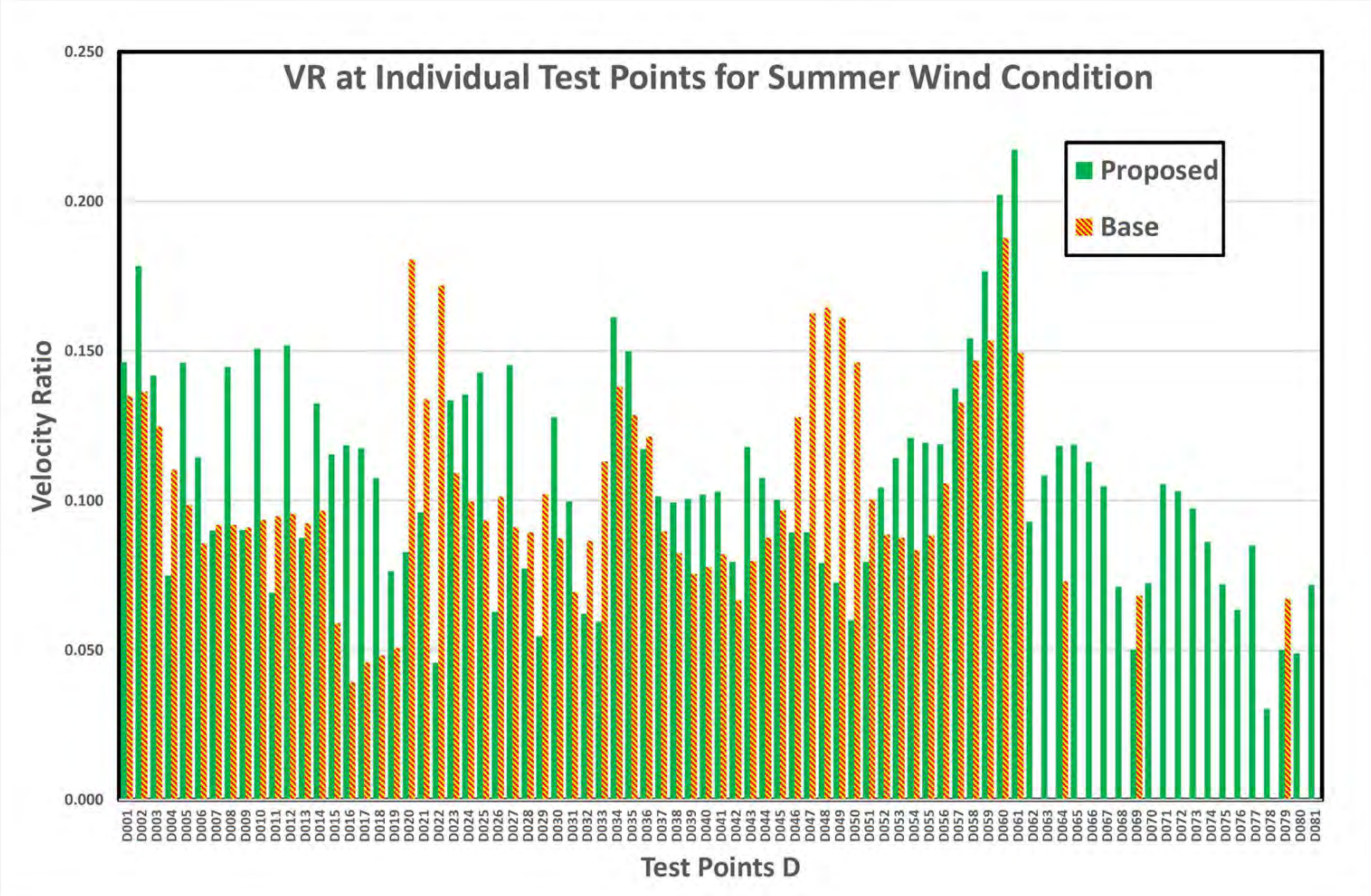


VR at Individual Test Points for Summer Wind Condition
Velocity Ratio
0.000
0.050
0.100
0.150
0.200
0.250
0.300
0.350
Proposed
Base
Test Points O
O101
O200

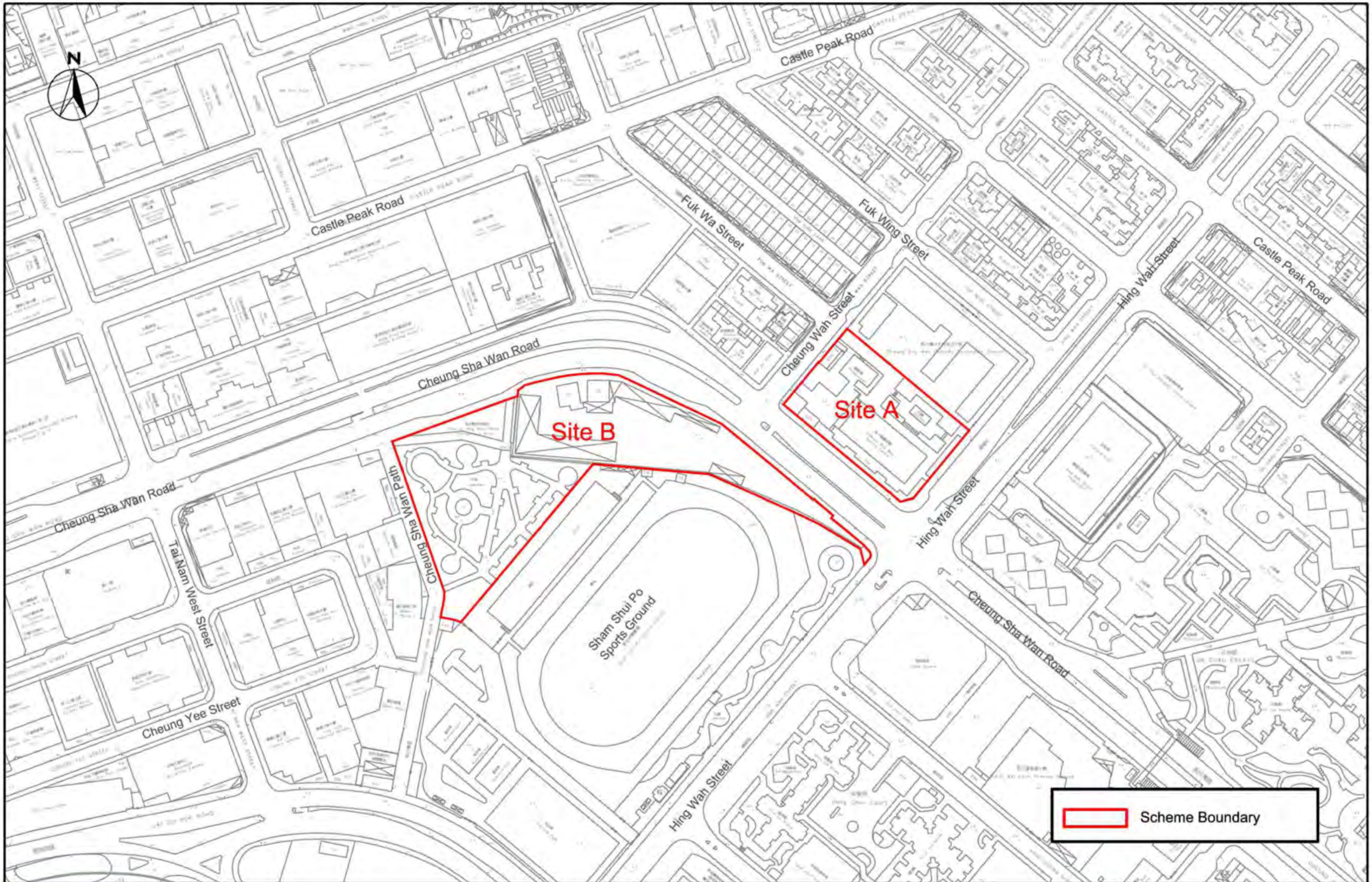

VR at Individual Test Points for Summer Wind Condition
Proposed
Base
Velocity Ratio
0.250
0.200
0.150
0.100
0.050
0.000
O201 O202 O203 O204 O205 O206 O207 O208 O209 O210 O211 O212 O213 O214 O215 O216 O217 O218 O219 O220 O221 O222 O223 O224 O225 O226 O227 O228 O229 O230 O231 O232 O233 O234 O235 O236 O237 O238 O239 O240 O241 O242 O243 O244 O245 O246 O247 O248 O249 O250 O251 O252 O253 O254 O255 O256 O257 O258 O259 O260 O261 O262 O263 O264 O265 O266 O267 O268 O269 O270 O271 O272 O273 O274 O275 O276 O277 O278 O279 O280 O281 O282 O283 O284 O285 O286 O287 O288 O289 O290 O291 O292 O293 O294 O295 O296 O297 O298 O299 O300
Test Points O



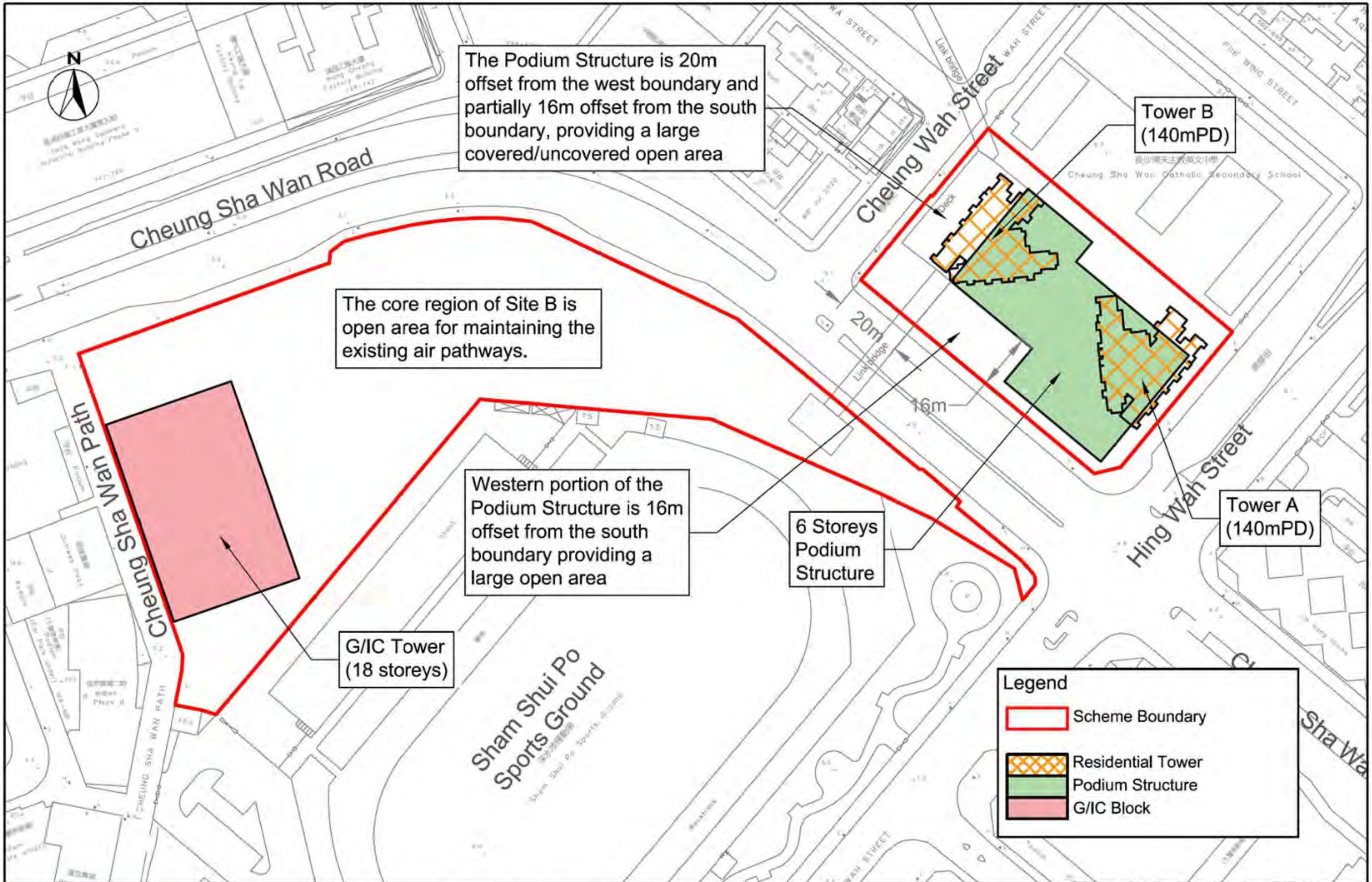
VR at Individual Test Points for Summer Wind Condition
Proposed
Base
Velocity Ratio
0.250
0.200
0.150
0.100
0.050
0.000
Test Points O
O301 O302 O303 O304 O305 O306 O307 O308 O309 O310 O311 O312 O313 O314 O315 O316 O317 O318 O319 O320 O321 O322 O323 O324 O325 O326 O327 O328 O329 O330 O331 O332 O333 O334 O335 O336 O337 O338 O339 O340 O341 O342 O343 O344 O345 O346 O347 O348 O349 O350 O351 O352 O353 O354 O355 O356 O357 O358 O359 O360 O361 O362 O363 O364 O365 O366 O367 O368 O369 O370 O371 O372 O373 O374 O375 O376 O377 O378 O379 O380 O381 O382 O383 O384


VR at Individual Test Points for Summer Wind Condition
Proposed
Base
Velocity Ratio
0.250
0.200
0.150
0.100
0.050
0.000
D001 D002 D003 D004 D005 D006 D007 D008 D009 D010 D011 D012 D013 D014 D015 D016 D017 D018 D019 D020 D021 D022 D023 D024 D025 D026 D027 D028 D029 D030 D031 D032 D033 D034 D035 D036 D037 D038 D039 D040 D041 D042 D043 D044 D045 D046 D047 D048 D049 D050 D051 D052 D053 D054 D055 D056 D057 D058 D059 D060 D061 D062 D063 D064 D065 D066 D067 D068 D069 D070 D071 D072 D073 D074 D075 D076 D077 D078 D079 D080 D081
Test Points D

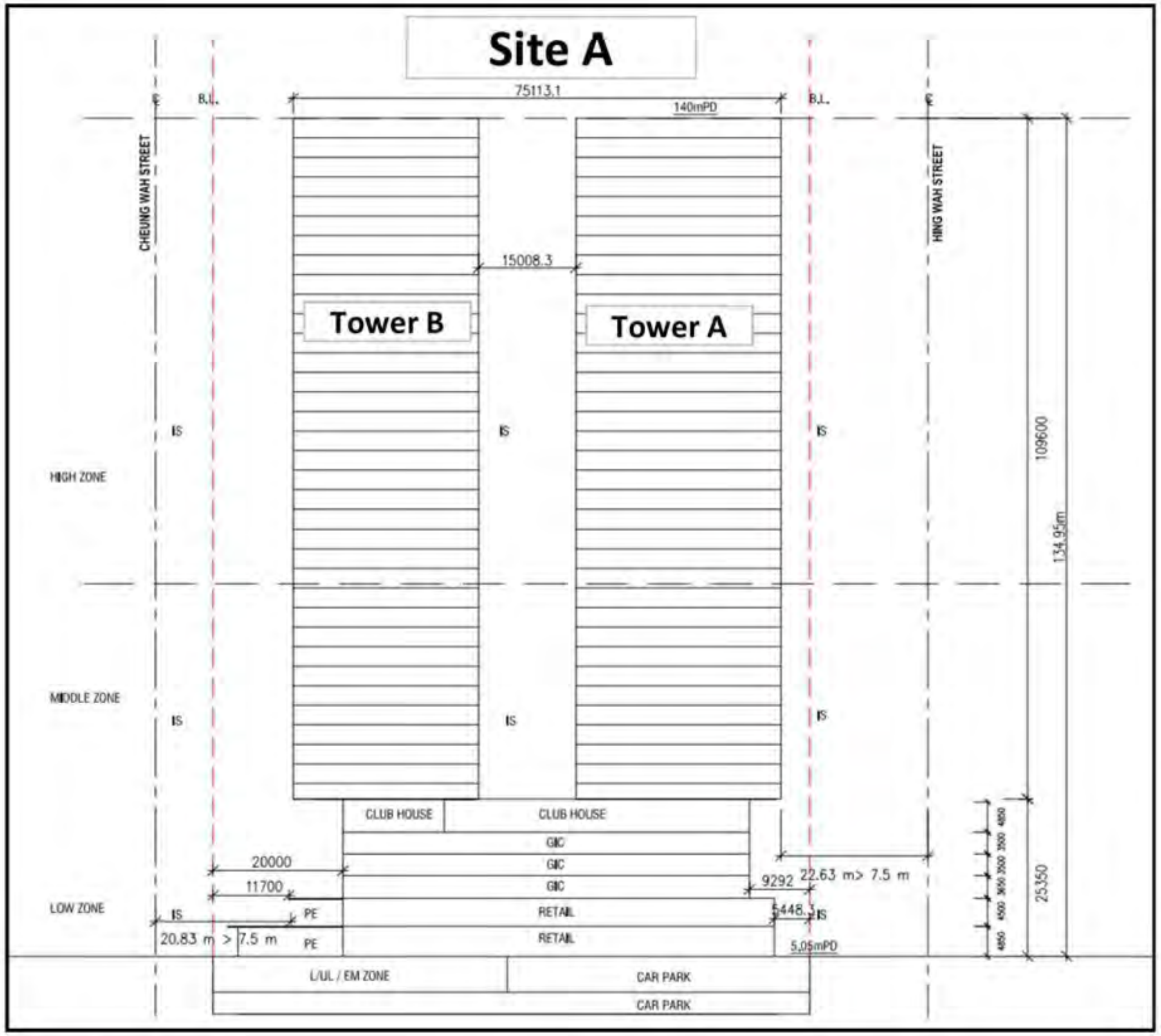
FIGURES

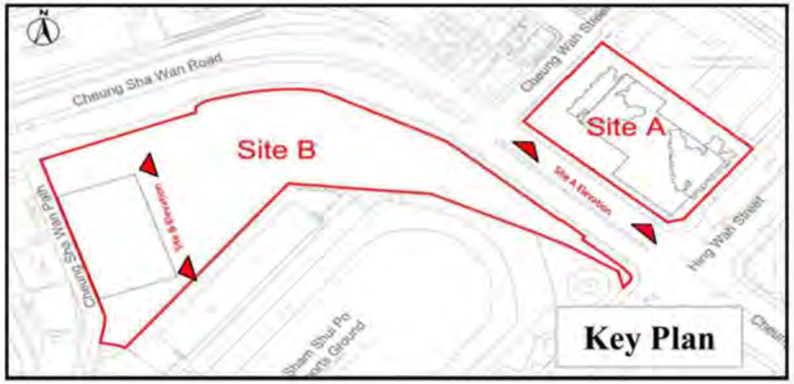


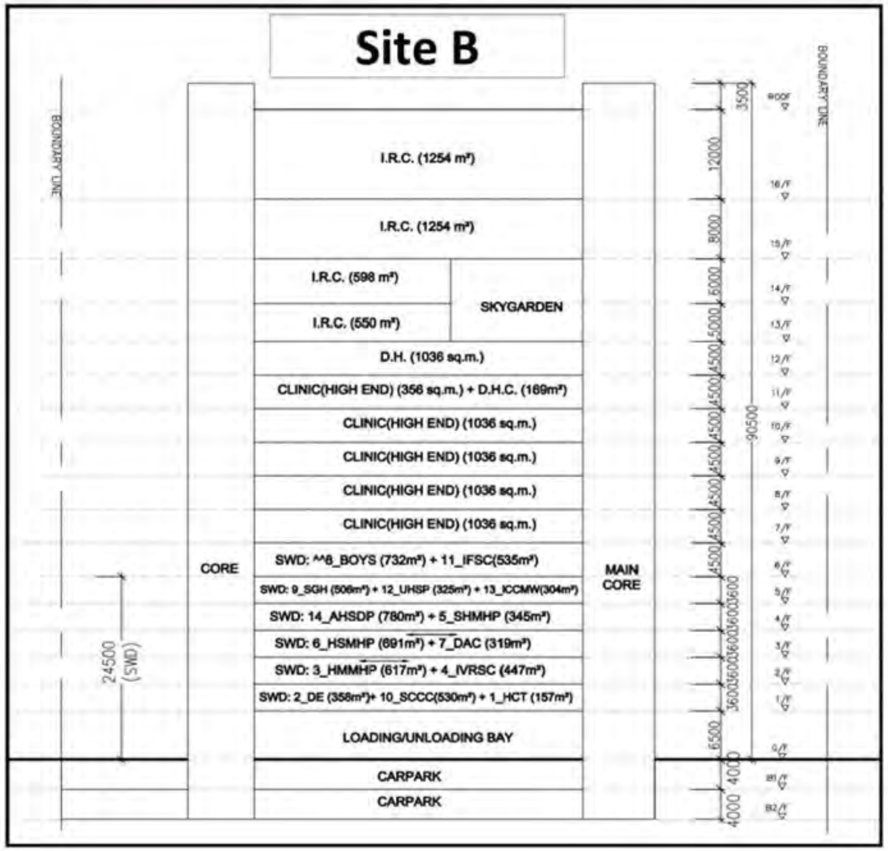
Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)	SCALE	1:2000 @ A3	DATE	APR 2021
		CHECK	KC	DRAWN	CC
	Project Site Location	JOB No.	IA19021-SSPAA1	DRAWING No. 1-1	REV -



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Notional Block Plan of the Scheme (SSP-018)	SCALE 1:1000 @ A3	DATE SEP 2021		
		CHECK KC	DRAWN CC		
		JOB No. IA19021-SSPAA1	DRAWING No. 1-2	REV -	







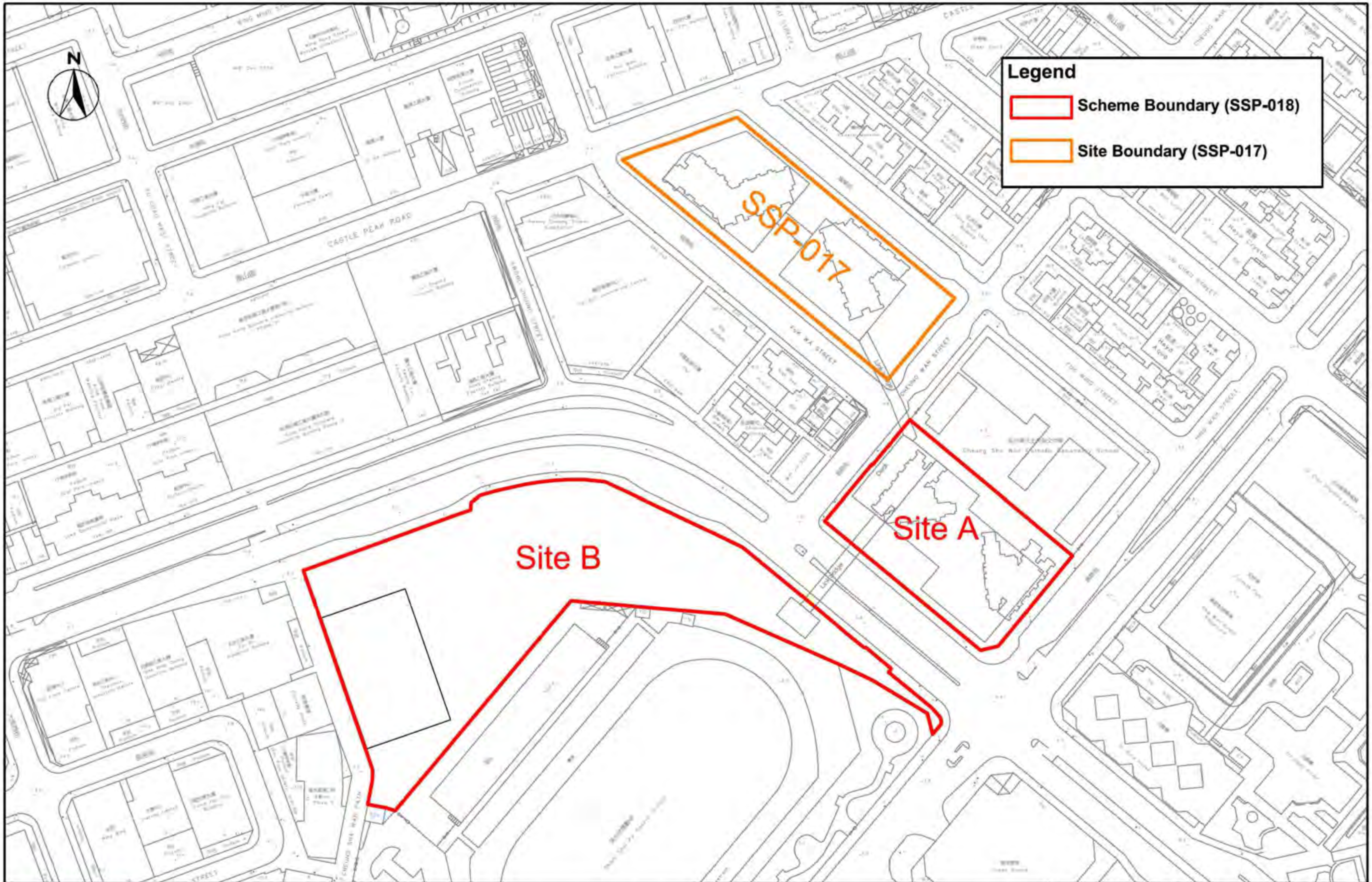
Remark:
Notional Design subject to change at detailed design stage

CINOTECH consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Notional Section Plan of the Scheme

SCALE	N.T.S.	DATE	Jun-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021-SSPAA1	FIGURE NO. 1-3	REV. -



SCALE	1:1500 @ A3	DATE	SEP 2021	
CHECK	KC	DRAWN	CC	
JOB No.	IA19021-SSPAA1	DRAWING No.	1-4	REV -

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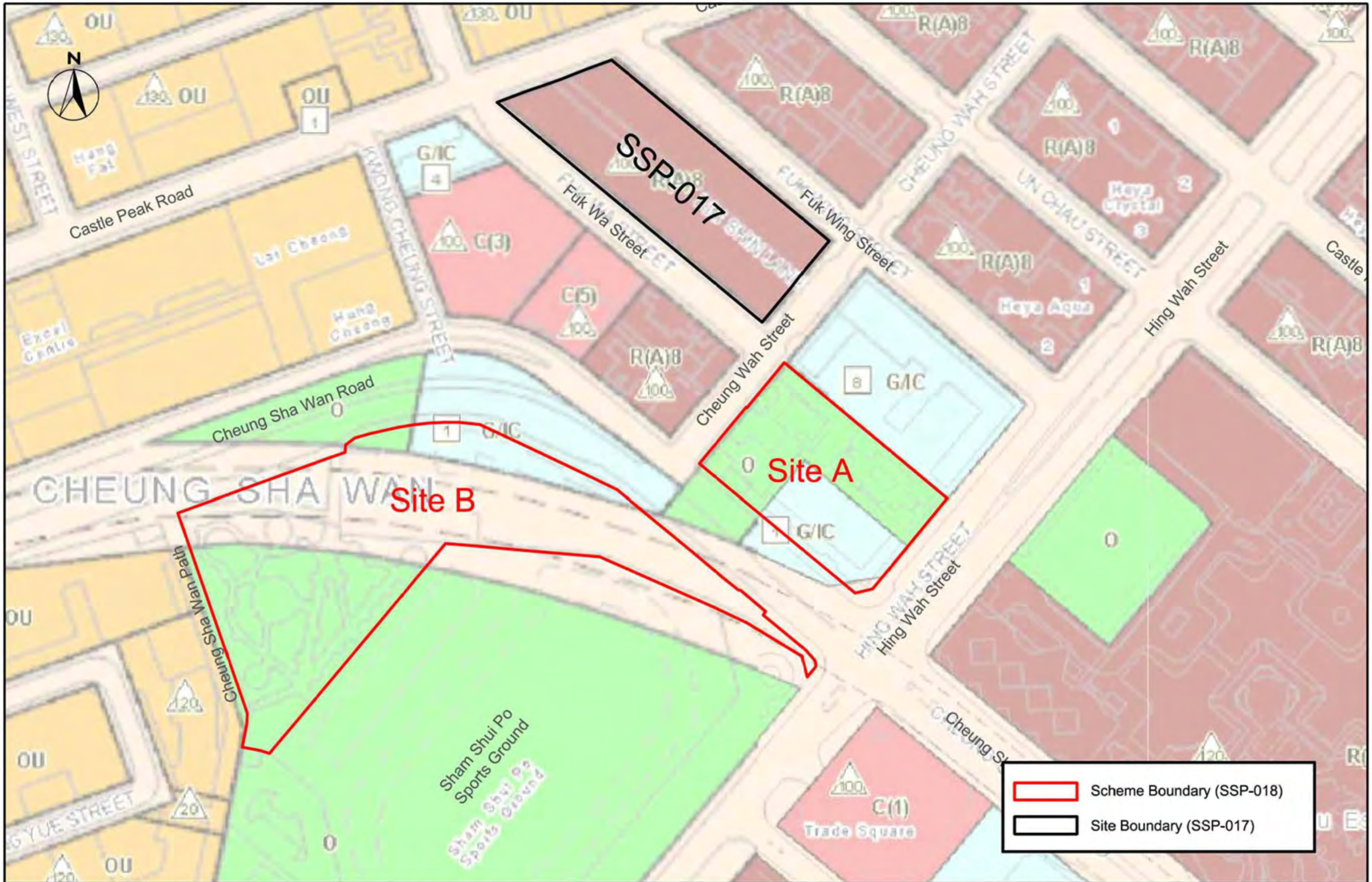
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Planned URA's Project in the Vicinity (SSP-017)

CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)	SCALE	1:1000 @ A3	DATE	SEP 2021
		CHECK	KC	DRAWN	CC
	Notional Block Plan of the URA Project (SSP-017)	JOB No.	IA19021-SSPAA1	DRAWING No.	1-5
				REV	-

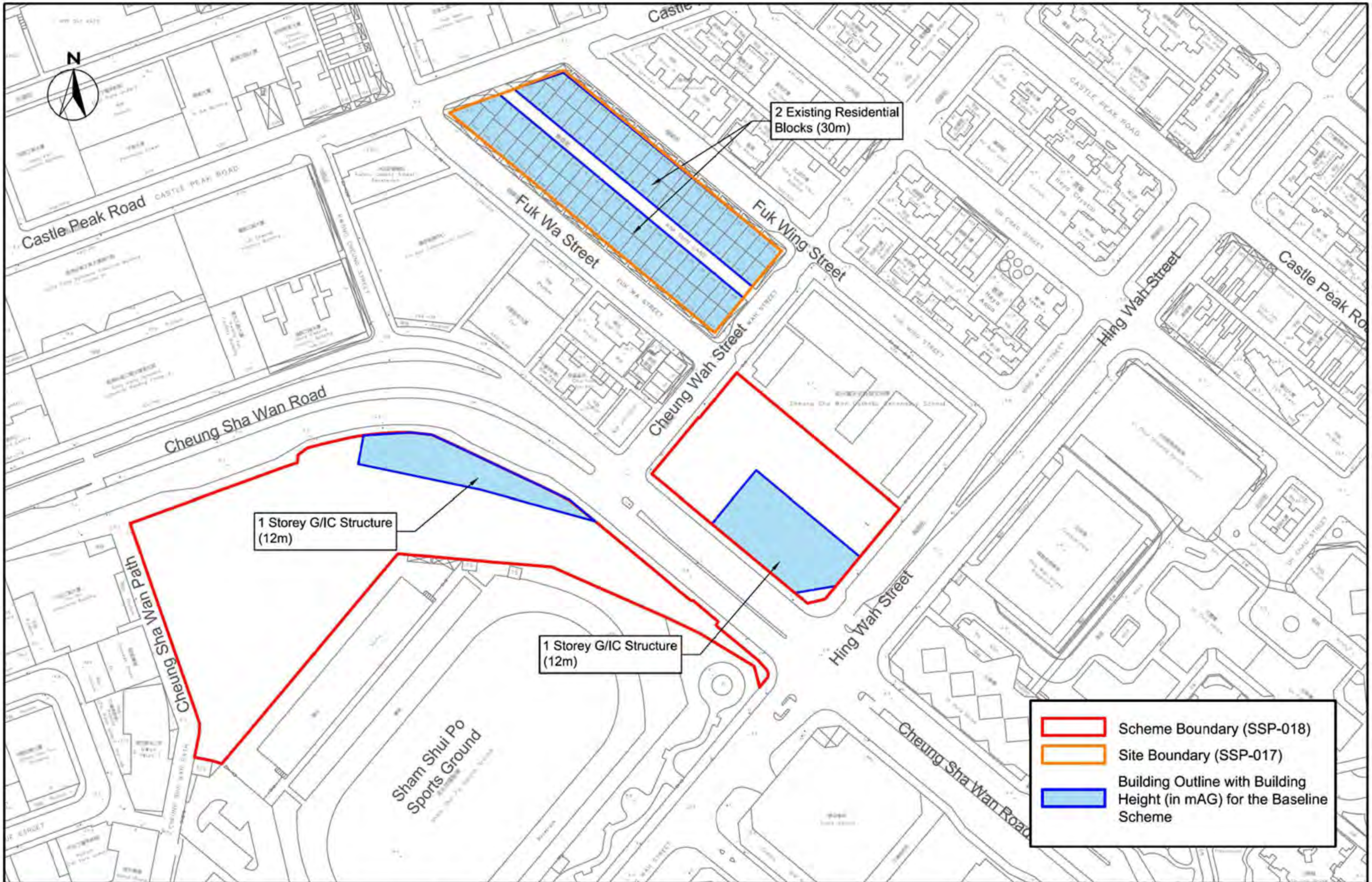


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

OZP Capture from Approved Hung Hom Outline Zoning Plan No. S/K5/37

SCALE	1:1000 @ A3	DATE	SEP 2021		
CHECK	KC	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	1-6	REV	-

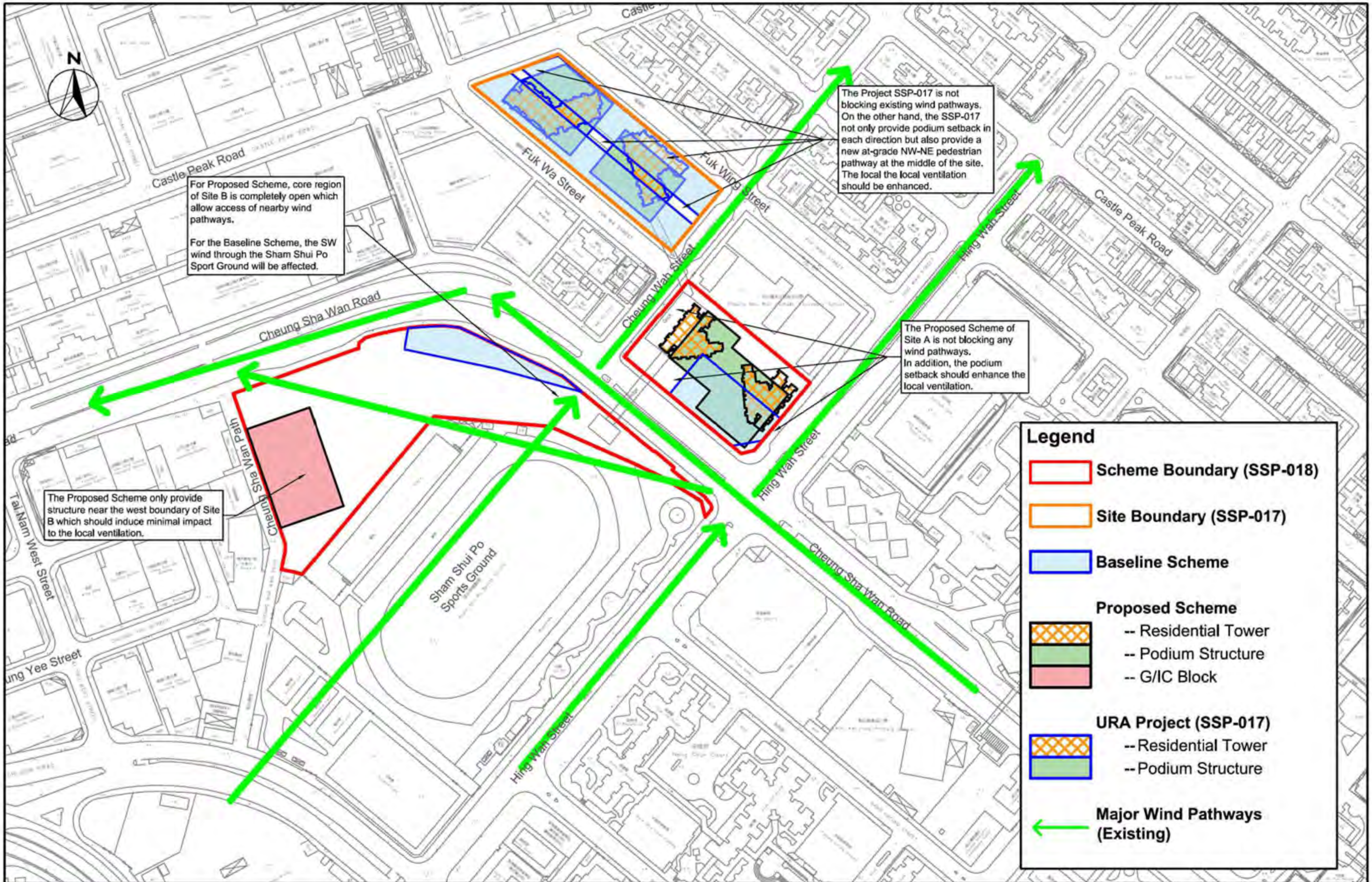


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Notional Block Plan of the Baseline Scheme

SCALE	1:1000 @ A3	DATE	AUG 2021		
CHECK	KC	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	1-7	REV	-



CINOTECH
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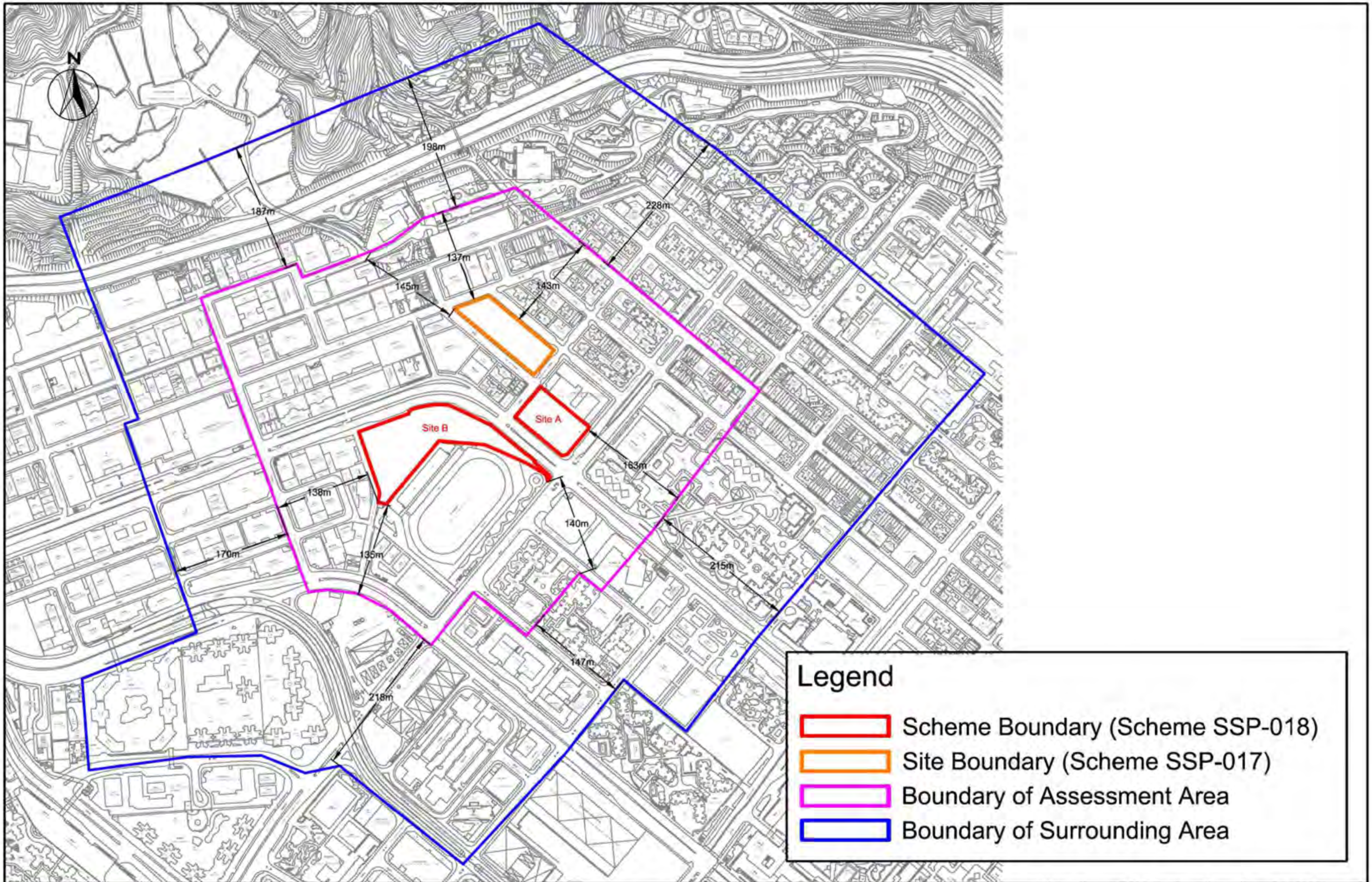
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Comparison of the Schemes

SCALE	1:2000 @ A3	DATE	SEP 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No.	1-8
REV	-		

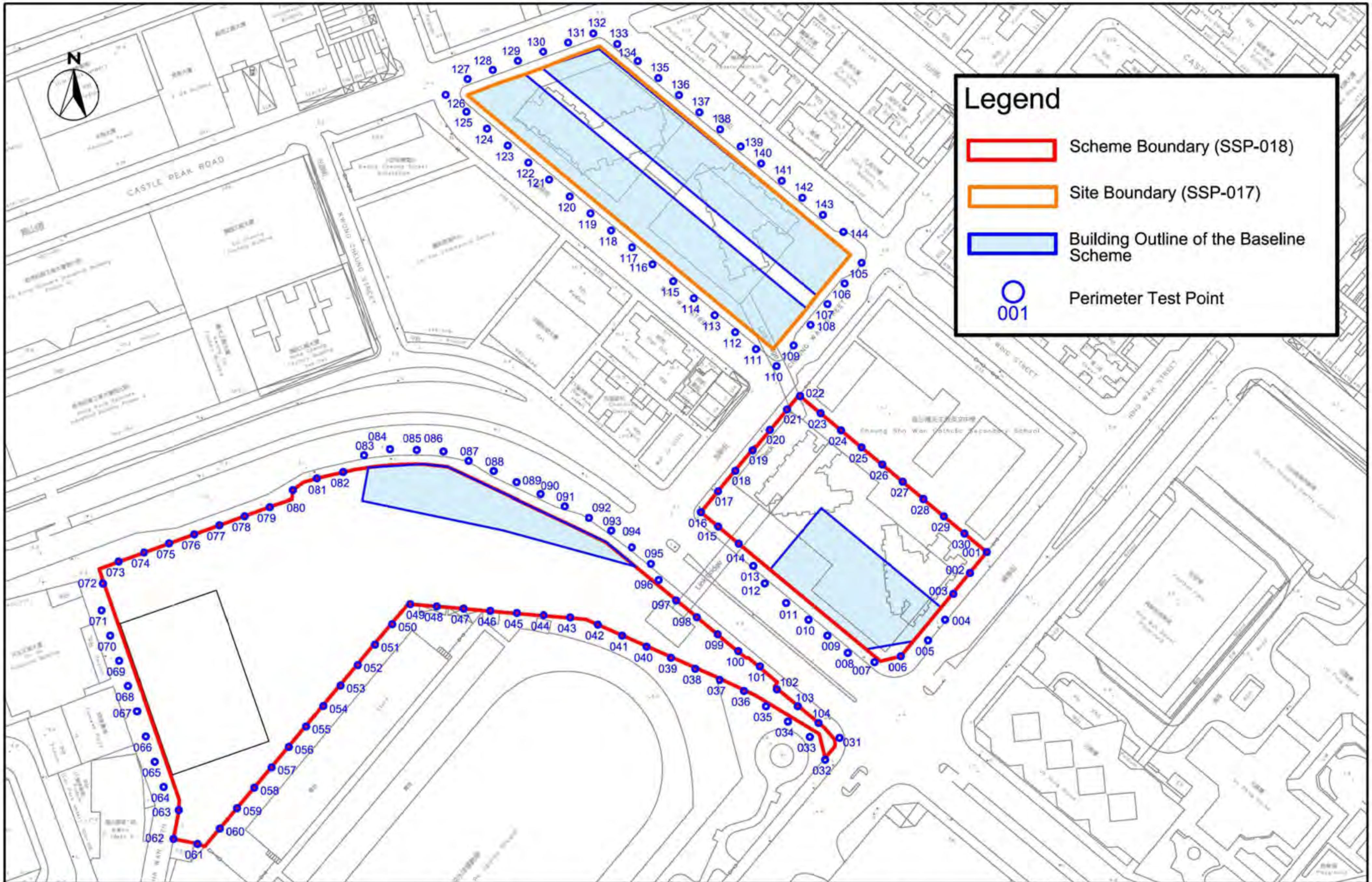


Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Assessment Area and Surrounding Area

SCALE	1:5000 @ A3	DATE	MAY 2021		
CHECK	KC	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	3-1	REV	-

CINOTECH
Cinotech Consultants Limited



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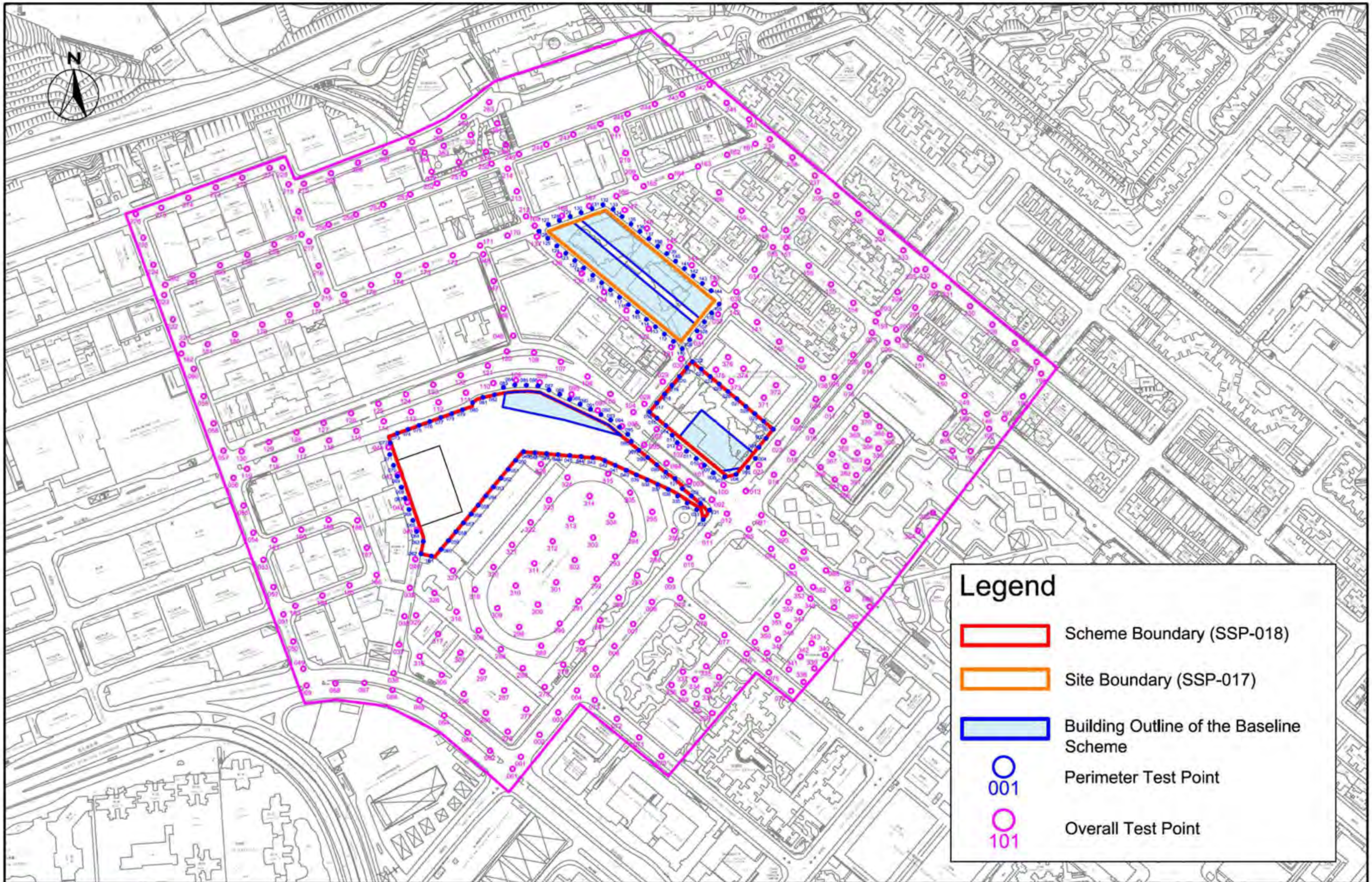
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Perimeter Test Point

SCALE	1:1300 @ A3	DATE	JUN 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No.	3-2b
		REV	-

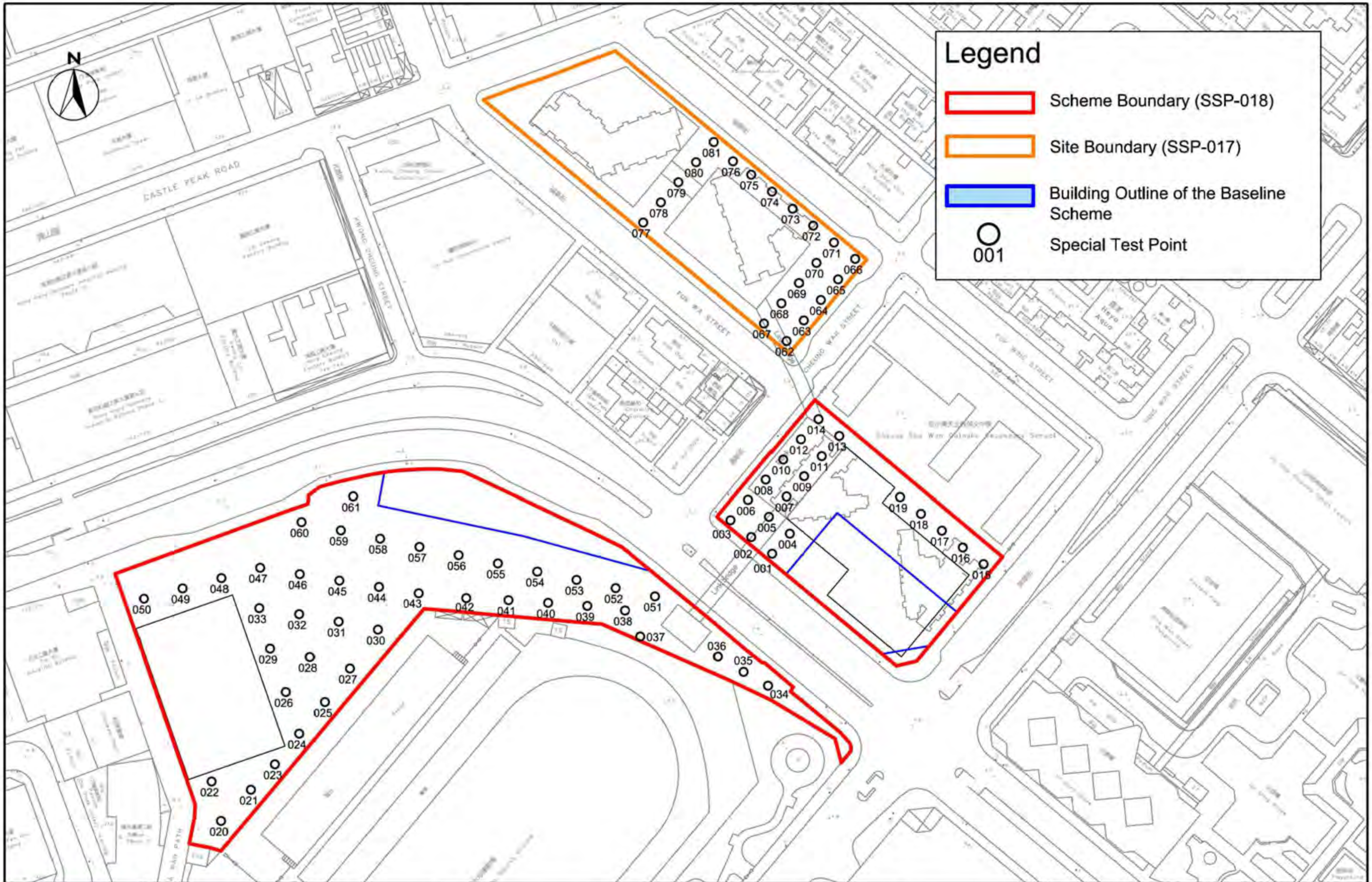


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Overall Test Point

SCALE	1:3000 @ A3	DATE	JUN 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No. 3-3	REV -

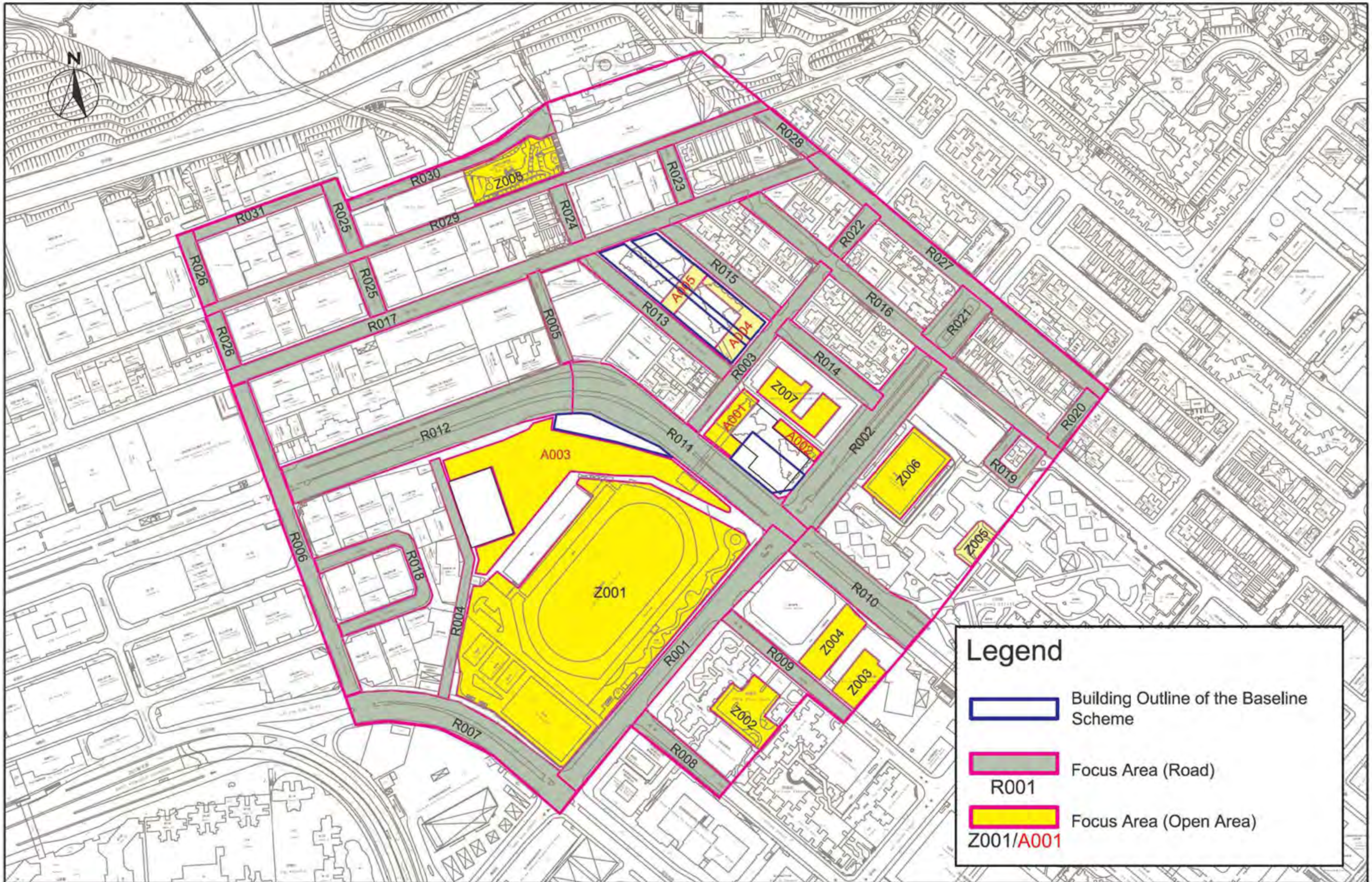


CINOTECH
Cinotech Consultants Limited

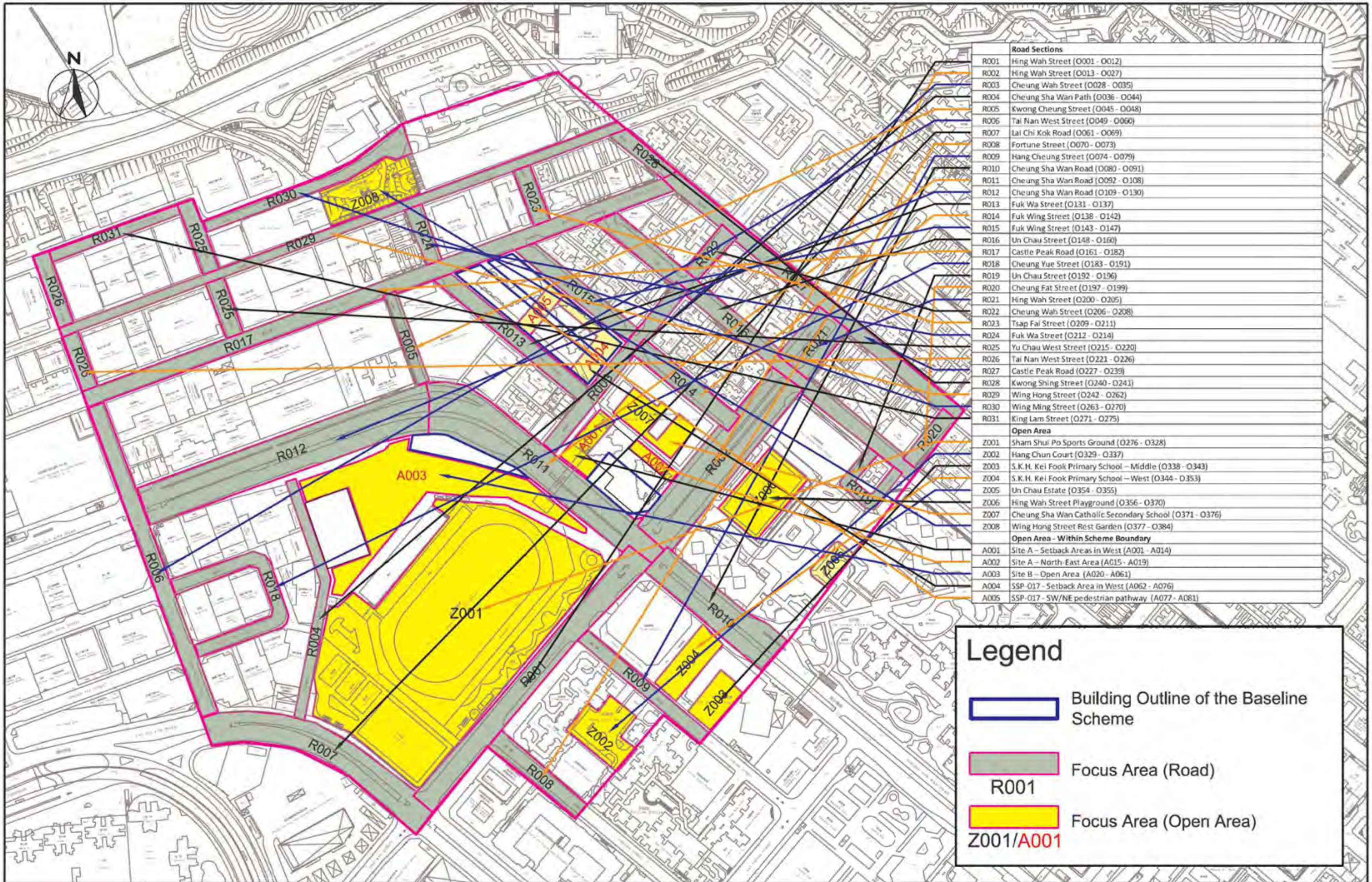
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Special Test Point

SCALE	1:1000 @ A3	DATE	SEP 2021	
CHECK	KC	DRAWN	CC	
JOB No.	IA19021-SSPAA1	DRAWING No. 3-4		REV -



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)	SCALE	1:3000 @ A3	DATE	Sept 2021
		CHECK	KC	DRAWN	CC
	Focus Areas	JOB No.	IA19021-SSPAA1	DRAWING No. 3-5a	REV -



	Road Sections
R001	Hing Wah Street (O001 - O012)
R002	Hing Wah Street (O013 - O027)
R003	Cheung Wah Street (O028 - O035)
R004	Cheung Sha Wan Path (O036 - O044)
R005	Kwong Cheung Street (O045 - O048)
R006	Tai Nan West Street (O049 - O060)
R007	Lai Chi Kok Road (O061 - O069)
R008	Fortune Street (O070 - O073)
R009	Hang Cheung Street (O074 - O079)
R010	Cheung Sha Wan Road (O080 - O091)
R011	Cheung Sha Wan Road (O092 - O108)
R012	Cheung Sha Wan Road (O109 - O130)
R013	Fuk Wa Street (O131 - O137)
R014	Fuk Wing Street (O138 - O142)
R015	Fuk Wing Street (O143 - O147)
R016	Un Chau Street (O148 - O160)
R017	Castle Peak Road (O161 - O182)
R018	Cheung Yue Street (O183 - O191)
R019	Un Chau Street (O192 - O196)
R020	Cheung Fat Street (O197 - O199)
R021	Hing Wah Street (O200 - O205)
R022	Cheung Wah Street (O206 - O208)
R023	Tsap Fai Street (O209 - O211)
R024	Fuk Wa Street (O212 - O214)
R025	Yu Chau West Street (O215 - O220)
R026	Tai Nan West Street (O221 - O226)
R027	Castle Peak Road (O227 - O239)
R028	Kwong Shing Street (O240 - O241)
R029	Wing Hong Street (O242 - O262)
R030	Wing Ming Street (O263 - O270)
R031	King Lam Street (O271 - O275)
	Open Area
Z001	Sham Shui Po Sports Ground (O276 - O328)
Z002	Hang Chun Court (O329 - O337)
Z003	S.K.H. Kei Fook Primary School – Middle (O338 - O343)
Z004	S.K.H. Kei Fook Primary School – West (O344 - O353)
Z005	Un Chau Estate (O354 - O355)
Z006	Hing Wah Street Playground (O356 - O370)
Z007	Cheung Sha Wan Catholic Secondary School (O371 - O376)
Z008	Wing Hong Street Rest Garden (O377 - O384)
	Open Area - Within Scheme Boundary
A001	Site A – Setback Areas in West (A001 - A014)
A002	Site A – North-East Area (A015 - A019)
A003	Site B – Open Area (A020 - A061)
A004	SSP-017 - Setback Area in West (A062 - A076)
A005	SSP-017 - SW/NE pedestrian pathway (A077 - A081)

Legend

Building Outline of the Baseline Scheme

R001 Focus Area (Road)

Z001/A001 Focus Area (Open Area)

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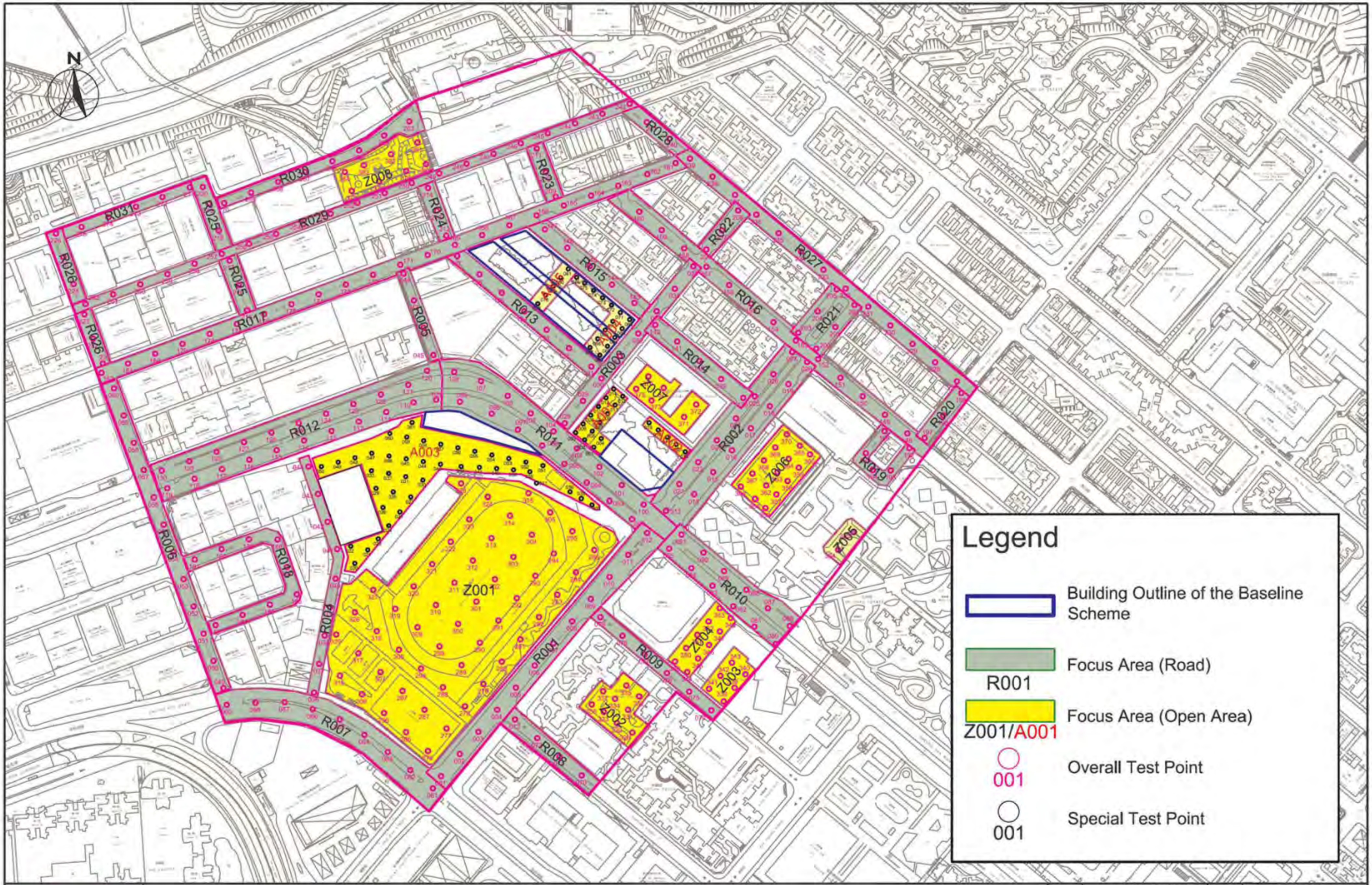
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Focus Areas

SCALE	1:3000 @ A3	DATE	Sept 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No. 3-5b	REV -



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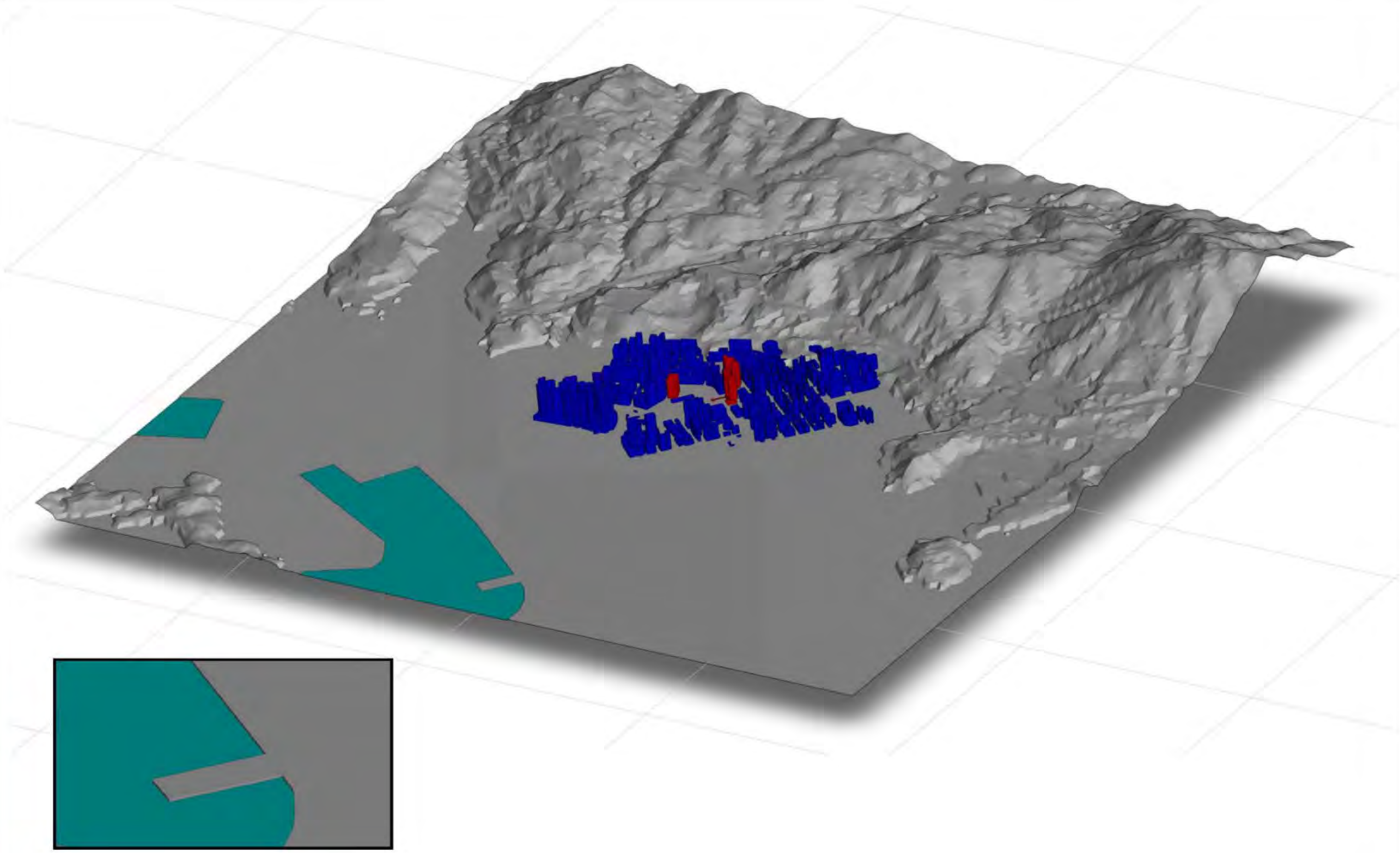
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Focus Areas (with Test Points)

SCALE	1:2500 @ A3	DATE	SEP 2021		
CHECK	KC	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	3-5c	REV	-



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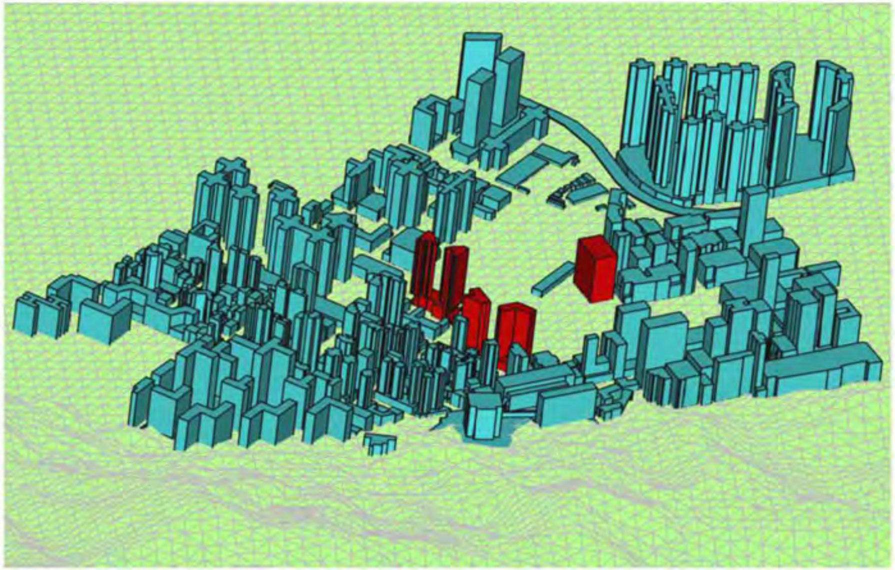
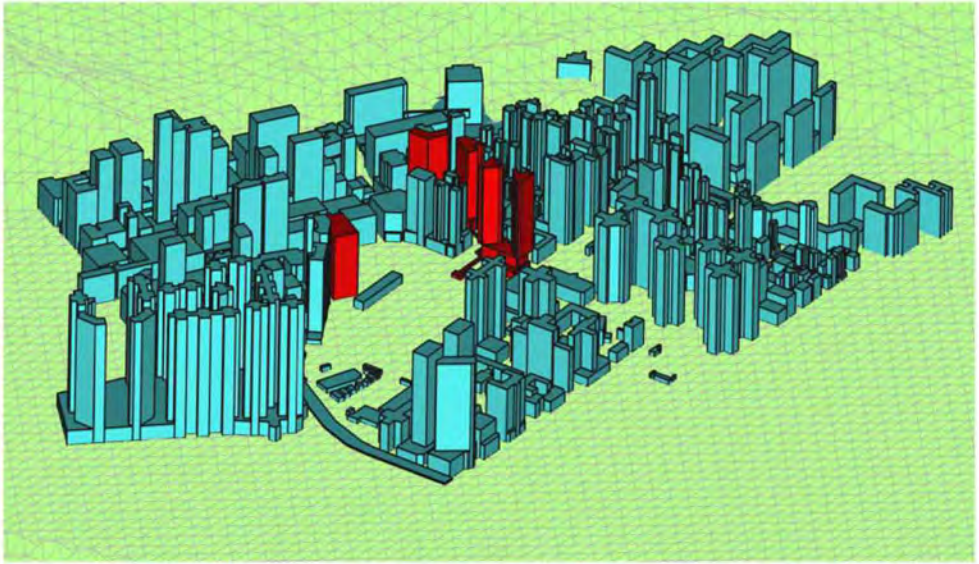
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Terrain Included in the CFD Models (Proposed Model)

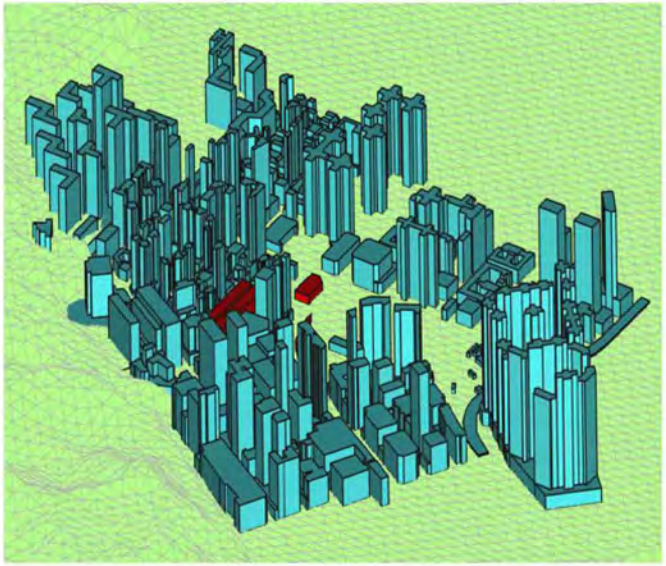
SCALE	N.T.S.	DATE	Sep-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021/KC-AA1-01	FIGURE NO. 3-6a	REV. -



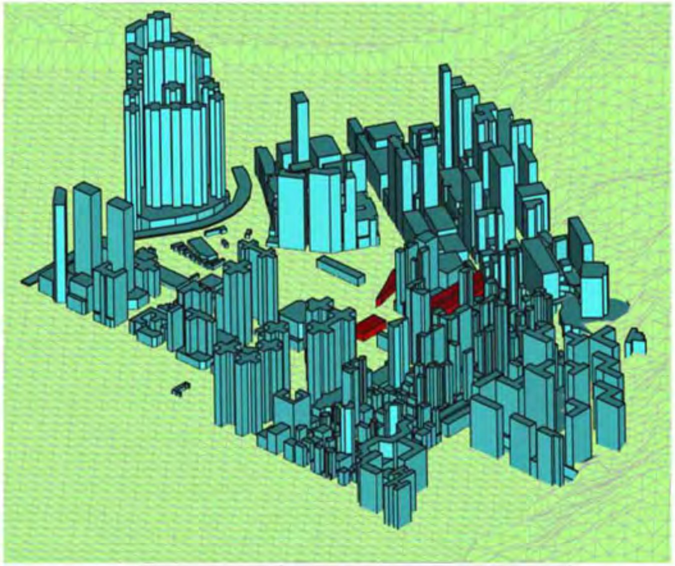
View from North



View from South



View from West



View from East

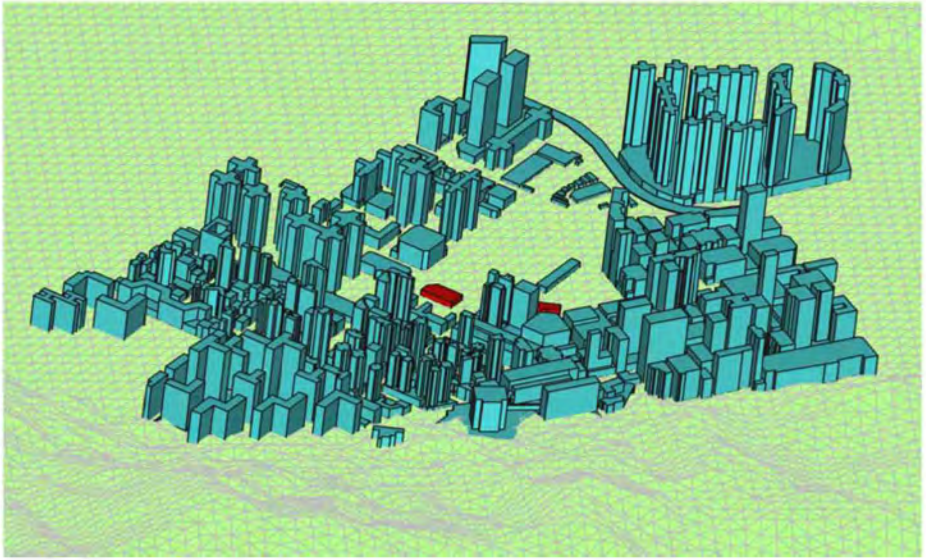
Top View

CINOTECH consultants limited 漢臻

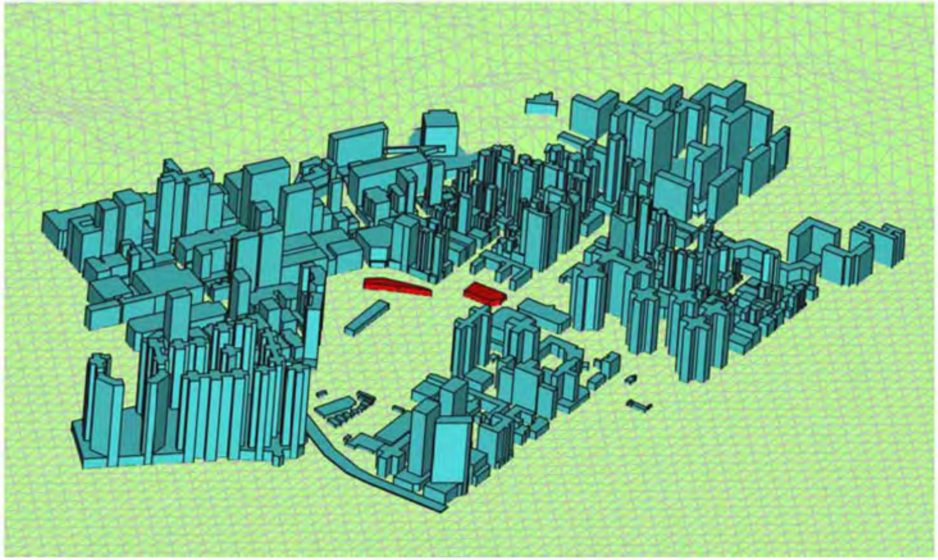
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Buildings Included in the CFD Models - Proposed Model

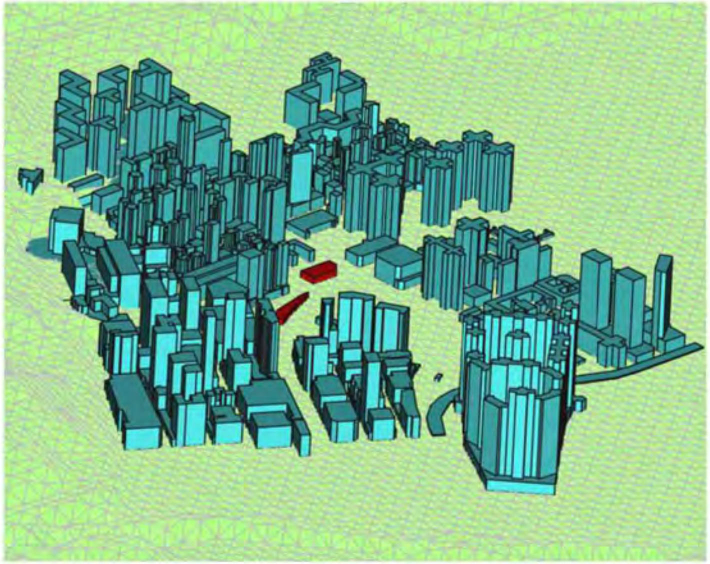
SCALE	N.T.S.	DATE	Sep-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021/KC-AA1-01	FIGURE NO. 3-6b	REV. -



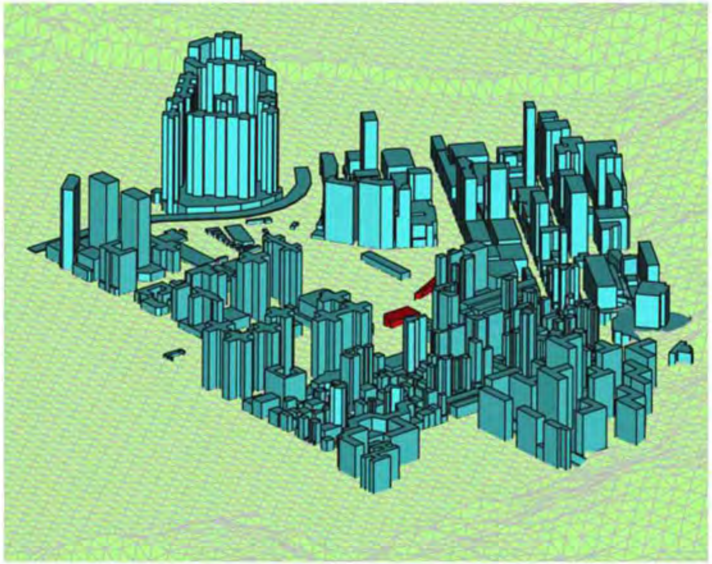
View from North



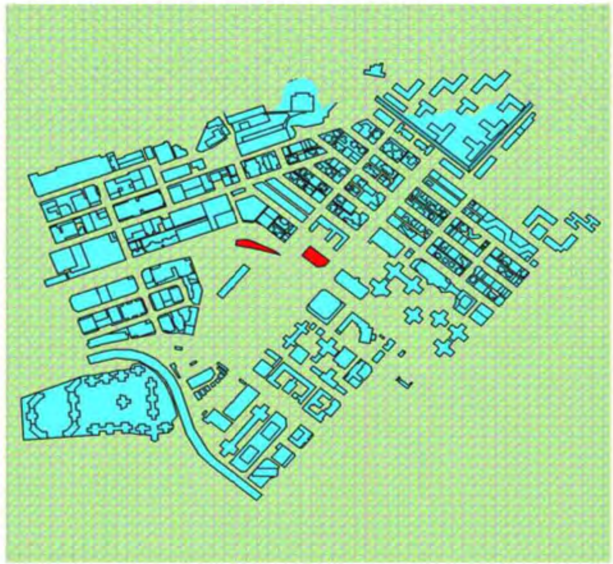
View from South



View from West

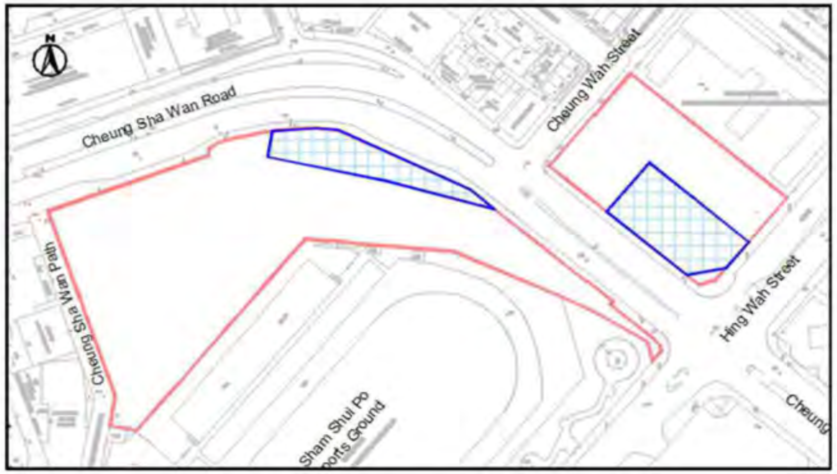


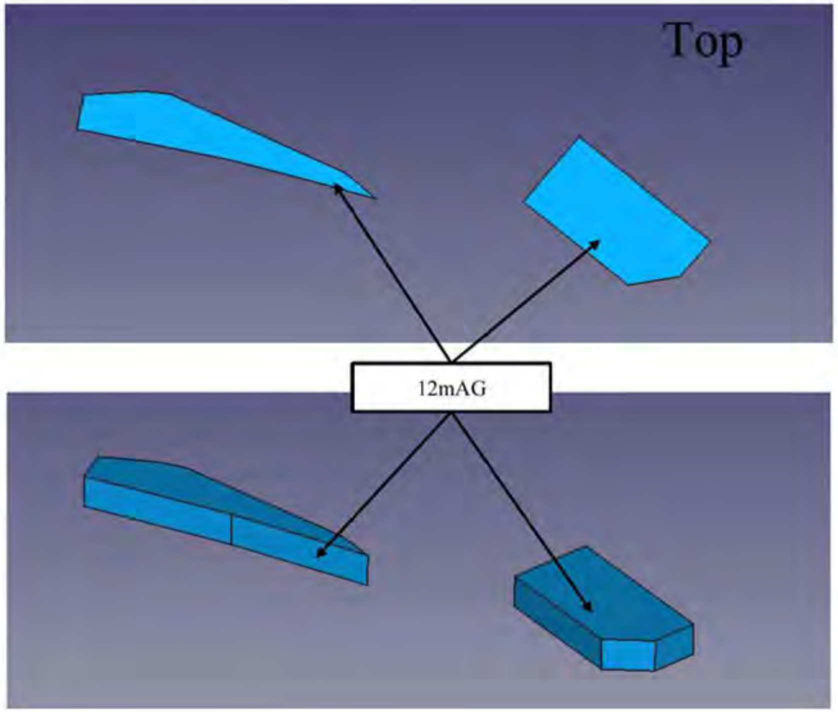
View from East

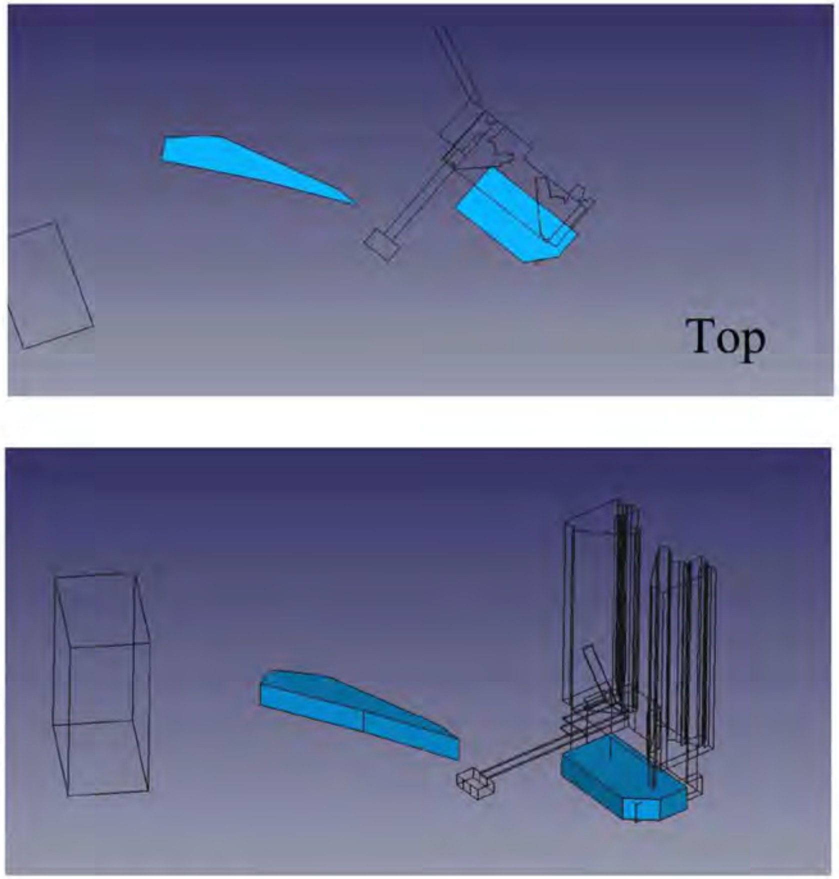


Top View

CINOTECH 漢臻 consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Buildings Included in the CFD Models - Proposed Model	SCALE	N.T.S.	DATE	Sep-21	
		CHECK	KC	DRAWN	CC	
		JOB NO.	IA9021/KC-AA1-01	FIGURE NO.	3-6c	REV. -







With the Outline of the Propsoed Buildings

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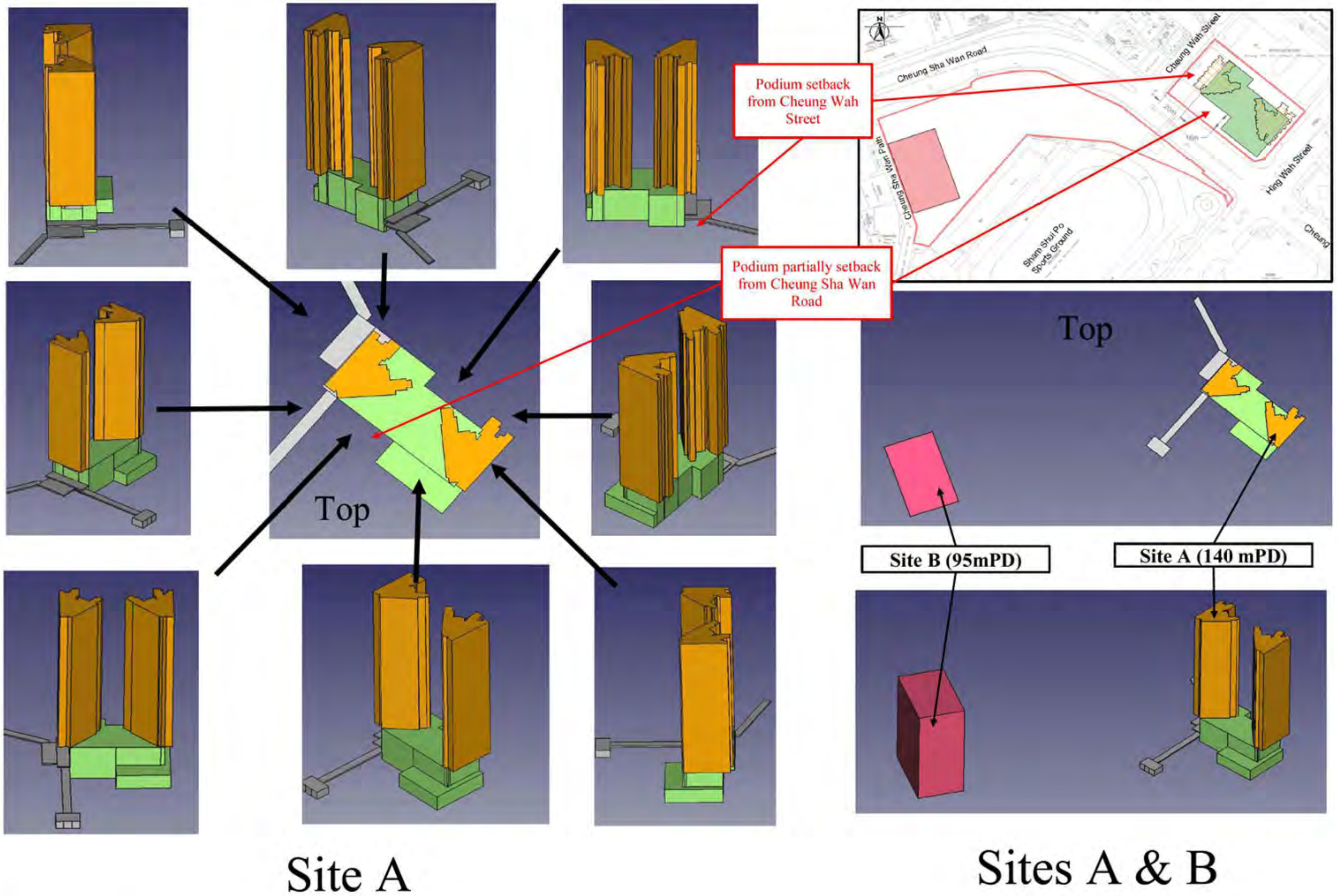
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

3D Model of the Baseline Buildings (Superstructure) adopted in CFD

SCALE	N.T.S.	DATE	Jul-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021/SSPAA1	FIGURE NO. 3-7a	REV. -



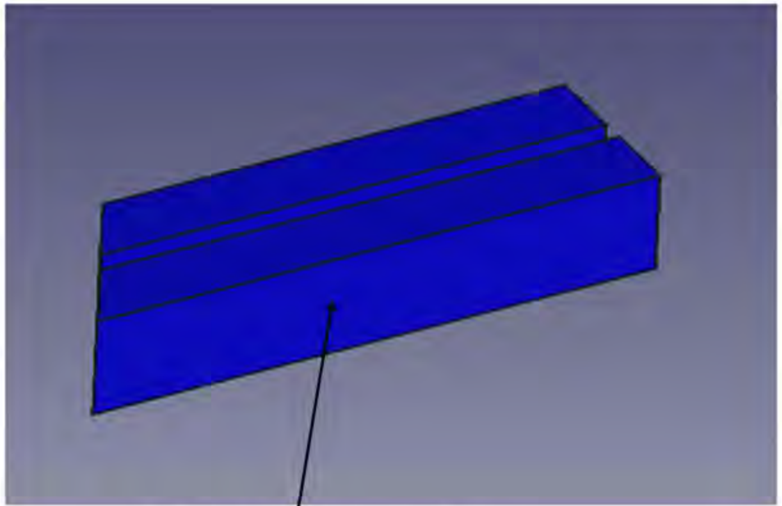
CINOTECH consultants limited 漢臻

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

3D Model of the Proposed Buildings (Superstructure) adopted in CFD

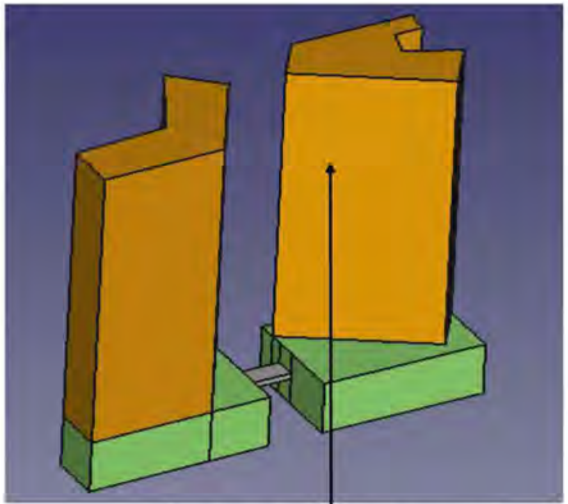
SCALE	N.T.S.	DATE	Jul-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021/SSPAA1	FIGURE NO. 3-7b	REV. -

Baseline Model



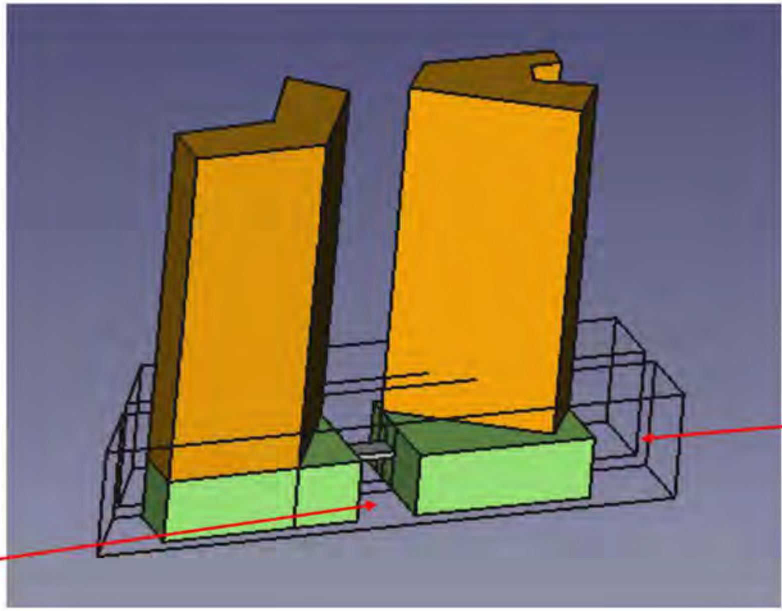
Existing (~30mPD)

Proposed Model



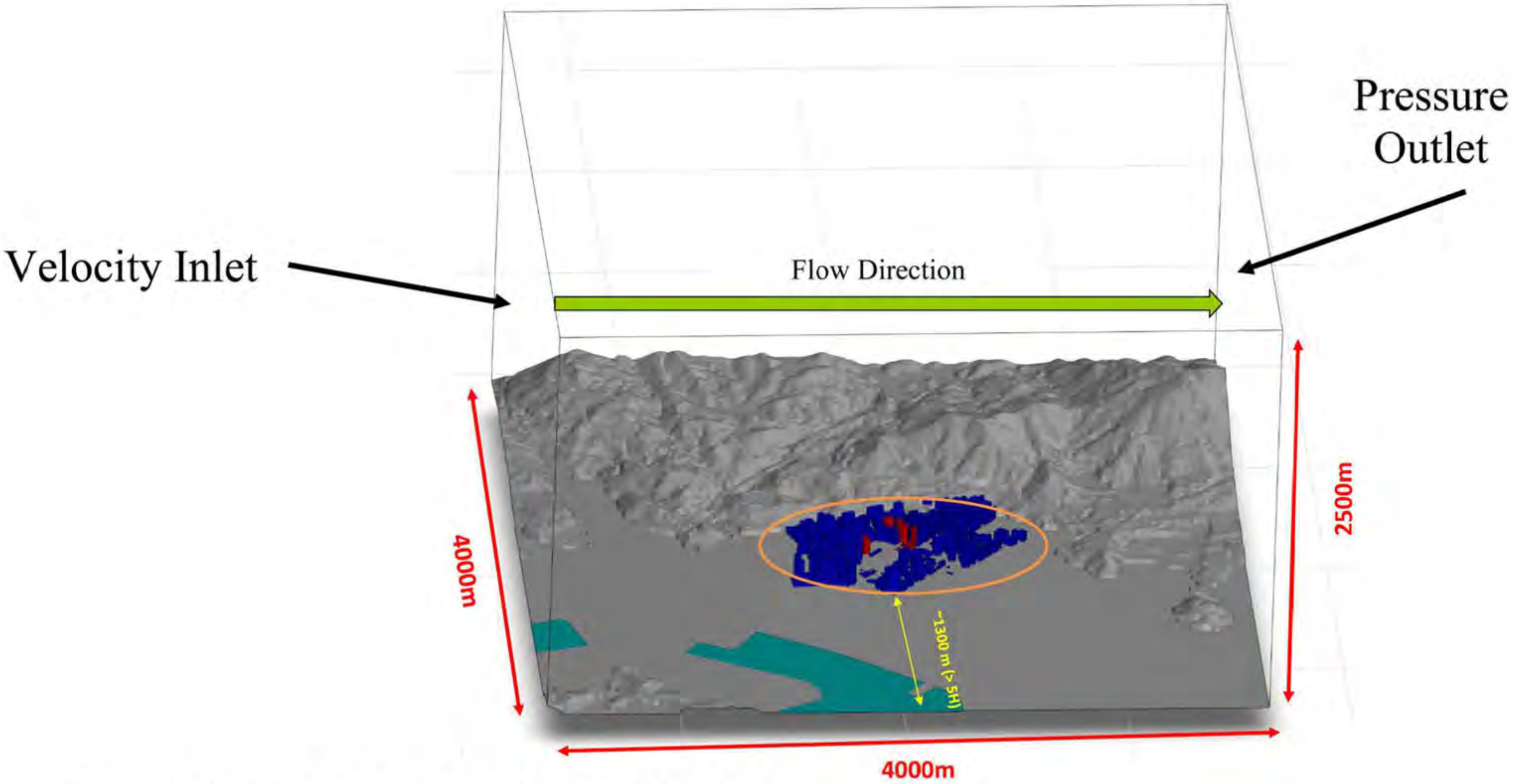
SSP-017 (140 mPD)

Comparison



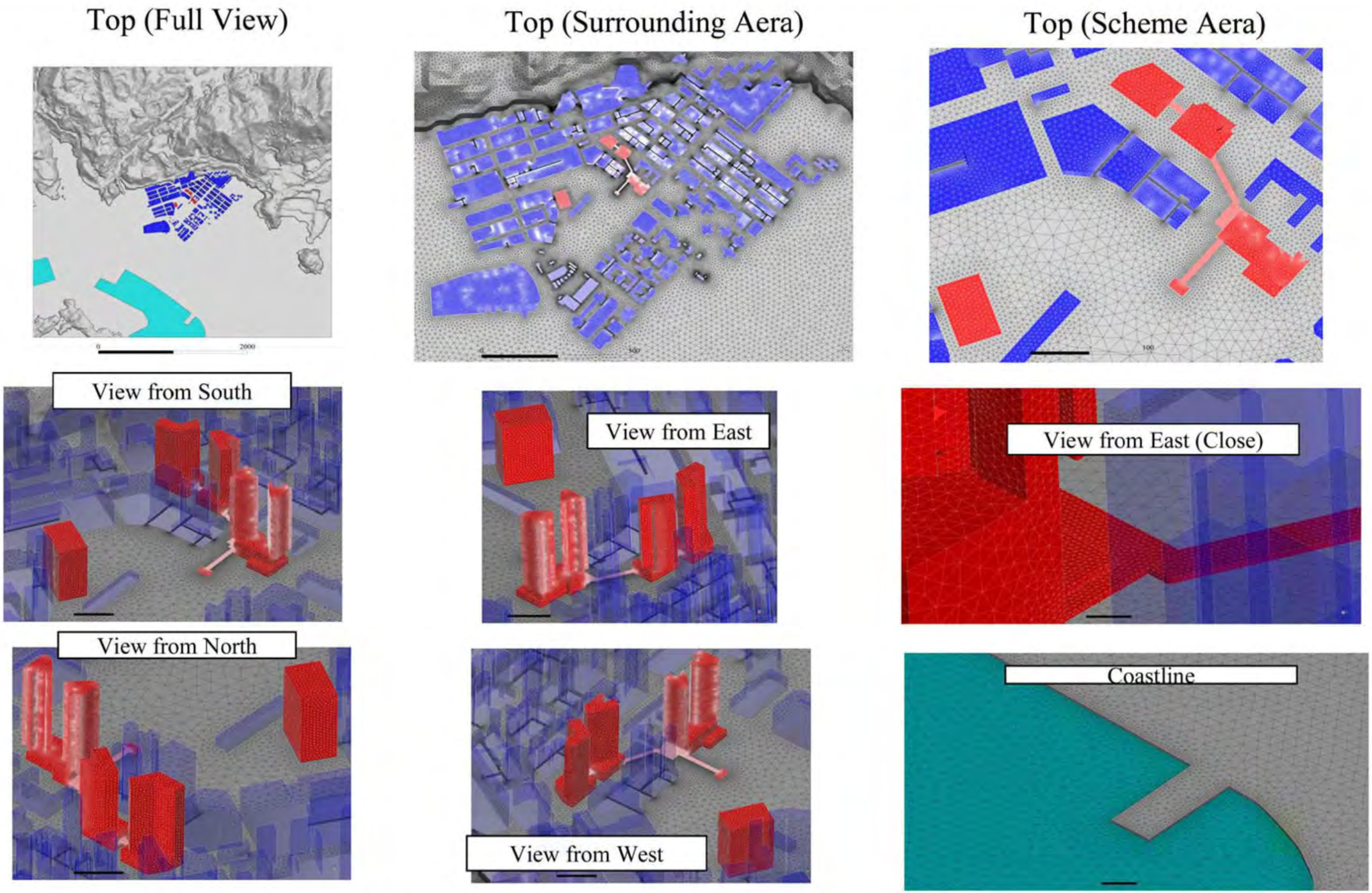
20m Building Setback

New 15m SW-NE pedestrian pathway



Ground & Building Walls: Solid Wall

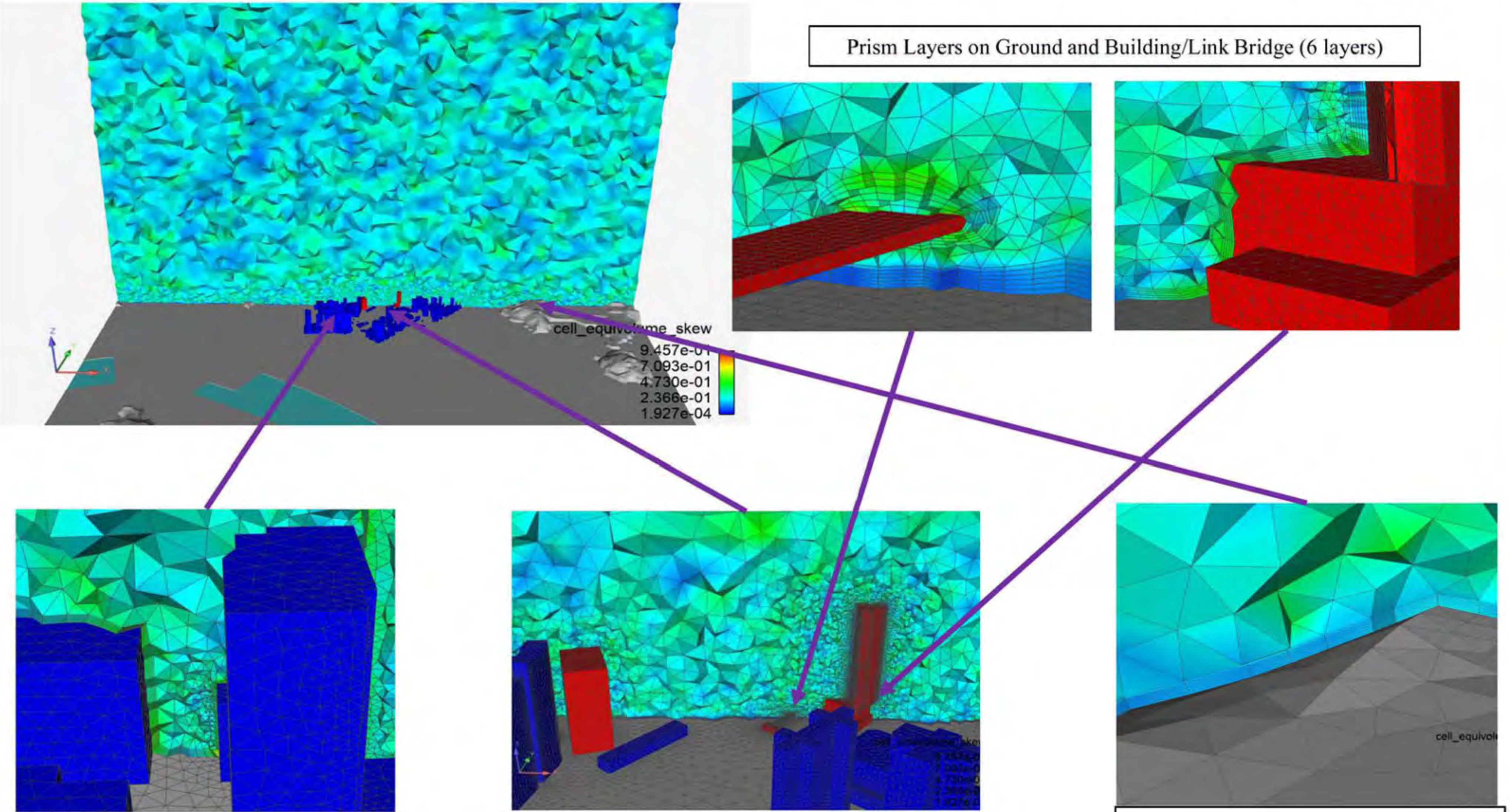
* Setting for 270 deg Wind is adopted in this example
# Height of Highest building within Assessment Area, h = 135 m ; h = 5 x 135= 675m
Height of Highest building in Computation Domin, H = 180 m ; H = 5 x 180= 900m



Screen capurted from the Proposed Model

CINOTECH 漢臻 consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) **Meshes on 2D Surfaces**	SCALE	N.T.S.	DATE	Sep-21
		CHECK	KC	DRAWN	CC
		JOB NO.	IA9021/SSPAA1	FIGURE NO. 3-9	REV. -

Overview of 3D cells



Prism Layers on Ground and Building/Link Bridge (6 layers)

Prism Layers on Ground and building (6 layers)

Near the Scheme

Prism Layers on Ground (6 layers)

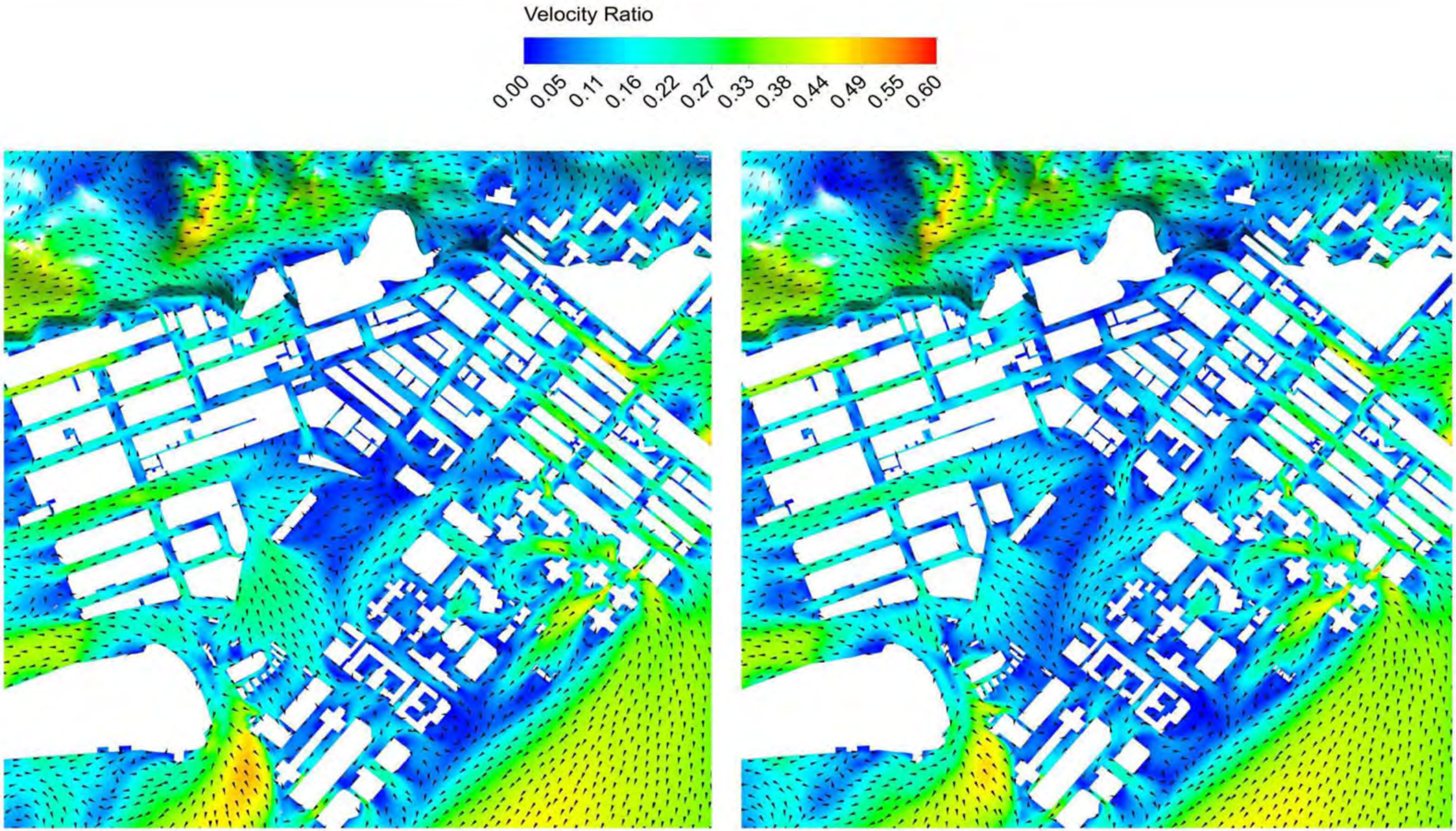
Screen capurted from the Proposed Model

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)

Meshes on 3D Space

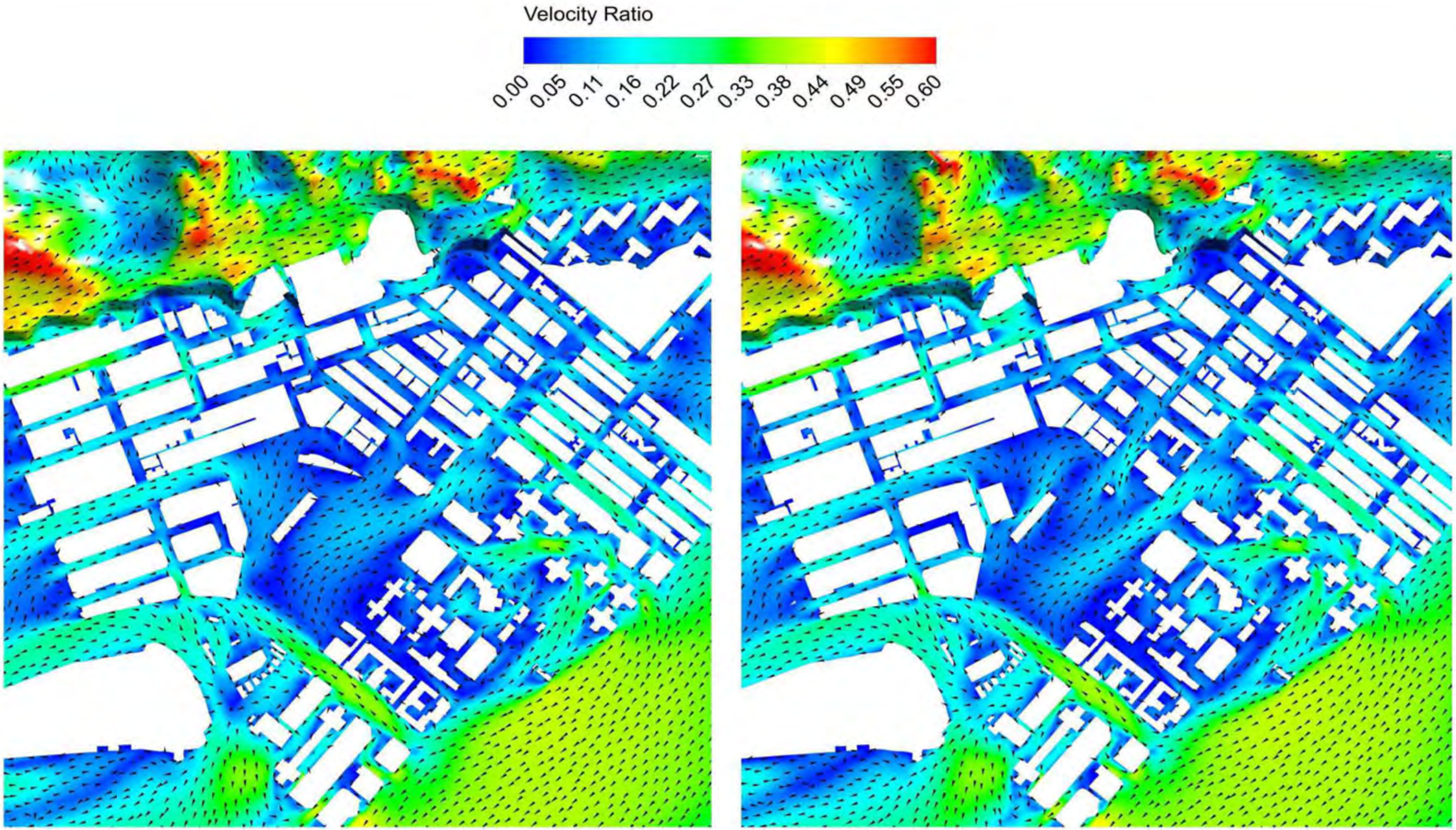
SCALE	N.T.S.	DATE	Sep-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021/SSPAA1	FIGURE NO. 3-10	REV. -



Baseline Scheme **Proposed Scheme**

045 deg Wind Direction

CINOTECH 漢蘇 consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG	SCALE	N.T.S.	DATE	Sep-21
		CHECK	KC	DRAWN	CC
		JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-1a REV. -



Baseline Scheme

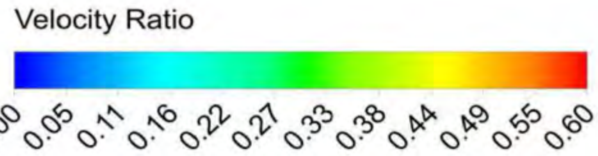
Proposed Scheme

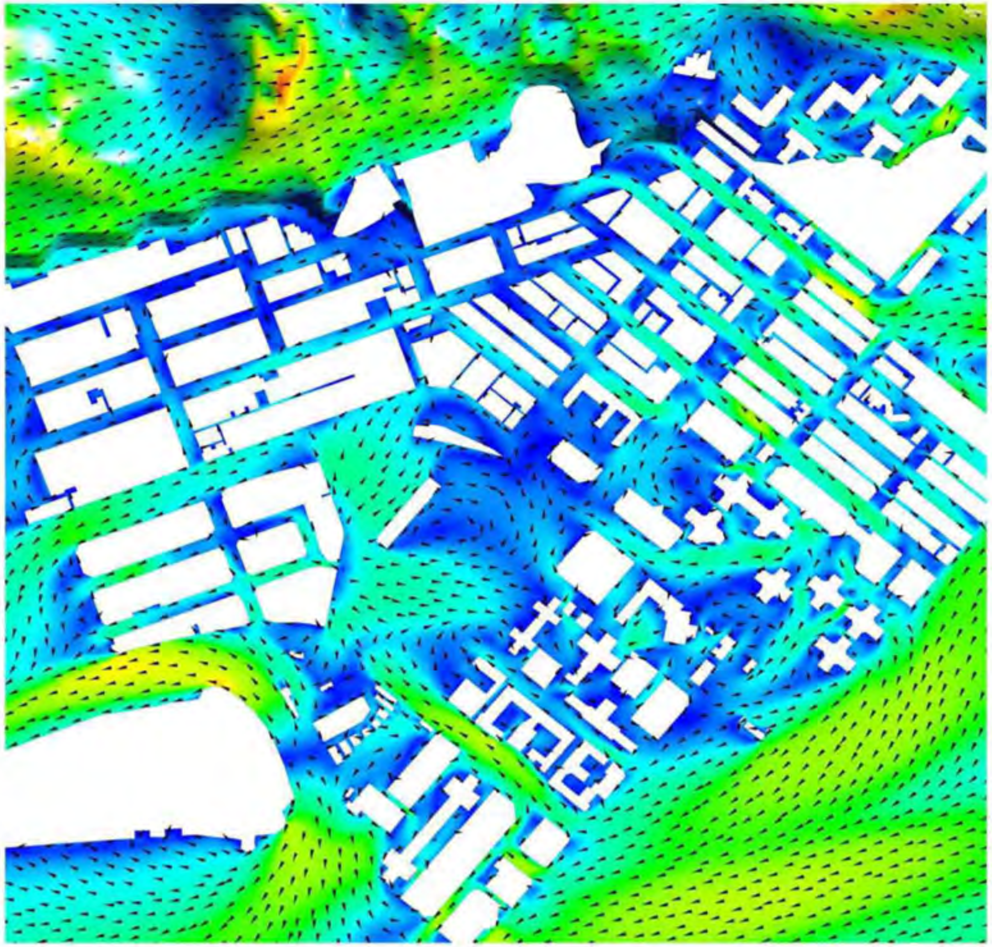
067.5 deg Wind Direction

CINOTECH 漢蓀 consultants limited

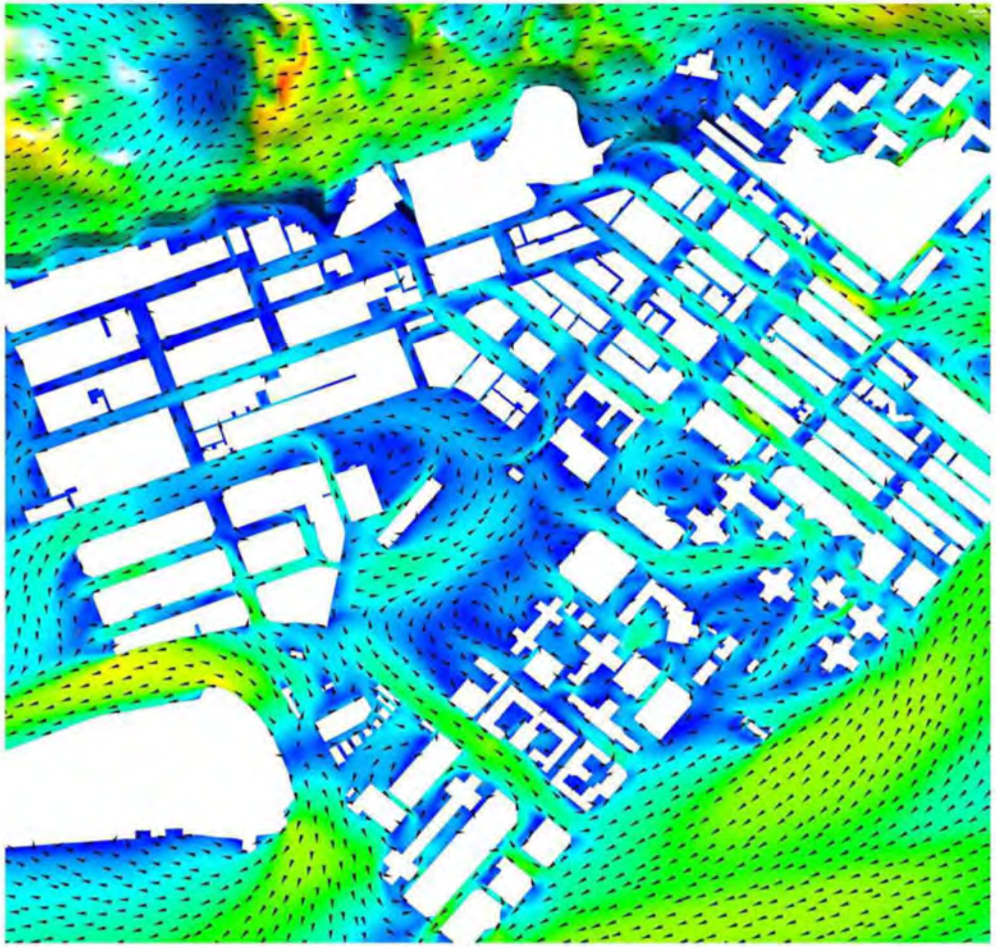
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG

SCALE	N.T.S.	DATE	Sep-21
CHECK	KC	DRAWN	CC
JOB NO.	IA19021/SSPAA1	FIGURE NO. 4-1b	REV. -





Baseline Scheme



Proposed Scheme

090 deg Wind Direction

CINOTECH consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG	SCALE	N.T.S.	DATE	Sep-21
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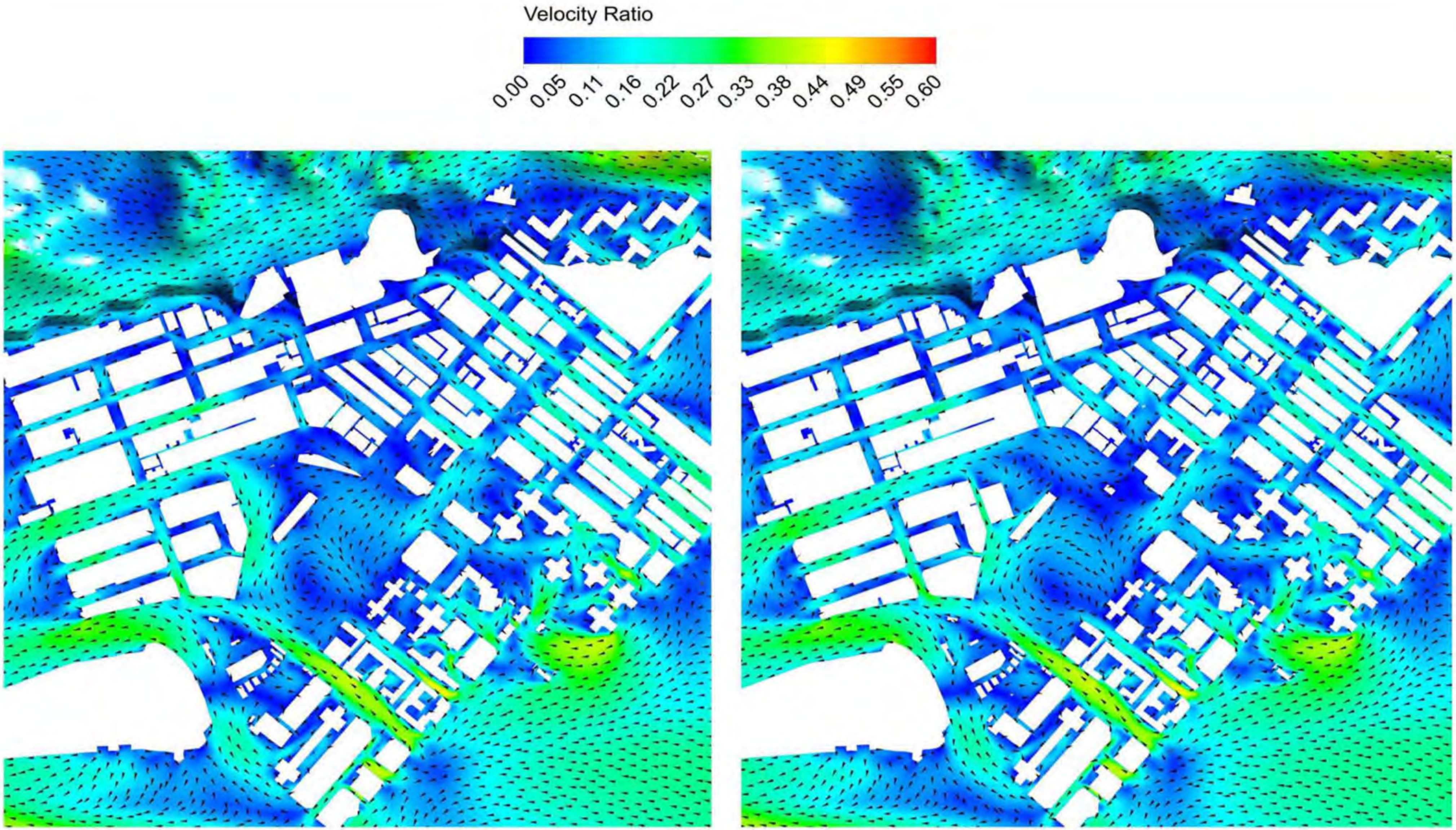
		JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-1c
				REV.	-



Baseline Scheme

Proposed Scheme

112.5 deg Wind Direction

CINOTECH consultants limited 漢藝	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG	SCALE	N.T.S.	DATE	Sep-21
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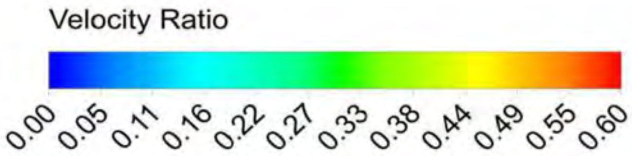
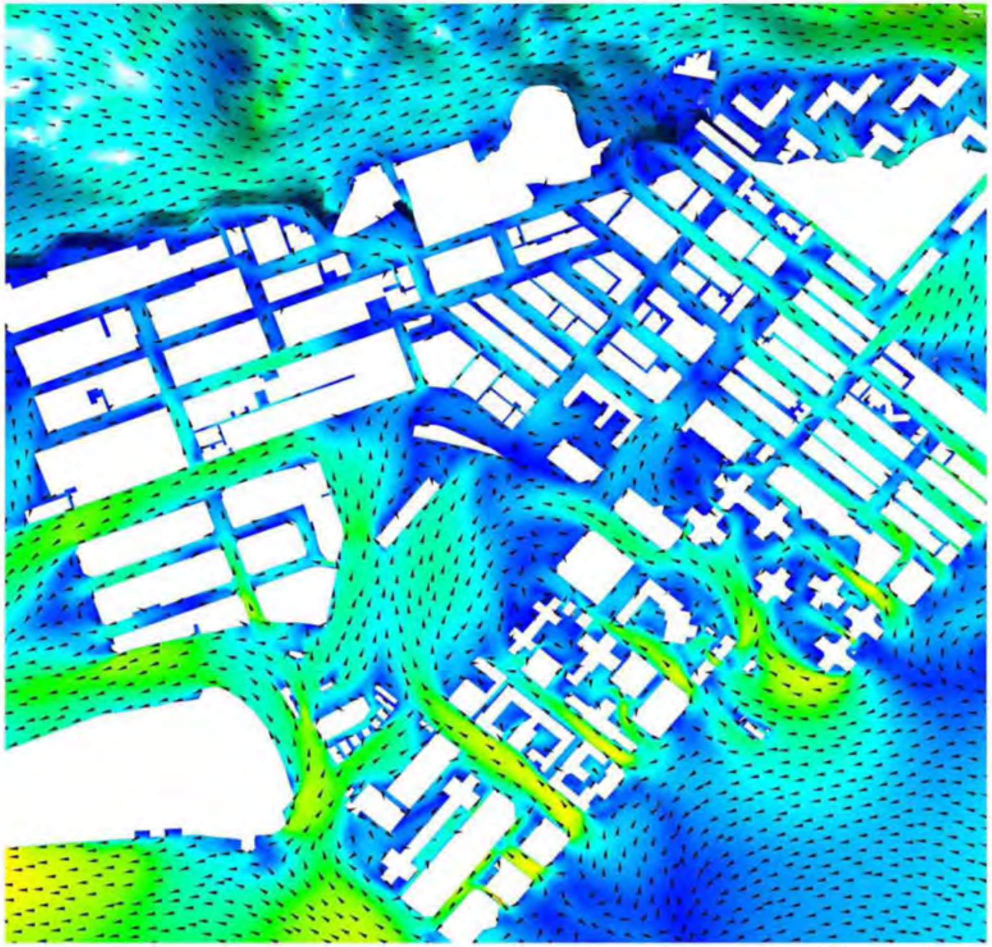
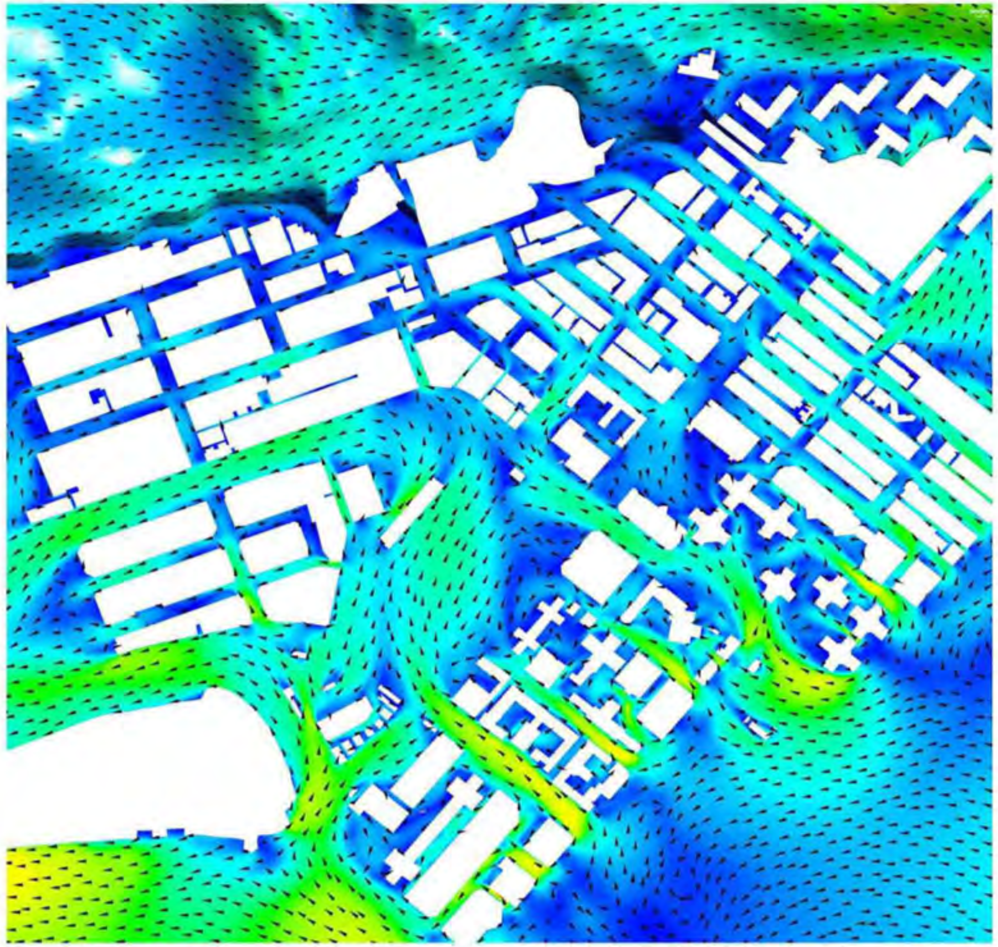
		JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-1d REV. -





Baseline Scheme



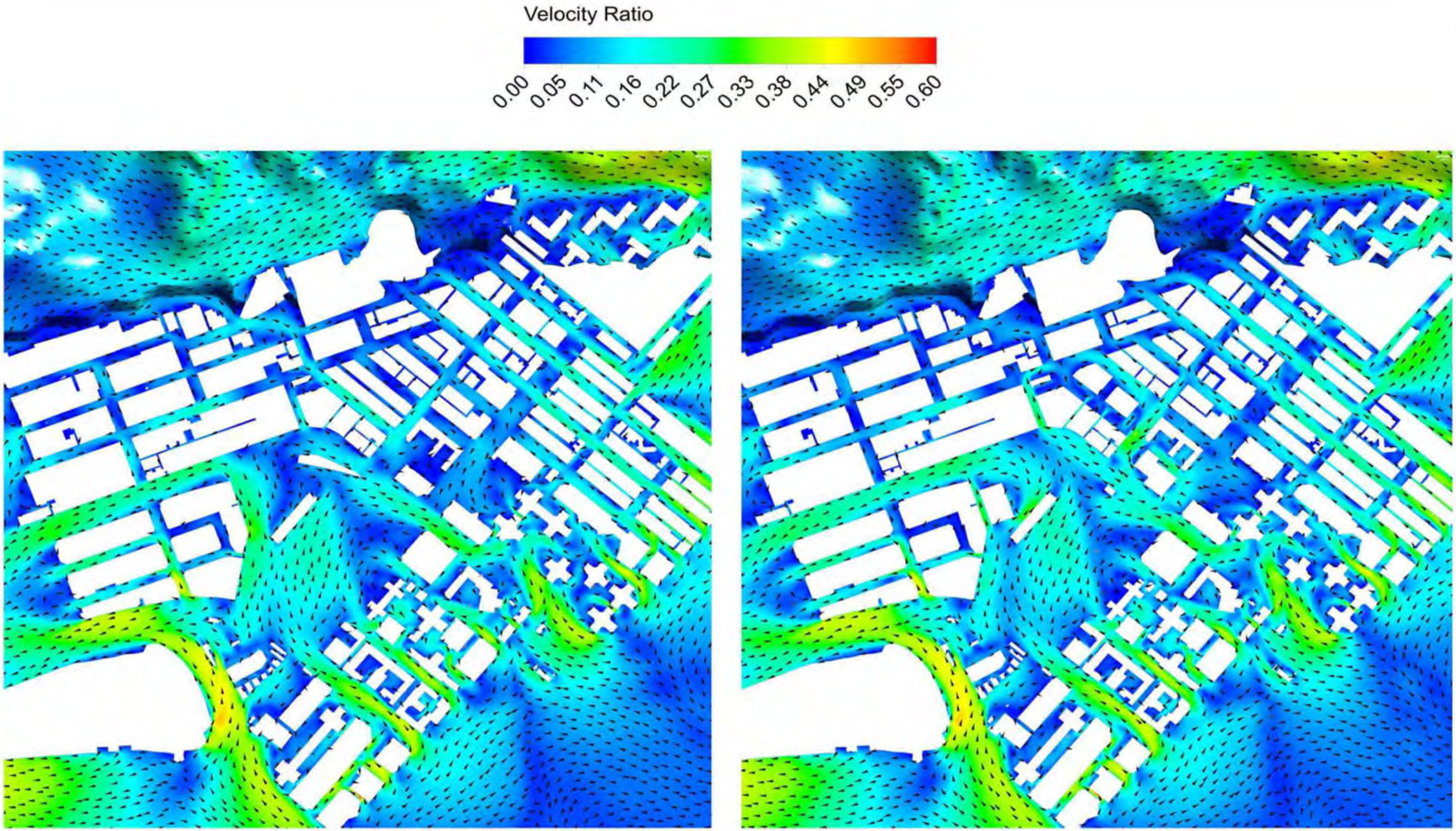
Proposed Scheme

135 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG

SCALE	N.T.S.	DATE	Sep-21	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-1e	REV.
				-



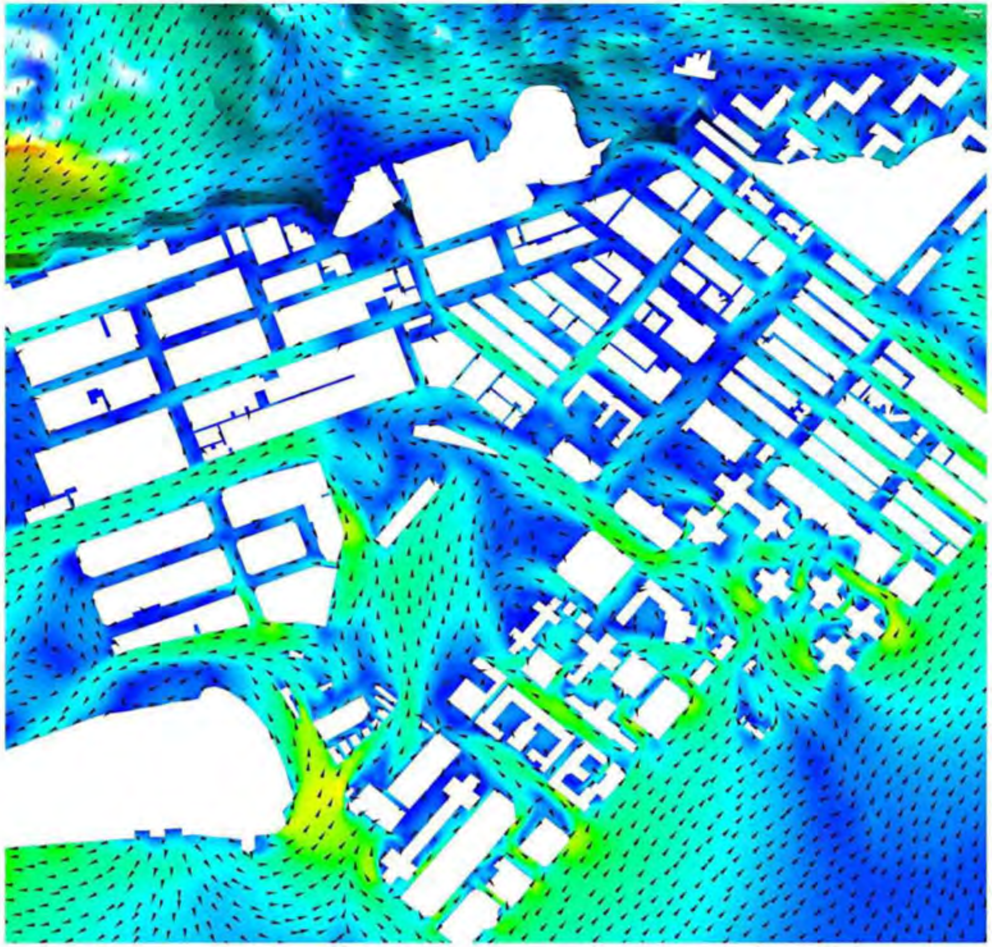
Baseline Scheme **Proposed Scheme**

157.5 deg Wind Direction

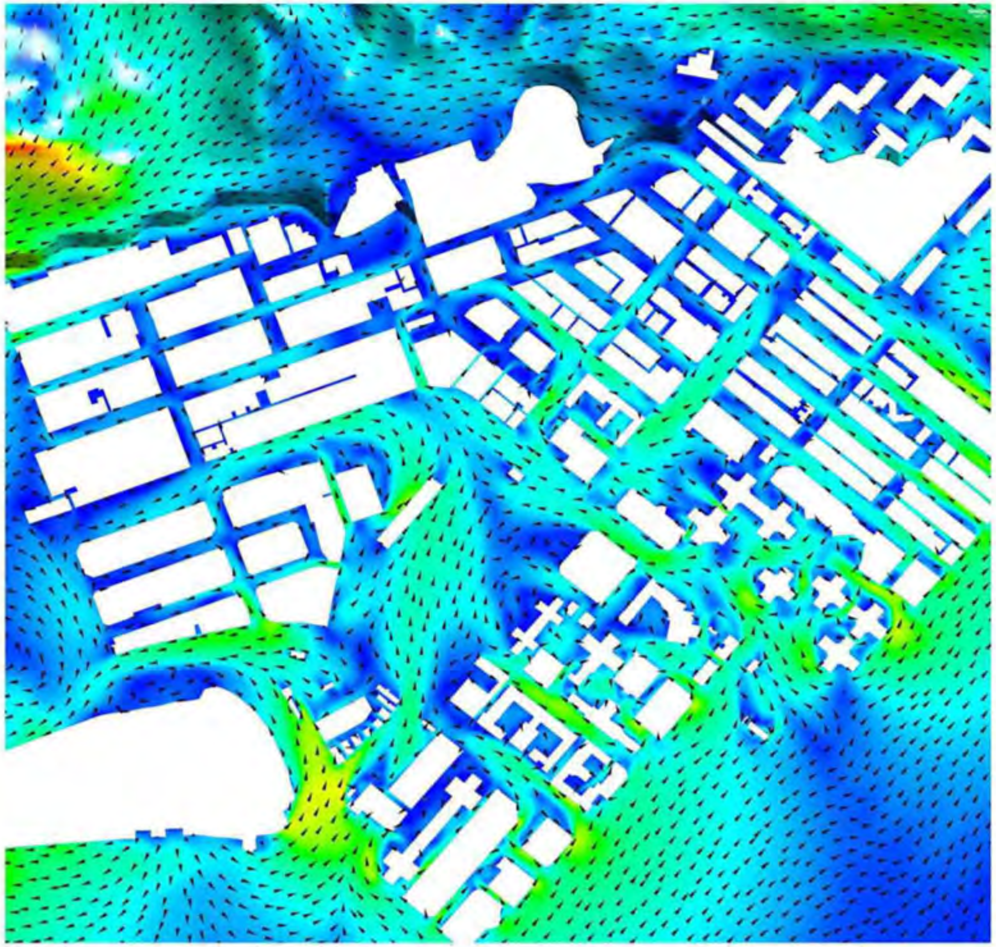
CINOTECH consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG	SCALE	N.T.S.	DATE	Sep-21
		CHECK	KC	DRAWN	CC
		JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-11 REV. -

Velocity Ratio

0.00 0.05 0.11 0.16 0.22 0.27 0.33 0.38 0.44 0.49 0.55 0.60



Baseline Scheme



Proposed Scheme

180 deg Wind Direction

CINOTECH consultants limited 漢蘇	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG	SCALE	N.T.S.	DATE	Sep-21
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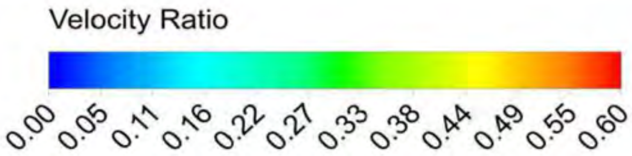
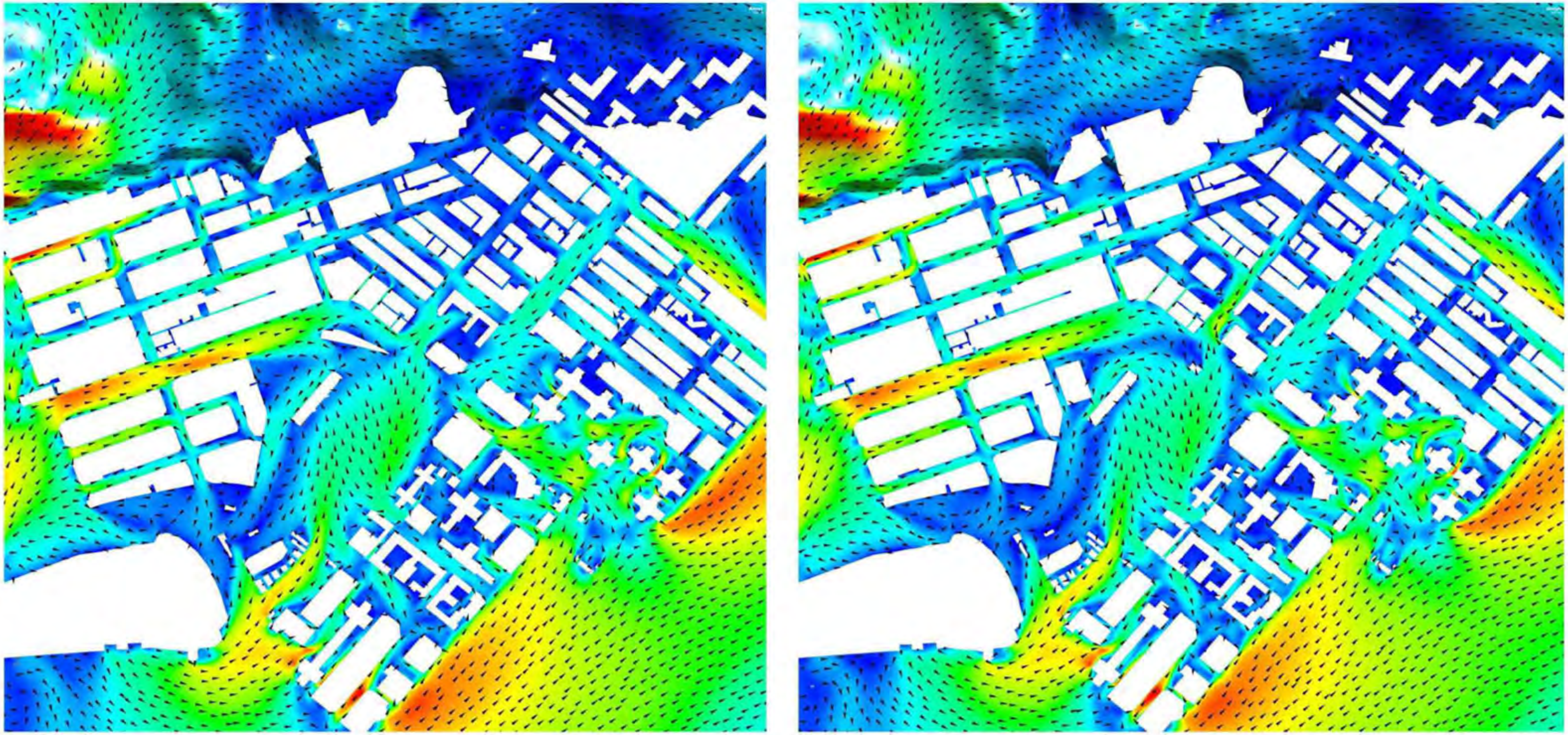
				REV.	-



Baseline Scheme



Proposed Scheme

202.5 deg Wind Direction

CINOTECH consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG	SCALE	N.T.S.	DATE	Sep-21	
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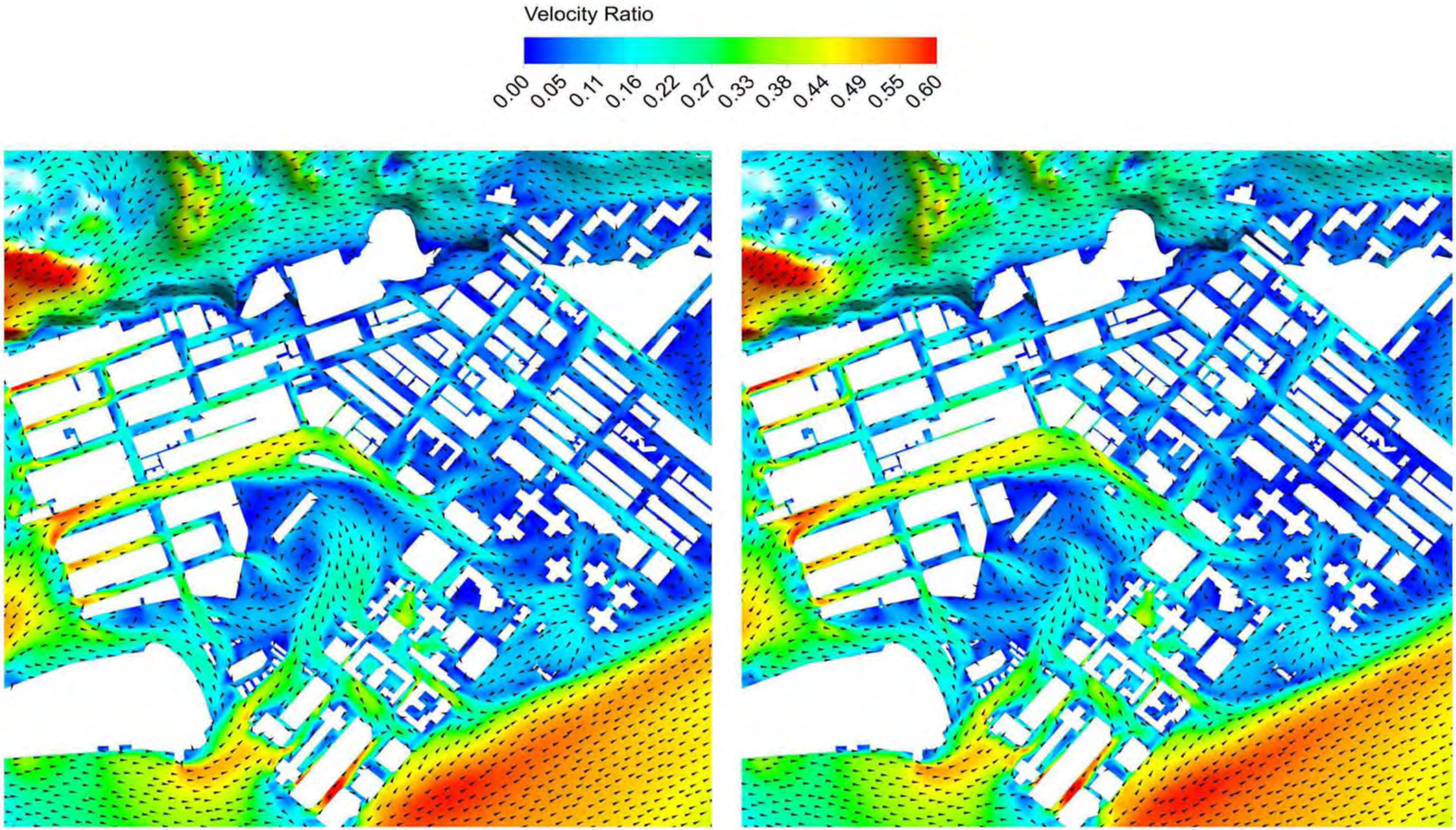


Baseline Scheme

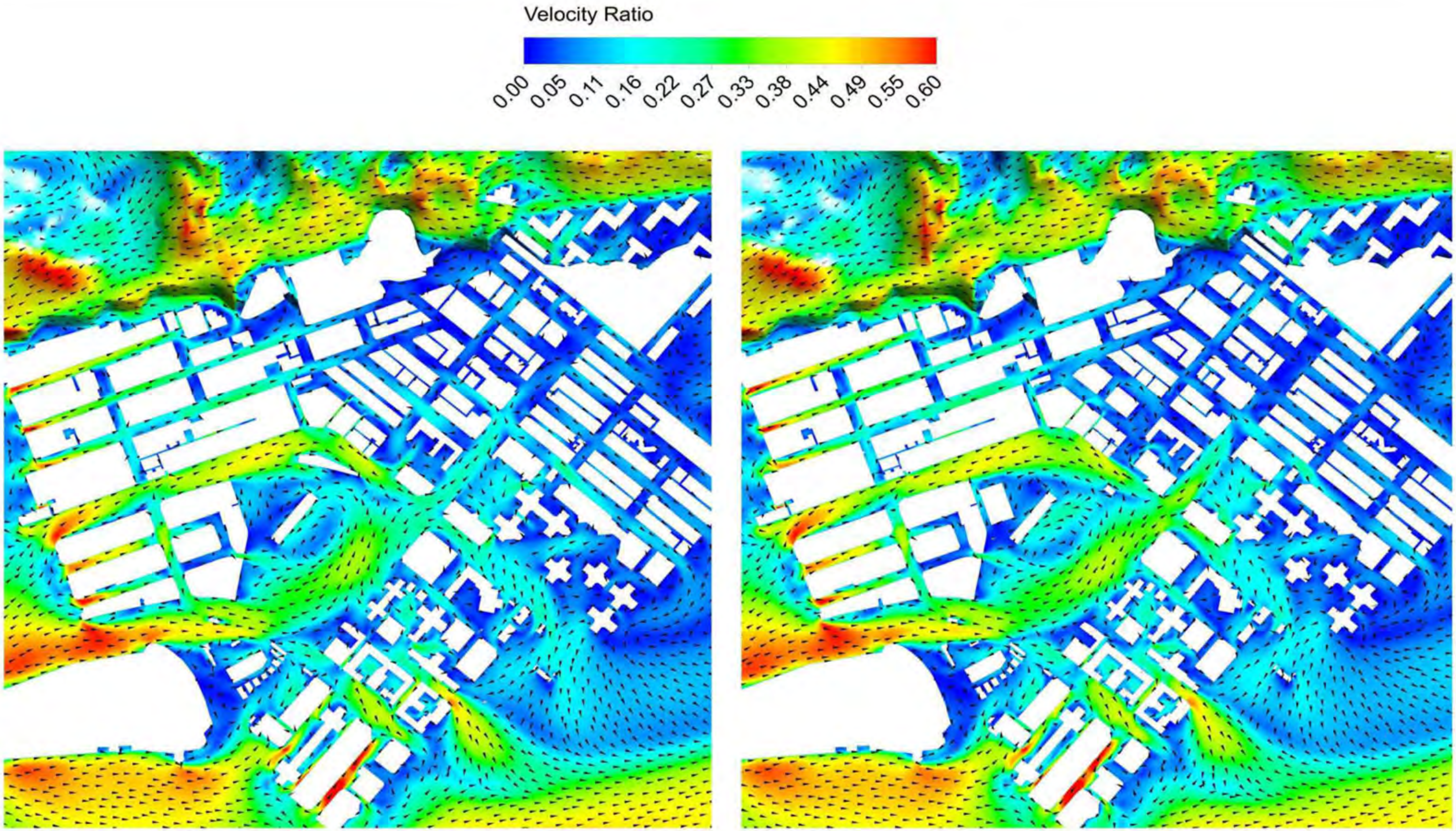
Proposed Scheme

225 deg Wind Direction

CINOTECH 漢藝 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG

SCALE	N.T.S.	DATE	Sep-21
CHECK	KC	DRAWN	CC
JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-1i
REV.	-		



Baseline Scheme

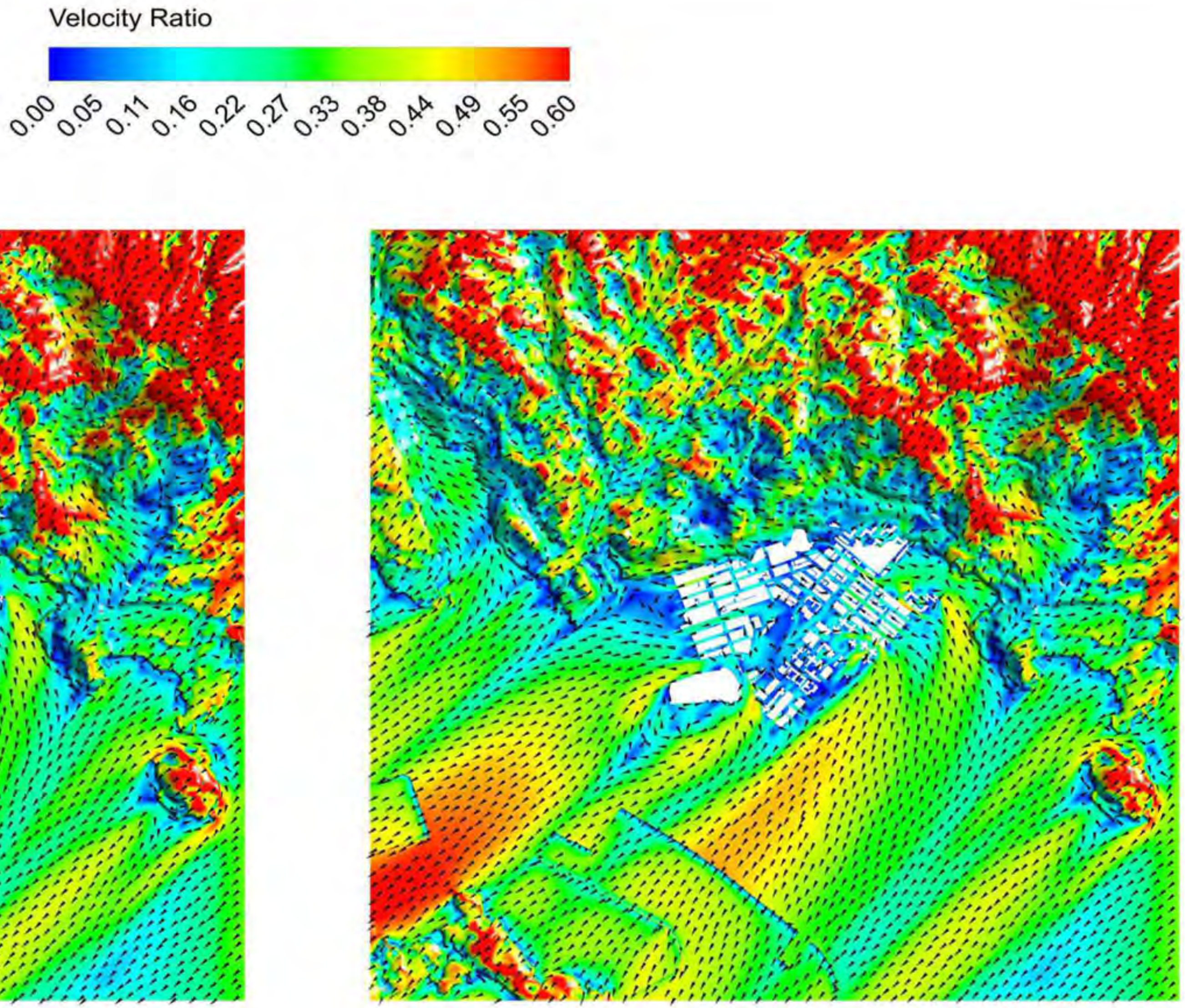
Proposed Scheme

247.5 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG

SCALE	N.T.S.	DATE	Sep-21	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-1j	REV. -



Baseline Scheme

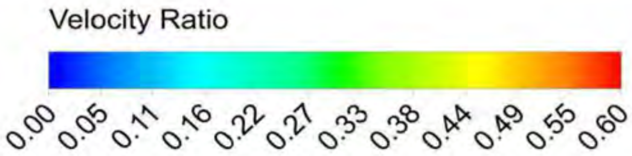
Proposed Scheme

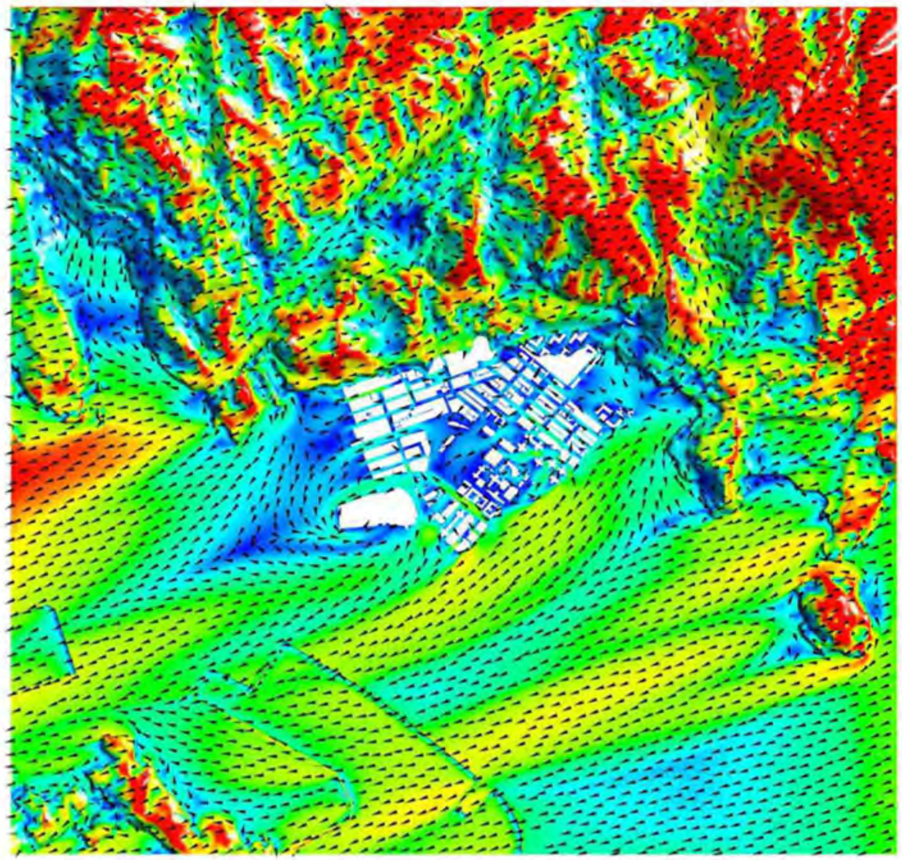
045 deg Wind Direction

CINOTECH 漢蔡 consultants limited

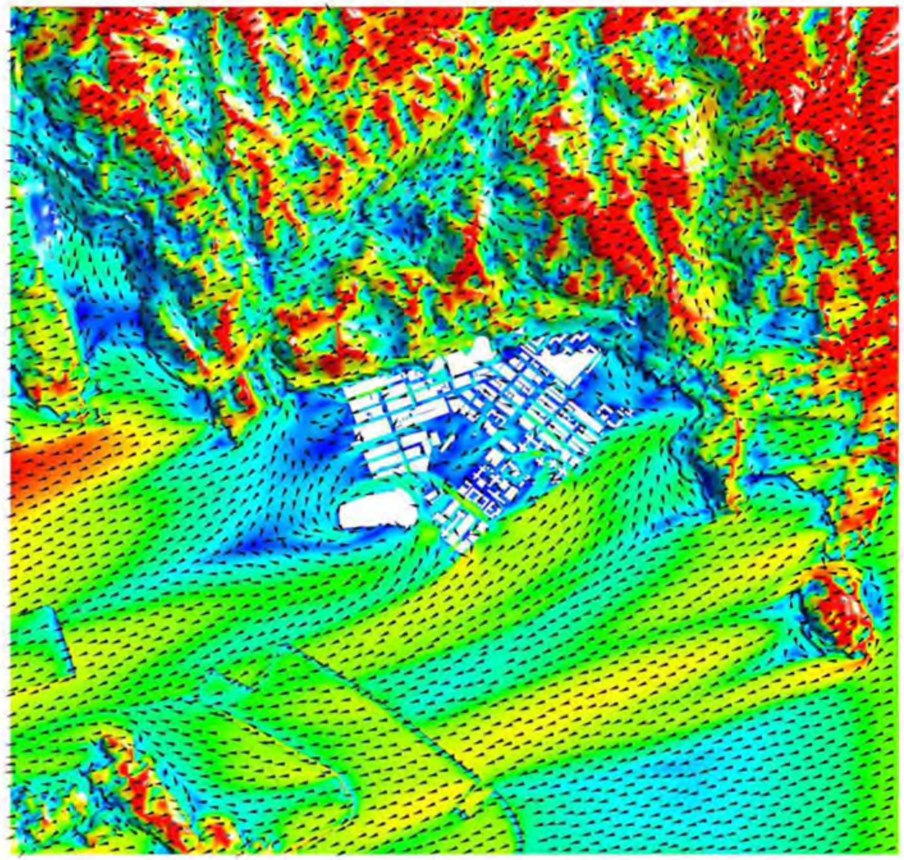
Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)

SCALE	N.T.S.	DATE	Sep-21	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-2a	REV. -





Baseline Scheme



Proposed Scheme

067.5 deg Wind Direction

CINOTECH 漢蘇 consultants limited	**Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)** **Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)**	SCALE	N.T.S.	DATE	Sep-21
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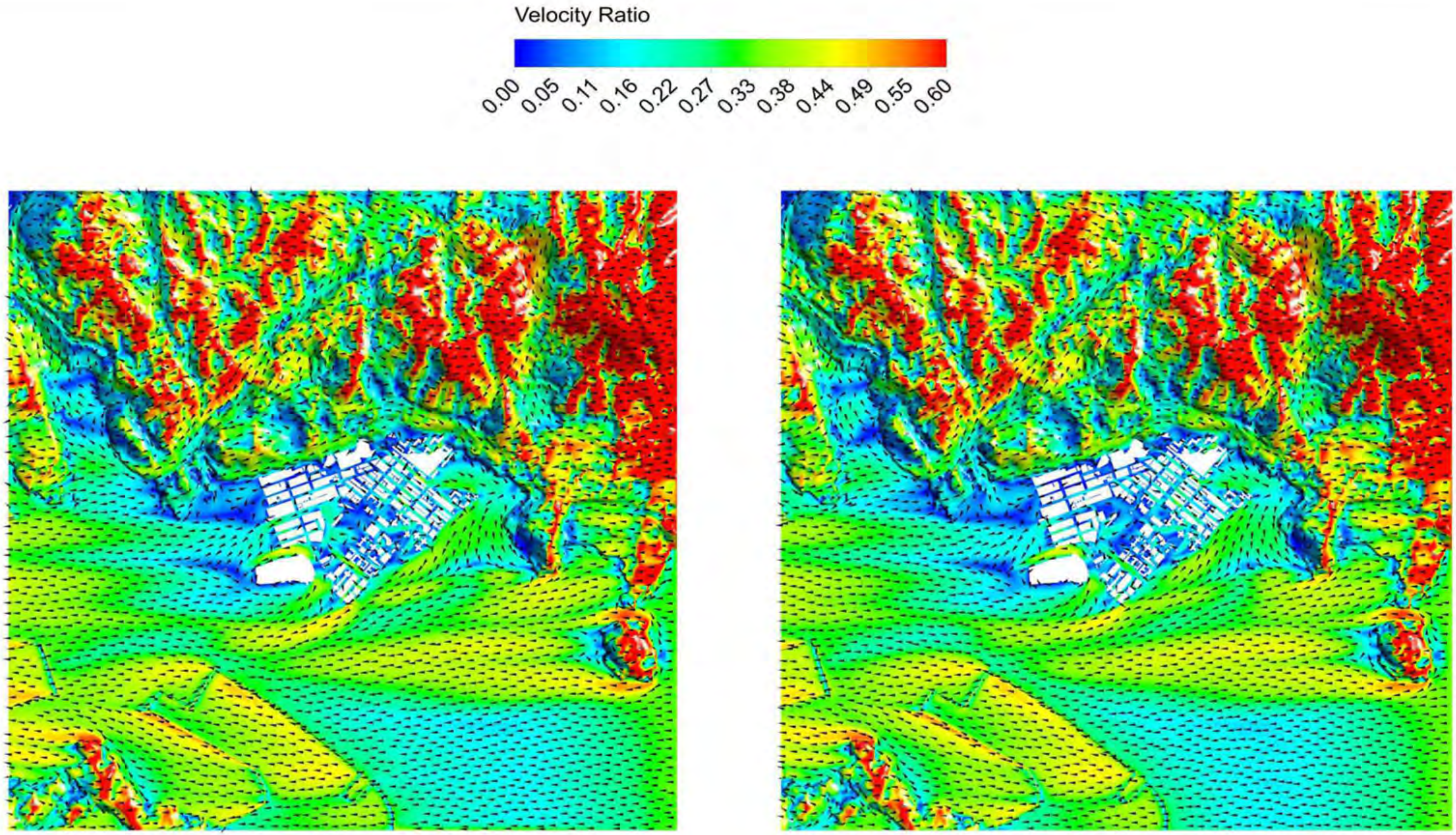
		JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-2b REV. -



Baseline Scheme **Proposed Scheme**

090 deg Wind Direction

CINOTECH 漢臻 consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)	SCALE	N.T.S.	DATE	Sep-21	
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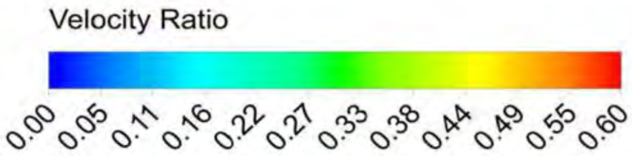
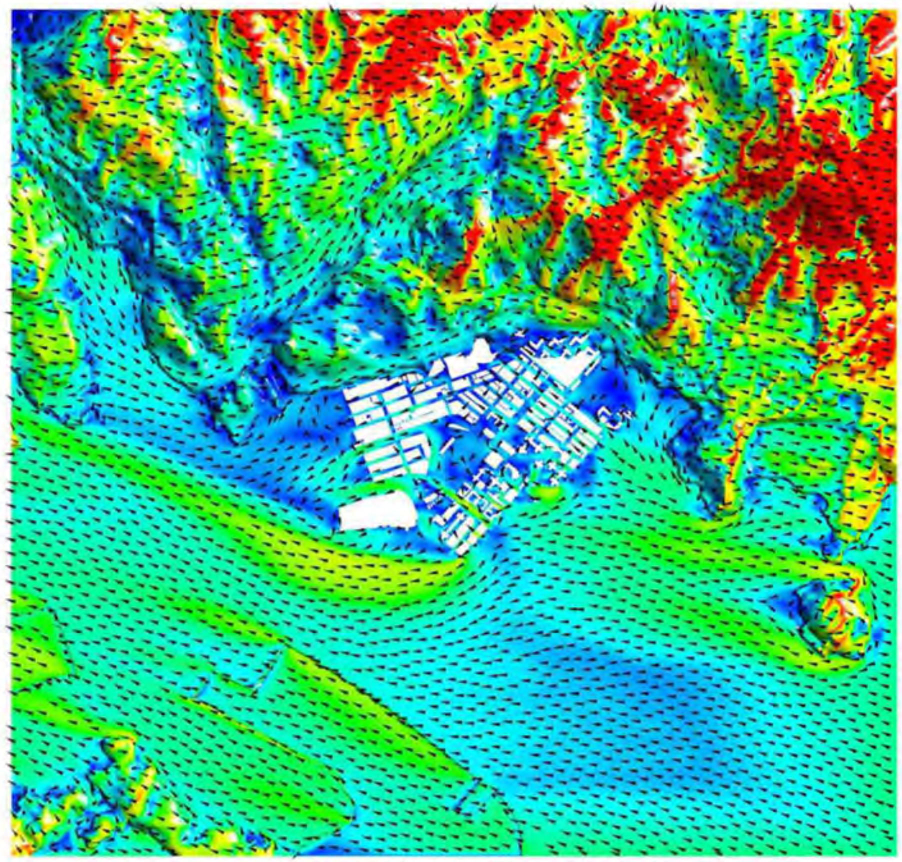
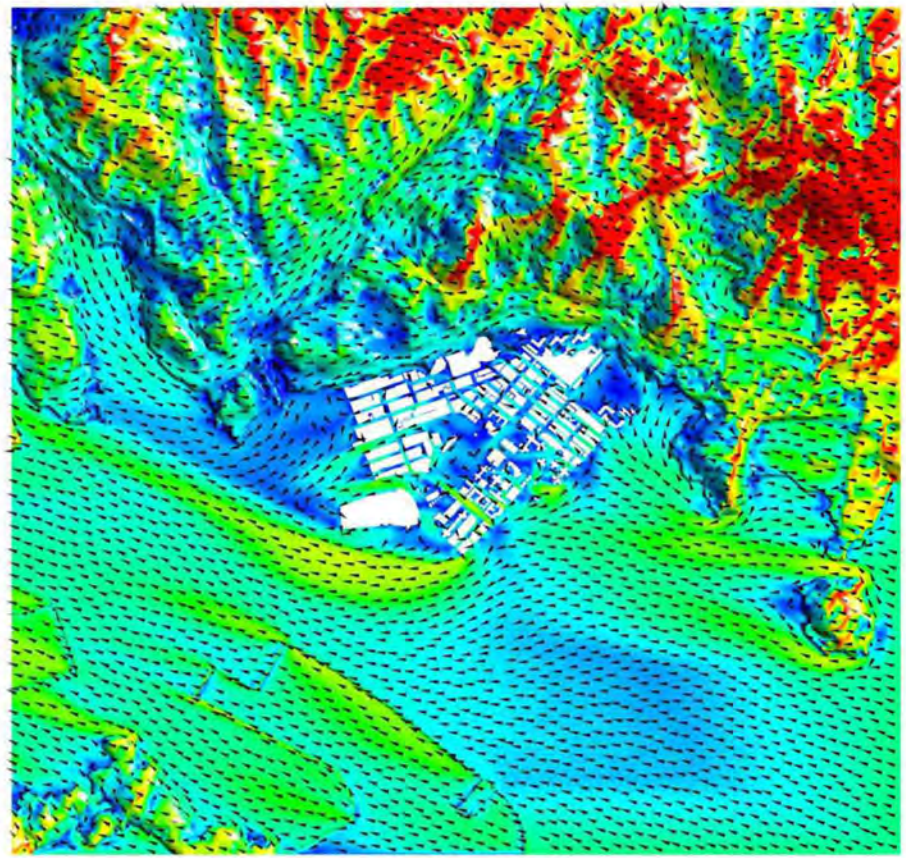




Baseline Scheme



Proposed Scheme

112.5 deg Wind Direction

CINOTECH 漢蘇 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)

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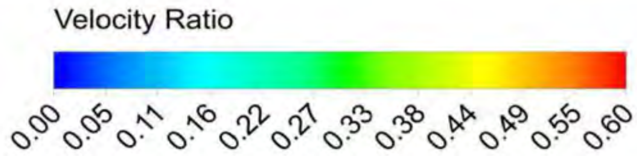
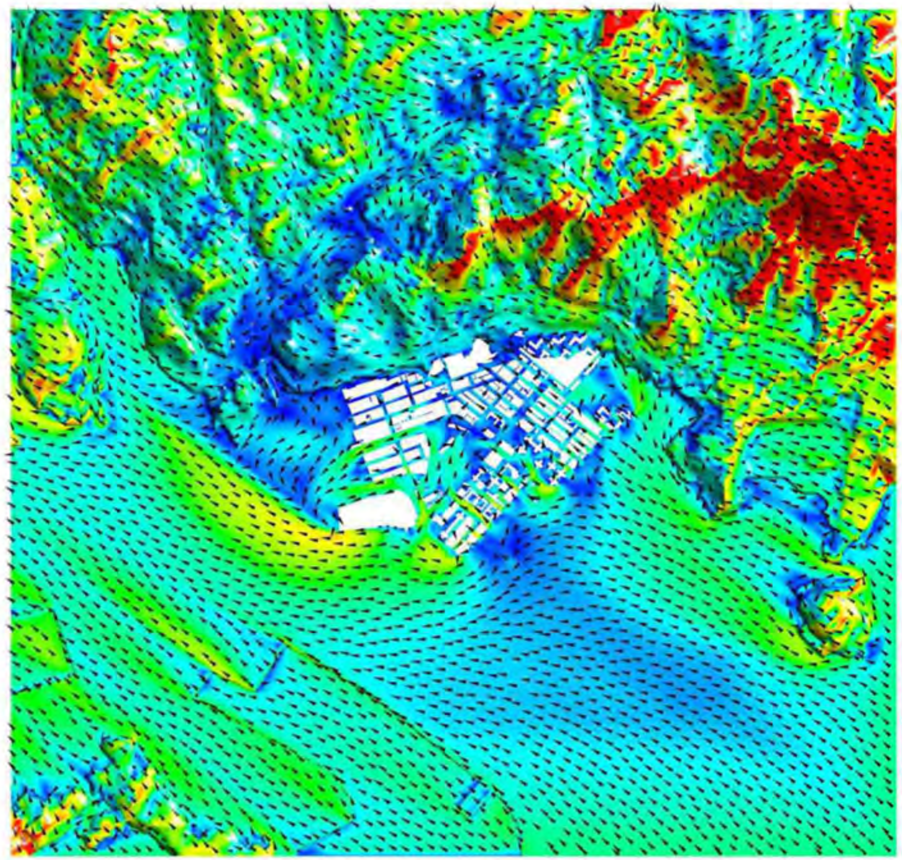
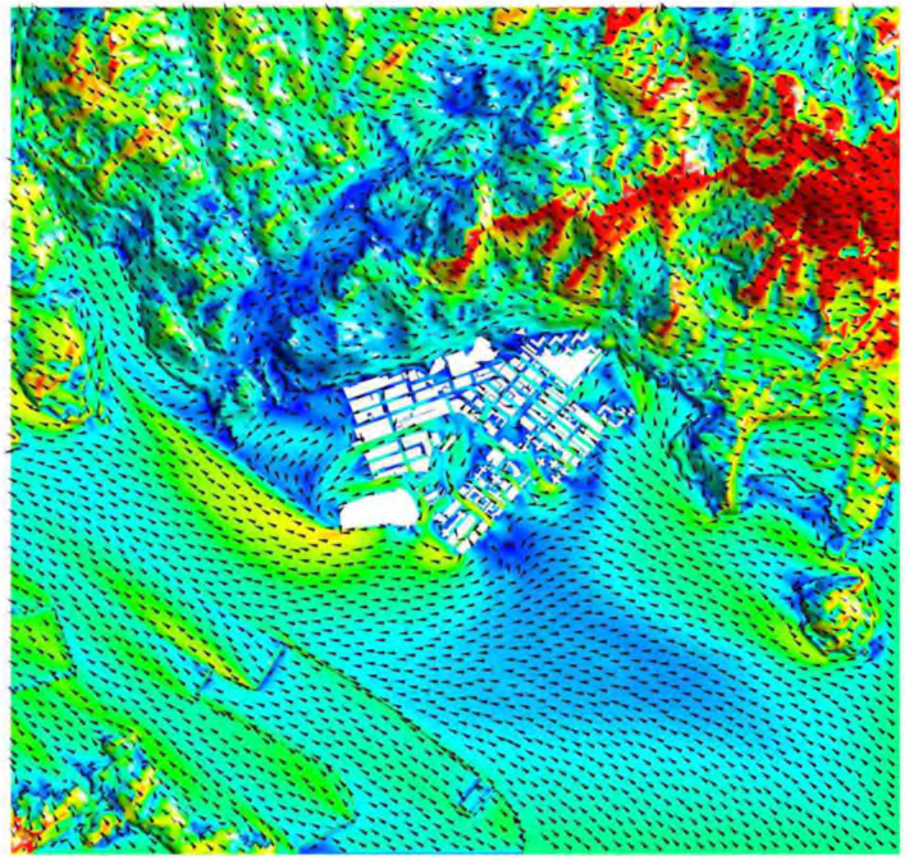
JOB NO.	IA19021/SSPAA1	FIGURE NO. 4-2d	REV. -



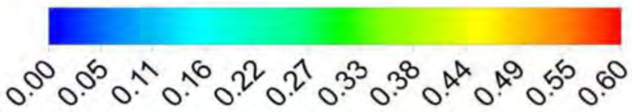


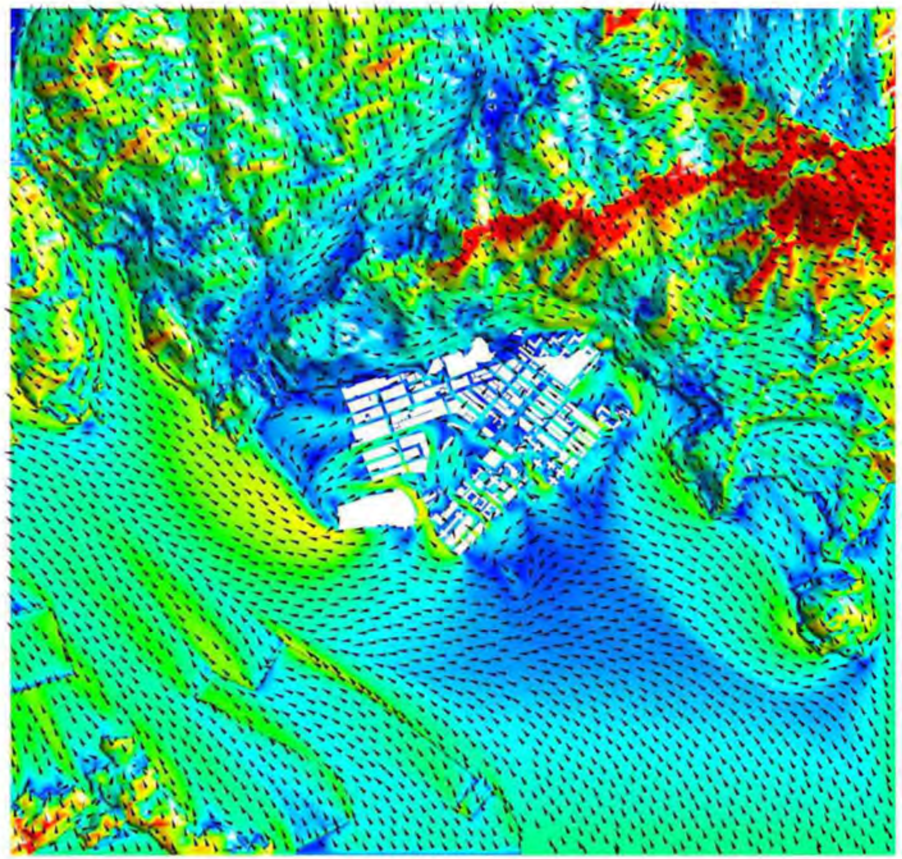
Baseline Scheme



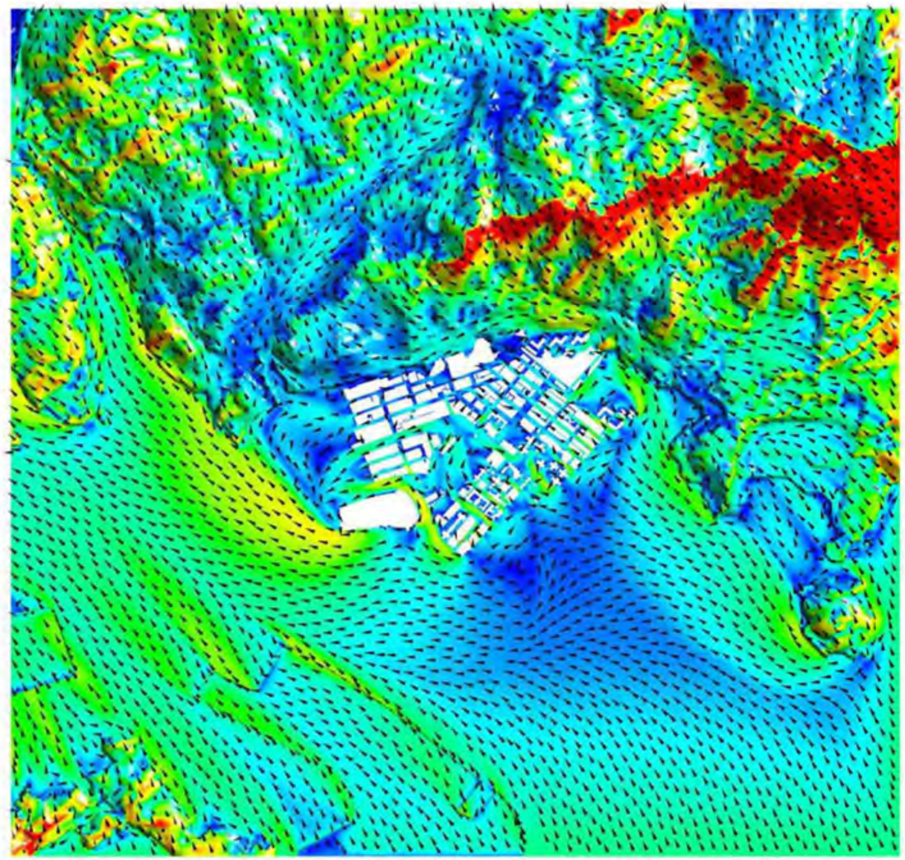
Proposed Scheme

135 deg Wind Direction





Baseline Scheme



Proposed Scheme

157.5 deg Wind Direction

CINOTECH consultants limited	Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018) Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)	SCALE	N.T.S.	DATE	Sep-21	
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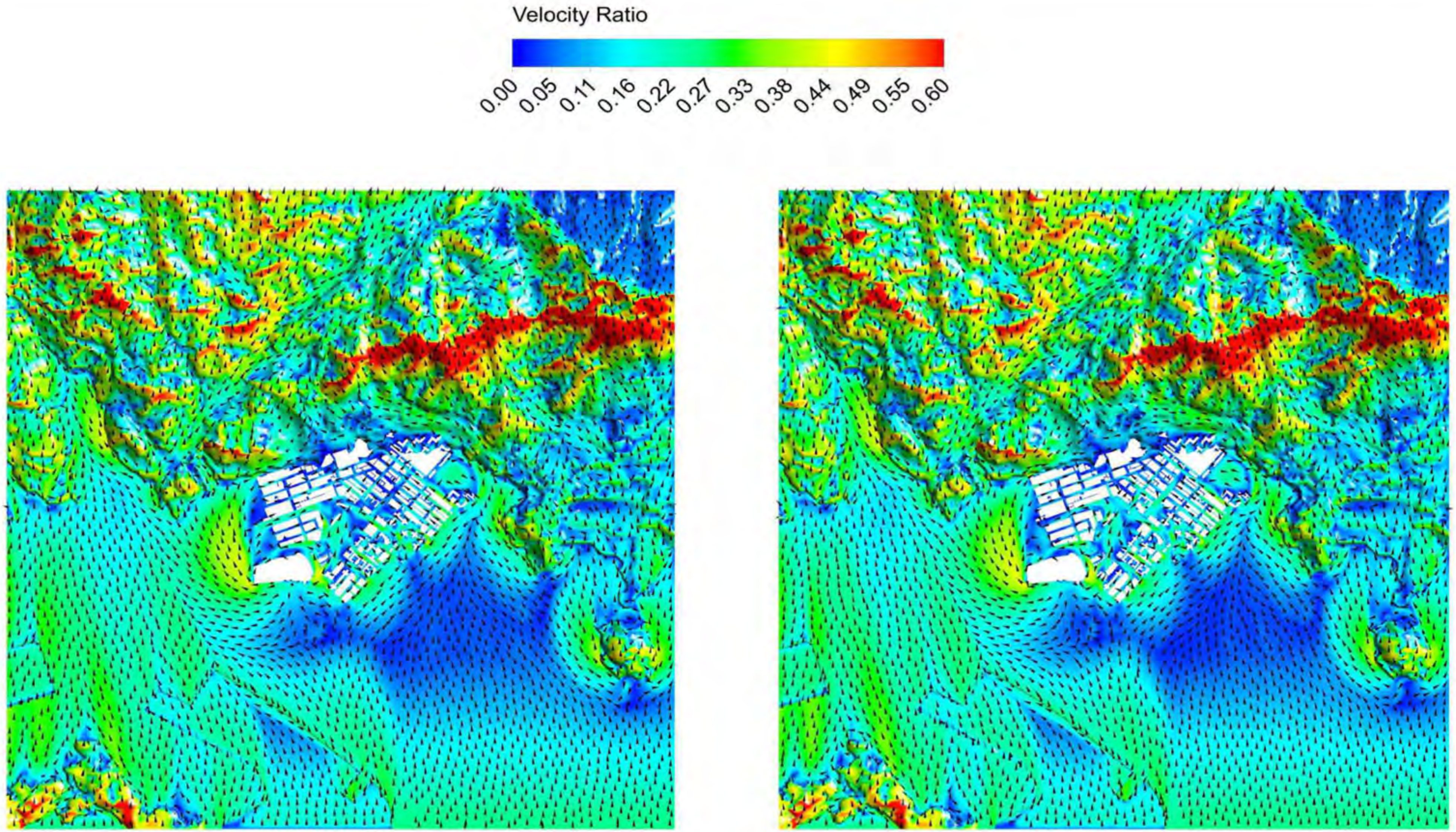

Baseline Scheme

Proposed Scheme

180 deg Wind Direction

CINOTECH consultants limited 漢蔡

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)

SCALE	N.T.S.	DATE	Sep-21
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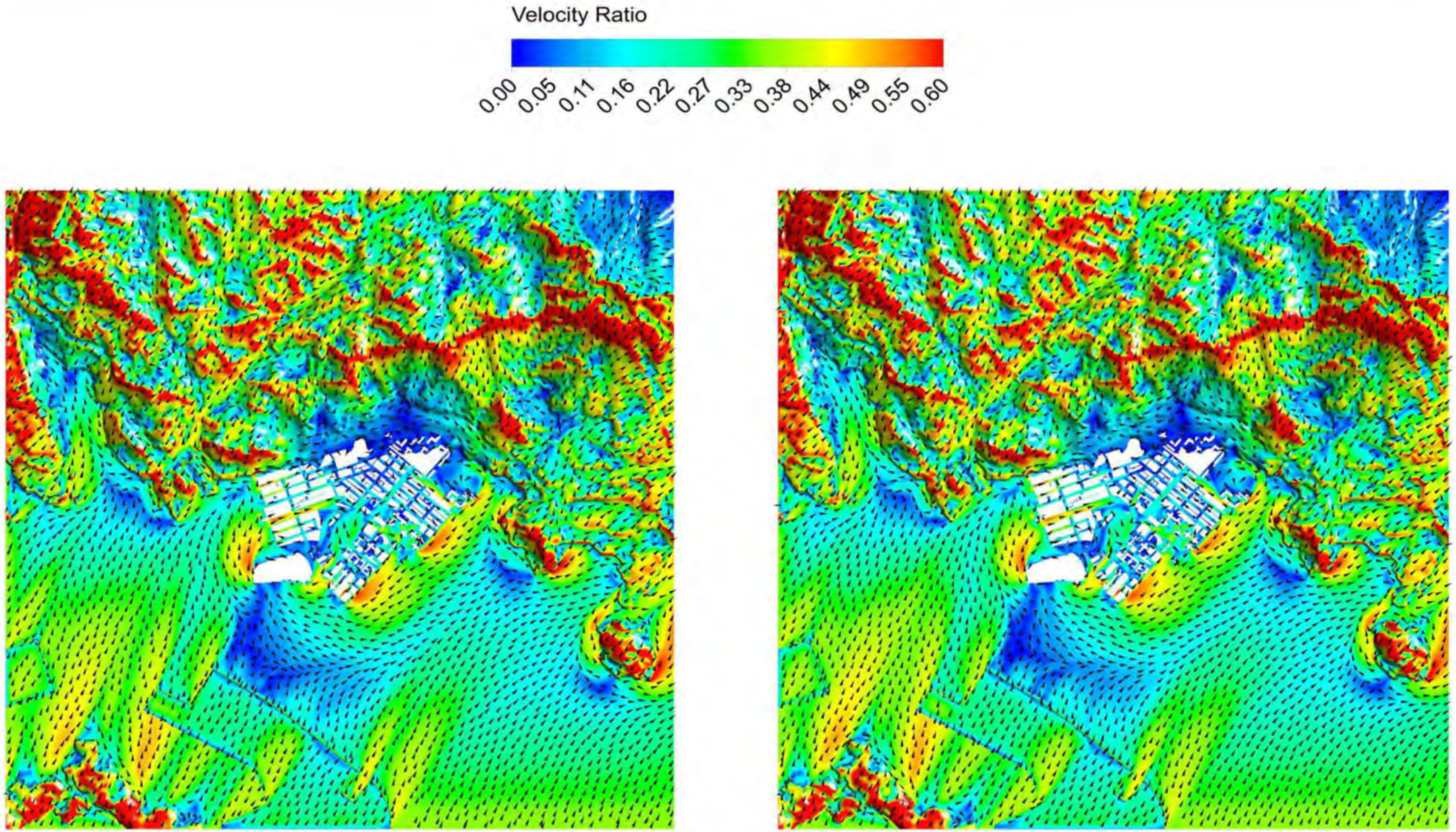
JOB NO.	IA19021/SSPAA1	FIGURE NO. 4-2g	REV. -



Baseline Scheme

Proposed Scheme

202.5 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)

SCALE	N.T.S.	DATE	Sep-21	
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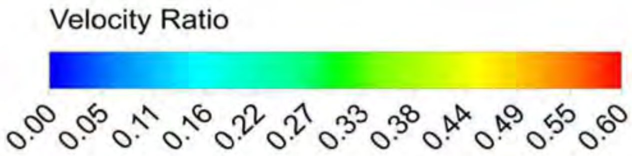
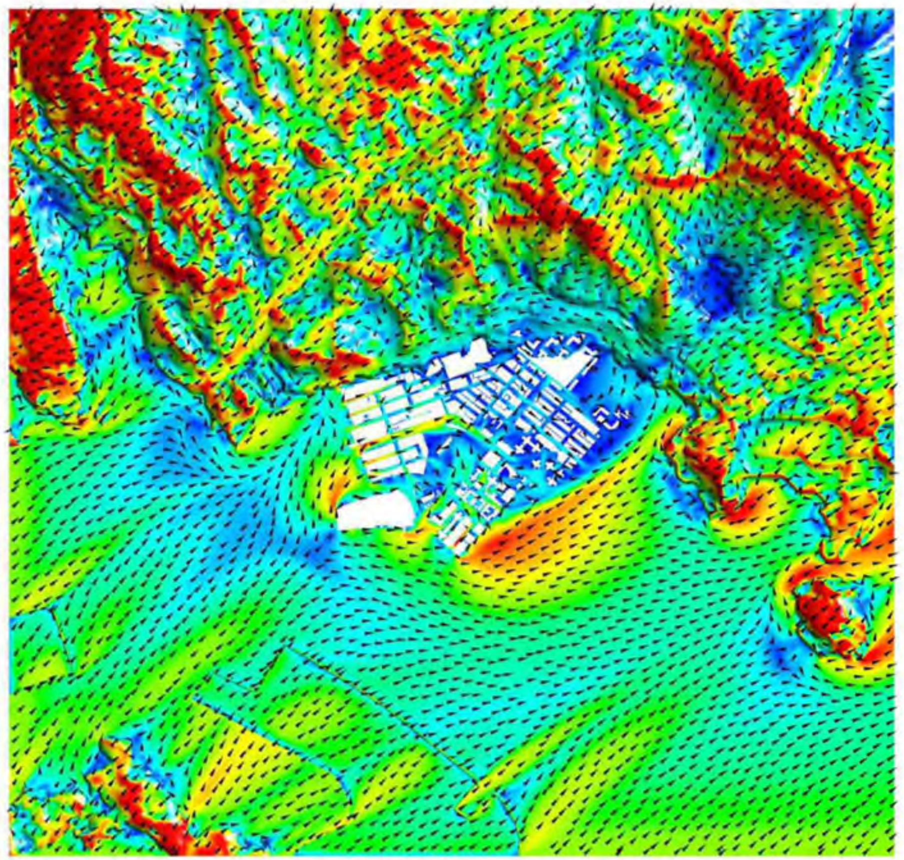
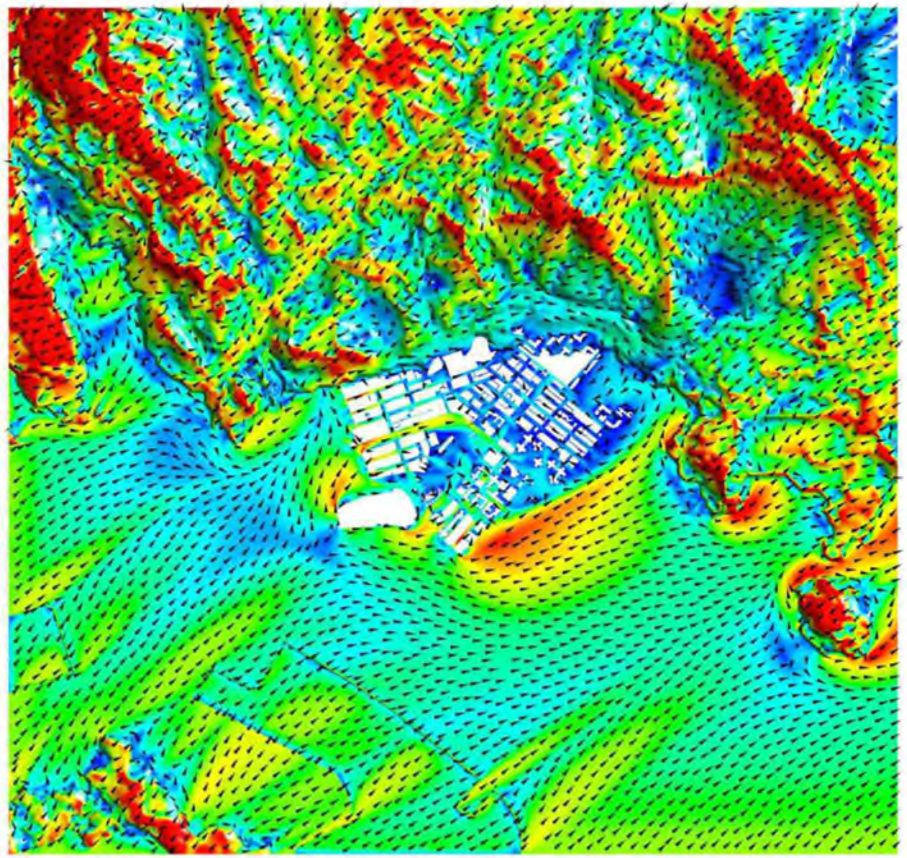
JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-2h	REV.
				-





Baseline Scheme



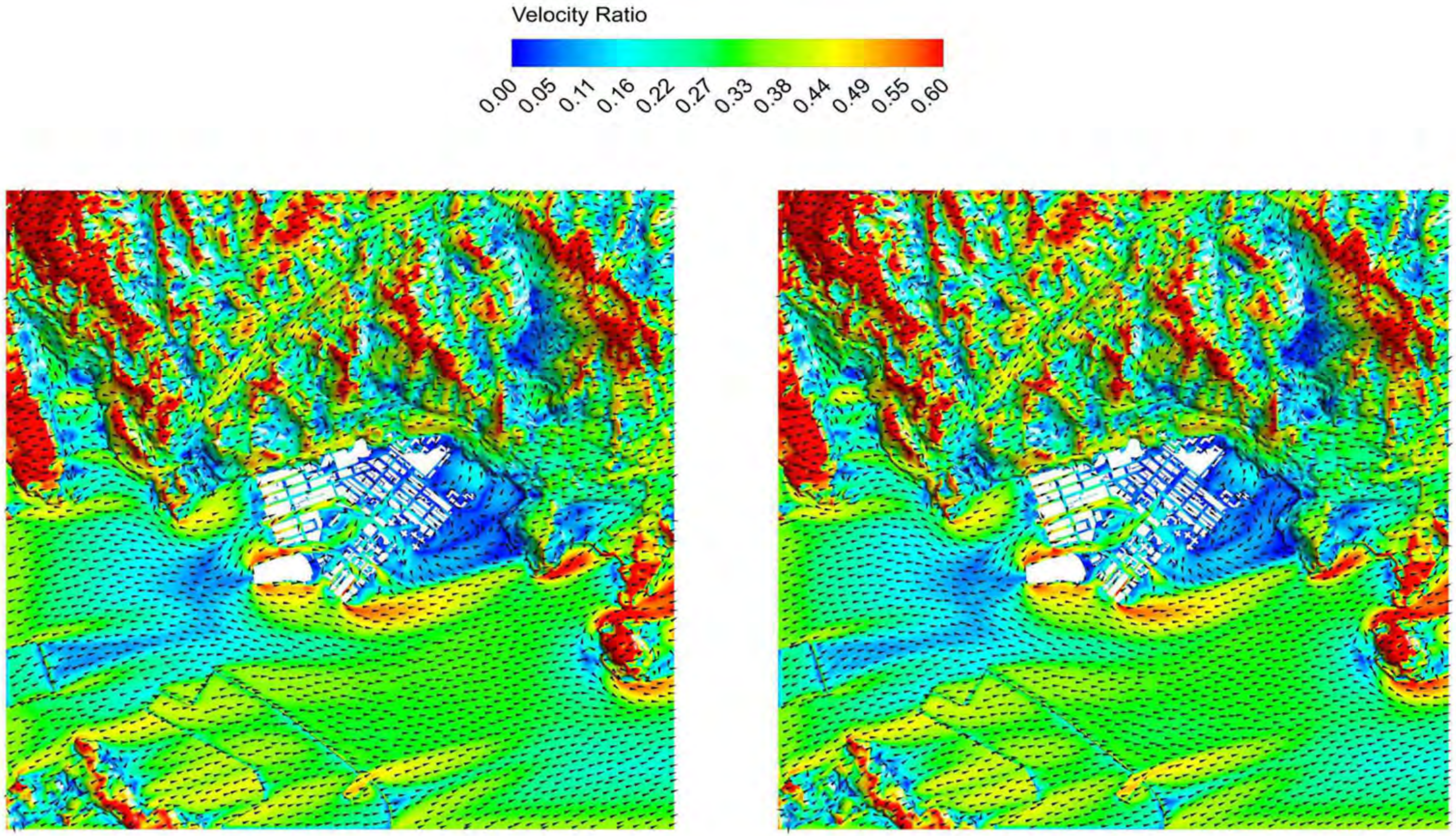
Proposed Scheme

225 deg Wind Direction

CINOTECH consultants limited 漢藝

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)

SCALE	N.T.S.	DATE	Sep-21
CHECK	KC	DRAWN	CC
JOB NO.	IA19021/SSPAA1	FIGURE NO.	4-2i
		REV.	-



Baseline Scheme

Proposed Scheme

247.5 deg Wind Direction

CINOTECH 漢蘇 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours and Vectors of Wind Velocity Ratio at 2mAG (4km)

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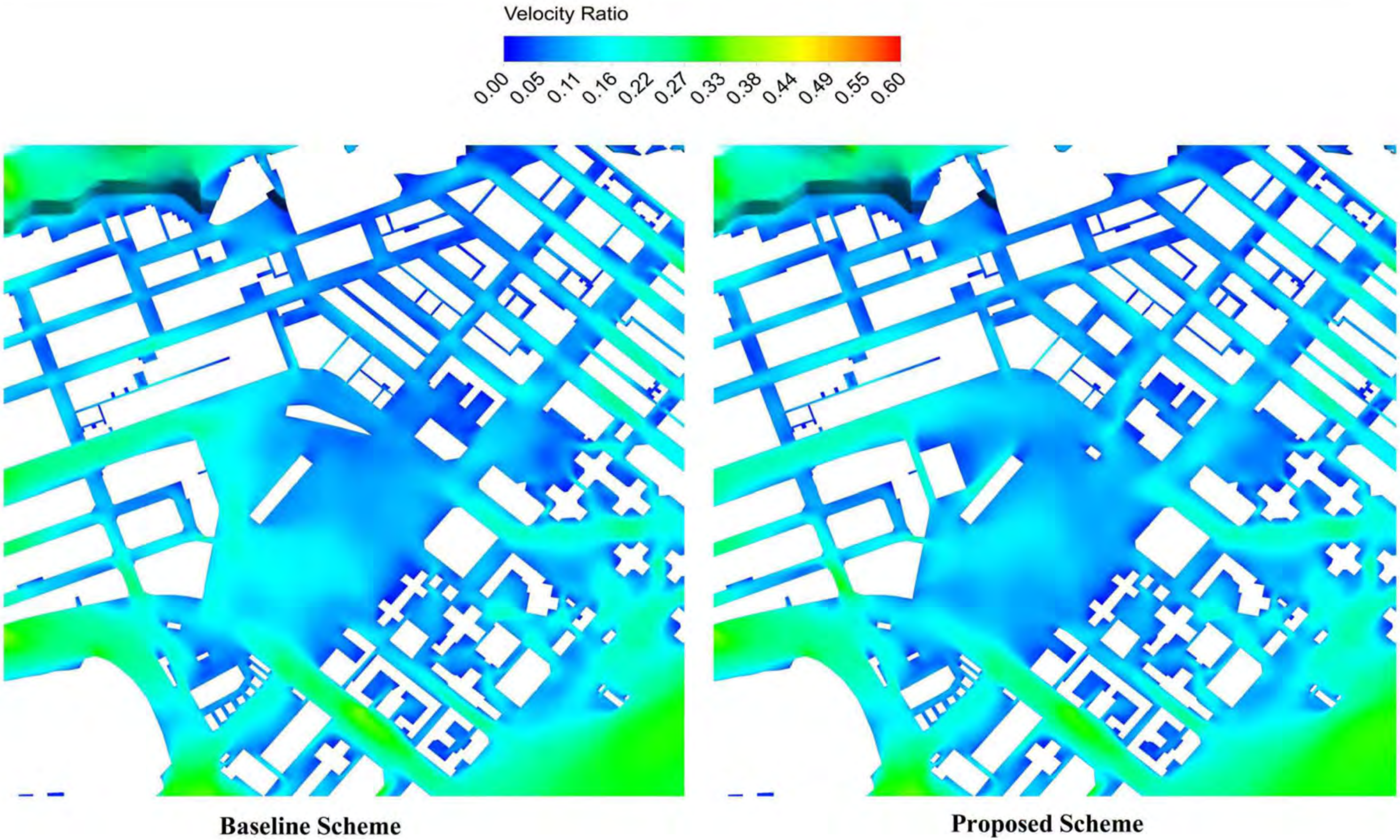
CHECK	KC	DRAWN	CC
JOB NO.	IA19021/SSPAA1	FIGURE NO. 4-2j	REV. -

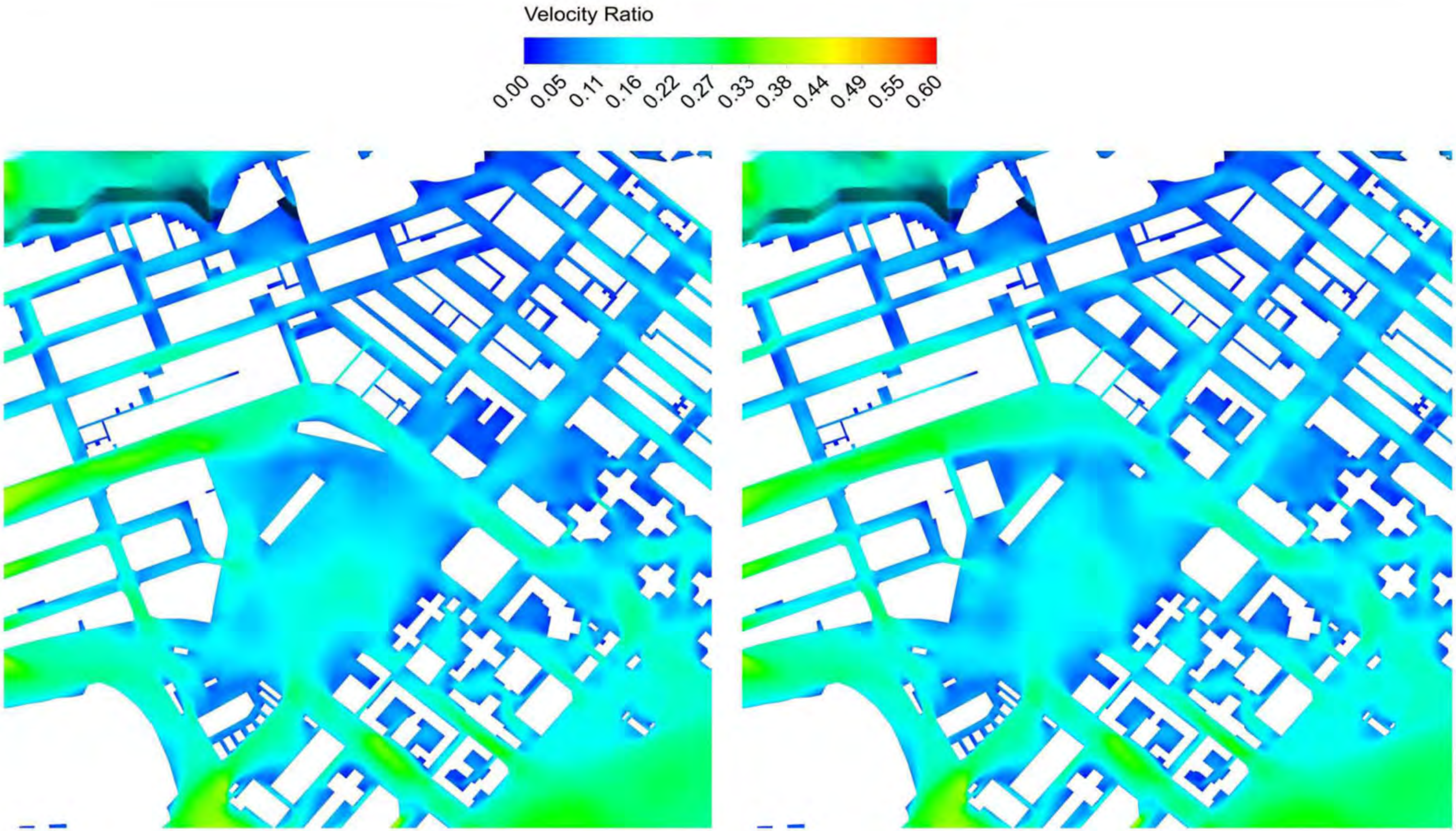


Annual

CINOTECH 漢蘇 consultants limited

Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)
Contours of Wind Velocity Ratio (Annual Condition)

SCALE	N.T.S.	DATE	Sep-21
CHECK	KC	DRAWN	CC
JOB NO.	IA19021/SSPAA1	FIGURE NO. 4-3a	REV. -



Baseline Scheme

Proposed Scheme

Summer

CINOTECH 漢蘇 consultants limited	**Urban Renewal Authority Development Scheme Cheung Sha Wan Road / Cheung Wah Street (SSP-018)** **Contours of Wind Velocity Ratio (Summer Condition)**	SCALE	N.T.S.	DATE	Sep-21
		CHECK	KC	DRAWN	CC
		JOB NO.	IA19021/SSPAA1	FIGURE NO. 4-3b	REV. -

Appendix 8

Drainage & Sewerage Impact Assessment (DSIA) Report

Urban Renewal Authority
Development Scheme
Cheung Wah Street / Cheung Sha Wan Road
(SSP-018)

Drainage Impact Assessment
(V1.0)

September 2021

Approved By	(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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Email: info@cinotech.com.hk

Prepared by	Colman Wong	Colman	23 September 2021
Checked by	Karina Chan		23 September 2021

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1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority (URA) has proposed a Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO). This Drainage Impact Assessment (DIA) is to support the submission of a draft Development Scheme Plan (DSP) with its planning proposal to the Town Planning Board (TPB) for consideration.

1.1.2 Cinotech Consultants Limited was commissioned by URA to carry out a Drainage Impact Assessment (DIA) to assess and envisage any potential drainage impact on the implementation of the proposed development of the Scheme and to recommend necessary pipe upgrading/diversion as necessary.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

2.1.1 The Scheme SSP-018 consists of Sites A and B. Site A is bounded by Hing Wah Street on the south-eastern boundary, Cheung Sha Wan Road on the south-western boundary, Cheung Wah Street on the north-western boundary, and Cheung Sha Wan Catholic Secondary School on the north-eastern boundary. Site B is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the south-eastern boundary (Figure 2-1). The proposed gross site areas of the Site A & Site B are 5,197m^2 and 13,857m^2 respectively, subject to site survey and detailed design.

2.1.2 Currently, the Site A comprises a single storey Cheung Sha Wan Sports Centre and its associate outdoor garden and playground. The Site B comprises a government land lot (GLA-TNK 1723) which currently is an open area with a few 1-2 storeys temporary structures, Cheung Sha Wan Path Sitting-out Area, and a garden associated with Sham Shui Po Sports Ground.

2.1.3 According to the Approved Cheung Sha Wan Outline Zoning Plan (OZP) No. S/K5/37, the Site A consists of Open Space, G/IC (1 storey), and small portion of road zone. Similarly, the Site B also consists of Open Space, G/IC (1 storey), and road zone.

2.1.4 Based on the best available information, the stormwater from Site A is currently discharged via public storm water manholes SMH4061013, SMH4061014, SMH4010597, SMH4010598, to the box culvert SBP4001321 in the east. While stormwater from Site B is either discharged via storm water manhole SMH4010820 to box culvert SBP4001323 in the east, or discharged via storm water manhole SMH4010081 to the decked nullah SDP4000306 in the far west. An overview of the existing drainage pipes in the vicinity is provided in **Figure 2-2**.

2.2 The Proposed Development

2.2.1 The entire Site A is proposed to rezone to "R(A)" and redevelop the area for high-density residential development, with non-domestic uses always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of a building. The proposed development on Site A consists of a 2 floors of basement carpark, a 5 storeys podium (GFA: 5,197m^2 for retails; 5,197m^2 for G/IC) and two 34 storeys residential towers (838 flats).

2.2.2 Western part of the Site B is proposed to rezone to G/IC and provide a G/IC complex with GFA of 33,696 m^2 for community and amenity. The rest of the Site B of about 9,645 m^2, is proposed to be public open space.

2.2.3 The proposed notional scheme is shown in **Appendix I**. The notional design is subject to change at detailed design stage.

2.2.4 It should be noted that public storm water manholes SMH4061013, SMH4061014, SMH4010597, SMH4010598 are within the boundary of Site A (**Figure 2-2**). Those manholes as well as their connecting drainage pipes will be removed. As those public storm water manholes are not only serving the Site A but also for upstream catchments, re-diversion of the existing drainage pipes is necessary.

2.2.5 An existing public storm water manhole SMH4010820 is current in Site B. The manhole together with it associated pipe will be removed. As the manhole should only serve the Site B, no re-diversion is necessary.

3 DRAINAGE IMPACT ASSESSMENT

3.1 Catchments in the Vicinity

3.1.1 Stormwater Drainage Manual – Planning, Design and Management", fifth edition, January 2018, (hereafter called "the DSD Manual") prepared by the DSD provides guidelines for the design of the drainage system. According to Table 10 of the DSD Manual, the recommended design return period based on flood levels is 50 years ("main rural catchment drainage channels") for conservative purpose.

3.1.2 The runoff coefficients of each zone are summarized in **Table 3-1**.

Table 3-1 Runoff Coefficients

Type of Area	Run-off Coefficient [1]
Grass	0.19
Paved/Concrete	0.90

Note:
[1] The runoff coefficients are extracted from Section 7.5.2 of "Stormwater Drainage Manual – Planning, Design and Management", fifth edition, January 2018.

3.1.3 A hydraulic calculation has been performed on the peak flows from a 1:50 year rainstorm with rainfall intensity according to the DSD Manual. The increase of 10.4% in rainfall for 2041-2060 is also incorporated into the calculation. The catchments are shown in **Figure 3-1** and **Figure 3-2a** to **Figure 3-2f**. The volumes of stormwater runoff of each zone are summarized in **Table 3-2**. The detailed calculations are shown in **Appendix II.**

Table 3-2 Comparison of Drainage Discharge from the Site and Vicinities

Catchments	Total Drainage Discharge (L/s)
Project site A	304.9
Project Site B (POS)	442.9
Project Site B (G/IC)	220.9
A1	181.3
A2	190.5
B1	196.5
B2	75.1
B3	268.1
B4	620.6

Note:
[1] Detailed calculations are shown in **Appendix II**.
[2] Paved and unpaved area for the proposed development subject to minor changes in detailed design stage.

3.2 Impact to Existing Public Drainage System

3.2.1 The runoff from Site A and the Site B (POS) will be directed to the nearest section of box culvert in the east (SBP4001321 & SBP4001322), without via existing public drainage pipes. The runoff from the Site B (G/IC) will be directed to the nearest existing manhole (SMH4010052). The hydraulic calculations of the full capacities for the existing pipes connecting to the public drainage system are summarized in **Table 3-3**. The detailed calculation can be found in Table A in **Appendix III.**

Table 3-3 Capacities of Existing Drainage Pipes

Drainage Pipe	Upstream Manhole no.	Downstream Manhole no.	Full Capacity[1] (L/s)	Catchment	Peak Flow (L/s)	Percentage
PS B01	SMH4010052	SMH4010053	1750	Project site B (G/IC) + B1 +B2 +B3 +B4	1381.1	79%
PS B02	SMH4010053	SMH4010054	2021	Project site B (G/IC) + B1 +B2 +B3 +B4	1381.1	68%
PS B03	SMH4010054	SMH4010055	1976	Project site B (G/IC) + B1 +B2 +B3 +B4	1381.1	70%

Note:
[1] Calculated by Colebrook-White Equation. The detailed calculation is shown in **Appendix III**.

3.2.2 From the calculation detailed in Table A of **Appendix III**, the downstream drainage pipes PS B01 – PS B03 can cater the stormwater discharge from Site B (G/IC). Therefore, no upgrading works for those pipes are required.

3.3 Drainage Discharge from Project to Public Drainage System

Site A (Composite Development)

3.3.1 Stormwater from Project Site A will be collected by a new terminal manhole (STMH-A01) then discharged via a new proposed pipe (PP A01) to the box culvert (SBP4001321) (2440mm×2440mm) along Hing Wah Street. The diameter and slope of the proposed pipe PP A01 are ϕ600mm and 1:100 respectively.

Re-diversion of Existing Drainage Pipe due to Site A

3.3.2 As the existing public stormwater manholes SMH4061013, SMH4061014, SMH4010597, SMH4010598 together with their associated drainage pipes will be removed due to the Site A, new stormwater manhole and drainage pipes will be required to re-divert the stormwater from upstream catchments to the box culvert SBP4001324 along Hing Wah Street (**Figure 3a**).

3.3.3 Five new manholes (STMH-A02 - STMH-A06) and six new drainage pipes (PP A02 – PP A07) have been proposed for the re-diversion. The diameter and slope of those proposed pipes are ϕ600mm and 1:100 respectively.

Site B (POS)

3.3.4 Stormwater from Project Site B (POS) will be collected by a new terminal manhole (STMH-B01) then discharged via a new pipe (PP B01) to the box culvert (SBP4001323) (2440mm×2440mm) along Hing Wah Street (**Figure 3-3b**). The diameter and slope of the proposed pipe PP B01 are ϕ600mm and 1:100 respectively.

Site B (G/IC Complex)

3.3.5 Stormwater from Project Site B (G/IC) will be collected by a new terminal manhole (STMH-B02) then discharged via a new pipe (PP B02) to the existing manhole (SMH4010052) along Cheung Sha Wan Road (**Figure 3-3c**). The diameter and slope of the proposed pipe PP B02 are ϕ600mm and 1:100 respectively.

Details of the Proposed Pipes

3.3.6 The proposed new pipes are summarised in **Table 3-4 & Table 3-5** and illustrated in **Figure 3-3a to Figure 3-3c**. Detailed calculation is presented in Table B of **Appendix III**.

3.3.7 It should be noted that the proposed new drainage pipe PP A02 will cross over with existing public sewer FWD4011891. FWD4011891 is a 750mm pipe with invert level of 1.02-1.06mpD, while PP A02 is having invert level of 3.50-3.62mPD. Similarly, the proposed new drainage pipe PP A04 (invert level of 3.05-3.26mPD) will cross over the proposed new sewer for Site A (~1.0 mPD, please refer to the SIA report for details). As there are significant vertical distances in between the pipes, no conflict of the pipes is anticipated.

3.3.8 The calculation shows that capacities of the proposed pipes are sufficient to cater the peak stormwater flow. Therefore, no adverse drainage impact is anticipated if the proposed new stormwater manholes and drainage pipes are implemented properly.

Table 3-4 Capacities of Proposed Drainage Pipes

Drainage Pipe	Upstream Manhole no.	Downstream Manhole no.	Diameter (mm)	Full Capacity[1] (l/s)	% of full capacity
Project Site A					
PP A01	STMH-A01	SBP4001321	600	556	55%
Project Site A - Re-diversion					
PP A02	SMH4061012	STMH-A02	600	556	67%
PP A03	STMH-A02	STMH-A03	600	548	68%
PP A04	STMH-A03	STMH-A04	600	548	68%
PP A05	STMH-A04	STMH-A05	600	548	68%
PP A06	STMH-A05	STMH-A06	600	548	68%
PP A07	STMH-A06	SBP4001321	600	548	68%
Project Site B (POS)					
PP B01	STMH-B01	SBP4001323	600	556	80%
Project Site B (G/IC)					
PP B02	STMH-B02	SMH4010052	600	556	40%

Note:
[1] Calculated by Colebrook-White Equation. The detailed calculation is shown in **Appendix III**.

Table 3-5 Details of Proposed Drainage Pipes

Drainage Pipe	Upstream Manhole no.	Downstream Manhole no.	Diameter (mm)	Invert level (mP.D.) [1]		Slope [1]
				Upstream	Downstream	
Project Site A						
PP A01	STMH-A01	SBP4001321	600	2.86	2.68	0.01
Project Site A - Re-diversion						
PP A02	SMH4061012	STMH-A02	600	3.62	3.50	0.01
PP A03	STMH-A02	STMH-A03	600	3.50	3.26	0.01
PP A04	STMH-A03	STMH-A04	600	3.26	3.05	0.01
PP A05	STMH-A04	STMH-A05	600	3.05	2.70	0.01
PP A06	STMH-A05	STMH-A06	600	2.70	2.32	0.01
PP A07	STMH-A06	SBP4001321	600	2.32	2.00	0.01
Project Site B (POS)						
PP B01	STMH-B01	SBP4001323	600	1.84	1.70	0.01
Project Site B (G/IC)						
PP B02	STMH-B02	SMH4010052	600	4.26	4.00	0.01

Note:
[1] The Invert level and slope of the proposed upgrade pipes subject to detail design.

4 CONCLUSION

4.1.1 The Development Scheme proposes to redevelop a composite development at Site A, which consists of 2 residential towers which providing about 838 flats, 2 floors of basement carpark, as well as a 5 storeys podium with ~5,197m^2 of G/C area and ~5,197m^2 of retail area; The Development Scheme also proposes a G/IC complex with GFA of ~33,696 m^2 for G/IC facilities at Site B.

4.1.2 For Site A, a new manhole (STMH-A01) is proposed to cater the drainage from the new development and then discharge via a new 600mm pipe (PP A01) to the nearby box culvert (SBP4001321).

4.1.3 The existing pipes and manholes (from existing manhole SMH4061012 to the box culvert SBP4001321) which are located within the boundary of Site A, will be replaced by new manholes (STMH-A02 - STMH-A06) and new pipes (from PP A02 to PP A07) to cater the stormwater from upstream catchments and then discharge to the box culvert (SBP4001324).

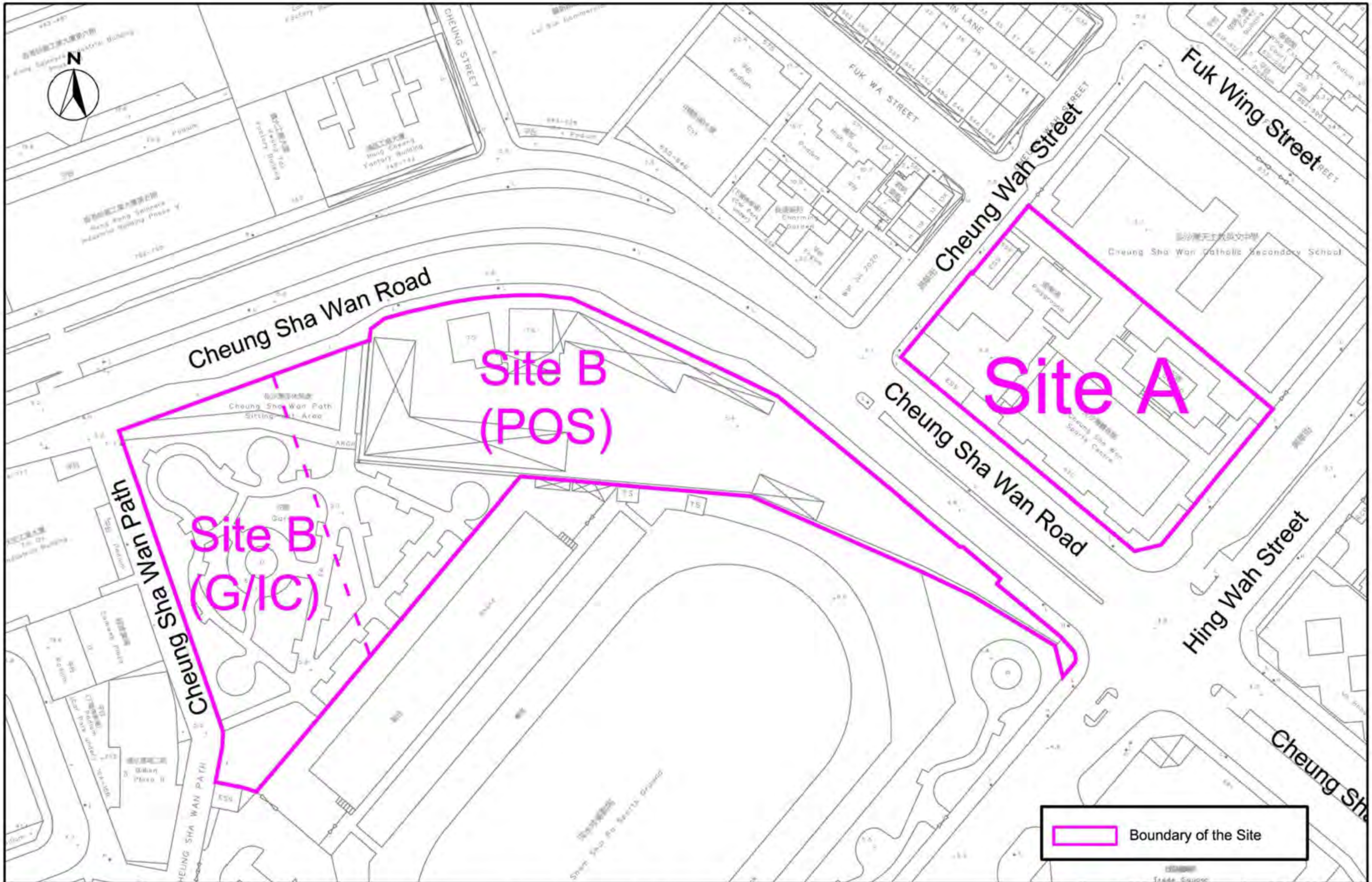
4.1.4 For Site B (POS), the existing manhole (SMH4010820) will be removed. A new terminal manhole (STMH-B01) will to collect the drainage discharge from Site B (POS), then discharged via a new 600mm pipe (PP B01) to the box culvert (SBP4001323).

4.1.5 A new manhole (STMH-B02) is proposed to cater the drainage from Site B (G/IC) and discharge via a new 600mm pipe (PP B02) to the existing manhole (SMH4010052).

4.1.6 Actual layout and invert levels of the proposed pipes are subject to detail design.

4.1.7 The new pipes would have sufficient capacity to cater for the stormwater discharge from the proposed development and surrounding catchments; therefore, no adverse drainage impact on the public drainage system is expected.

FIGURES



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Cinotech Consultants Limited

Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Location of the Project Site

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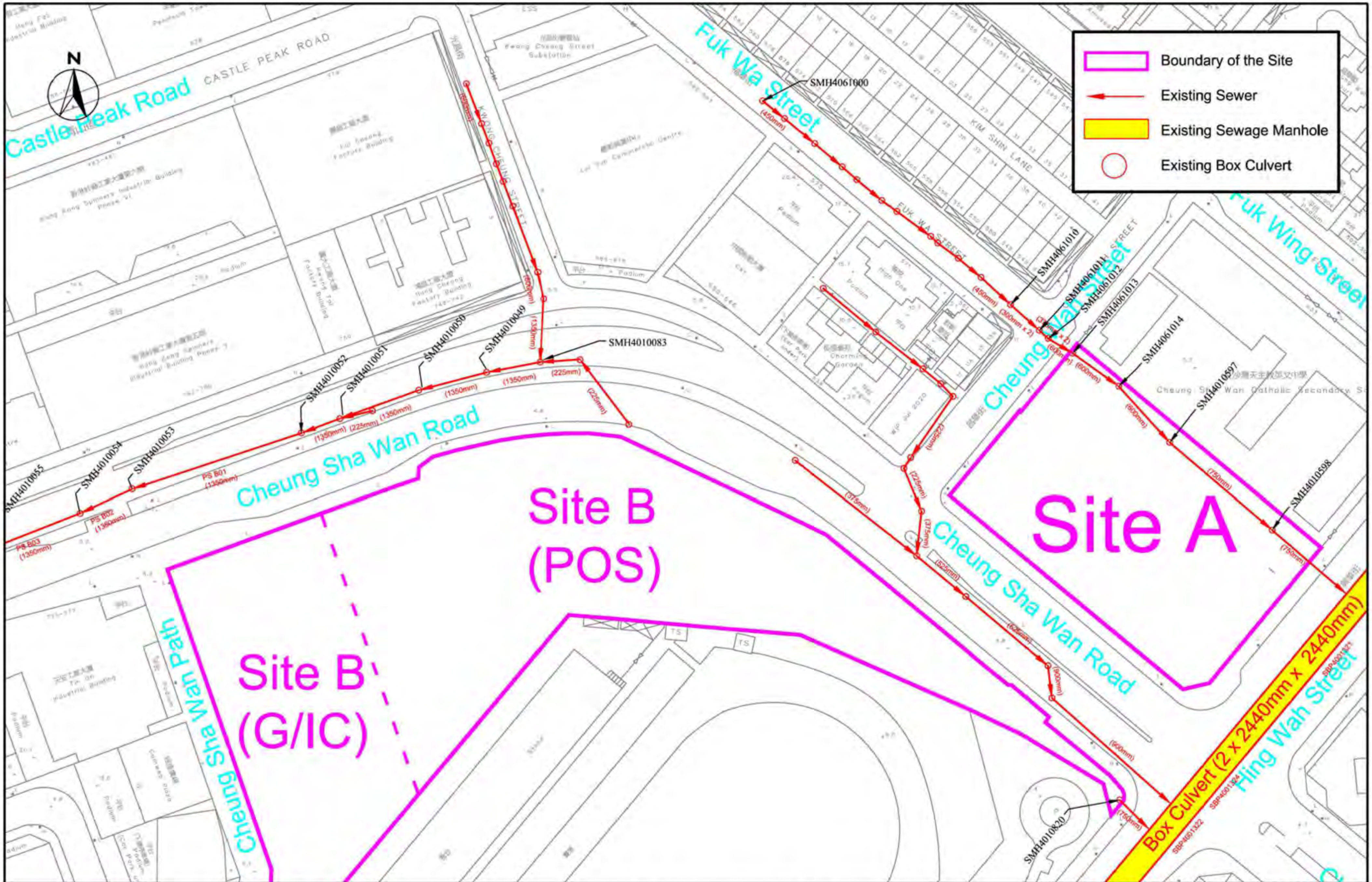

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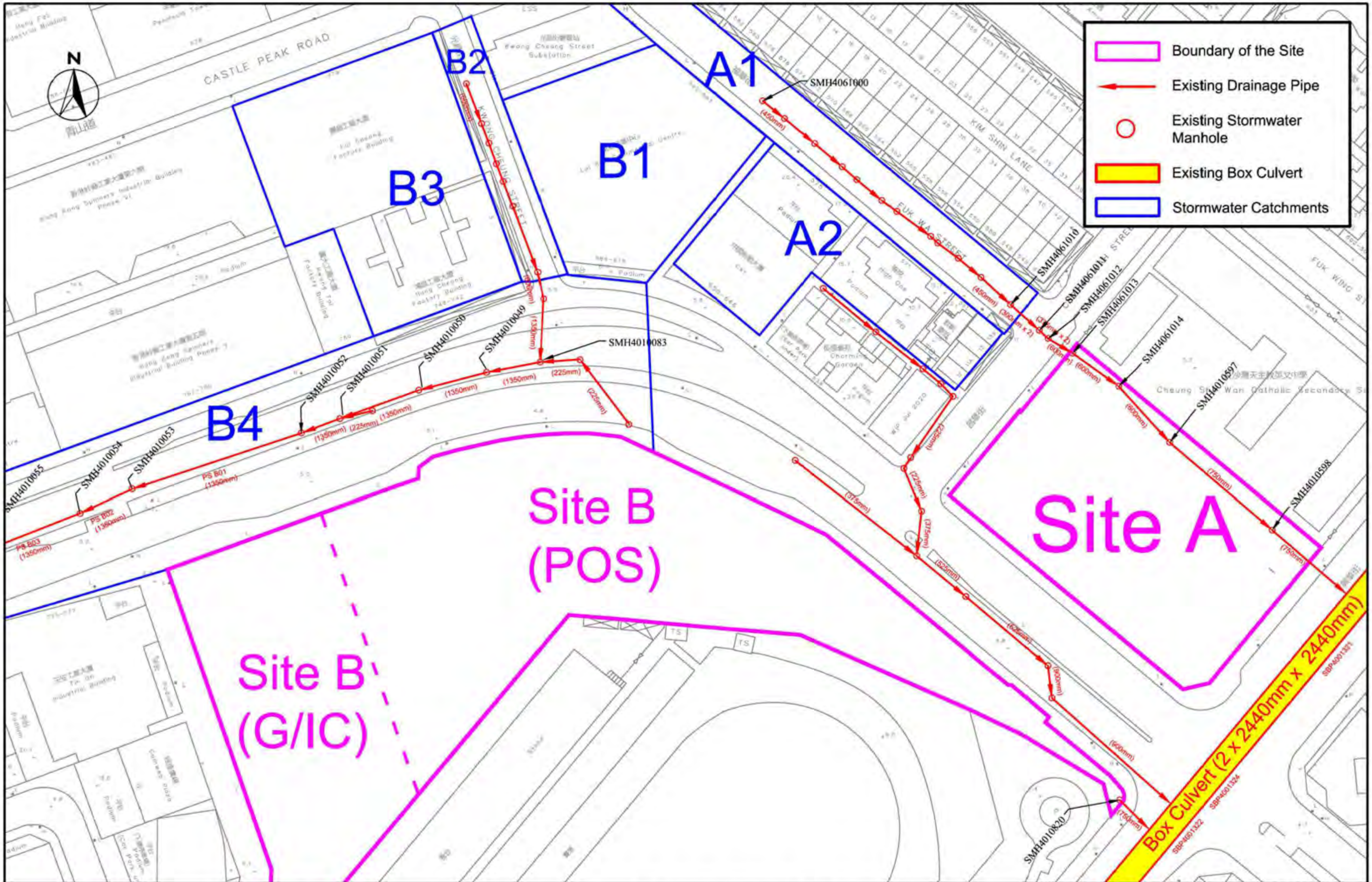

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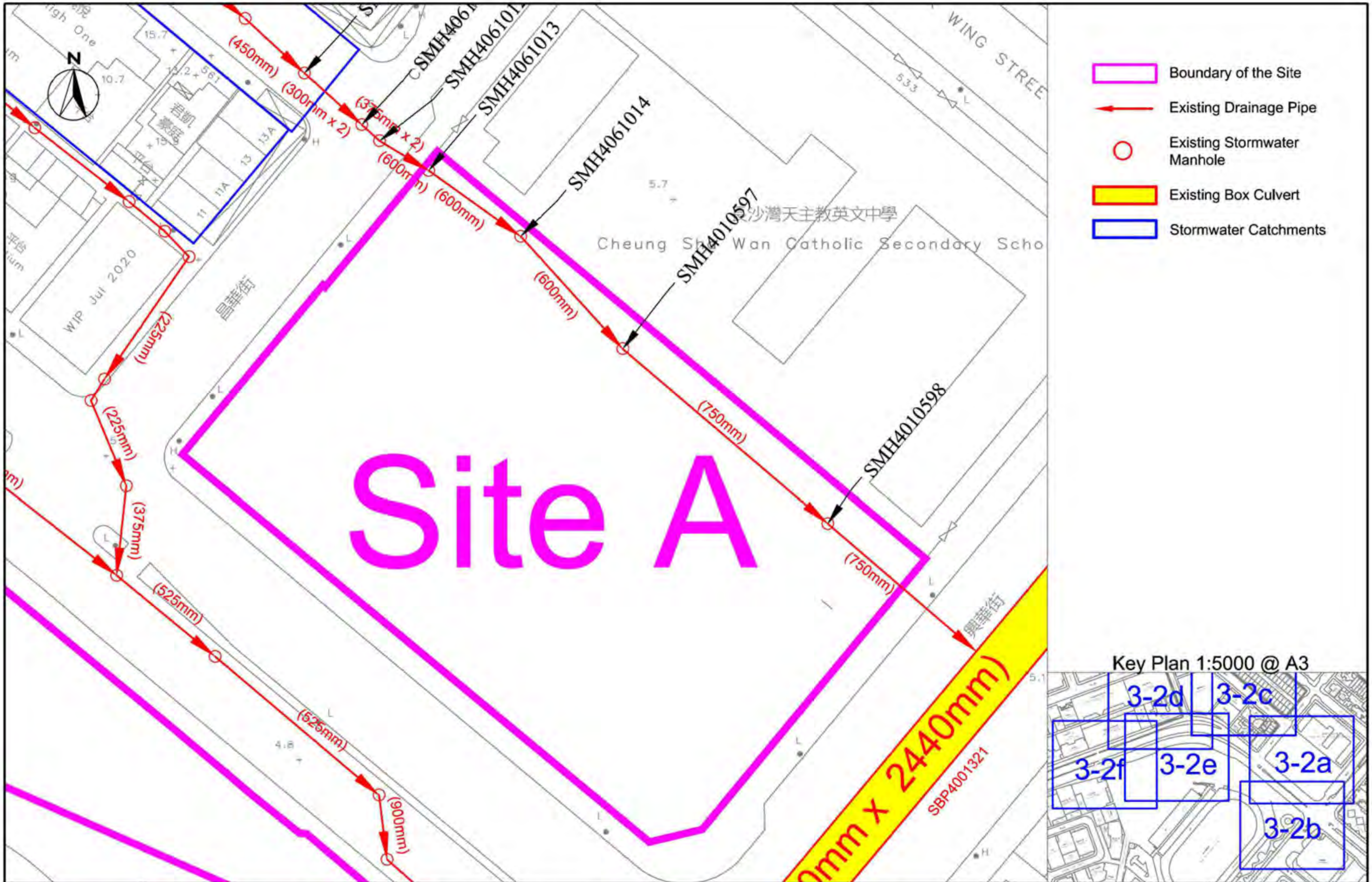

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Stormwater Catchments and Existing Drainage Pipes in the Vicinity

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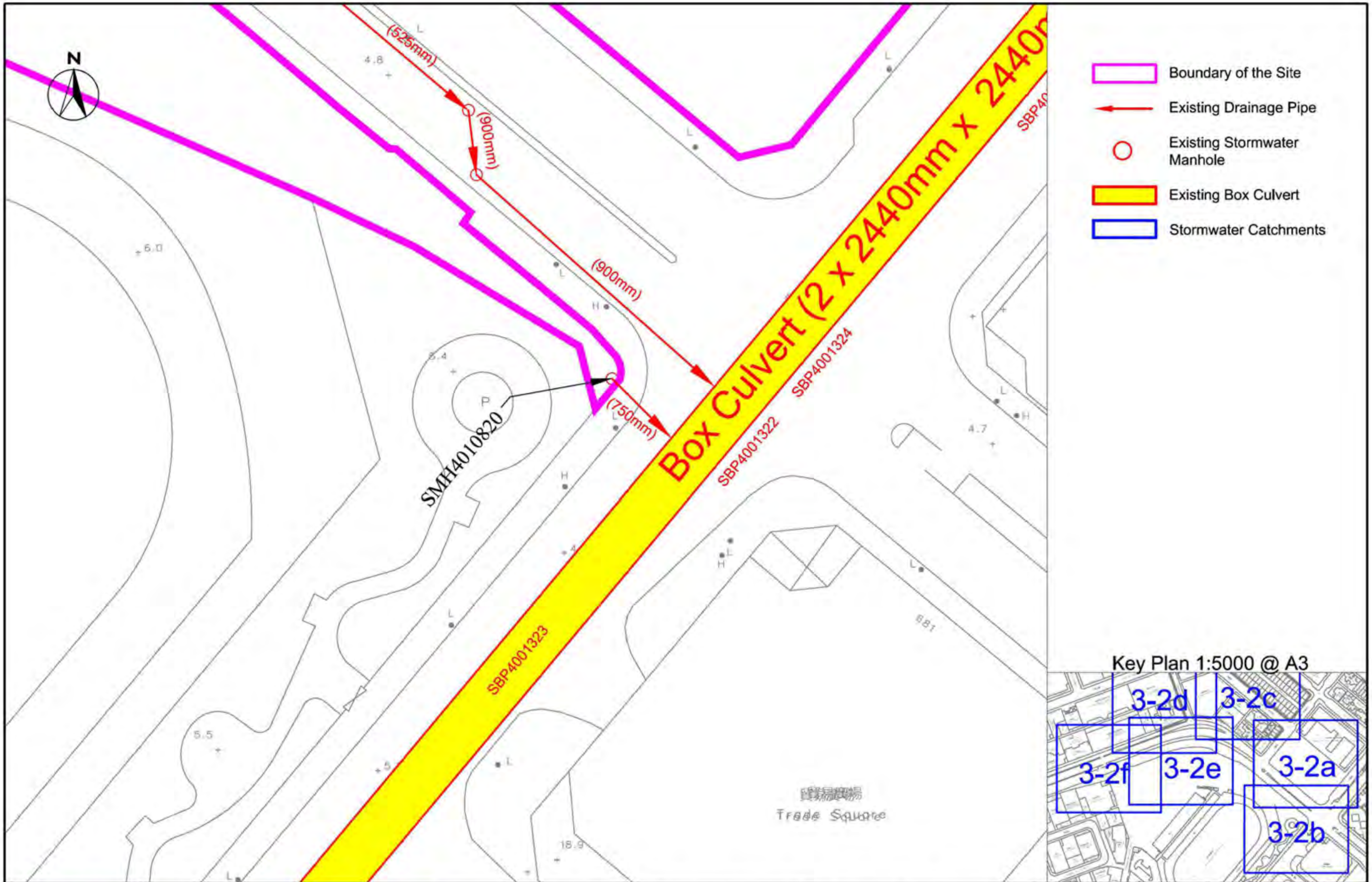

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Stormwater Catchments and Existing Drainage Pipes in the Vicinity

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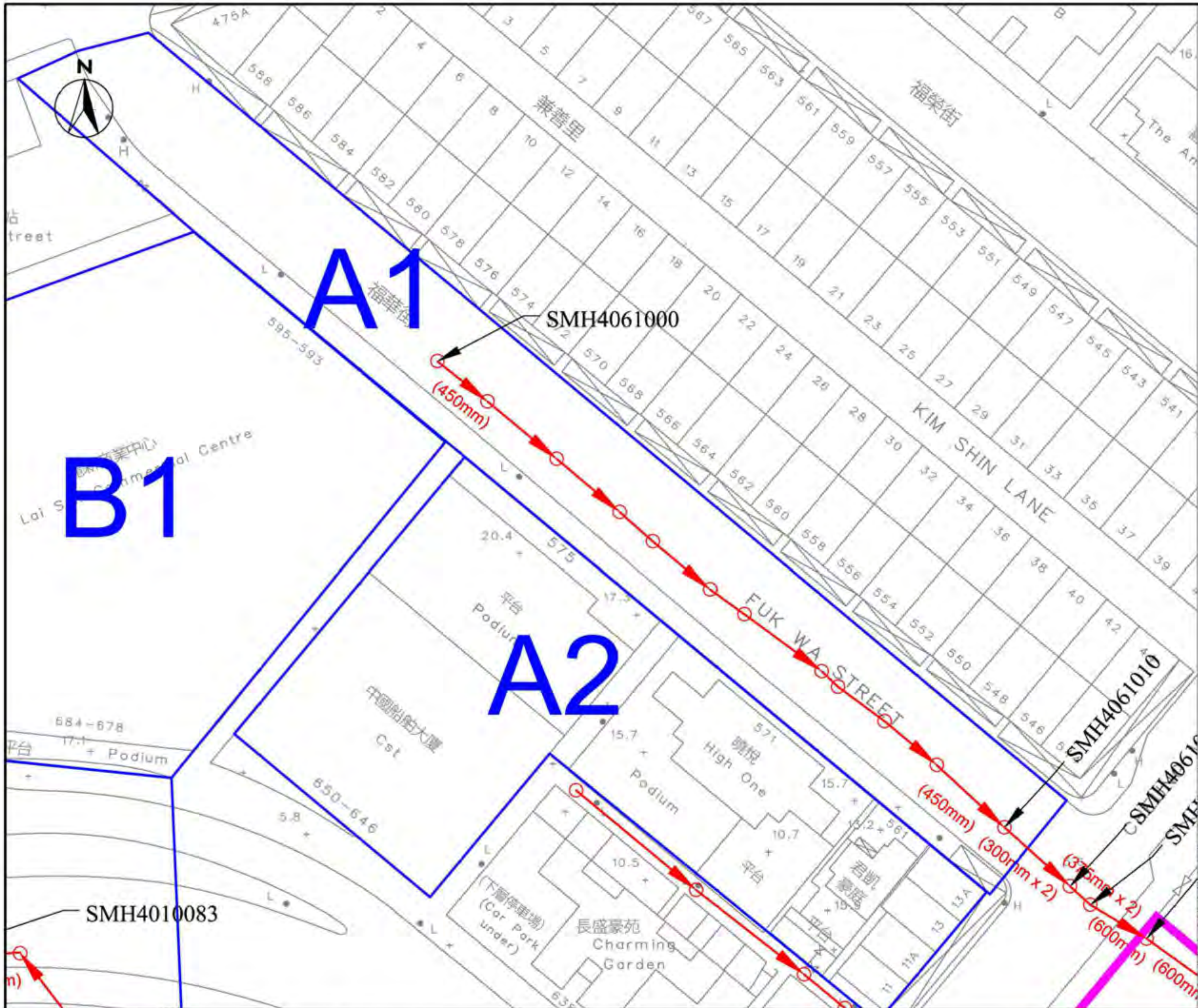
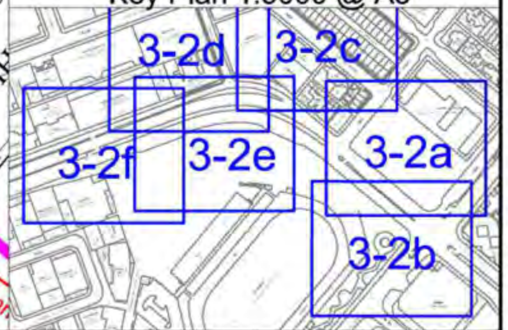


- Boundary of the Site
- Existing Drainage Pipe
- Existing Stormwater Manhole
- Existing Box Culvert
- Stormwater Catchments

Key Plan 1:5000 @ A3



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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Stormwater Catchments and Existing Drainage Pipes in the Vicinity

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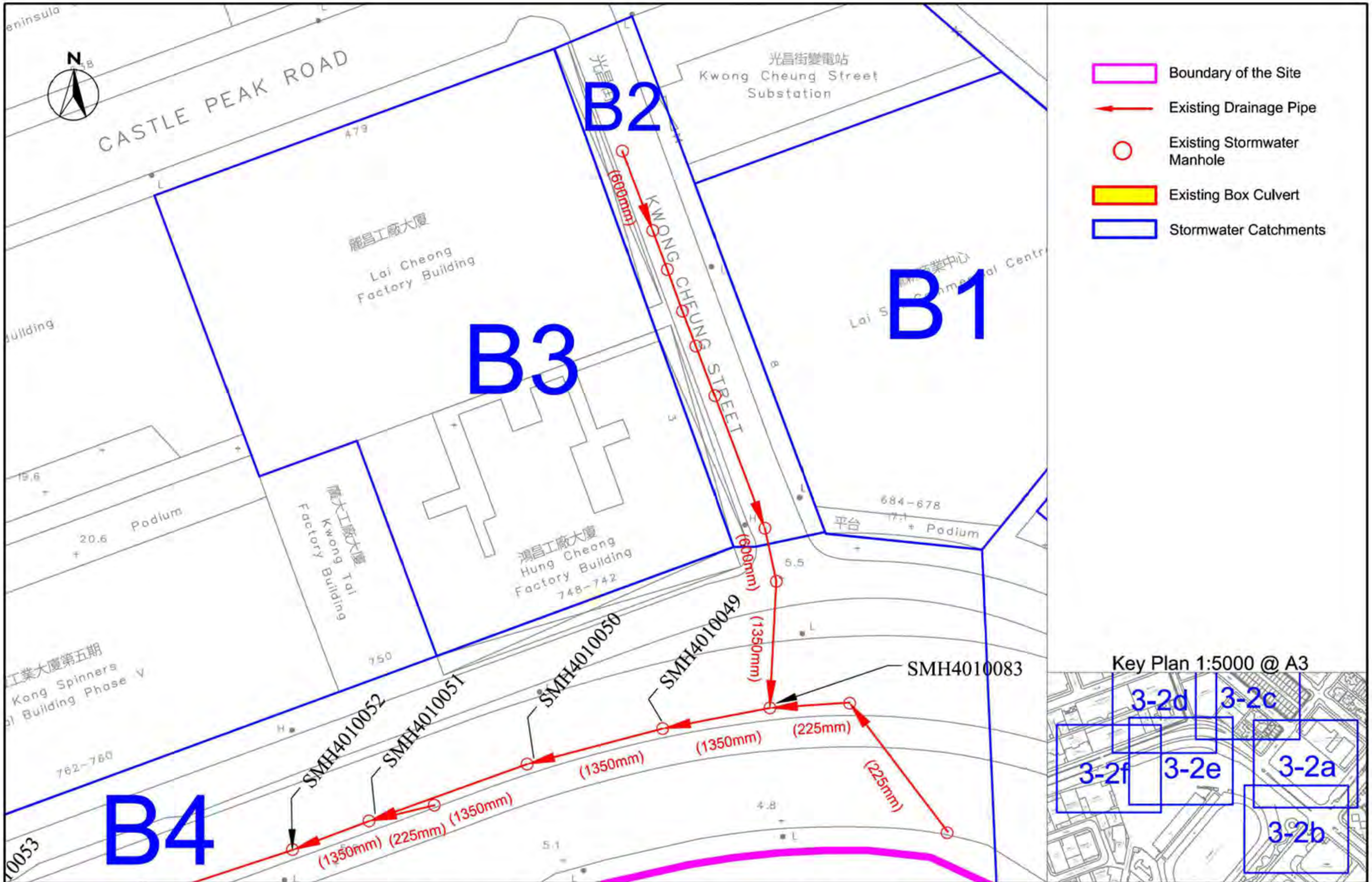

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Stormwater Catchments and Existing Drainage Pipes in the Vicinity

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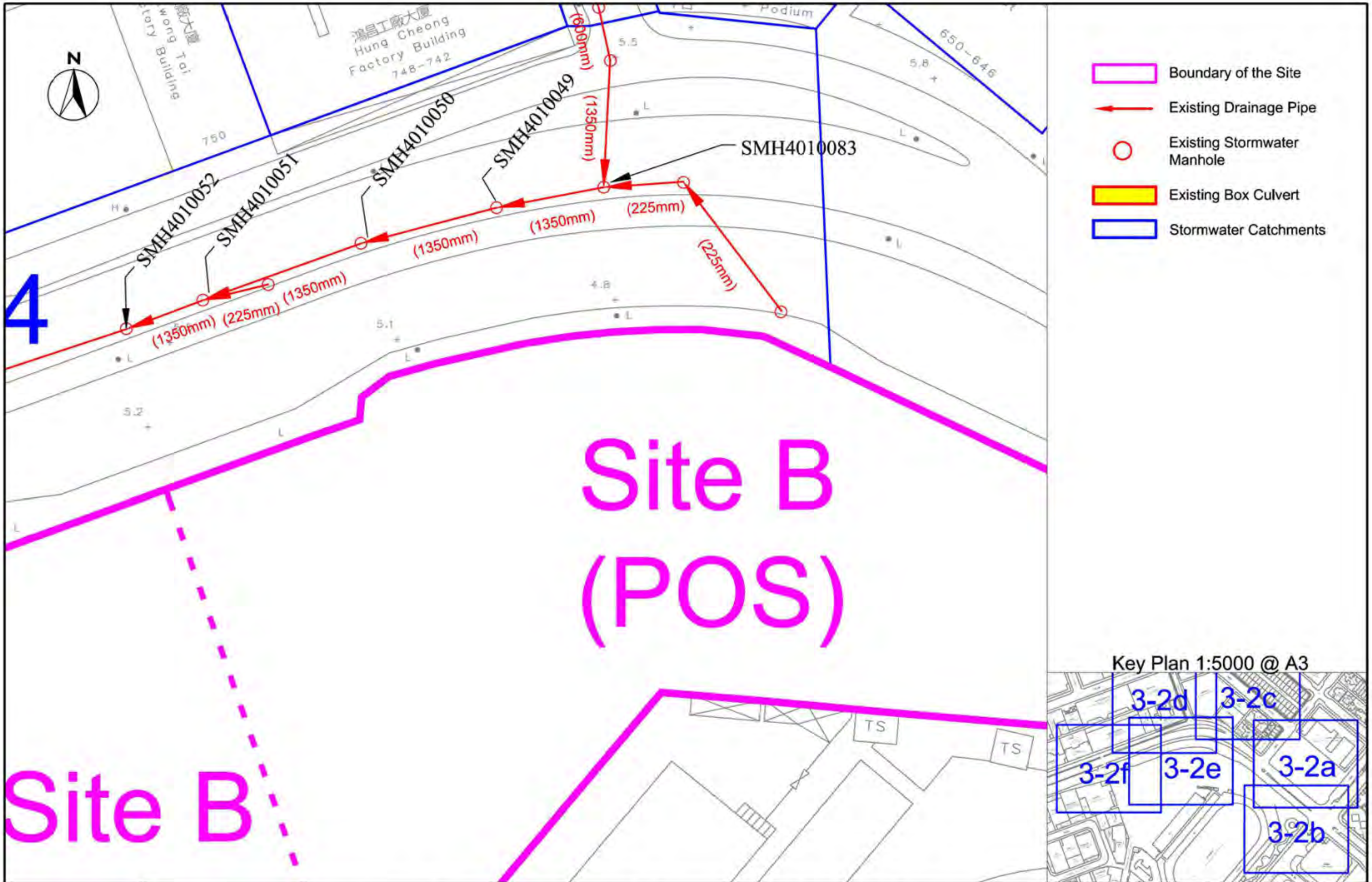

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Stormwater Catchments and Existing Drainage Pipes in the Vicinity

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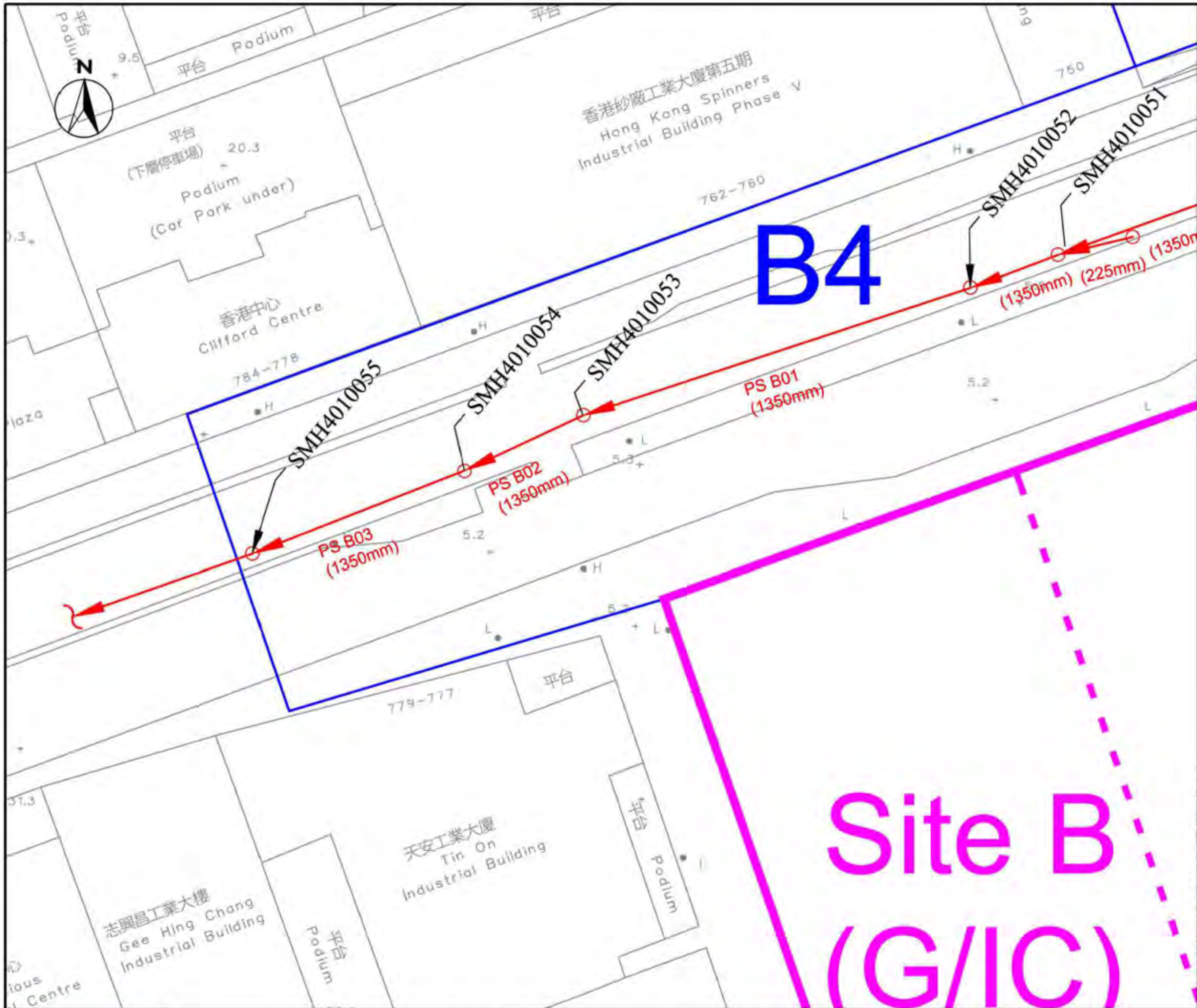
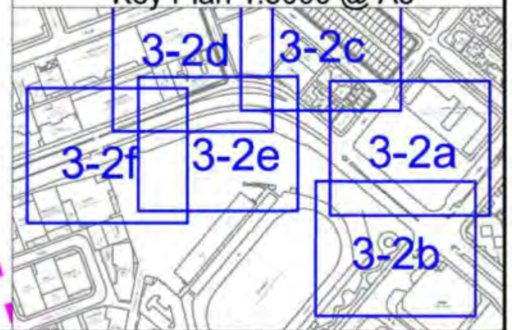


- Boundary of the Site
- Existing Drainage Pipe
- Existing Stormwater Manhole
- Existing Box Culvert
- Stormwater Catchments

Key Plan 1:5000 @ A3



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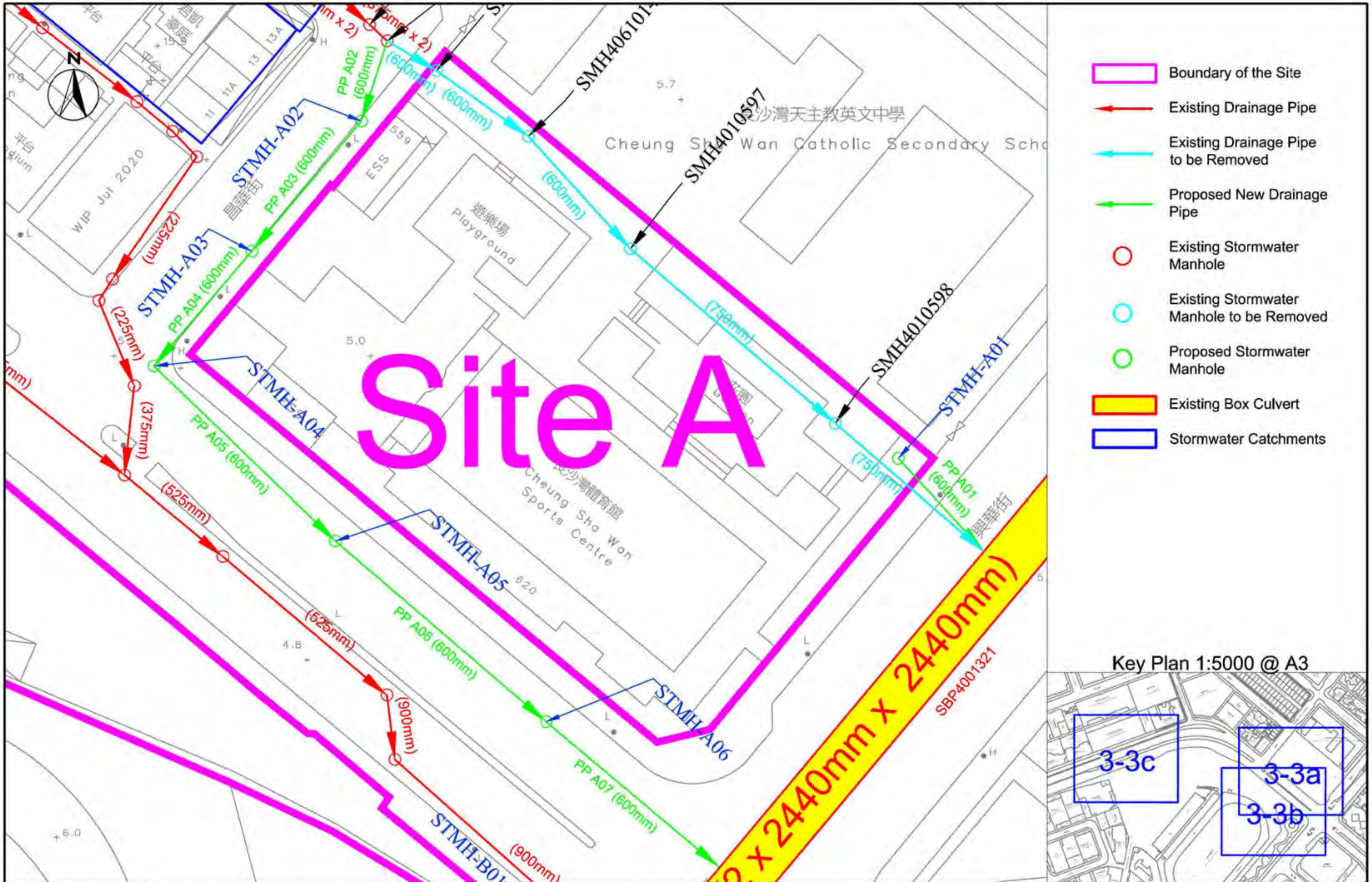

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Proposed New Drainage Pipes

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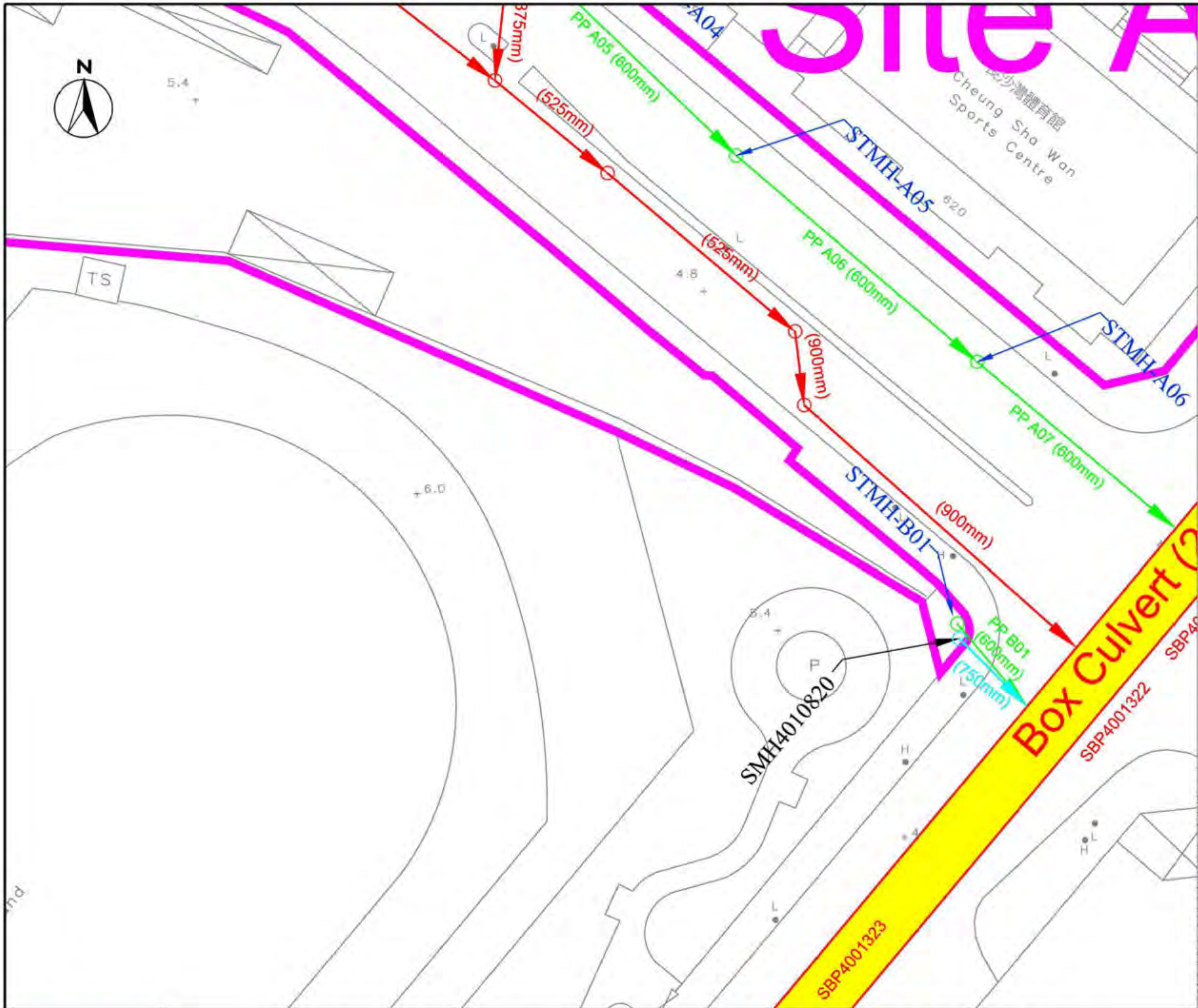
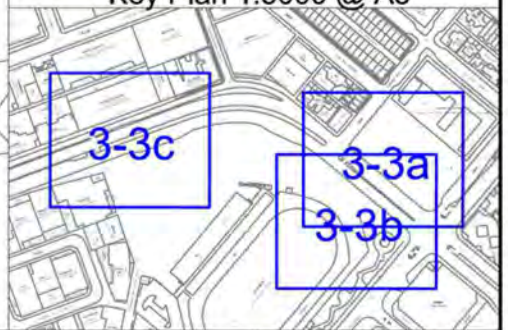


Boundary of the Site
Existing Drainage Pipe
Existing Drainage Pipe to be Removed
Proposed New Drainage Pipe
Existing Stormwater Manhole
Existing Stormwater Manhole to be Removed
Proposed Stormwater Manhole
Existing Box Culvert
Stormwater Catchments

Key Plan 1:5000 @ A3



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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Proposed New Drainage Pipes

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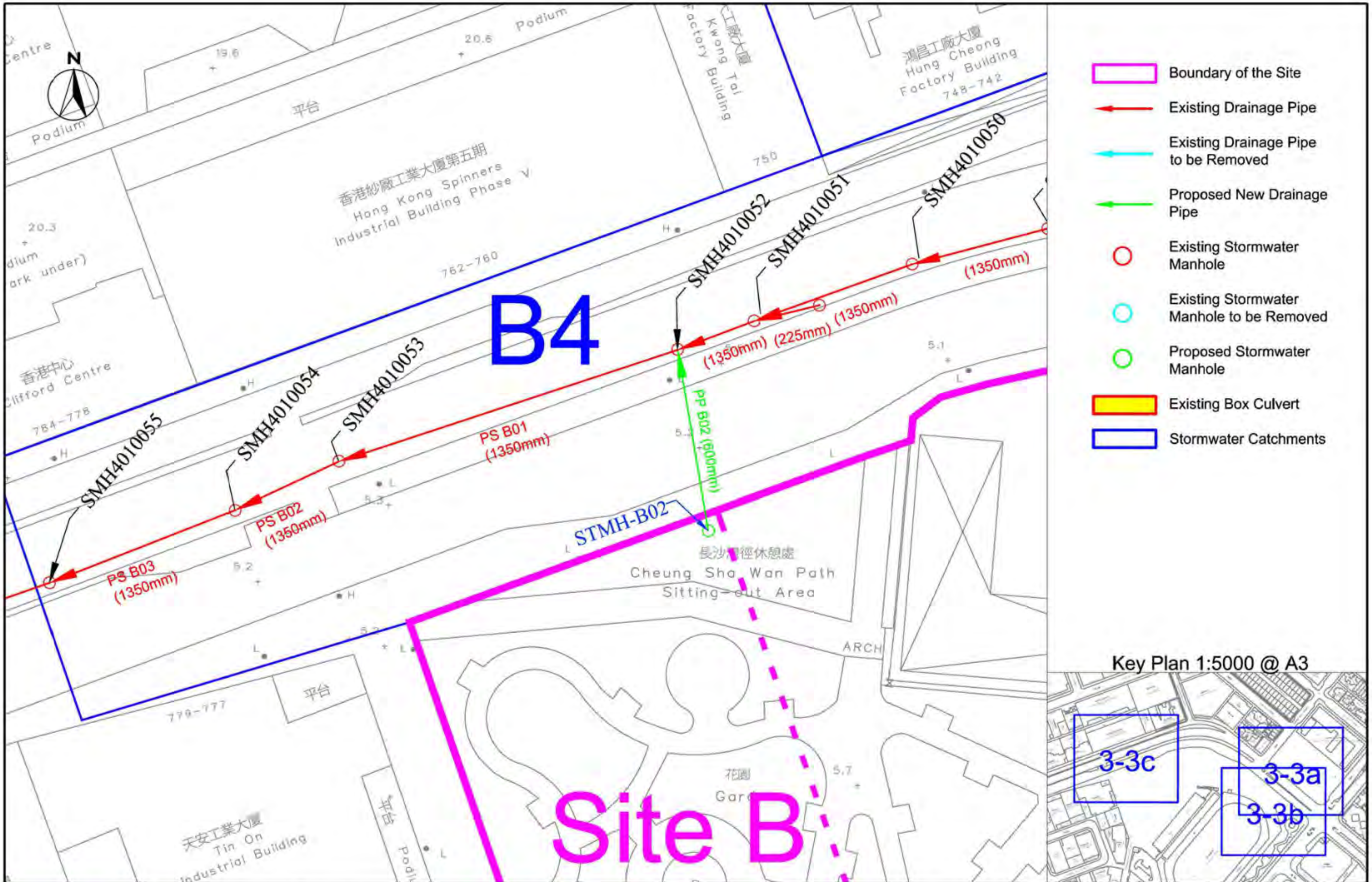

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Proposed New Drainage Pipes

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CHECK	RT	DRAWN	CC
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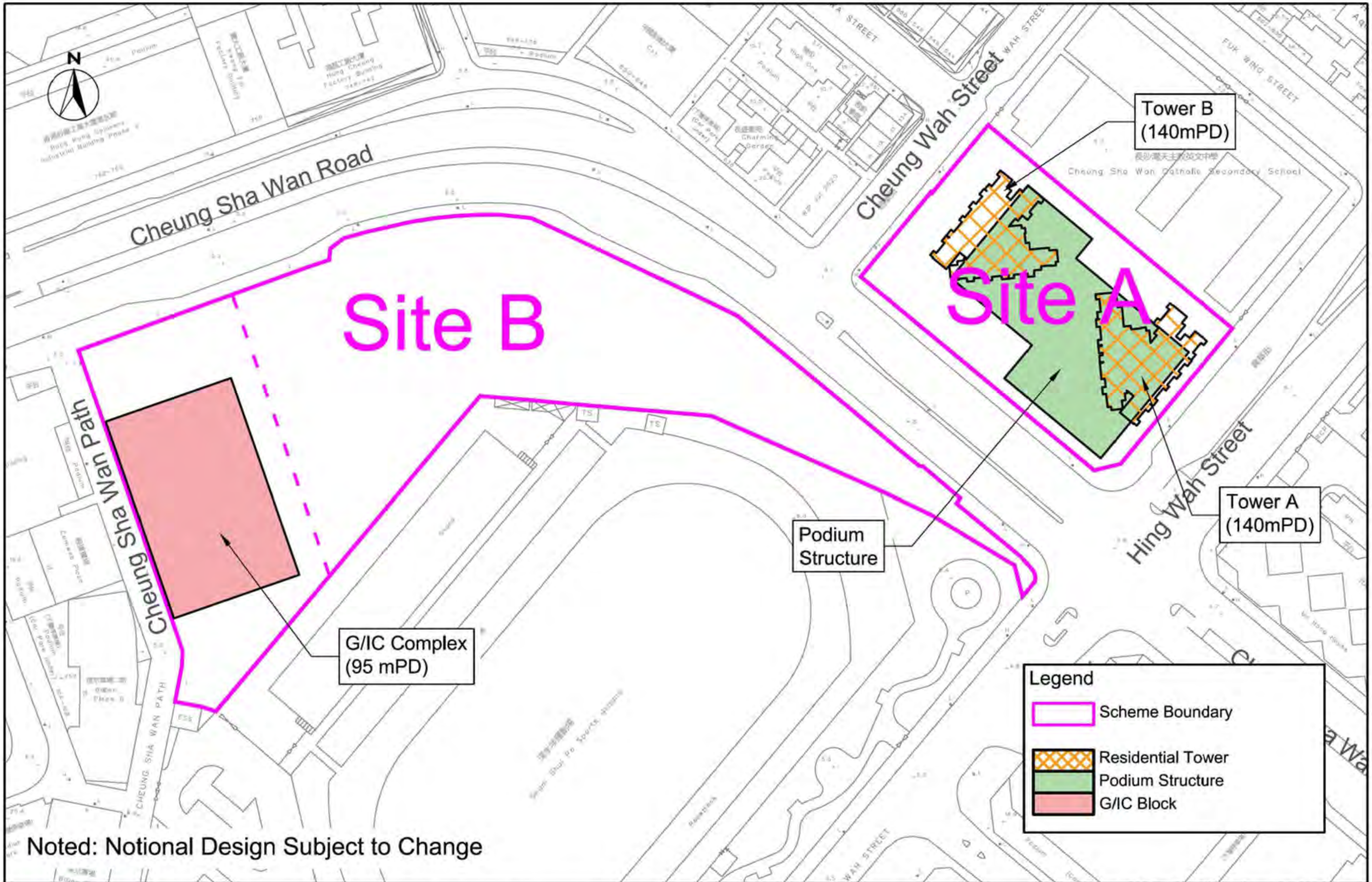
		REV	-

APPENDIX I
Notional Block Plan of the Proposed Scheme



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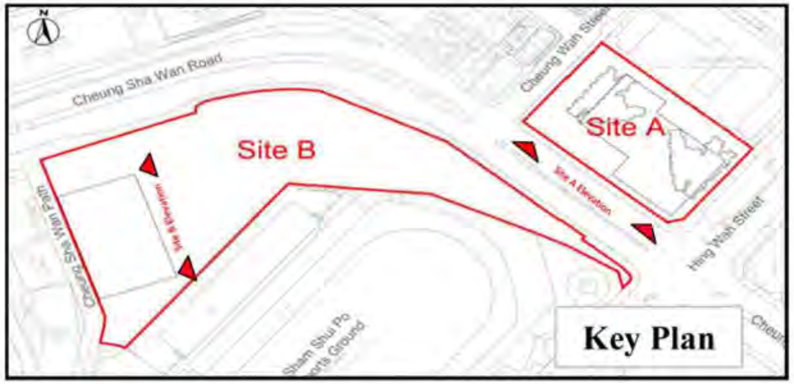

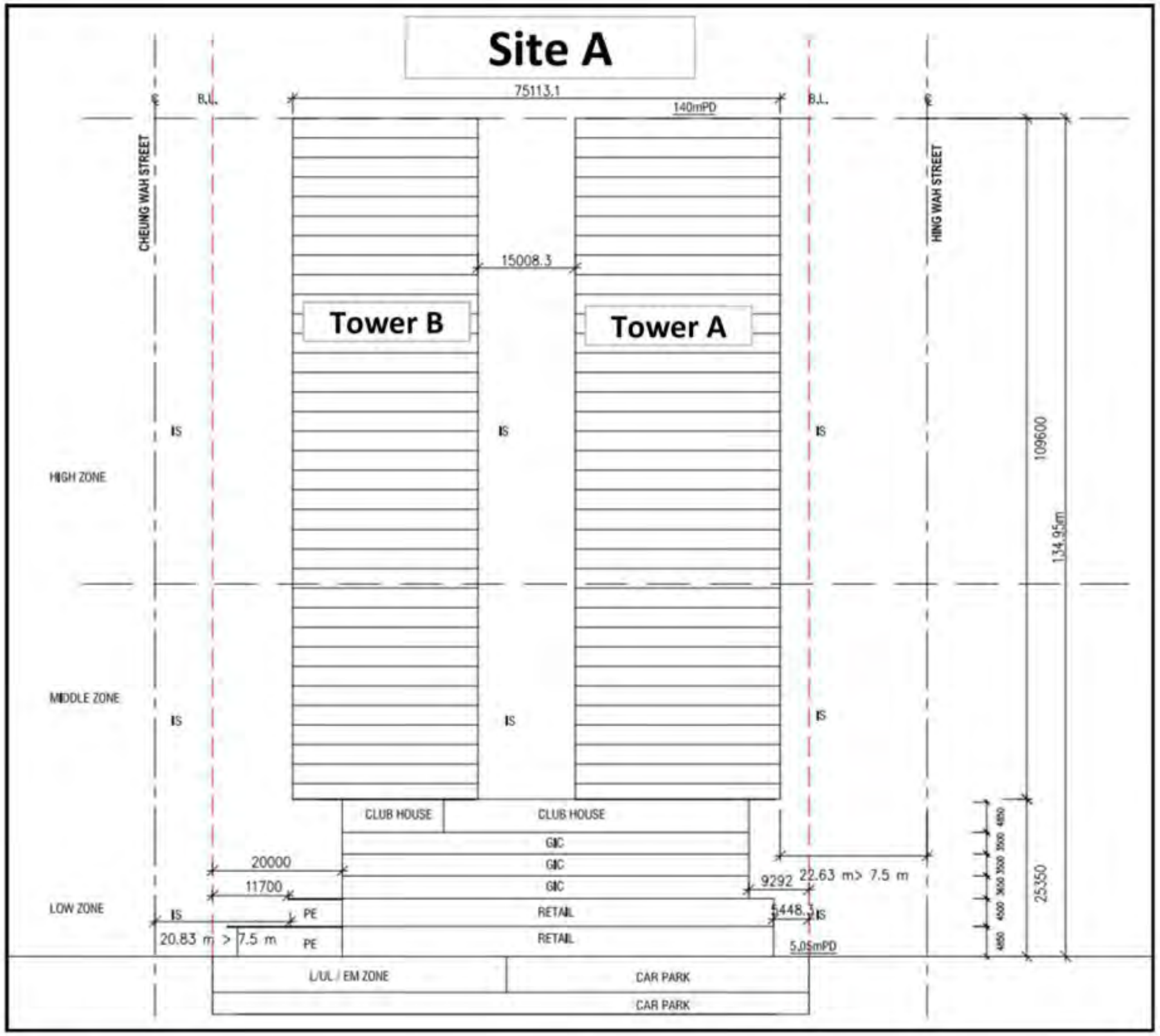

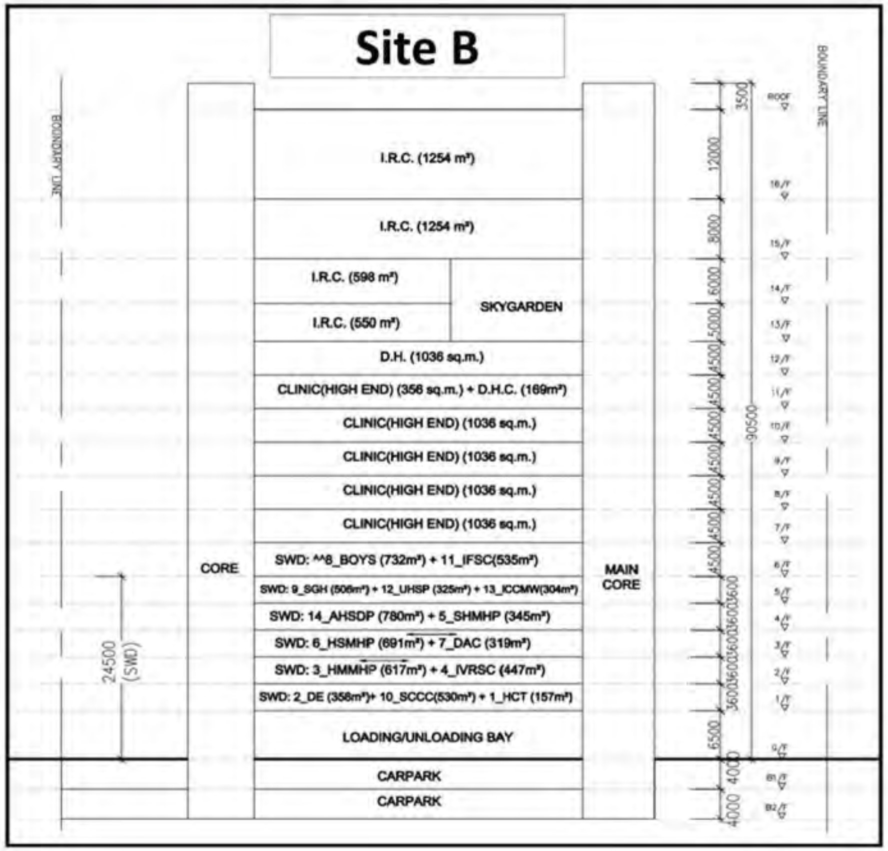

Remark:
Notional Design subject to change at detailed design stage

CINOTECH consultants limited

Urban Renewal Authority Development Scheme Cheung Wah Street/ Cheung Sha Wan (SSP-018)

Notional Section Plan of the Proposed Scheme

SCALE	N.T.S.	DATE	Jun-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021-SSPAA1	FIGURE NO. APP I	REV. -

APPENDIX II
Drainage From Catchment Zone

Appendix II - Drainage from Catchment Zone

Catchment Zone	Project Site A	Project Site B (POS)	Project Site B (G/IC)	A1	A2	B1	B2	B3	B4
Description	Proposed Development	Proposed Development	Proposed Development	Fuk Wa Street	Existing Buildings	Existing Buildings	Kwong Cheung Street	Existing Buildings	Cheung Sha Wan Road
Catchment Area (m^2)	5197	9645	4212	2389	2603	3158	982	4135	8540
Slope (m per 100m)[1]	0.40	0.40	0.40	0.18	0.40	0.40	0.30	0.40	0.16
L (m)	93.0	243.0	140.0	20.0	30.0	70.0	20.0	60.0	30.0
TOC (min)	6.9	16.9	10.6	1.9	2.4	5.4	1.8	4.5	2.5
Runoff intensity (mm/hr)[2]	212.4	166.3	189.8	274.8	264.9	225.3	276.9	234.7	263.1
Paved area (m^2)	5197	9645	4212	2389	2603	3158	982	4135	8540
Runoff coefficient (paved)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Drainage discharge (L/s)	276.2	401.2	200.1	164.2	172.5	178.0	68.0	242.8	562.1
Unpaved area (m^2)[3]	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Runoff coefficient (unpaved)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Drainage discharge (L/s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Drainage discharge (L/s)	276.2	401.2	200.1	164.2	172.5	178.0	68.0	242.8	562.1
Rainfall increased for 2041-2060	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Total Drainage discharge with Rainfall increased (L/s)	304.9	442.9	220.9	181.3	190.5	196.5	75.1	268.1	620.6

Note:
[1] A slope of 1:250 is assumed for flat catchment area.
[2] The run-off intensity is calculated by the equation in Section 4.3.3 of the Drainage Manual:

$$i = \frac{a}{(t_d + b)^c}$$

where Table 3a - Storm Constants for 50years return period of HKO Headquarters are adopted.

$a = 451.3$
$b = 2.46$
$c = 0.337$

[3] There is no unpaved area in the study area.

APPENDIX III
Detailed Calculation of Pipe Capacities

Appendix III - Detailed Calculation of Pipe Capacities

Table A - Caculation of Existing Pipe

Pipe No.	Upstream Manhole No.	Downstream Manhole No.	Upstream invert level (mP.D.)	Downstream invert level (mP.D.)	Length (m)	Diameter (m)	Area (m^2)	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m^2/s)	Hydraulic Pipeline Roughness (m) [1]	Velocity (m/s)	Full Capacity (L/s)	Catchment	Peak Flow (L/s)	% of full capacity
Existing Pipes																
PS B01	SMH4010052	SMH4010053	2.64	2.57	51.2	1.350	1.431	0.338	0.001	1.14E-06	0.003	1.22	1750	Project site B (G/IC) + B1 +B2 +B3 +B4	1381.1	79%
PS B02	SMH4010053	SMH4010054	2.57	2.54	16.5	1.350	1.431	0.338	0.002	1.14E-06	0.003	1.41	2021	Project site B (G/IC) + B1 +B2 +B3 +B4	1381.1	68%
PS B03	SMH4010054	SMH4010055	2.54	2.49	28.7	1.350	1.431	0.338	0.002	1.14E-06	0.003	1.38	1976	Project site B (G/IC) + B1 +B2 +B3 +B4	1381.1	70%

Note:

[1] The roughness coefficient for slimed concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.

Table B - Calculation of Proposed New Pipe

Pipe No.	Upstream Manhole No.	Downstream Manhole No.	Upstream invert level (mP.D.)	Downstream invert level (mP.D.)	Length (m)	Diameter (m)	Area (m^2)	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m^2/s)	Hydraulic Pipeline Roughness (m) [1]	Velocity (m/s)	Full Capacity (L/s)	Catchment	Peak Flow (L/s)	% of full capacity
Proposed New Pipes																
Project Site A																
PP A01	STMH-A01	SBP4001321	2.86	2.68	18.2	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.97	556	Project site A	304.9	55%
Project Site A - Re-diversion																
PP A02	SMH4061012	STMH-A02	3.62	3.50	12.1	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.97	556	A1 + A2	371.8	67%
PP A03	STMH-A02	STMH-A03	3.50	3.26	24.5	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.94	548	A1 + A2	371.8	68%
PP A04	STMH-A03	STMH-A04	3.26	3.05	21.7	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.94	548	A1 + A2	371.8	68%
PP A05	STMH-A04	STMH-A05	3.05	2.70	36.2	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.94	548	A1 + A2	371.8	68%
PP A06	STMH-A05	STMH-A06	2.70	2.32	39.9	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.94	548	A1 + A2	371.8	68%
PP A07	STMH-A06	SBP4001321	2.32	2.00	32.6	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.94	548	A1 + A2	371.8	68%
Project Site B (POS)																
PP B01	STMH-B01	SBP4001323	1.84	1.70	13.5	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.97	556	Project site B (POS)	442.9	80%
Project Site B (G/IC)																
PP B02	STMH-B02	SMH4010052	4.26	4.00	26.0	0.600	0.283	0.150	0.010	1.14E-06	0.003	1.97	556	Project site B (G/IC)	220.9	40%

Note:

[1] The roughness coefficient for slimed concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.

[2] The upstream and downstream level of proposed pipes will be confirmed by pipe survey in detail design stage.

[3] The location of the terminal manhole within the Site is subject to detail design.

Urban Renewal Authority
Development Scheme
Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Sewerage Impact Assessment
(V1.0)

September 2021

Approved By	(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority (URA) has proposed a Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO). This Sewerage Impact Assessment (SIA) is to support the submission of a draft Development Scheme Plan (DSP) with its planning proposal to the Town Planning Board (TPB) for consideration.

1.1.2 Cinotech Consultants Limited was commissioned by URA to carry out a Sewerage Impact Assessment (SIA) to assess and envisage any potential sewerage impact on the implementation of the proposed development of the Scheme and to recommend necessary pipe upgrading/diversion as necessary.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

2.1.1 The Scheme SSP-018 consists of Sites A and B. Site A is bounded by Hing Wah Street on the south-eastern boundary, Cheung Sha Wan Road on the south-western boundary, Cheung Wah Street on the north-western boundary, and Cheung Sha Wan Catholic Secondary School on the north-eastern boundary. Site B is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the south-eastern boundary (Figure 2-1). The proposed gross site areas of the Site A & Site B are 5,197m^2 and 13,857m^2 respectively, subject to site survey and detailed design.

2.1.2 Currently, the Site A comprises a single storey Cheung Sha Wan Sports Centre and its associate outdoor garden and playground. The Site B comprises a government land lot (GLA-TNK 1723) which currently is an open area with a few 1-2 storeys temporary structures, Cheung Sha Wan Path Sitting-out Area, and a garden associated with Sham Shui Po Sports Ground.

2.2 The Proposed Development

2.2.1 The entire Site A is proposed to rezone to "R(A)" and redevelop the area for high-density residential development, with non-domestic uses always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of a building. The proposed development on Site A consists of a 2 floors of basement carpark, a 5 storeys podium (GFA: ~5,197m^2 for G/IC area, and ~5,197m^2 for Commercial area) and two 34 storeys residential towers (838 flats).

2.2.2 Western part of the Site B is proposed to rezone to G/IC and provide a G/IC complex with GFA of 33,696 m^2 for community and amenity. The rest of the Site B of about 9,645 m^2, is proposed to be public open space.

2.2.3 The proposed notional scheme is shown in **Appendix I**. The notional design is subject to change at detailed design stage.

3 SEWERAGE IMPACT ASSESSMENT

3.1 Sewage Discharge from the Scheme

3.1.1 Based on the population by-census 2016, the average domestic household size in Sham Shui Po District Council Constituency Area is 2.6 persons, therefore the design residential population is about 1928 persons (838 flats × 2.6). The population of restaurant, retail and G/IC are estimated according to the usable floor area (UFA) per person and the worker density from Figure 9 of Commercial and Industrial Floor Space Utilization, published by Planning Department. **Table 3-1** indicates the population calculation of the Site A and Site B. It should be note that GFA ratio of *Clubhouse : Retails : Restaurant* is assumed to be 10% : 45% : 45%. As the sewage discharge per unit area for restaurant is much higher than the other two and the assumed ratio of restaurant is on high side, this assumption is considered conservative.

Table 3-1 Estimation of Population

Section	No. of Flat [1]	Non-residential GFA (m^2) [2]	Population Factor		Population	
			No. of person per flat [3]	Residential Population	Worker Density (worker/100 m^2) [4]	No. of Employee
Site A						
Residential	838	-	2.6	2179	-	-
Restaurant	-	2338.65	-	-	5.1	119
Retail	-	2338.65	-	-	3.5	82
Clubhouse		519.7	-	-	3.3	17
G/IC	-	5197	-	-	3.3	172
Site B						
G/IC	-	33733	-	-	3.3	1113

[1] No. of flats and GFA are provided by URA
[2] It is assumed that the GFA ratio of Clubhouse : Retails : Restaurant = 10% : 45% : 45%.
[3] The average domestic household size is 2.6 persons for Sham Shui Po, according to Population By-census 2016. Source from (http://www.bycensus2016.gov.hk/en/bc-dp.html).
[4] The worker densities for different sections are from Figure 9 of Commercial and Industrial Floor Space Utilization Survey.

3.1.2 The estimated contributing population, sewage flow rate and peak flow from Site A and Site B are summarised in **Table 3-2**. The peak flow are 59.2 L/s and 21.7 L/s for Site A and Site B respectively, applying the peaking factor including stormwater allowance of 6 for the contribution population between 1,000 to 5,000.

Table 3-2 Calculation of Sewage Discharge

Occupant Type	Unit Flow Factors [1] [4] (m3/day/person)	No. of Occupants / Employee	Flow Rate (m^3/day)	Contributing population [2]	Peak Factor [3]	Peak Flow (L/s)
	Site A					
Residential	0.27	2179	588.3	-	-	-
Restaurant	1.58	119	188.0	-	-	-
Retail	0.28	82	23.0	-	-	-
Clubhouse	0.28	17	4.8	-	-	-
G/IC	0.28	172	48.2	-	-	-
Total	-	-	852.2	3157	6	59.2
	Site B					
G/IC	0.28	1113	311.6	-		-
Total	-	-	311.6	1155		**21.7**

[1] EPD's Guidelines for Estimating Sewage Flows for Infrastructure Planning defining sewage flow parameter.

[2] The contribution population for Site A is 852.2 (m^3/day) / 0.27(m^3/day/person) = 3157 and the contribution population for Site B is 311.6 (m^3/day) / 0.27(m^3/day/person) = 1155

[3] Peaking Factor of 6 and 8 for contributing population 1,000-5,000 and <1,000 respectively and the operation hour is assumed to be 24 hours. The peak flow is the sum of flow rate of each occupant type x peaking factor.

[4] The Unit Flow Factors are 0.27, 1.58, 0.28, 0.28, m3/day/head for Residential, Restaurant, Retail and Clubhouse respectively.

3.2 Sewage Discharge from the Vicinity

3.2.1 The surrounding developments near the Scheme is sectioned into different catchments based on the existing sewerage system. The sewage catchment areas in the vicinity are shown in **Figure 3-1 & Figures 3-2a - 3-2f** and the estimated sewage discharges from each catchment are summarised in **Table 3-3**. The population and detailed calculation of flow rate is presented in **Appendix II**.

3.2.2 It should be noted that the actual sewage discharge route of Cheung Sha Wan Catholic Secondary School (Catchment A), as well as Gee Hing Chang Industrial Building and Precious Industrial Centre (Catchment E) are uncertain due to the lack of information in the relevant record plans. Based on the best available information, assumption has been made that Catchment A discharged to sewer manhole FMH4009911 (upstream of Site A) and two developments in Catchment E discharged to sewer manhole FMH4009982 (downstream of Site B, upstream of PS B02). The said proposal will be subject to change upon verification of the sewerage discharge route of the above developments at subsequent detailed design stage.

Table 3-3 Sewage Discharge from Surrounding Catchments

Catchment ID	Development	Total Flowrate / catchment (m^3/day)
A	Cheung Sha Wan Catholic Secondary School	38.6
B	Fuk Wing Street (Cheung Wah Street to Castle Peak Road) & Fuk Wa Street (Cheung Wah Street to Castle Peak Road)	1168.6
C	571 Fuk Wa Street	361.5
	561 Fuk Wa Street	
	11-13A Cheung Wah Street	
	Charming Garden (長盛豪苑) (638 Cheung Wah Street)	
	Furture development on Land Slot NKIL 2197 RP	
D	650-646 Cheung Wah Street (Tower)	372.5
	650-646 Cheung Wah Street (Podium)	
E	Gee Hing Chang Industrial Building	168.7
	Precious Industrial Centre	

* The calculation is detailed in **Appendix II**.

3.3 Review Sewerage System

3.3.1 Since the sewage discharge from the Scheme is expected to increase after the development, the downstream sewers shall be checked for sufficient capacities to cater sewerage discharge.

3.3.2 The capacities of the downstream foul sewer pipe sections (PS A01 – PS A10 and PS B01 – PS B06, **Figure 3-1, & Figures 3-2a - 3-2f**) are calculated by Colebrook-White Equation and listed in **Table 3-4**. The detailed calculation is shown in **Table A of Appendix III**.

Table 3-4 Capacity of Existing Foul Sewers

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)
Site A			
PS A01	FMH4009914	FMH4009915	339.4
PS A02	FMH4009915	Unknown	449.4
PS A03	Unknown	FMH4009917	293.0
PS A04	FMH4009917	FMH4009918	355.9
PS A05	FMH4009918	FMH4009919	404.7
PS A06	FMH4009919	FMH4010450	384.5
PS A07	FMH4010450	FMH4010451	377.1
PS A08	FMH4010451	FMH4010452	362.6
PS A09	FMH4010452	FMH4010453	1224.1
PS A10	FMH4010453	FMH4010454	3640.3
Site B			
PS B01	FMH4009981	FMH4009982	1559.7
PS B02	FMH4009982	FMH4009983	1077.5
PS B03	FMH4009983	FMH4009984	1431.9
PS B04	FMH4009984	FMH4009985	1431.9
PS B05	FMH4009985	FMH4009986	1431.9
PS B06	FMH4009986	FMH4009987	1431.9
Upstream Pipe Sections			
US 01	FMH4009910	FMH4009911	343.2
US 02	FMH4045944	FMH4045945	791.9
US 03	FMH4009974	FMH4009975	600.4

[1] The Manhole ID of the sewage manhole between sewers PS A02 & PS A03 is not available.
[2] The invert level between FMH4009984 and FMH4009986 (Downstream of PS B03 to Upstream of PS B06) are not available. Average slope has been adopted.

3.3.3 The utilization calculation adopts the following assumptions/configurations:

- The Upstream Pipes US 01, US02 & US03 is assumed to be fully utilized (**Figures 3-1, 3-2a & 3-2c**).
- For the calculation of peak flow of PS A01 – PS A10, 100% of the discharge from Catchments C & D are included for conservative assessment (**Figure 3-2a**).
- For the calculation of peak flow of PS B01 – PS B06, 100% of the discharge Upstream Pipe US 03 are included for conservative assessment (**Figure 3-2d**).
- No sewage flow is anticipated along the 2 x 300m sewers between FMH4009977 & FMH4009979 (**Figure 3-2d**, in the south of catchment D) under normal condition. It is because their invert level (up to 3.96mPD) are more than 1m higher than the other connected sewers. Therefore, only discharge from Upstream Pipe US 03 and Site B will reach PS B01. The potential discharge from Catchments C & D (and other upstream areas) can only reach PS B01 via Upstream Pipe US 03.
- The sewage from Site A & Site B will discharge to FMH4009914 & PMH4009981 respectively, the details will be provided in later sections.

3.3.4 **Table 3-5** shows a summary of the proportion of peak flow to full capacity from surrounding catchment areas to each segment of existing pipe sections. The detailed calculation is shown in **Tables B of Appendix III**.

Table 3-5 Proportion of Peak Flow to Full Capacity (Existing Pipes)

Segment	Full Capacity (L/s)	Total Peak Flow (L/s)	Total Discharge Loading to Pipe Capacity (%)
Site A			
PS A01	339.4	511.3	151%
PS A02	449.4	511.3	114%
PS A03	293.0	511.3	175%
PS A04	355.9	511.3	144%
PS A05	404.7	511.3	126%
PS A06	384.5	511.3	133%
PS A07	377.1	511.3	136%
PS A08	362.6	511.3	141%
PS A09	1224.1	511.3	42%
PS A10	3640.3	1303.2	36%
Site B			
PS B01	1559.7	628.5	40%
PS B02	1077.5	643.7	60%
PS B03	1431.9	643.7	45%
PS B04	1431.9	643.7	45%
PS B05	1431.9	643.7	45%
PS B06	1431.9	643.7	45%

* **Bold** for surcharged pipe.

3.3.5 For Site A, PS A01 – PS A08 are required to be upgraded due to that the capacity are more than 100% full with the proposed redevelopment. PS A01 – PS A08 are proposed to be upgraded to 900mm. Upon this chance, the slope of each sewer segment can also be even out.

3.3.6 For Site B, the full capacities of each sewer segment are far from fully utilized and therefore there is no sewer pipe need to be upgraded.

3.3.7 The discharge loading and capacity of the upgrading pipe sections are shown in **Table 3-6** and the detailed calculation can be found in **Appendix IV**.

Table 3-6 Proportion of Peak Flow to Full Capacity after Upgrading

Segment	Full Capacity (L/s)	Total Peak Flow (L/s)	Total Discharge Loading to Pipe Capacity (%)
PS A01	627.6	511.3	81%
PS A02	627.6	511.3	81%
PS A03	627.6	511.3	81%
PS A04	627.6	511.3	81%
PS A05	627.6	511.3	81%
PS A06	627.6	511.3	81%
PS A07	627.6	511.3	81%
PS A08	627.6	511.3	81%

3.3.8 The sewage discharge from Site A is proposed to be collected by a terminal manhole (FTMH01) and discharged via proposed pipe (PP01) to existing manhole FMH4009914. For Site B, the sewage discharge is proposed to be collected by a new terminal manhole (FTMH02) and discharged via proposed pipe (PP02) to existing manhole (FMH4009981). The diameter and slope of both PP01 & PP02 are 300mm and 1:100 respectively. The proposed new pipe is presented in **Table 3-7**. The location of the proposed upgrade and new pipes are shown in **Figures 3-3a – 3-3c**. the exact location of the new manholes and invert level will subject to future detail design.

Table 3-7 Proportion of Peak Flow to Full Capacity (Proposed New Pipes)

Segment	Catchment	Proposed New Pipe [1]			Full Capacity (L/s)	Total Peak Flow (L/s)	Total Discharge Loading to Pipe Capacity (%)
		Upstream Invert Level (mPD)	Downstream Invert Level (mPD)	Diameter (mm)			
PP01	Site (A)	1.10	1.00	300	87.9	76.9	88%
PP02	Site (B)	2.15	1.95	300	87.9	28.1	32%

[1] The upstream and downstream level of proposed pipes will be subject to detail design.

3.3.9 The project proponent (URA) will be responsible for all of the sewers laying and upgrading works related to the Scheme, including the aforementioned proposed new/upgrade sewers.

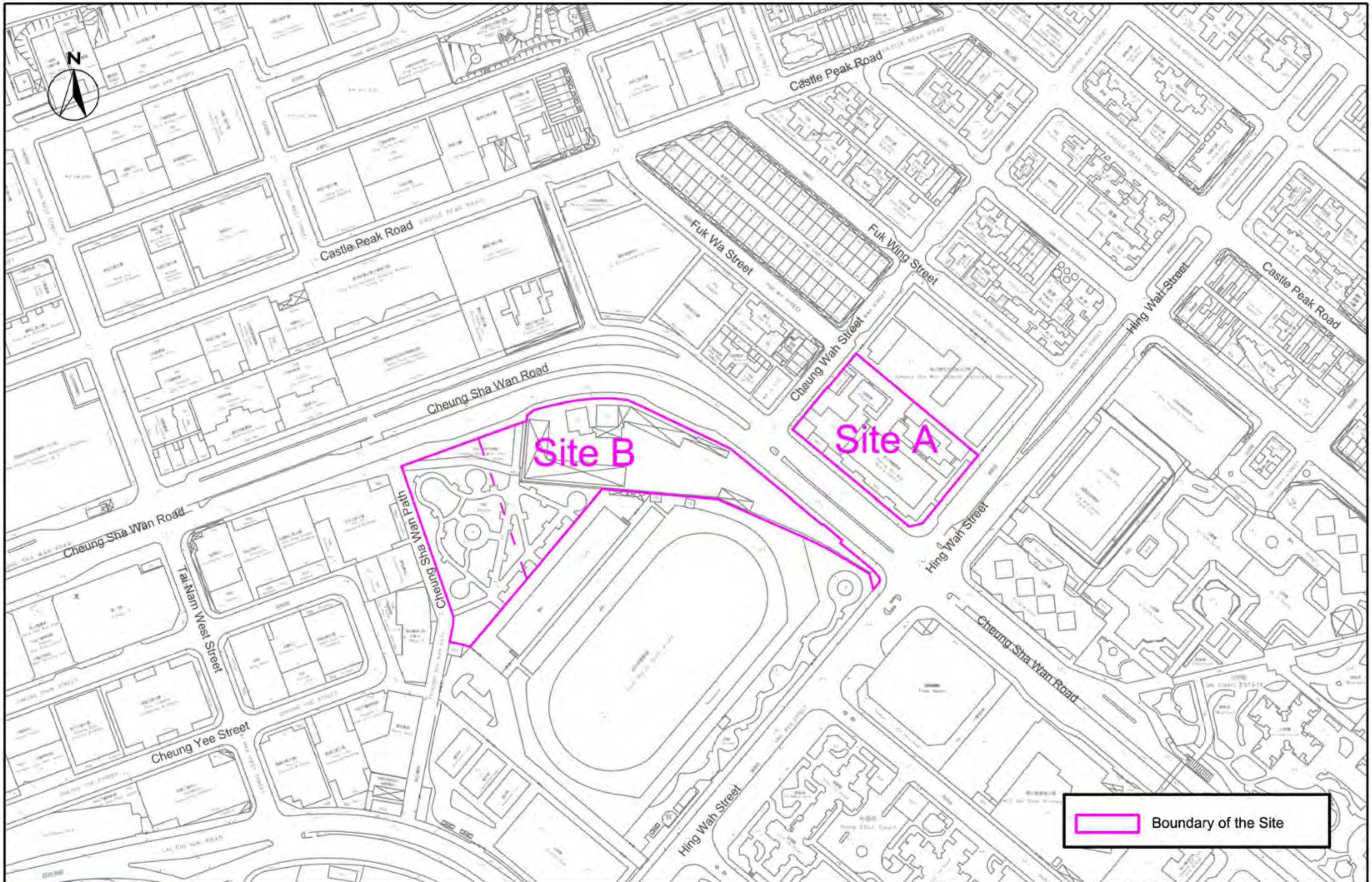
4 CONCLUSION

4.1.1 The Development Scheme proposes to redevelop a composite development at Site A, which consists of 2 residential towers which providing about 838 flats, 2 floors of basement carpark, as well as a 5 storeys podium with ~5,197m^2 for G/IC area, and ~5,197m^2 for Commercial area. The Development Scheme also proposes a G/IC complex with GFA of ~33,733 m^2 for G/IC facilities at Site B.

4.1.2 The estimated daily sewage discharge from the proposed the composite development at Site A and G/IC complex at Site B are 852.2 m^3/day and 311.6 m^3/day respectively. The sewage effluent from the proposed Site A will be collected by the terminal manhole FTMH01 and ultimately discharge to the public sewer at manhole FMH4009914. Terminal manhole FTMH02 will collect the sewage effluent from the proposed Site B and connect to the public sewage at manhole FMH4009981. Two pipes (PP01 and PP02) are proposed to cater the sewage discharge of the proposed development in the Scheme. The diameters of the proposed pipes are both 300mm (**Figures 3-3a & 3-3c** refers). The slopes of both proposed pipes are 1:100. Eight existing sewers between manhole FMH4009914 & FMH4010452 are proposed to be upgraded from 750mm to 900mm, with average slope of ~0.0018 to cater the peak sewage flow (**Figures 3-3a & 3-3b** refers). Actual layout and inverts levels of the proposed pipes are subject to detail design.

4.1.3 With the proposed new and upgraded sewers, the sewage network is considered to have sufficient capacities to cater the expected sewage flows from the proposed development of the Scheme and the surrounding catchments. Therefore, no adverse sewerage impact on the public sewerage system is expected from the proposed development.

Figures



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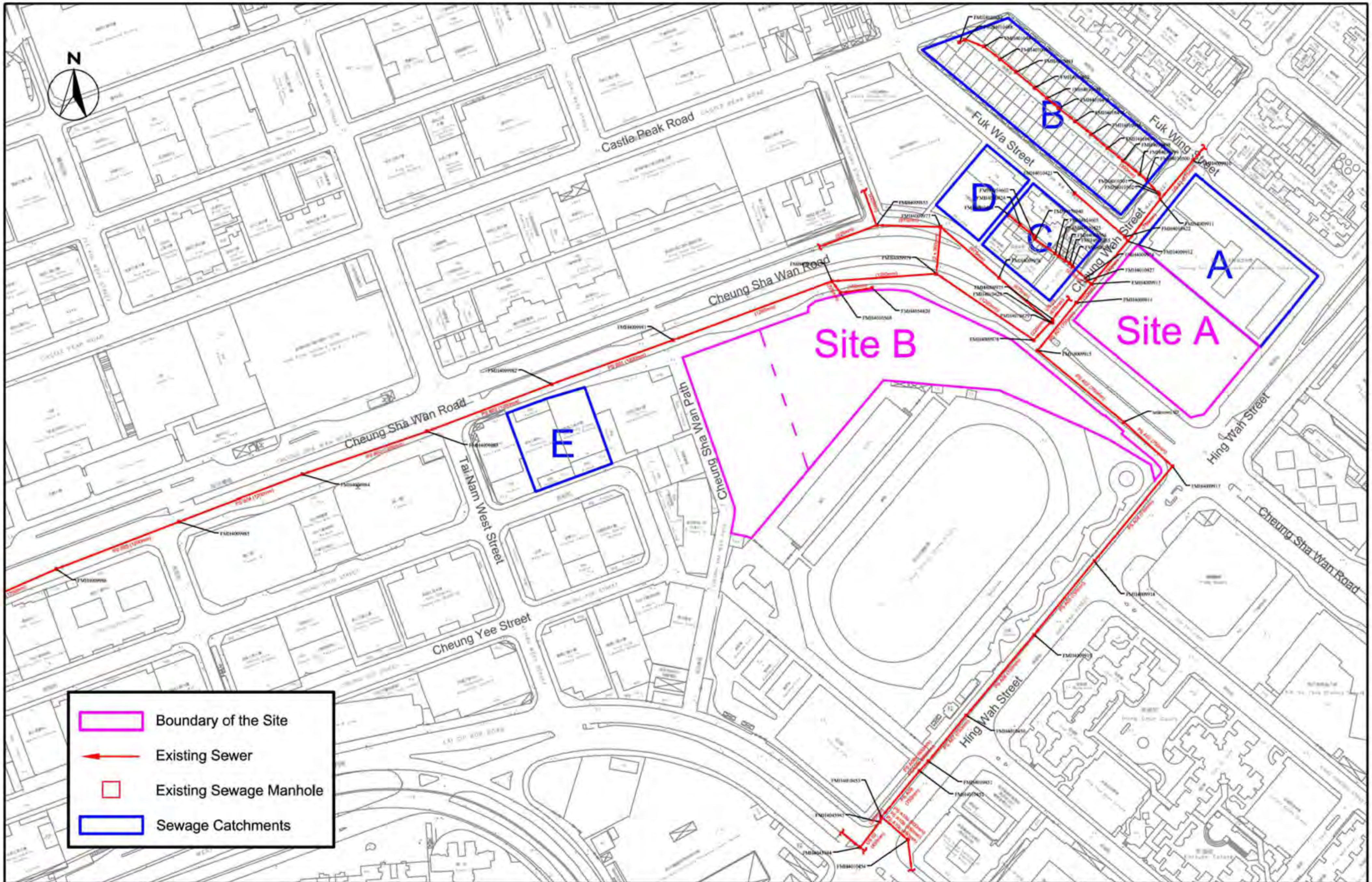
		JOB No.	IA19021-SSPAA1	DRAWING No.	Fig.2-1	REV -



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE	1:2000 @ A3	DATE	APRIL 2021
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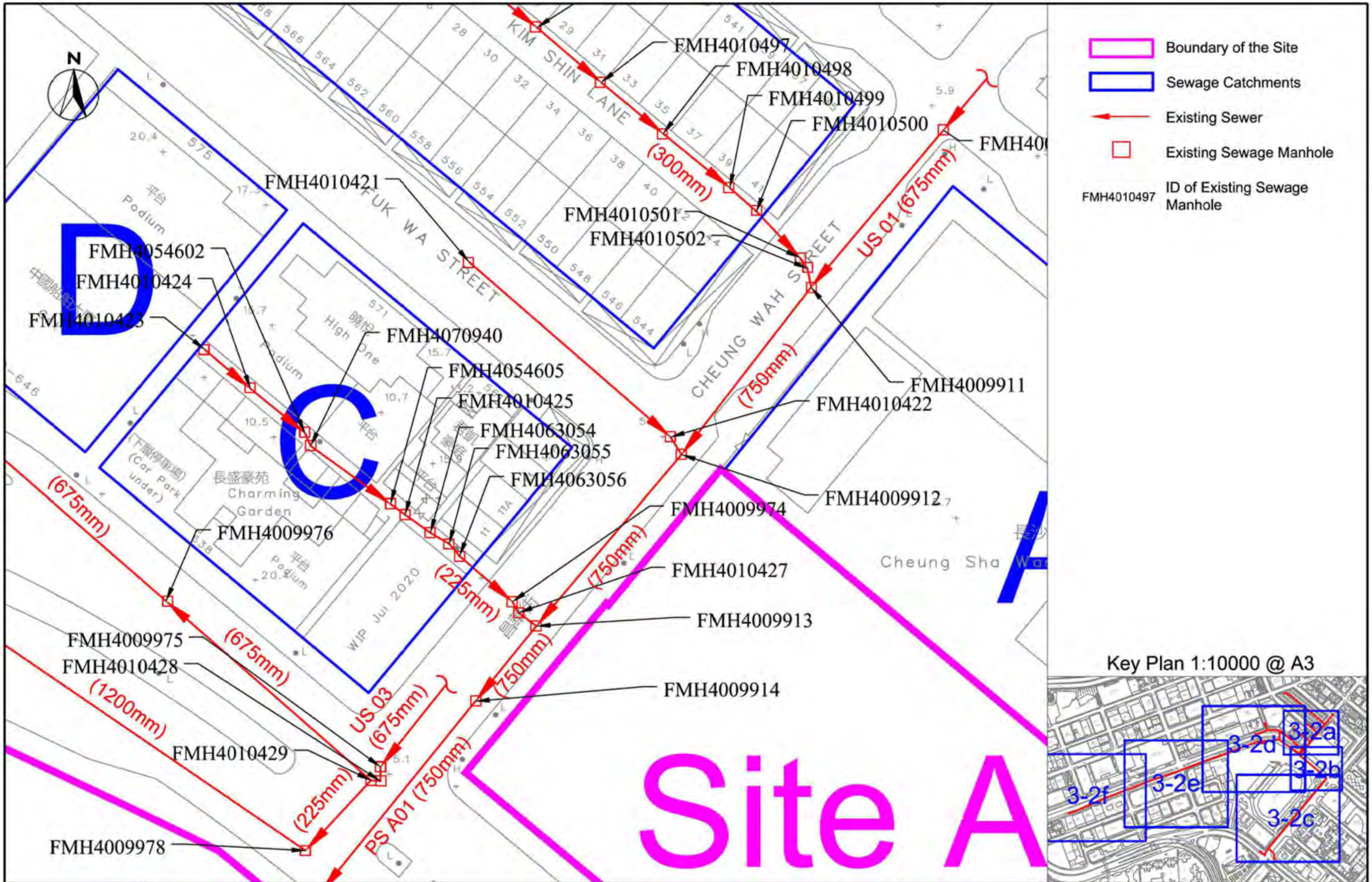

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Sewage Catchments and Existing Sewers in the Vicinity

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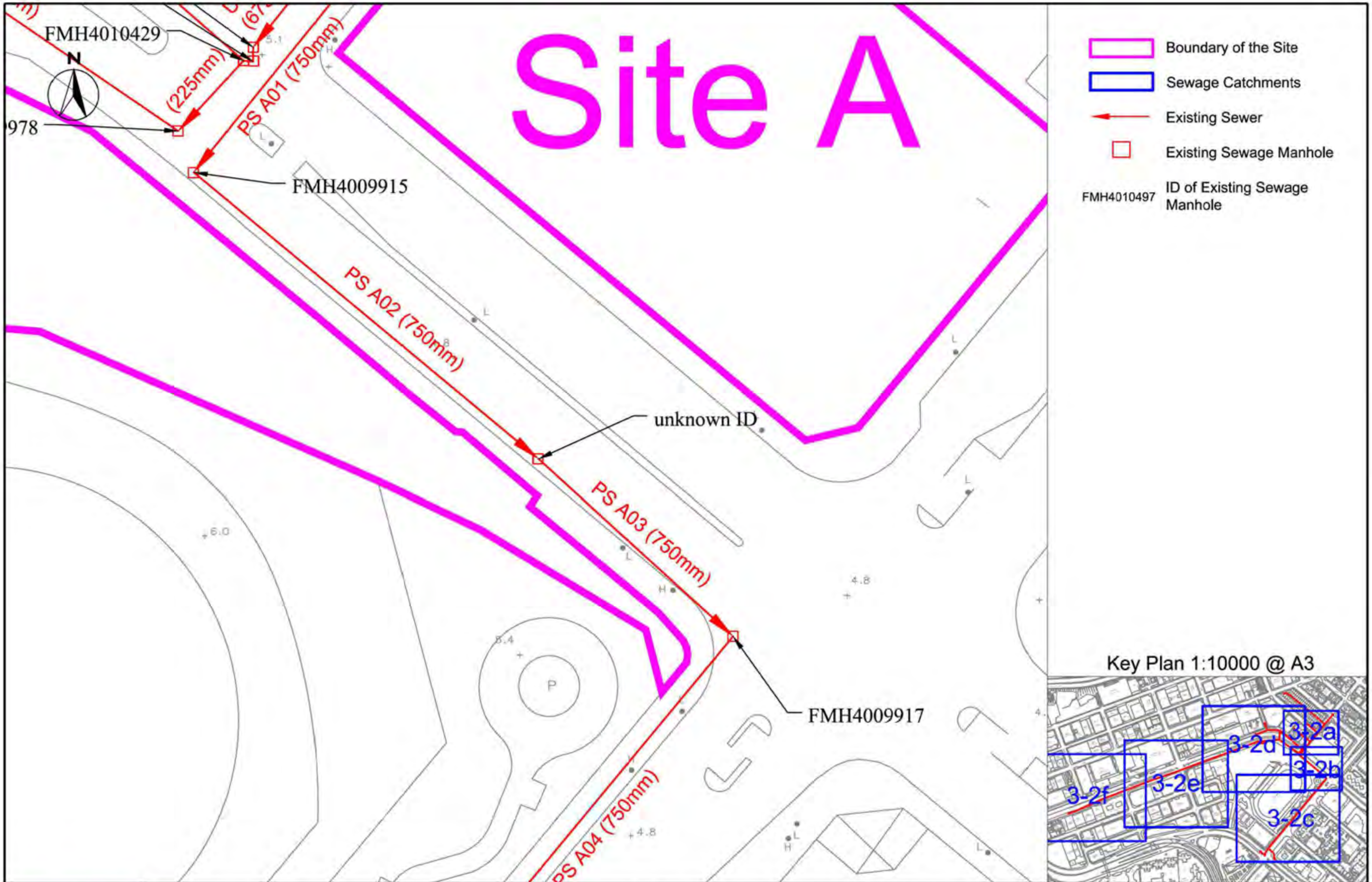

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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Sewage Catchments and Existing Sewers in the Vicinity

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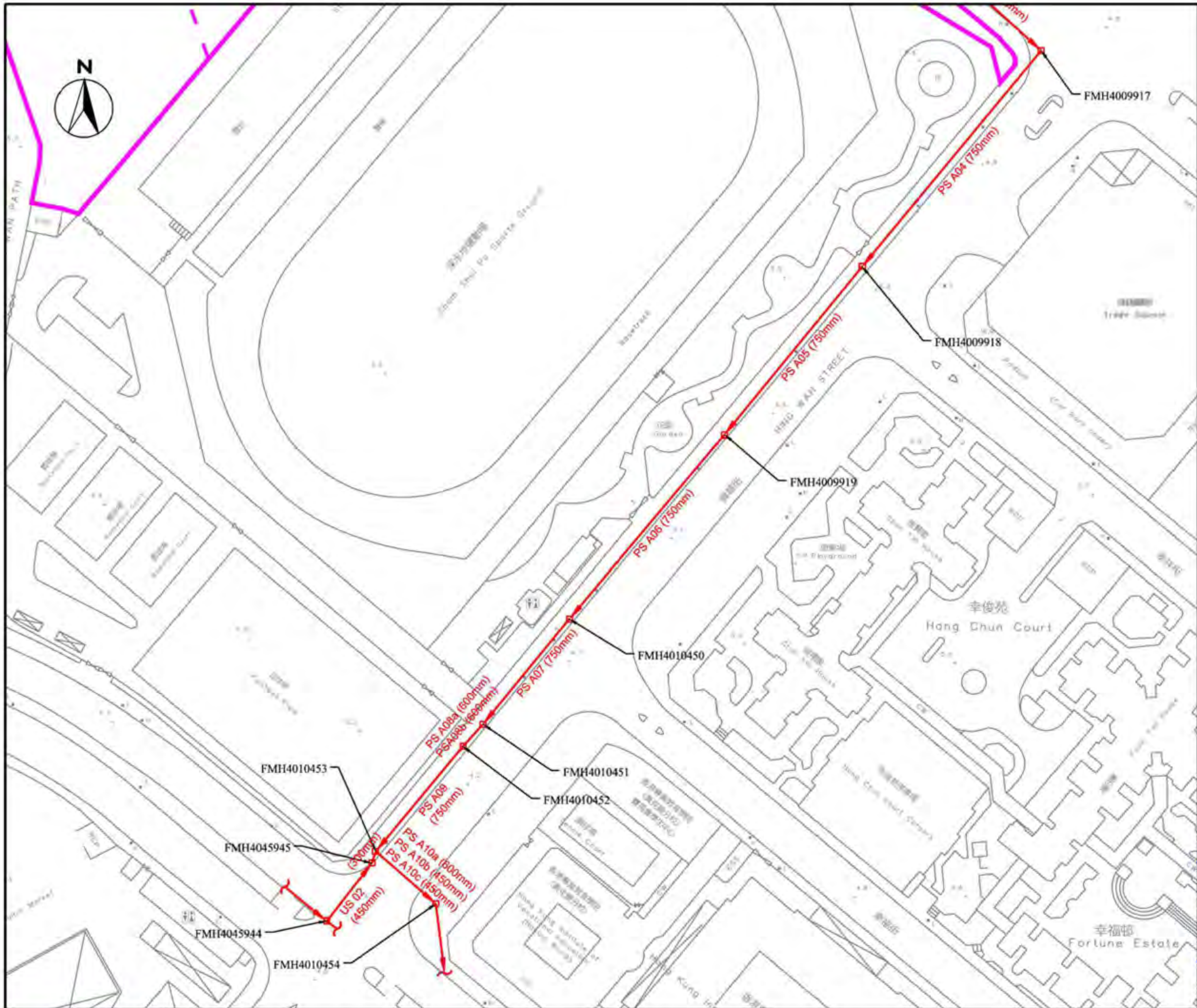
REV	-		



Boundary of the Site

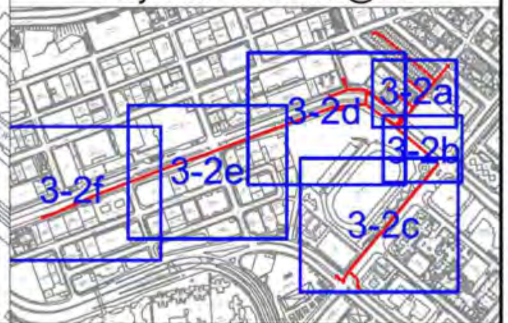
Sewage Catchments

Existing Sewer

Existing Sewage Manhole

FMH4010497 ID of Existing Sewage Manhole

Key Plan 1:10000 @ A3



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Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Sewage Catchments and Existing Sewers in the Vicinity

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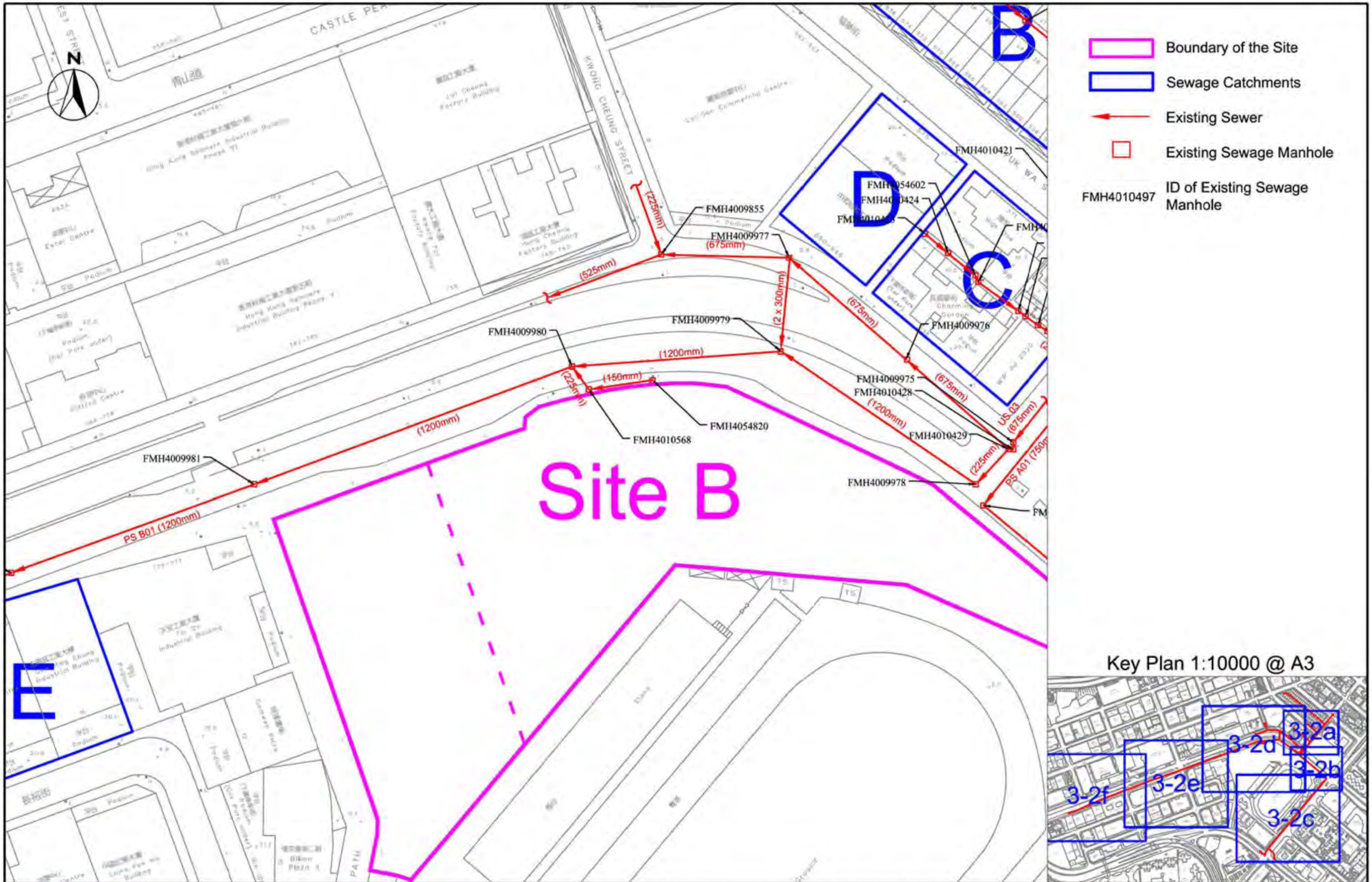

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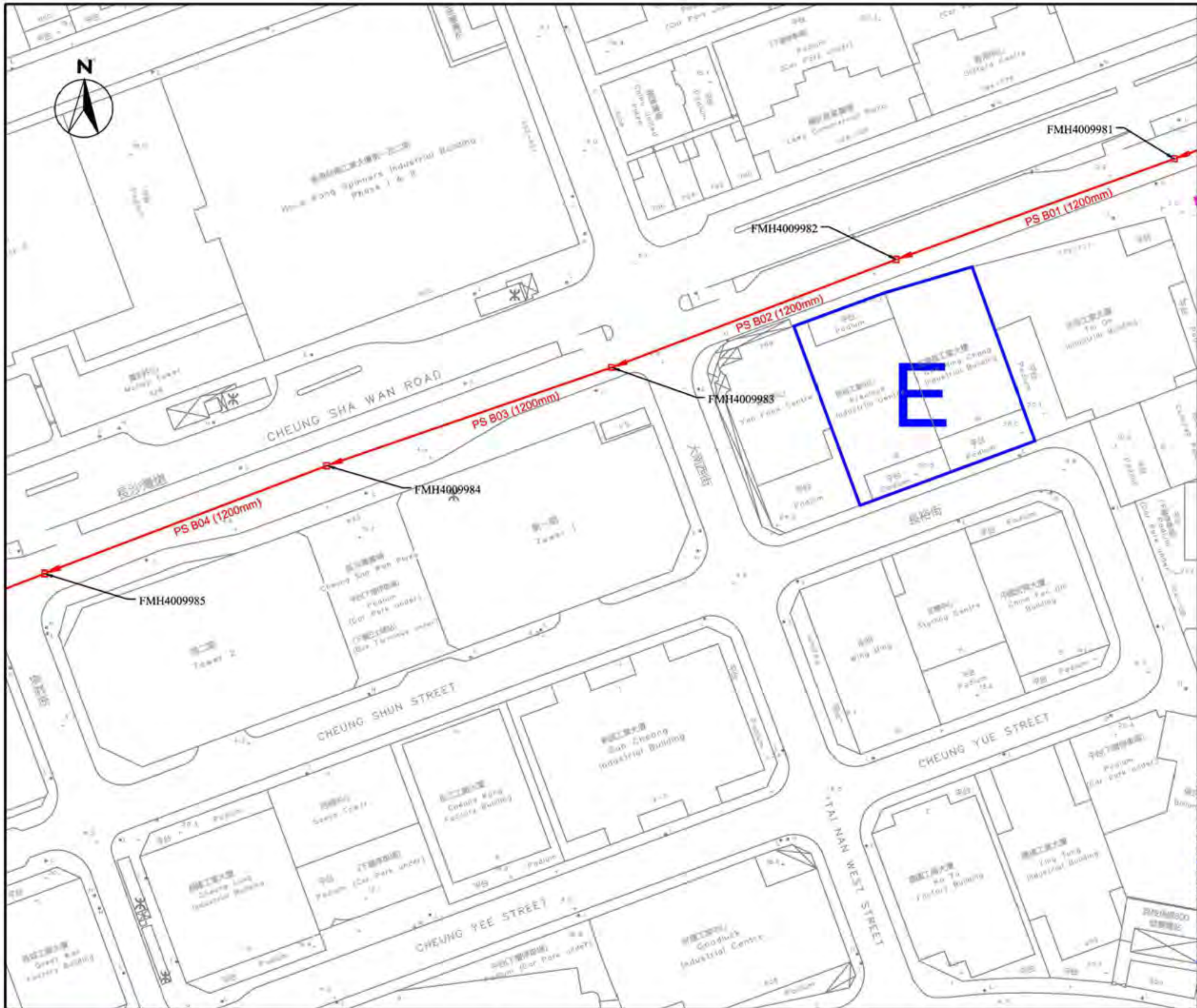
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

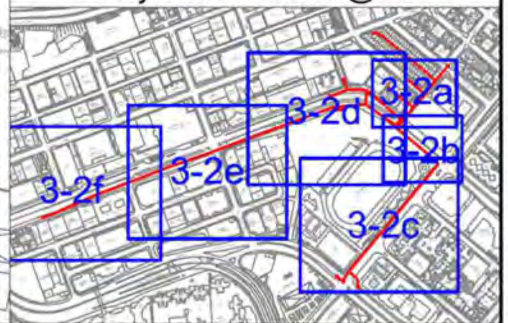
Sewage Catchments and Existing Sewers in the Vicinity

SCALE	1:1000 @ A3	DATE	APRIL 2021	
CHECK	RT	DRAWN	CC	
JOB No.	IA19021-SSPAA1	DRAWING No.	3-2d	REV -



- Boundary of the Site
- Sewage Catchments
- Existing Sewer
- Existing Sewage Manhole
- FMH4010497 ID of Existing Sewage Manhole

Key Plan 1:10000 @ A3



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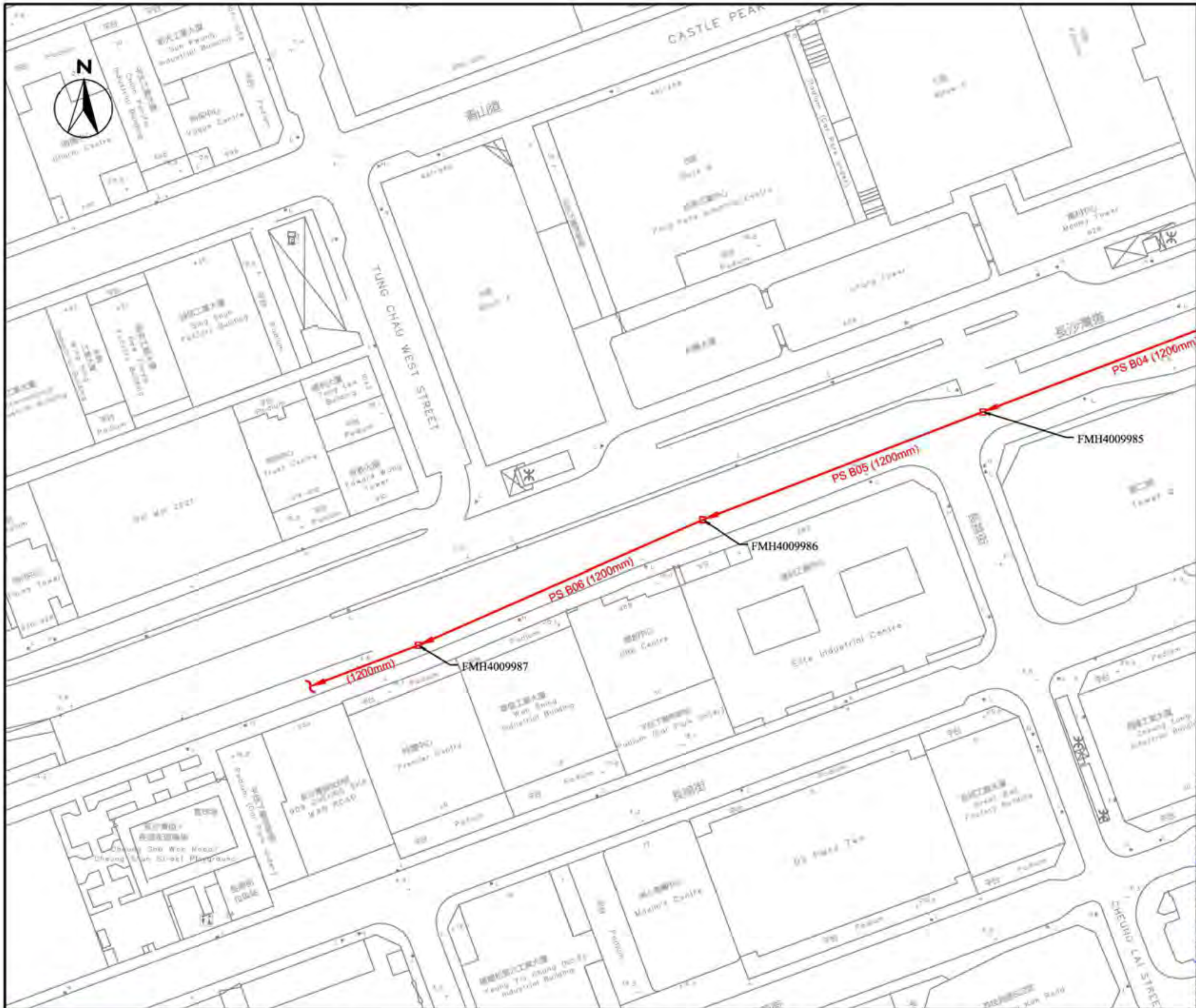
Sewage Catchments and Existing Sewers in the Vicinity

SCALE	1:1000 @ A3	DATE	APRIL 2021		
CHECK	RT	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	3-2e	REV	-



Boundary of the Site

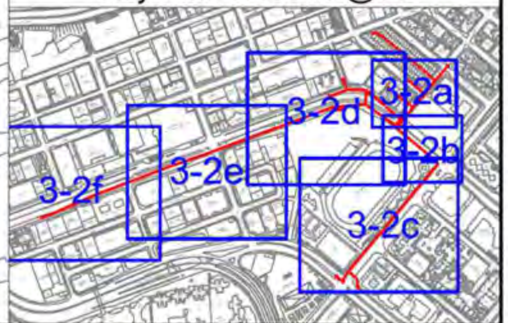
Sewage Catchments

Existing Sewer

Existing Sewage Manhole

FMH4010497 ID of Existing Sewage Manhole

Key Plan 1:10000 @ A3



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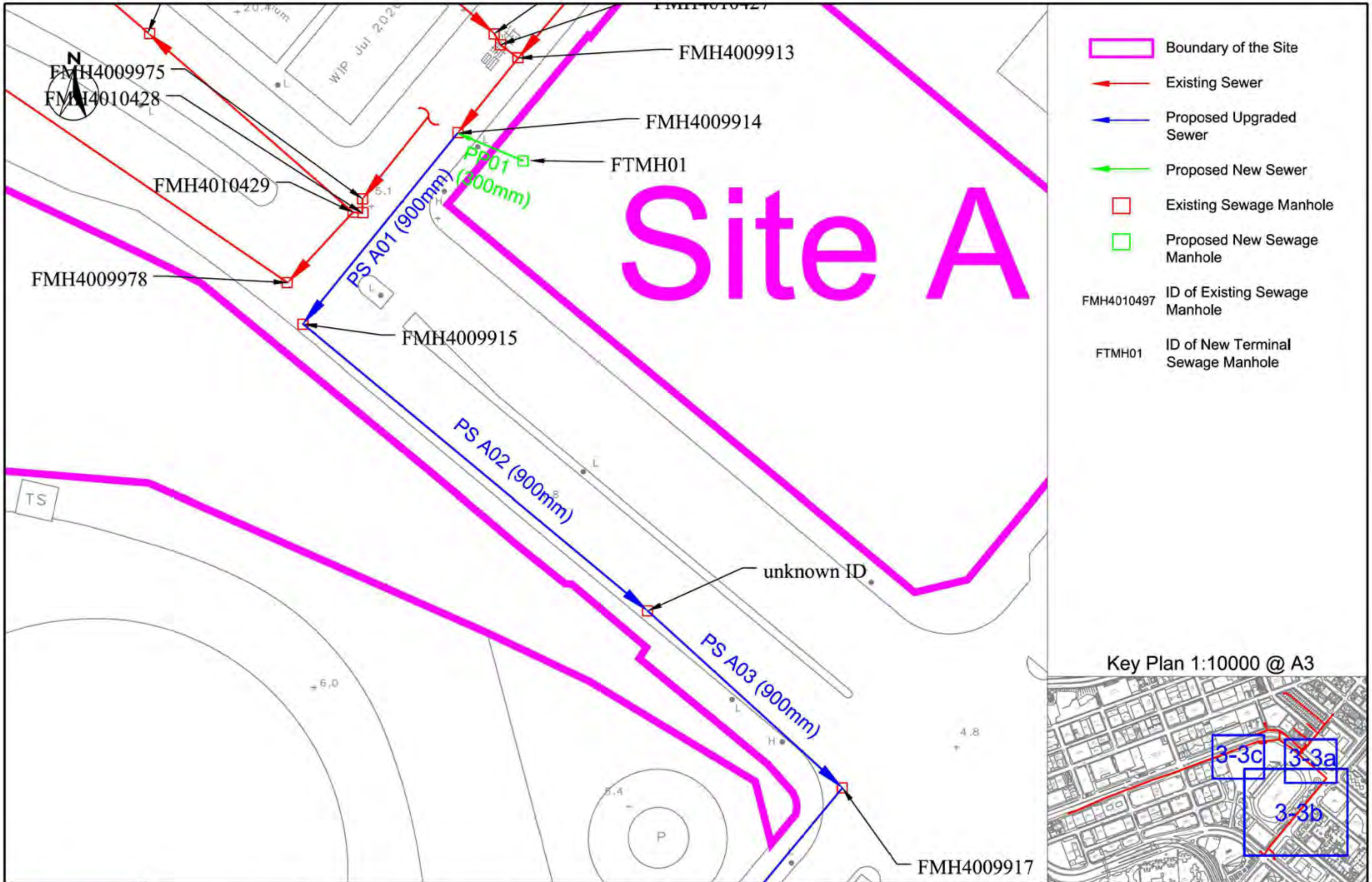
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Sewage Catchments and Existing Sewers in the Vicinity

SCALE	1:1000 @ A3	DATE	APRIL 2021		
CHECK	RT	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	3-2f	REV	-



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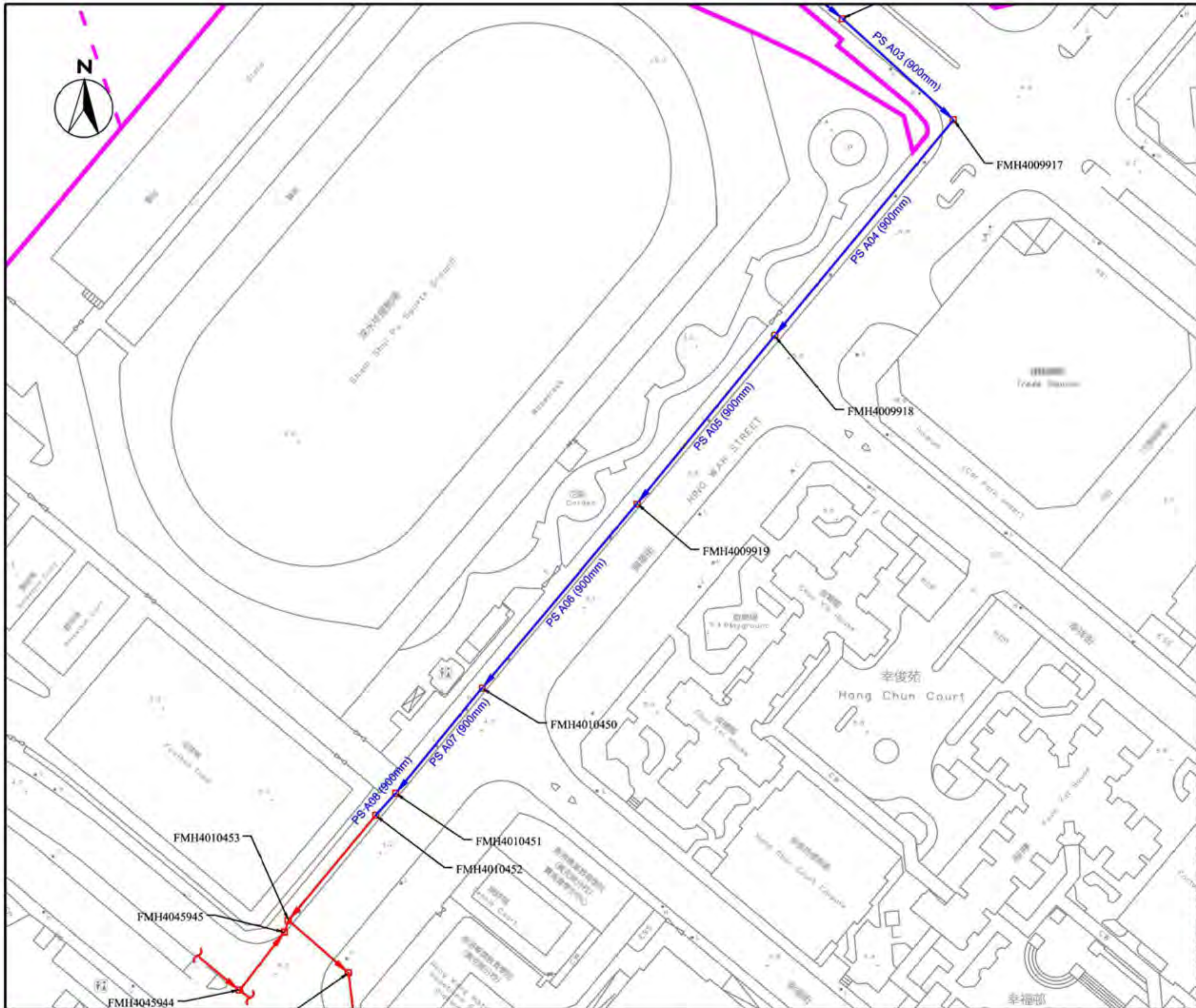
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Proposed Upgrade and New Sewers

SCALE	1:500 @ A3	DATE	MAY 2021		
CHECK	RT	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	3-3a	REV	-



	Boundary of the Site
	Existing Sewer
	Proposed Upgraded Sewer
	Proposed New Sewer
	Existing Sewage Manhole
	Proposed New Sewage Manhole
FMH4010497	ID of Existing Sewage Manhole
FTMH01	ID of New Terminal Sewage Manhole

Key Plan 1:10000 @ A3

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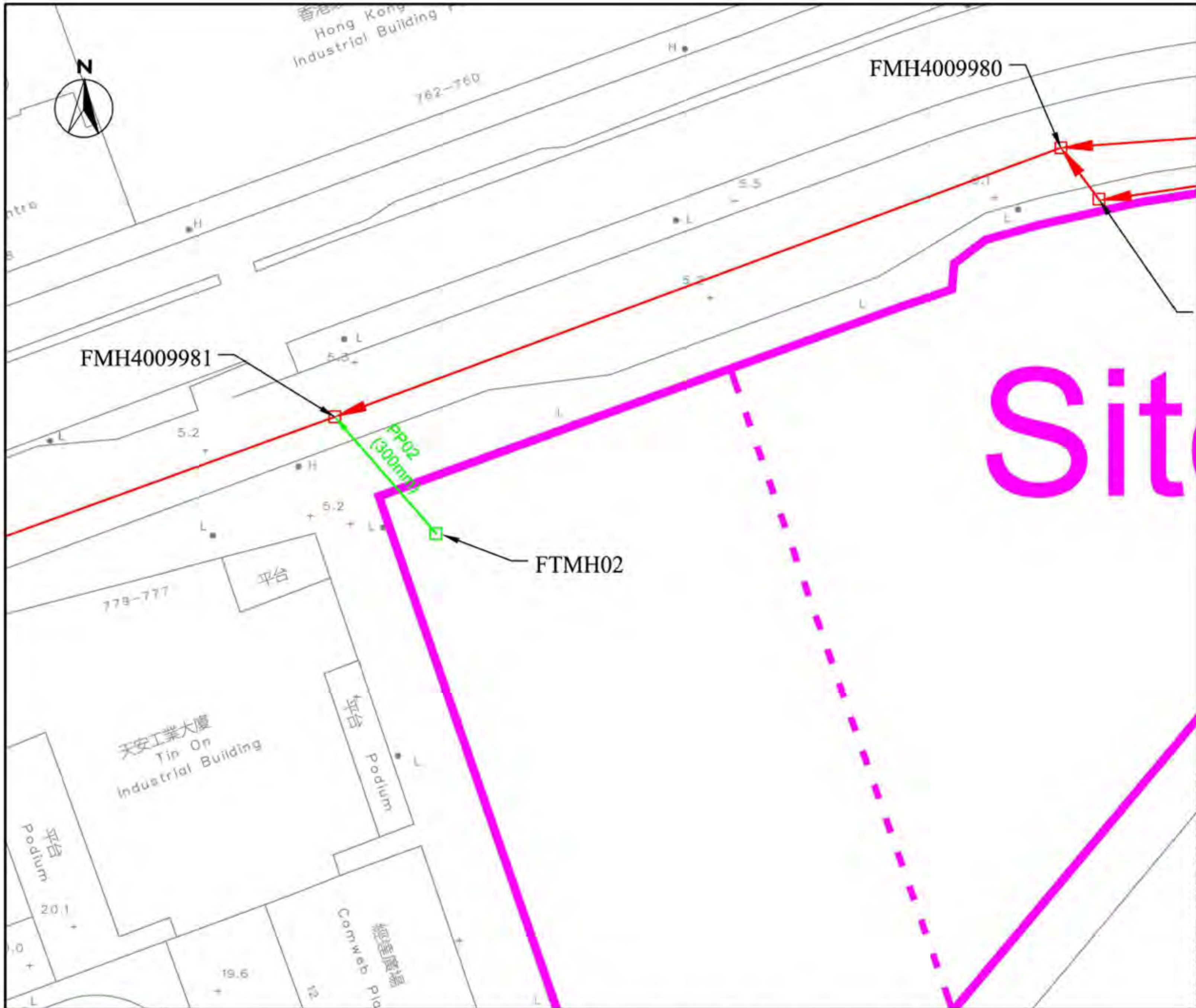
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Proposed Upgrade and New Sewers

SCALE	1:1000 @ A3	DATE	MAY 2021	
CHECK	RT	DRAWN	CC	
JOB No.	IA19021-SSPAA1	DRAWING No.	3-3b	REV -



Boundary of the Site

Existing Sewer

Proposed Upgraded Sewer

Proposed New Sewer

Existing Sewage Manhole

Proposed New Sewage Manhole

FMH4010497 ID of Existing Sewage Manhole

FTMH01 ID of New Terminal Sewage Manhole

Key Plan 1:10000 @ A3

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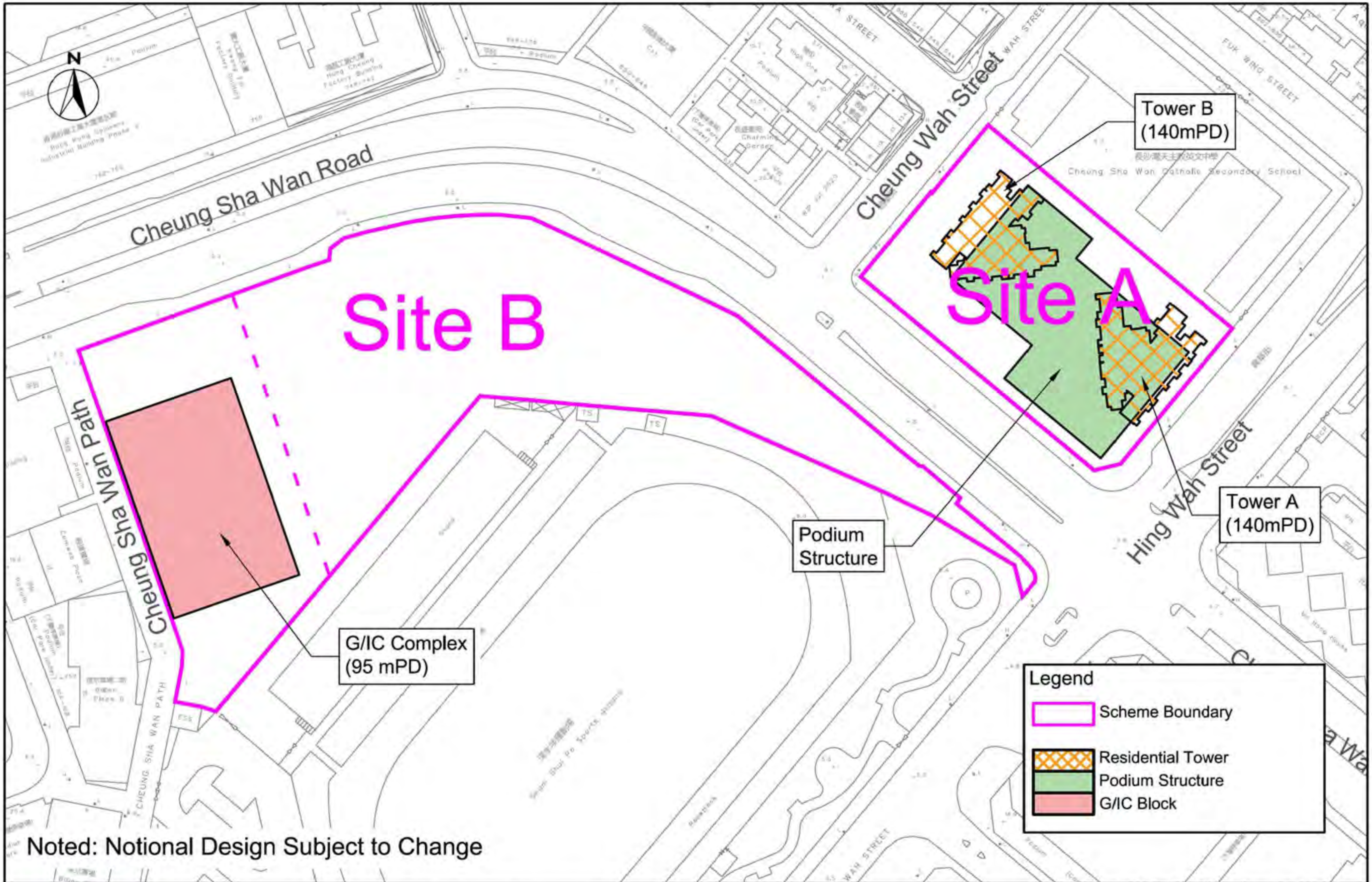
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Proposed Upgrade and New Sewers

SCALE	1:500 @ A3	DATE	MAY 2021		
CHECK	RT	DRAWN	CC		
JOB No.	IA19021-SSPAA1	DRAWING No.	3-3c	REV	-

Appendix I

Notional Block Plan of the Proposed Scheme



Noted: Notional Design Subject to Change

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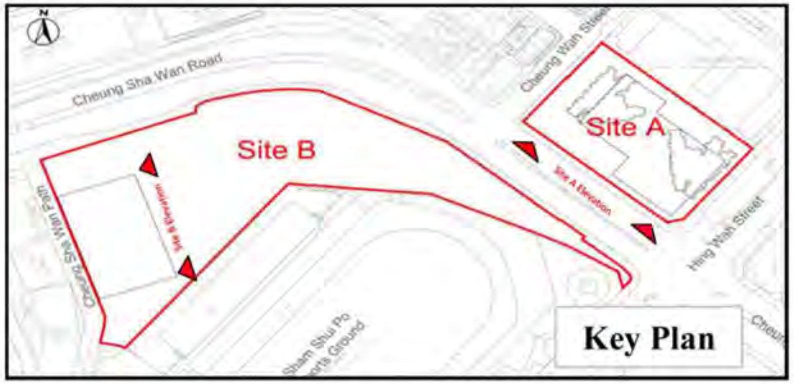
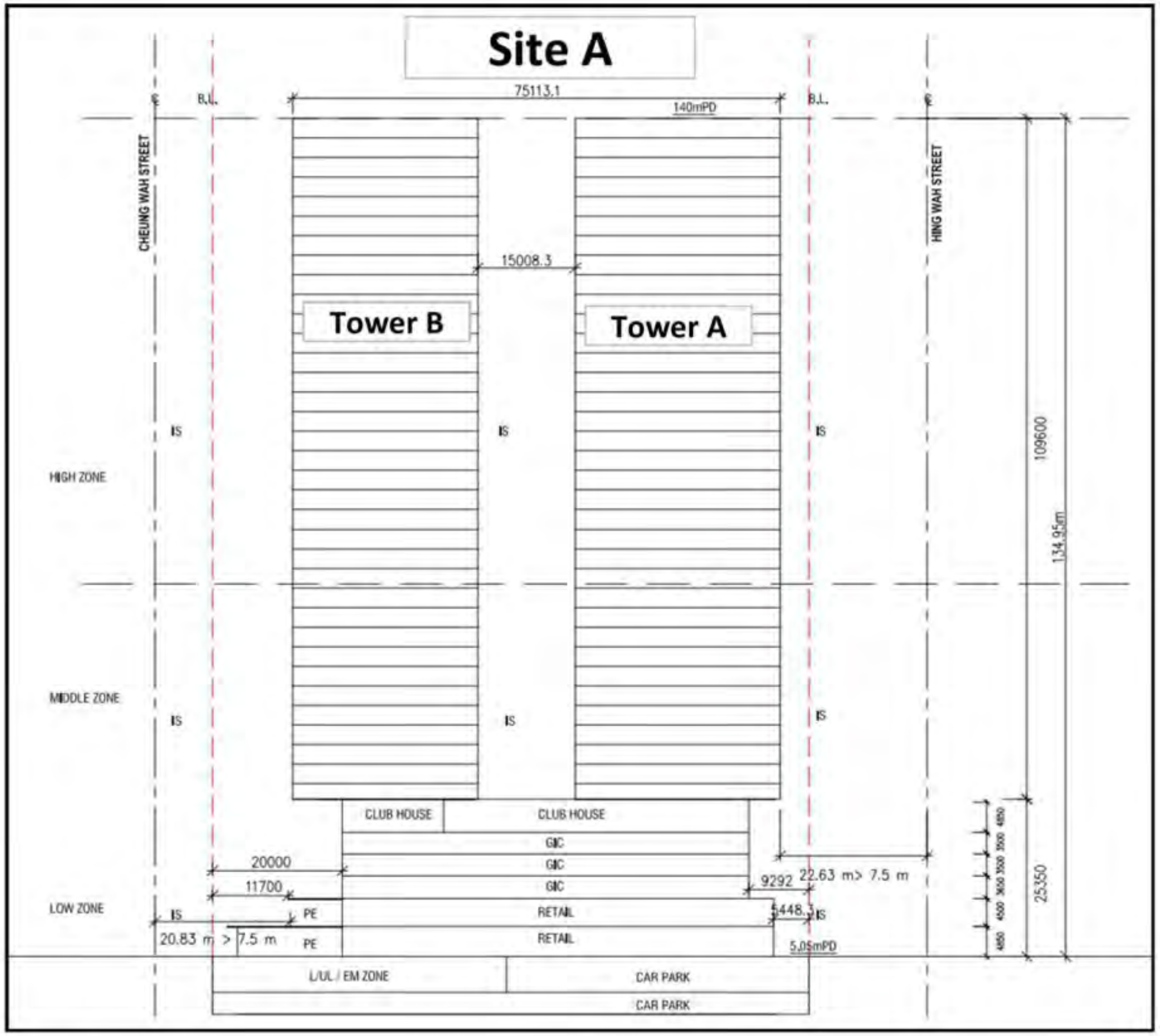
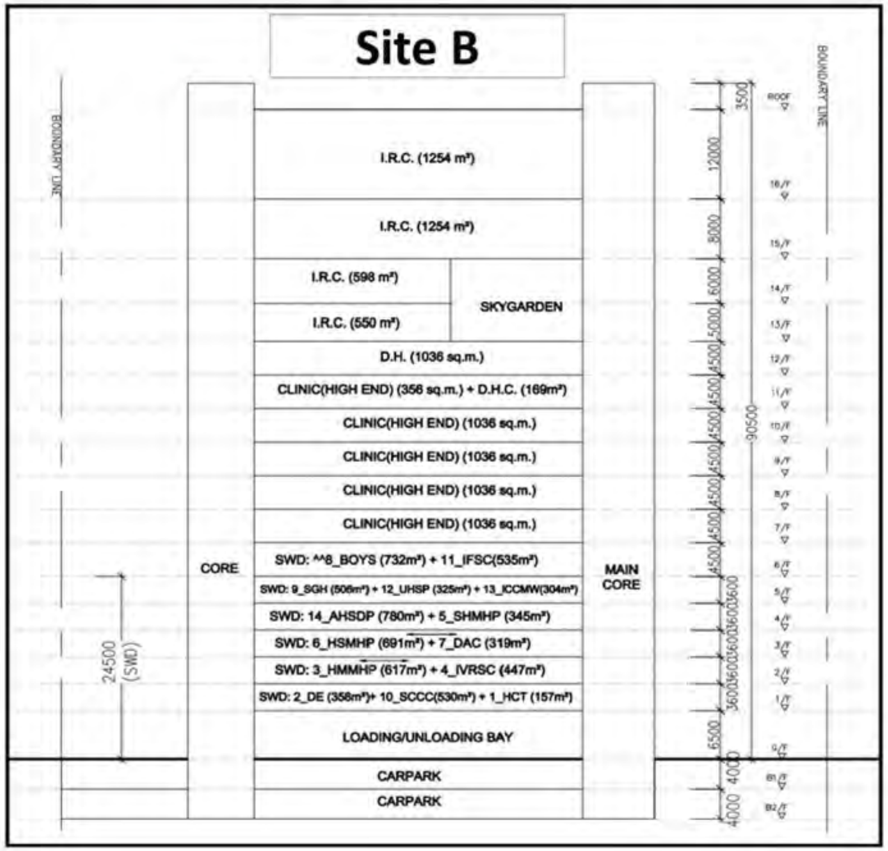
Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Notional Block Plan of the Proposed Scheme

SCALE	1:1000 @ A3	DATE	JUL 2021
CHECK	KC	DRAWN	CC
JOB No.	IA19021-SSPAA1	DRAWING No.	App I
		REV	-







Remark:
Notional Design subject to change at detailed design stage

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Development Scheme Cheung Wah Street/ Cheung Sha Wan (SSP-018)

Notional Section Plan of the Proposed Scheme

SCALE	N.T.S.	DATE	Jun-21
CHECK	KC	DRAWN	CC
JOB NO.	IA9021-SSPAA1	FIGURE NO. APP I	REV. -

Appendix II
Sewage Discharge from Surrounding Catchments

Appendix II: Sewage Discharge from Surrounding

Catchment ID	Building	No. of Flats	No of Shops	No. of Restaurants	Retail Area (m^2) [1]	Restaurant Area (m^2) [1]	Commercial Area (m^2) [1]	Industrial Area (m^2) [1]	Population								
									Residential [2][8]	Retail/ Shop (Staff)[4]	Restaurants (Staff)[4]	School (Staff)[5]	School (Student)[5]	Retail (staff)[6] by worker density	Restaurant (staff)[6] by worker density	Commercial (Staff)[6] by worker density	Industrial (Staff)[6] by worker density
A	Cheung Sha Wan Catholic Secondary School	-	-	-	-	-	-	-	-	-	-	61	842	-	-	-	-
B	Fuk Wing Street (Cheung Wah Street to Castle Peak Road) & Fuk Wa Street (Cheung Wah Street to Castle Peak Road) [3]	[3]	40	24	-	-	-	-	3543	80	120	-	-	-	-	-	-
C	571 Fuk Wa Street	187	-	1	-	-	-	-	486	-	5	-	-	-	-	-	-
	561 Fuk Wa Street	21	-	1	-	-	-	-	55	-	5	-	-	-	-	-	-
	11-13A Cheung Wah Street	20	3	2	-	-	-	-	52	6	10	-	-	-	-	-	-
	Charming Garden (長盛豪苑) (638 Cheung Wah Street)	112	2	2	-	-	-	-	291	4	10	-	-	-	-	-	-
	Furture development on Land Slot NKIL 2197 RP [10]	78	-	-	202.5	202.5	-	-	203	-	-	-	-	7	10	-	-
D	650-646 Cheung Wah Street (Tower)	-	-	-	-	-	11172	-	-	-	-	-	-	-	-	659	-
	650-646 Cheung Wah Street (Podium)	-	-	-	-	2327.5	-	-	-	-	-	-	-	-	119	-	-
E	Gee Hing Chang Industrial Building	-	1	-	-	-	-	6768.3	-	2	-	-	-	-	-	-	156
	Precious Industrial Centre	-	3	-	-	-	-	6860.7	-	6	-	-	-	-	-	-	158

Notes:

[1] Estimated value

[2] The average domestic household size is 2.6 persons for Sham Shui Po, according to Population By-census 2016. Source from (http://www.bycensus2016.gov.hk/en/bc-dp.html).

[3] The population for Large Street Block Groups (No: 26123) is reference to Population By-census 2016. Source from (http://www.bycensus2016.gov.hk/en/bc-dp.html).

[4] The density of 2 employees per a retail/shop and 5 employees per a restaurant is based on site survey.

[5] The number of teacher and student of Cheung Sha Wan Catholic Secondary School are reference to School Annual School Report 2019-2020

[6] The worker density for Commercial Area (5.9 employee per 100 m^2),Restaurant Area (5.1 employee per 100 m^2), Retail Area (3.5 employee per 100 m^2) and Industrial Area (2.3 employee per 100 m^2) are from Figure 9 and 10 of Commercial and Industrial Floor Space Utilization Survey 2005.

[7] The Unit Flow Factors are 0.27, 0.28, 0.04, 1.58 and 0.53 m^3/day/head for residential use, retail/office/commercial/School(Staff), School Student, restaurants and industrial use, respectively.

[8] Number of flats are reference to Centaline Property https://hk.centanet.com/estate/.

[9] Number of flats are reference to Midland Realty /https://www.midland.com.hk/en/

[10] It is assumed that the Furture development on Land Slot NKIL 2197 RP consists of 26 storeys of residential tower with 3 flats per floor. The non-residential area is estimated by allowable the plot ratio according to OZP (1.5 for non-residential).

Appendix II: Sewage Discharge from Surrounding

Catchment ID	Building	Flowrate (m^3/day) [7]							Flowrate / catchment (m^3/day)	Total Flowrate / catchment (m^3/day)	Reference
		Residential UFF=0.27	Retail/Shop UFF=0.28	School (Staff) UFF=0.28	School (Student) UFF=0.04	Restaurants UFF=1.58	Commercial UFF=0.28	Industrial UFF=0.53			
A	Cheung Sha Wan Catholic Secondary School	-	-	4.9	33.7	-	-	-	38.6	38.6	-
B	Fuk Wing Street (Cheung Wah Street to Castle Peak Road) & Fuk Wa Street (Cheung Wah Street to Castle Peak Road) [3]	956.6	22.4	-	-	189.6	-	-	1168.6	1168.6	-
C	571 Fuk Wa Street	131.2	-	-	-	7.9	-	-	139.1	361.5	Centaline Property [8]
	561 Fuk Wa Street	14.9	-	-	-	7.9	-	-	22.8		
	11-13A Cheung Wah Street	14.0	1.7	-	-	15.8	-	-	31.5		Midland Realty [9]
	Charming Garden (長盛豪苑) (638 Cheung Wah Street)	78.6	1.1	-	-	15.8	-	-	95.5		
	Furture development on Land Slot NKIL 2197 RP [10]	54.8	2.0	-	-	15.8	-	-	72.6		-
D	650-646 Cheung Wah Street (Tower)	-	-	-	-	-	184.5	-	184.5	372.5	-
	650-646 Cheung Wah Street (Podium)	-	-	-	-	188.0	-	-	188.0		
E	Gee Hing Chang Industrial Building	-	0.6	-	-	-	-	82.7	83.2	168.7	-
	Precious Industrial Centre	-	1.7	-	-	-	-	83.7	85.4		

Notes:

[1] Estimated value

[2] The average domestic household size is 2.6 persons for Sham Shui Po, according to Population By-census 2016. Source from (http://www.bycensus2016.gov.hk/en/bc-dp.html).

[3] The population for Large Street Block Groups (No: 26123) is reference to Population By-census 2016. Source from (http://www.bycensus2016.gov.hk/en/bc-dp.html).

[4] The density of 2 employees per a retail/shop and 5 employees per a restaurant is based on site survey.

[5] The number of teacher and student of Cheung Sha Wan Catholic Secondary School are reference to School Annual School Report 2019-2020

[6] The worker density for Commercial Area (5.9 employee per 100 m2),Restaurant Area (5.1 employee per 100 m2), Retail Area (3.5 employee per 100 m2) and Industrial Area (2.3 employee per 100 m2) are from Figure 9 and 10 of Commercial and Industrial Floor Space Utilization Survey 2005.

[7] The Unit Flow Factors are 0.27, 0.28, 0.04, 1.58 and 0.53 m3/day/head for residential use, retail/office/commercial/School(Staff), School Student, restaurants and industrial use, respectively.

[8] Number of flats are reference to Centaline Property https://hk.centanet.com/estate/.

[9] Number of flats are reference to Midland Realty /https://www.midland.com.hk/en/

[10] It is assumed that the Furture development on Land Slot NKIL 2197 RP consists of 26 storeys of residential tower with 3 flats per floor. The non-residential area is estimated by allowable the plot ratio according to OZP (1.5 for non-residential).

Appendix III

Detailed Calculation of Existing Sewage Discharge

Appendix III: Calculation of Existing Pipe Capacity

Table A - Pipe Capacity Calculation

Segment	Upstream Manhole	Downstream Manhole	Upstream Invert Level (mPD)	Downstream Invert Level (mPD)	Length (m)	Diameter (mm)	Diameter (m)	Area (m^2)	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m^2/s)	Hydraulic Pipeline Roughness (m)[1]	Velocity (m/s)	Full Capacity (l/s)	Remark
Existing Pipes															
Site A															
PS A01	FMH4009914	FMH4009915	1	0.95	35.3	750	0.75	0.442	0.1875	0.0014	0.00000114	0.006	0.77	339.4	
PS A02	FMH4009915	Unknown	0.95	0.79	64.5	750	0.75	0.442	0.1875	0.0025	0.00000114	0.006	1.02	449.4	
PS A03	Unknown	FMH4009917	0.79	0.75	37.8	750	0.75	0.442	0.1875	0.0011	0.00000114	0.006	0.66	293.0	
PS A04	FMH4009917	FMH4009918	0.75	0.64	70.6	750	0.75	0.442	0.1875	0.0016	0.00000114	0.006	0.81	355.9	
PS A05	FMH4009918	FMH4009919	0.64	0.53	54.6	750	0.75	0.442	0.1875	0.0020	0.00000114	0.006	0.92	404.7	
PS A06	FMH4009919	FMH4010450	0.53	0.42	60.5	750	0.75	0.442	0.1875	0.0018	0.00000114	0.006	0.87	384.5	
PS A07	FMH4010450	FMH4010451	0.42	0.36	34.3	750	0.75	0.442	0.1875	0.0017	0.00000114	0.006	0.85	377.1	
PS A08	FMH4010451	FMH4010452	0.34	0.33	7.5	-	-	-	-	-	-	-	-	362.6	PS A08 consists of two pipes: PS A08a and A08b
PS A09	FMH4010452	FMH4010453	0.33	-0.18	34.3	750	0.75	0.442	0.1875	0.0149	0.00000114	0.003	2.77	1224.1	
PS A10	FMH4010453	FMH4010454	-	-	20.1	-	-	-	-	-	-	-	-	3640.3	PS A10 consists of three pipes: PS A10a, A10b & A10c
Site B															
PS B01	FMH4009981	FMH4009982	1.95	1.8	74.3	1200	1.2	1.131	0.3	0.0020	0.00000114	0.003	1.38	1559.7	
PS B02	FMH4009982	FMH4009983	1.8	1.71	76.6	1200	1.2	1.131	0.3	0.0012	0.00000114	0.006	0.95	1077.5	
PS B03	FMH4009983	FMH4009984	1.71	1.58	75.8	1200	1.2	1.131	0.3	0.0017	0.00000114	0.003	1.27	1431.9	
PS B04	FMH4009984	FMH4009985	1.58	1.45	76.0	1200	1.2	1.131	0.3	0.0017	0.00000114	0.003	1.27	1431.9	
PS B05	FMH4009985	FMH4009986	1.45	1.32	75.5	1200	1.2	1.131	0.3	0.0017	0.00000114	0.003	1.27	1431.9	
PS B06	FMH4009986	FMH4009987	1.32	1.19	78.3	1200	1.2	1.131	0.3	0.0017	0.00000114	0.003	1.27	1431.9	
Upstream Pipe Sections															
US 01	FMH4009910	FMH4009911	1.36	1.28	29.5	675	0.675	0.358	0.16875	0.0025	0.00000114	0.006	0.96	343.2	
US 02	FMH4045944	FMH4045945	1.65	-0.10	18.8	450	0.45	0.159	0.1125	0.0933	0.00000114	0.003	4.98	791.9	
US 03	FMH4009974	FMH4009975	3.2	3.01	30.4	675	0.675	0.358	0.16875	0.0063	0.00000114	0.003	1.68	600.4	
Sub-Pipe for A08 & A10															
PS A08a	FMH4010451	FMH4010452	0.34	0.33	7.5	600	0.6	0.283	0.15	0.0013	0.00000114	0.006	0.64	181.3	
PS A08b	FMH4010451	FMH4010452	0.34	0.33	7.5	600	0.6	0.283	0.15	0.0013	0.00000114	0.006	0.64	181.3	
PS A10a	FMH4010453	FMH4010454	-0.2	-2.8	20.1	600	0.6	0.283	0.15	0.1296	0.00000114	0.003	7.09	2003.3	
PS A10b	FMH4010453	FMH4010454	-0.2	-2.2	20.1	450	0.45	0.159	0.1125	0.0997	0.00000114	0.003	5.15	818.5	
PS A10c	FMH4010453	FMH4010454	-0.2	-2.2	20.1	450	0.45	0.159	0.1125	0.0997	0.00000114	0.003	5.15	818.5	

Note:

[1] The roughness coefficient for slimed concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.

[2] The Manhole ID of the sewage manhole between Pipe PS A02 & PS A03 is not available.

[3] The invert level between FMH4009984 and FMH4009986 (Downstream of PS B03 to Upstream of PS B06) are not available. Average slope has been adopted.

Appendix III: Calculation of Existing Pipe Capacity

Table B: Proportion of Peak Flow to Full Capacity

Segment	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge (m^3/day) [1]	Contribution Population [2]	Peaking Factor[3]	Catchment Inflow Factors, P_{CIF} [4]	Peak Flow [5] (L/s)	Total Peak Flow[6][7] (L/s)	% of full capacity
Existing Pipes											
Site A											
PS A01	FMH4009914	FMH4009915	339.4	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	151%
PS A02	FMH4009915	Unknown	449.4	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	114%
PS A03	Unknown	FMH4009917	293.0	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	175%
PS A04	FMH4009917	FMH4009918	355.9	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	144%
PS A05	FMH4009918	FMH4009919	404.7	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	126%
PS A06	FMH4009919	FMH4010450	384.5	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	133%
PS A07	FMH4010450	FMH4010451	377.1	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	136%
PS A08	FMH4010451	FMH4010452	362.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	141%
PS A09	FMH4010452	FMH4010453	1224.1	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	42%
PS A10	FMH4010453	FMH4010454	3640.3	Upstream Pipe Section 01 + Upstream Pipe Section 02 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	1303.2	36%
Site B											
PS B01	FMH4009981	FMH4009982	1559.7	Upstream Pipe Section 03 + project(B)	311.6	1154	6	1.3	28.1	628.5	40%
PS B02	FMH4009982	FMH4009983	1077.5	Upstream Pipe Section 03 + project(B) + E	480.3	1779	6	1.3	43.4	643.7	60%
PS B03	FMH4009983	FMH4009984	1431.9	Upstream Pipe Section 03 + project(B) + E	480.3	1779	6	1.3	43.4	643.7	45%
PS B04	FMH4009984	FMH4009985	1431.9	Upstream Pipe Section 03 + project(B) + E	480.3	1779	6	1.3	43.4	643.7	45%
PS B05	FMH4009985	FMH4009986	1431.9	Upstream Pipe Section 03 + project(B) + E	480.3	1779	6	1.3	43.4	643.7	45%
PS B06	FMH4009986	FMH4009987	1431.9	Upstream Pipe Section 03 + project(B) + E	480.3	1779	6	1.3	43.4	643.7	45%

Note:

[1] The discharge from Upstream Pipes US 01, US 02 & US 03 are not included.

[2] The contribution population = total catchment discharge (m^3/day) / 0.27(m^3/day/person)

[3] Peaking Factor of 8 for contribution population <1,000 , 6 for contribution population of 1000 - 5000, 5 for contribution population of 5000-10000 and 4 for contribution population of 10000-50000 are adopted.

[4] Catchment Inflow Factors of North West Kowloon (=1.3) has been adopted

[5] Peak Flow = Daily average dry weather flow × Peaking Factor (including stormwater allowance) × Catchment Inflow Factor / 24 / 3600, the operation hour is assumed to be 24 hours.

[6] Full pipe capacity of US 01 is added to the peak flow of PS A01-PS A10, and full pipe capacity of US 02 is added to the peak flow of PS A10.

[7] Full pipe capacity of US 02 is added to the peak flow of PS B01- PS B06.

Appendix IV

Capacity Calculation of Proposed Pipes and Upgraded Pipes

Appendix IV: Calculation of Proposed Pipe Capacity

Table A - Pipe Capacity Calculation

Segment	Upstream Manhole	Downstream Manhole	Upstream Invert Level (mPD) [1]	Downstream Invert Level (mPD) [1]	Length (m)	Diameter (mm)	Diameter (m)	Area (m^2)	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m^2/s)	Hydraulic Pipeline Roughness (m) [2]	Velocity (m/s)	Full Capacity (l/s)
Proposed New Pipe														
PP01	FTMH01	FMH4009914	1.10	1.00	10.0	300	0.3	0.071	0.075	0.0100	0.00000114	0.003	1.24	87.9
PP02	FTMH02	FMH4009981	2.15	1.95	20.0	300	0.3	0.071	0.075	0.0100	0.00000114	0.003	1.24	87.9
Proposed Upgrading Pipe														
PS A01	FMH4009914	FMH4009915	1	0.94	35.3	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6
PS A02	FMH4009915	Unknown	0.94	0.82	64.5	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6
PS A03	Unknown	FMH4009917	0.82	0.75	37.8	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6
PS A04	FMH4009917	FMH4009918	0.75	0.62	70.6	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6
PS A05	FMH4009918	FMH4009919	0.62	0.52	54.6	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6
PS A06	FMH4009919	FMH4010450	0.52	0.41	60.5	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6
PS A07	FMH4010450	FMH4010451	0.41	0.34	34.3	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6
PS A08	FMH4010451	FMH4010452	0.34	0.33	7.5	900	0.9	0.636	0.225	0.0018	0.00000114	0.006	0.99	627.6

Note:

[1] The upstream and downstream level of proposed pipes will be subject to detail design.

[2] The roughness coefficient for slimed concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.

Appendix IV: Calculation of Proposed Pipe Capacity

Table B: Proportion of Peak Flow to Full Capacity after Upgrading

Segment	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge (m^3/day) [1]	Contribution Population [2]	Peaking Factor[3]	Catchment Inflow Factors, P_{CIF} [4]	Peak Flow [5] (L/s)	Total Peak Flow[6][7] (L/s)	% of full capacity
Proposed New Pipes											
PP01	FTMH01	FMH4009914	87.9	Project (A)	852.2	3156	6	1.3	76.9	76.9	88%
PP02	FTMH02	FMH4009981	87.9	Project (B)	311.6	1154	6	1.3	28.1	28.1	32%
Proposed Upgrading Plan											
PS A01	FMH4009914	FMH4009915	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%
PS A02	FMH4009915	Unknown	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%
PS A03	Unknown	FMH4009917	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%
PS A04	FMH4009917	FMH4009918	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%
PS A05	FMH4009918	FMH4009919	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%
PS A06	FMH4009919	FMH4010450	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%
PS A07	FMH4010450	FMH4010451	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%
PS A08	FMH4010451	FMH4010452	627.6	Upstream Pipe Section 01 + project(A) + A + B + C + D	2793.4	10346	4	1.3	168.1	511.3	81%

Note:

[1] The discharge from Upstream Pipes US 01, US 02 & US 03 are not included.

[2] The contribution population = total catchment discharge (m^3/day) / 0.27(m^3/day/person)

[3] Peaking Factor of 8 for contribution population <1,000 , 6 for contribution population of 1000 - 5000, 5 for contribution population of 5000-10000 and 4 for contribution population of 10000-50000 are adopted.

[4] Catchment Inflow Factors of North West Kowloon (=1.3) has been adopted

[5] Peak Flow = Daily average dry weather flow × Peaking Factor (including stormwater allowance) × Catchment Inflow Factor / 24 / 3600, the operation hour is assumed to be 24 hours.

[6] Full pipe capacity of US 01 is added to the peak flow of PS A01-PS A10, and full pipe capacity of US 02 is added to the peak flow of PS A10.

[7] Full pipe capacity of US 02 is added to the peak flow of PS B01- PS B06.

Appendix 9

Water Supply Impact Assessment (WSIA) Report

Urban Renewal Authority
Development Scheme
Cheung Wah Street / Cheung Sha Wan Road (SSP-018)

Water Supply Impact Assessment Report

(V1.0)

September 2021

Approved By	(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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Prepared by	Colman Wong	Colman	23 September 2021
Checked by	Karina Chan		23 September 2021

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LIST OF APPENDICES

1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority (URA) has proposed a Cheung Wah Street / Cheung Sha Wan Road Development Scheme (SSP-018) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance (URAO). This Water Supply Impact Assessment (SIA) is to support the submission of a draft Development Scheme Plan (DSP) with its planning proposal to the Town Planning Board (TPB) for consideration.

1.1.2 Cinotech Consultants Limited was commissioned by URA to conduct this to assess any potential water impact brought by the proposed development. Architectural drawings and technical information of the subject site were largely provided by the project architect and other project team members.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

2.1.1 The Scheme SSP-018 consists of Sites A and B. Site A is bounded by Hing Wah Street on the south-eastern boundary, Cheung Sha Wan Road on the south-western boundary, Cheung Wah Street on the north-western boundary, and Cheung Sha Wan Catholic Secondary School on the north-eastern boundary. Site B is bounded by Cheung Sha Wan Road to the north, Cheung Sha Wan Path to the west, and Sham Shui Po Sports Ground on the south-eastern boundary (Figure 2-1). The proposed gross site areas of the Site A & Site B are 5,197m^2 and 13,857m^2 respectively, subject to site survey and detailed design. The location of the site is shown in **Figure 2-1**.

2.1.2 Currently, the Site A comprises a single storey Cheung Sha Wan Sports Centre and its associate outdoor garden and playground. The Site B comprises a government land lot (GLA-TNK 1723) which currently is an open area with a few 1-2 storeys temporary structures, Cheung Sha Wan Path Sitting-out Area, and a garden associated with Sham Shui Po Sports Ground.

2.2 The Proposed Development

2.2.1 The entire Site A is proposed to rezone to "R(A)" and redevelop the area for high-density residential development, with non-domestic uses always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of a building. The proposed development on Site A consists of a 2 floors of basement carpark, a 5 storeys podium (GFA: 5,197m^2 for retails; 5,197m^2 for G/IC) and two 34 storeys residential towers (838 flats).

2.2.2 Western part of the Site B is proposed to rezone to G/IC and provide a G/IC complex with GFA of 33,696 m^2 for community and amenity. The rest of the Site B of about 9,645 m^2, is proposed to be public open space.

2.2.3 The proposed notional scheme is shown in **Appendix I**. The notional design is subject to change at detailed design stage.

3 WATER SUPPLY IMPACT ASSESSMENT

3.1 Existing Freshwater Supply

3.1.1 According to the Fresh Water Mains Record Plans and reply letter from Water Supplies Department (WSD), the Scheme Area is currently served by Shek Kip Mei No.2 Fresh Water Service Reservoir (Shek Kip Mei No.2 FWSR; Capacity: 40,000 m^3) and Shek Kip Mei No.3 Fresh Water Service Reservoir (Shek Kip Mei No.3 FWSR; Capacity: 48,188 m^3).

3.1.2 Site A is currently served by a 40/80 mm branch from a 200mm main along Cheung Wah Street which is origin from a 450mm main along Castle Peak Road.

3.1.3 Site B is currently served by a 150mm main along Cheung Sha Wan Path, which is connected to a 30" Steel pipe along Lai Chi Kok Road.

3.1.4 The WSD Fresh Water Mains Record Plan is provided in **Appendix II**.

3.2 Freshwater Supply Impact

3.2.1 The calculations for the water demand for the existing and future scenarios and existing spare capacities at different reservoirs are included in **Appendix IV**, together with comparisons with the existing supply facilities. The fresh water demand is expected to increase from 1.31 m^3/day to 748.77 m^3/d (an increase of 747.46 m^3/day, or 0.747 MLD) as a result of the proposed development.

<u>Shek Kip Mei No.2 FWSR & Shek Kip Mei No.3 FWSR</u>

3.2.2 As shown in **Appendix IV**, there is substantially greater spare capacity (27 MLD) in Shek Kip Mei No.2 FWSR & Shek Kip Mei No.3 FWSR. The expected increase in demand can therefore be accommodated by the existing Fresh Water Service Reservoir. No adverse impact to Fresh Water Service Reservoir is anticipated.

<u>Fresh Water Mains (Site A)</u>

3.2.3 Currently, the fresh water of the Site A and Cheung Sha Wan Catholic Secondary School (the School) are sharing the same branch from the 200mm main along Cheung Wah Street. The School is in upstream location and having two 100mm pipes from the 200mm main; while the Site A is located at downstream of the School with only a 40/80mm pipe.

3.2.4 With assuming a maximum sustained flow velocity of 2.0m/s, which is 2/3 of the maximum flow velocity (3m/s) suggested in Departmental Instruction (DI) No. 1309 "Design Criteria", the capacity of 40mm, 80mm, 100mm and 200mm mains are 217 m^3/day, 869 m^3/day, 1357 m^3/day, and 5429 m^3/day respectively.

3.2.5 Assuming the development of Site A is using the existing fresh water pipe to the site, the total fresh water capacity of the Site A and the School is 2714 m^3/day (2 x 100mm pipe), while the fresh water capacity of 80mm/40mm branch for the Site A is only 869/217 m^3/day.

3.2.6 Three time the estimated mean daily fresh water demand of the Proposed Development Site A is ~2,230m^3/day. As the water consumption of the School is far less than the residential towers, and the water supply capacity of the School and Site A are more than three time of the estimated mean daily fresh water demand of the Proposed Development (Site A), no fresh water supply impact to the School is anticipated. However, the branch reaching Site A is only a 40/80mm pipe which is insufficient. In addition, a two-end feed fresh water supply network is preferred for the proposed development. New fresh water pipes and upgrade of existing fresh water pipes are required.

3.2.7 It is proposed to upgrade the existing 40/80mm pipe to 100mm pipe. In addition, it is proposed to provide a new 100mm fresh water pipe connect to the 300mm fresh water main along Lai Chi Kok Road. With the proposed water pipes implemented properly, the fresh water capacity of the Site A is 2714 m^3/day (2 x 100mm pipe) with both-end feed supply network thus no adverse fresh water supply impact is anticipated for Site A. The alignment and connection points of the proposed new/upgraded water pipes subject to detail design. The suggested upgrade and new fresh water mains are illustrated in **Appendix II**.

Fresh Water Mains (Site B)

3.2.8 Three time the estimated mean daily fresh water demand of the Proposed Development Site A is ~20m^3/day, which is far below the water capacity of the 150mm fresh water main along Cheung Sha Wan Path (3054 m^3/day). No adverse fresh water supply impact is anticipated for Site B.

3.3 Existing Saltwater Supply

3.3.1 According to the Fresh Water Mains Record Plans and reply letter from Water Supplies Department (WSD), the Scheme Area is currently served by Cheung Sha Wan Salt Water Pumping Station (Cheung Sha Wan SWPS) (Capacity 96 mld).

3.3.2 Site A is currently served by a 150mm main along Cheung Wah Street and Cheung Sha Wan Road.

3.3.3 There is no WSD salt water supply main connected to the Site B. The nearest salt water mains are the 6" (~150mm) salt water main along Cheung Sha Wan Road, and a 200mm salt water main along Hing Wah Street. There is also a 50mm branch near the eastern boundary of Site B.

3.3.4 The WSD Salt Water Mains Record Plan is provided in **Appendix III**.

3.4 Salt Water Supply Impact

3.4.1 The calculations for the water demand for the existing and future scenarios and existing spare capacities at different reservoirs are included in **Appendix IV**, together with comparisons with the existing supply facilities. The salt water demand is expected to increase from 0.46 m^3/day to 160.28 m^3/d (an increase of 159.82 m^3/day, or 0.160 MLD) as a result of the proposed development.

Cheung Sha Wan SWPS

3.4.2 As shown in **Appendix IV**, there is substantially greater spare capacity (24 MDL) in Cheung Sha Wan SWPS. The expected increase in demand can therefore be accommodated by the existing Cheung Sha Wan SWPS. No adverse impact to Cheung Sha Wan SWPS is anticipated.

<u>Salt Water Mains (Site A)</u>

3.4.3 With assuming a maximum sustained flow velocity of 2.0m/s, which is 2/3 of the maximum flow velocity (3m/s) suggested in Departmental Instruction (DI) No. 1309 "Design Criteria", the capacity of 150mm mains is 3054m^3/day.

3.4.4 As the Site A is served by a 150mm main, which making the theoretical total salt water capacity of the Scheme Area and the surrounding area to ~3054 m^3/day. The 150mm salt water main has far more than sufficient capacity to maintain three time the estimated mean daily salt water demand of the Site A (~474m^3/day), the expected increase in demand of the Site A should not has any adverse impact to the existing salt water mains and downstream areas.

<u>Salt Water Mains (Site B)</u>

3.4.5 Three time the estimated mean daily salt water demand of the Site B (~7m^3/day) is small compare to the capacity of 150mm mains. However, there is no salt water pipe connected to the west portion of site B, where the proposed G/IC complex located. New salt water pipes are required.

3.4.6 It is proposed to provide a new 80mm salt water pipe connect to the 150mm salt water main along Cheung Sha Wan Road. With the proposed water pipe implemented properly, the salt water capacity of the Site B is 869 m^3/day thus no adverse salt water supply impact is anticipated for Site B. The alignment and connection points of the proposed new/upgraded water pipes subject to detail design. The suggested new salt water mains are illustrated in **Appendix III**.

3.5 Construction and Maintenance

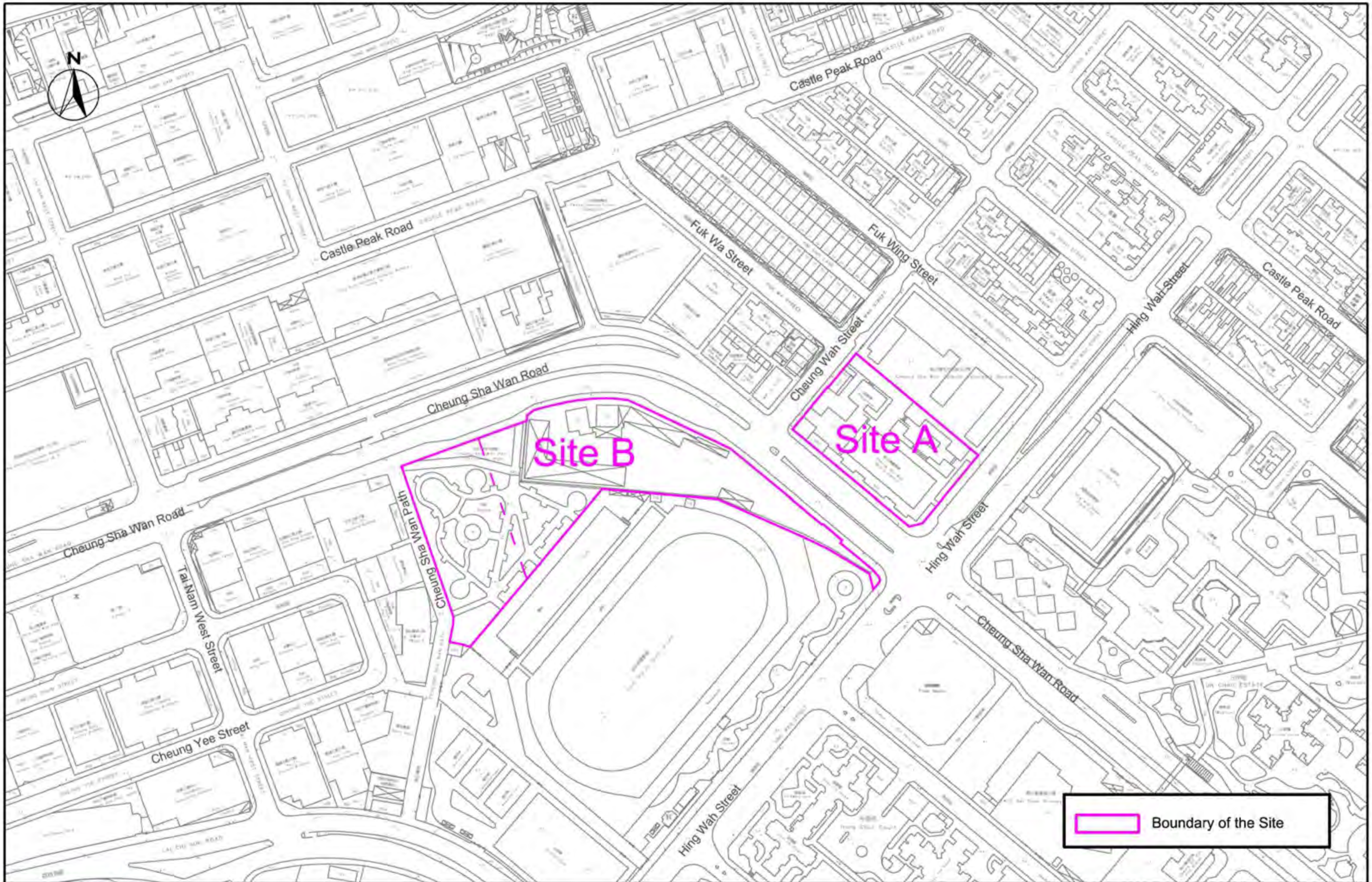
3.5.1 Responsibilities for the investigation, design, construction, repair and maintenance of the internal water supply facilities and connection to the main water system(s) will be discussed among URA/its joint venture partners/its assignees and relevant Government departments in detailed design stage.

3.5.2 The detailed connection arrangements for the Scheme Area and the local water mains will be reviewed in later stages during implementation of the Scheme. Local upgrading and/or realignment may be implemented if necessary.

4 CONCLUSION

4.1.1 The water supply impact due to the proposed Scheme has been reviewed. Although the proposed Scheme at the Site will result in increases in both the fresh and salt water demands, the increases can be accommodated by the existing main supply facilities and the proposed new/upgraded pipes. Therefore, no adverse water supply impact is anticipated from the proposed development.

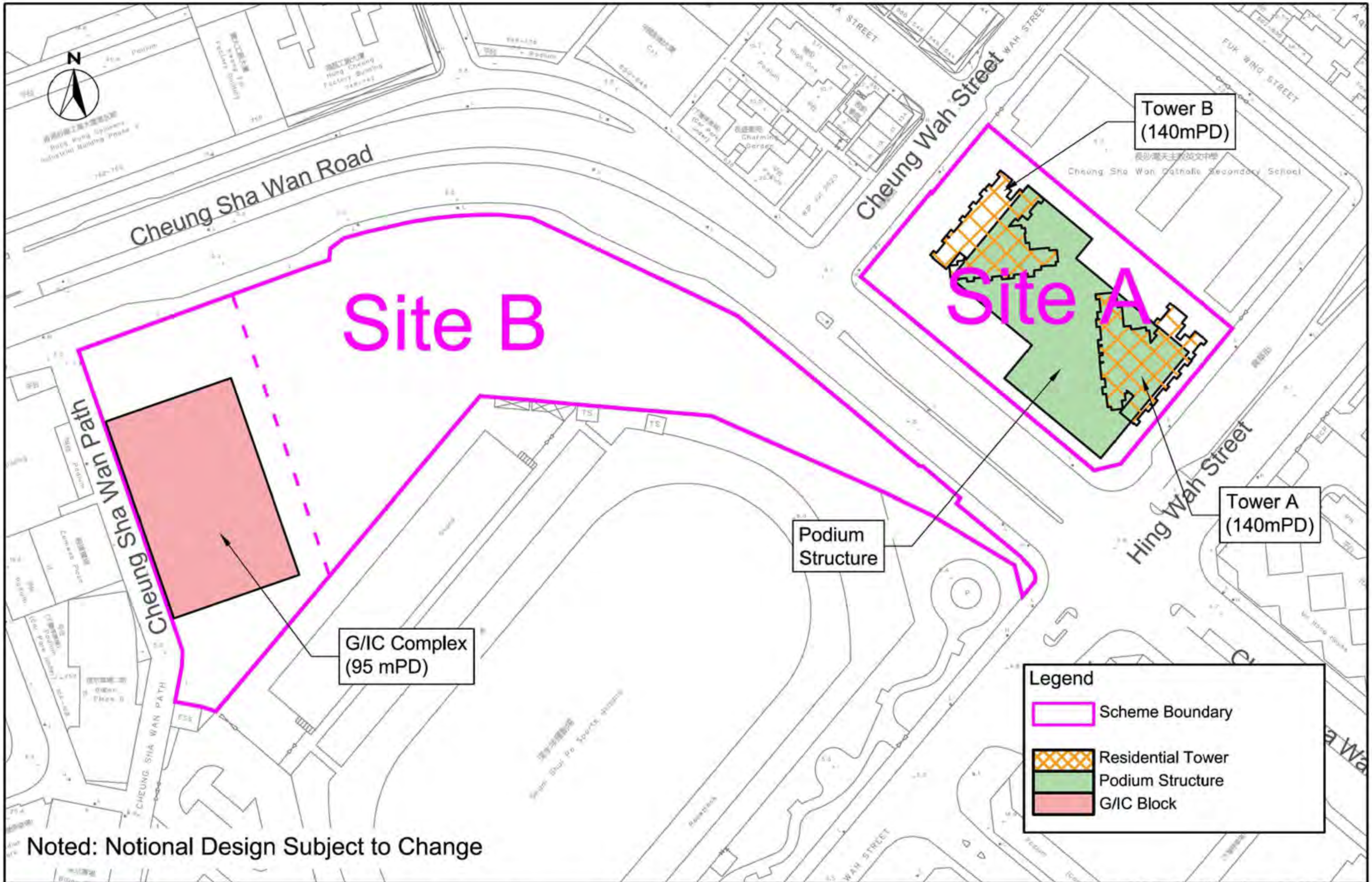
Figure



Cinotech Cinotech Consultants Limited	Urban Renewal Authority Development Scheme Cheung Wah Street / Cheung Sha Wan Road (SSP-018)	SCALE	1:2000 @ A3	DATE	Jul 2021
		CHECK	KC	DRAWN	CC
	Location of the Project Site	JOB No.	IA19021-SSPAA1	DRAWING No. / REV	Fig.2-1 / -

Appendix I

Notional Block Plan of the Proposed Scheme



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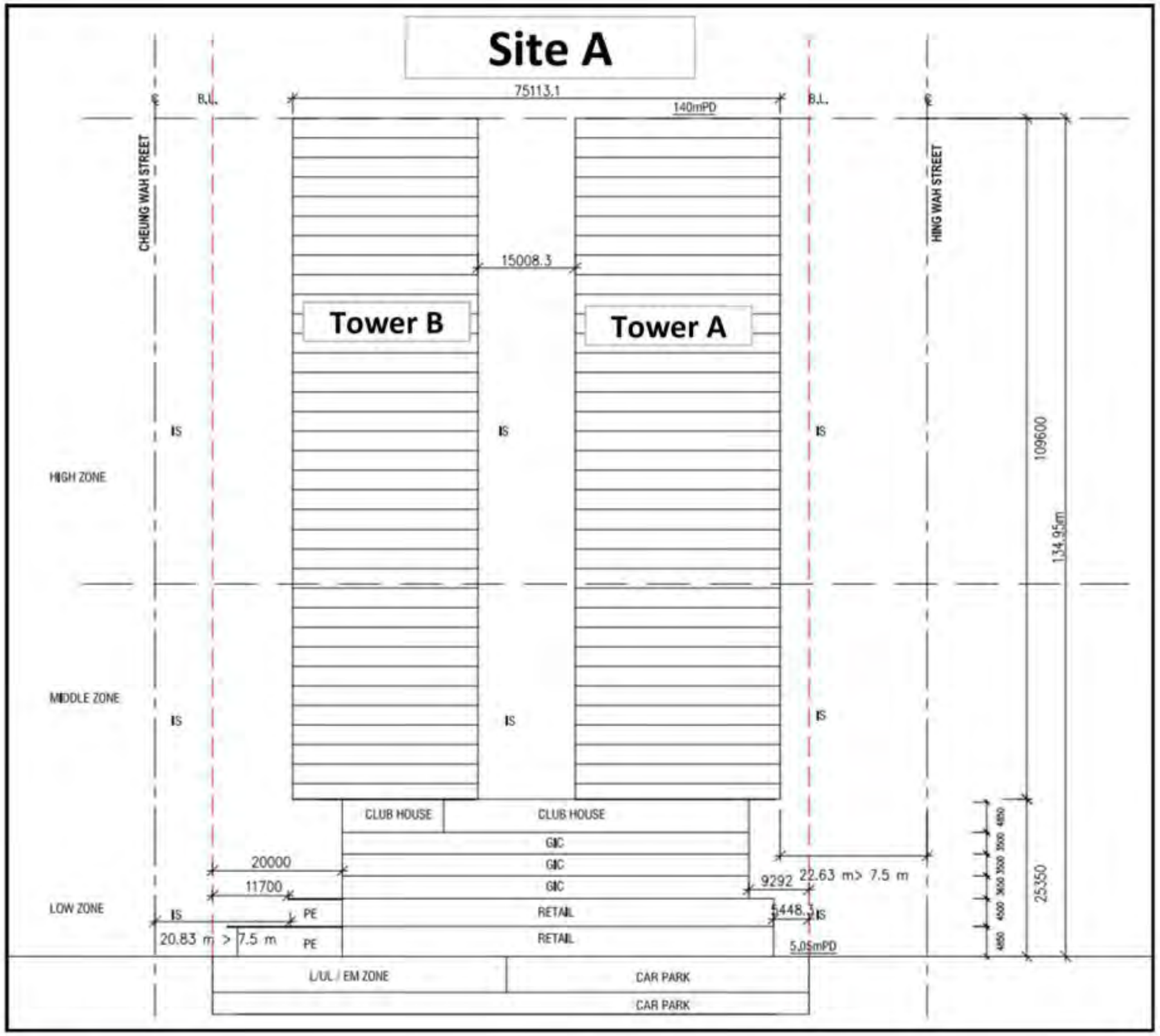
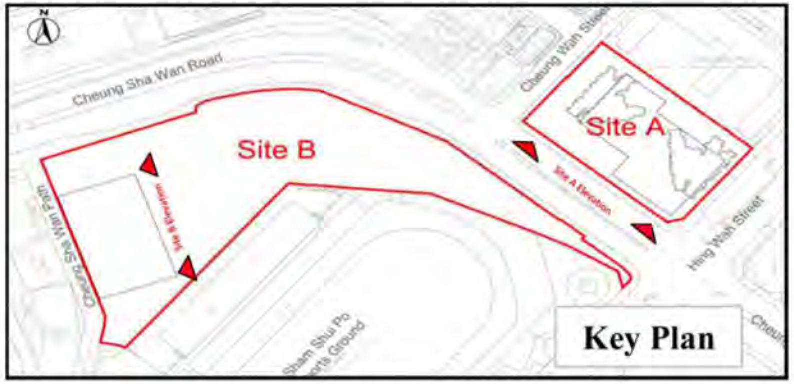
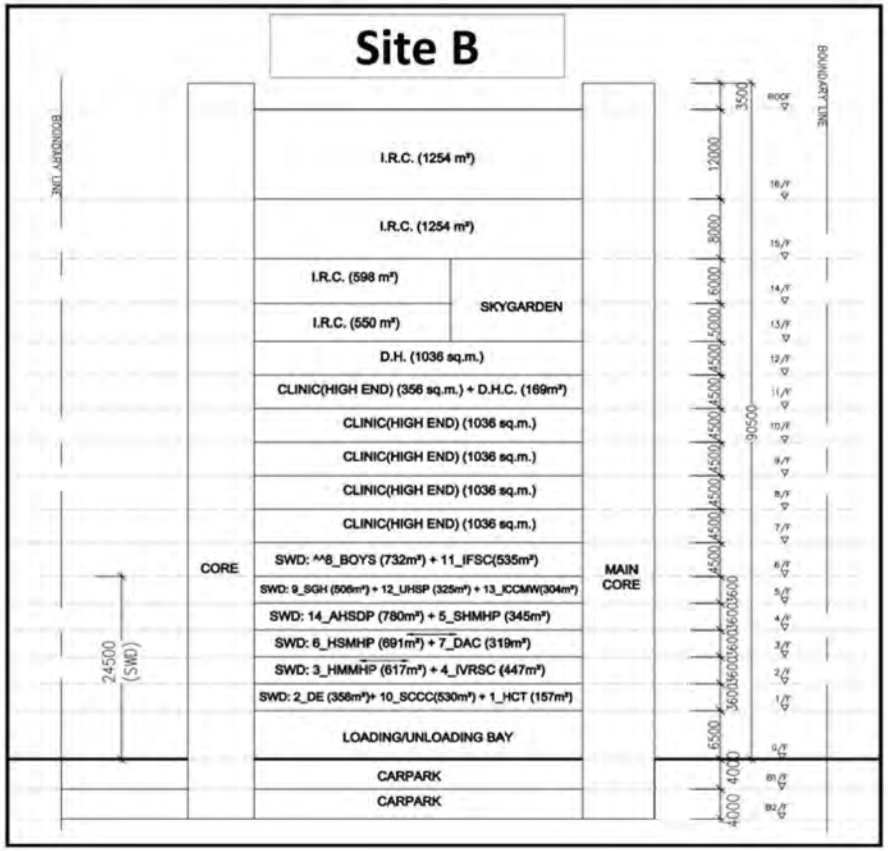
	Notional Block Plan of the Proposed Scheme	JOB No.	IA19021-SSPAA1	DRAWING No. App I	REV -







Remark:
Notional Design subject to change at detailed design stage

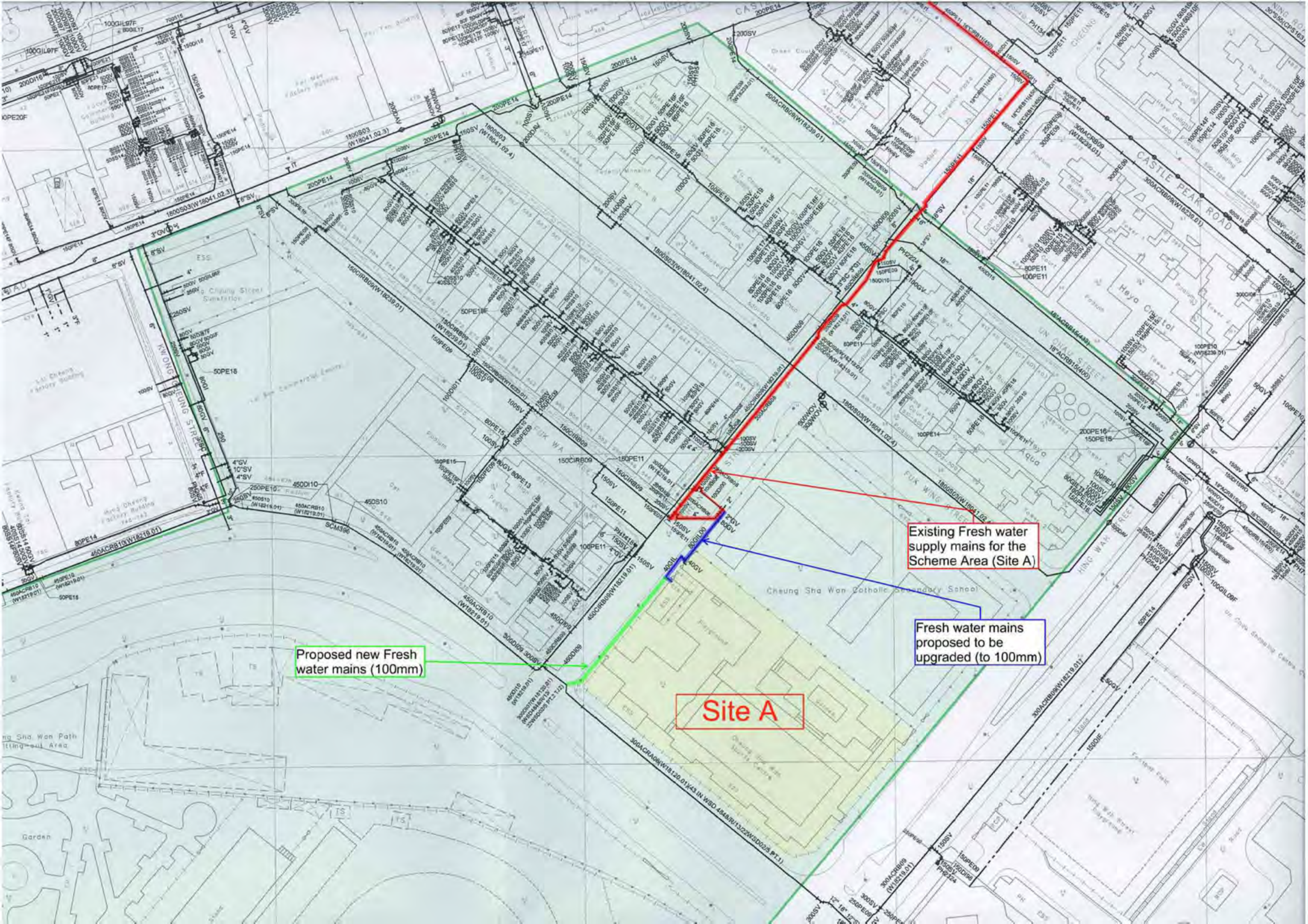
CINOTECH consultants limited

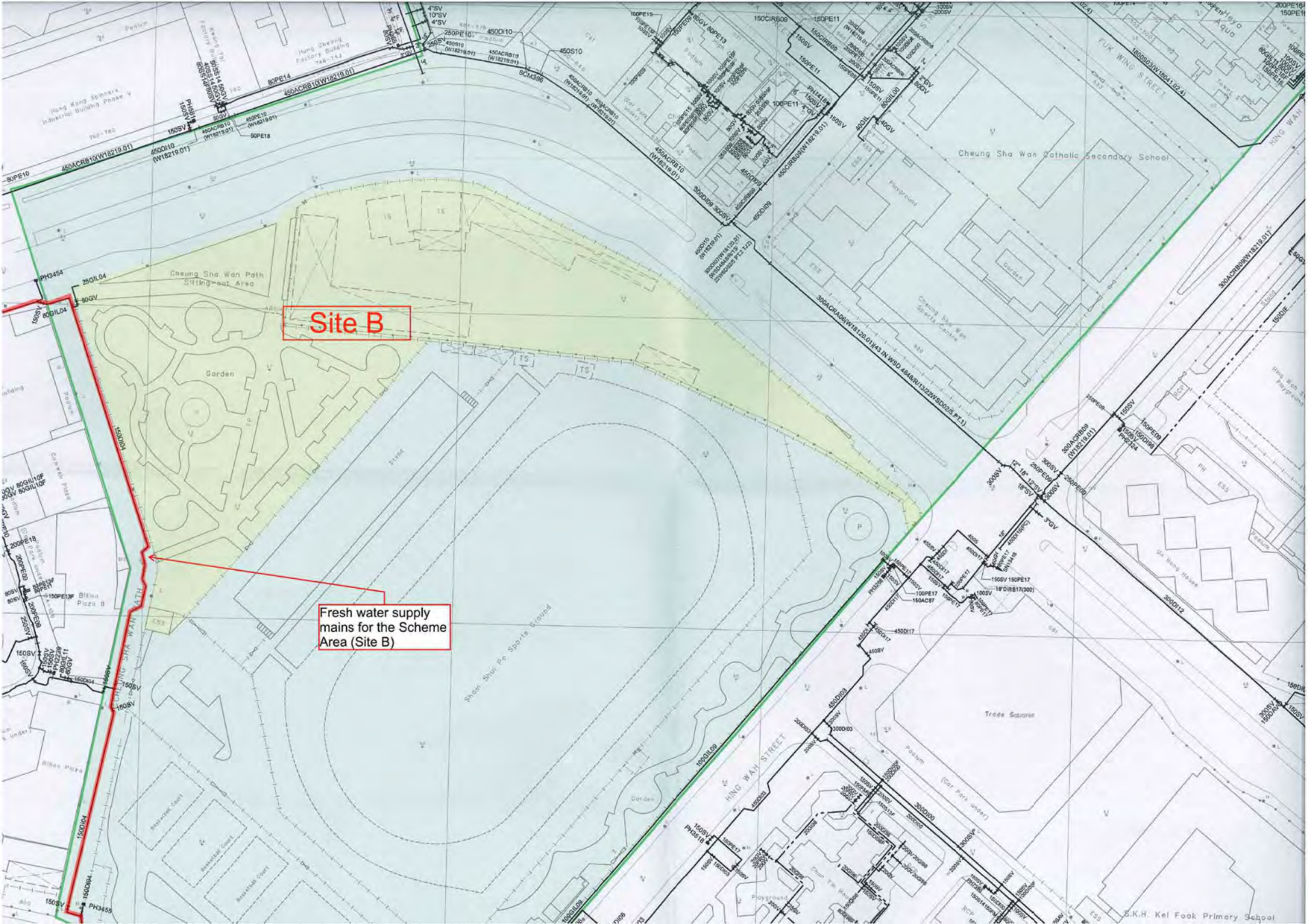
Urban Renewal Authority Development Scheme Cheung Wah Street/ Cheung Sha Wan (SSP-018)

Notional Section Plan of the Proposed Scheme

SCALE	N.T.S.	DATE	Jun-21	
CHECK	KC	DRAWN	CC	
JOB NO.	IA9021-SSPAA1	FIGURE NO.	APP I	REV. -

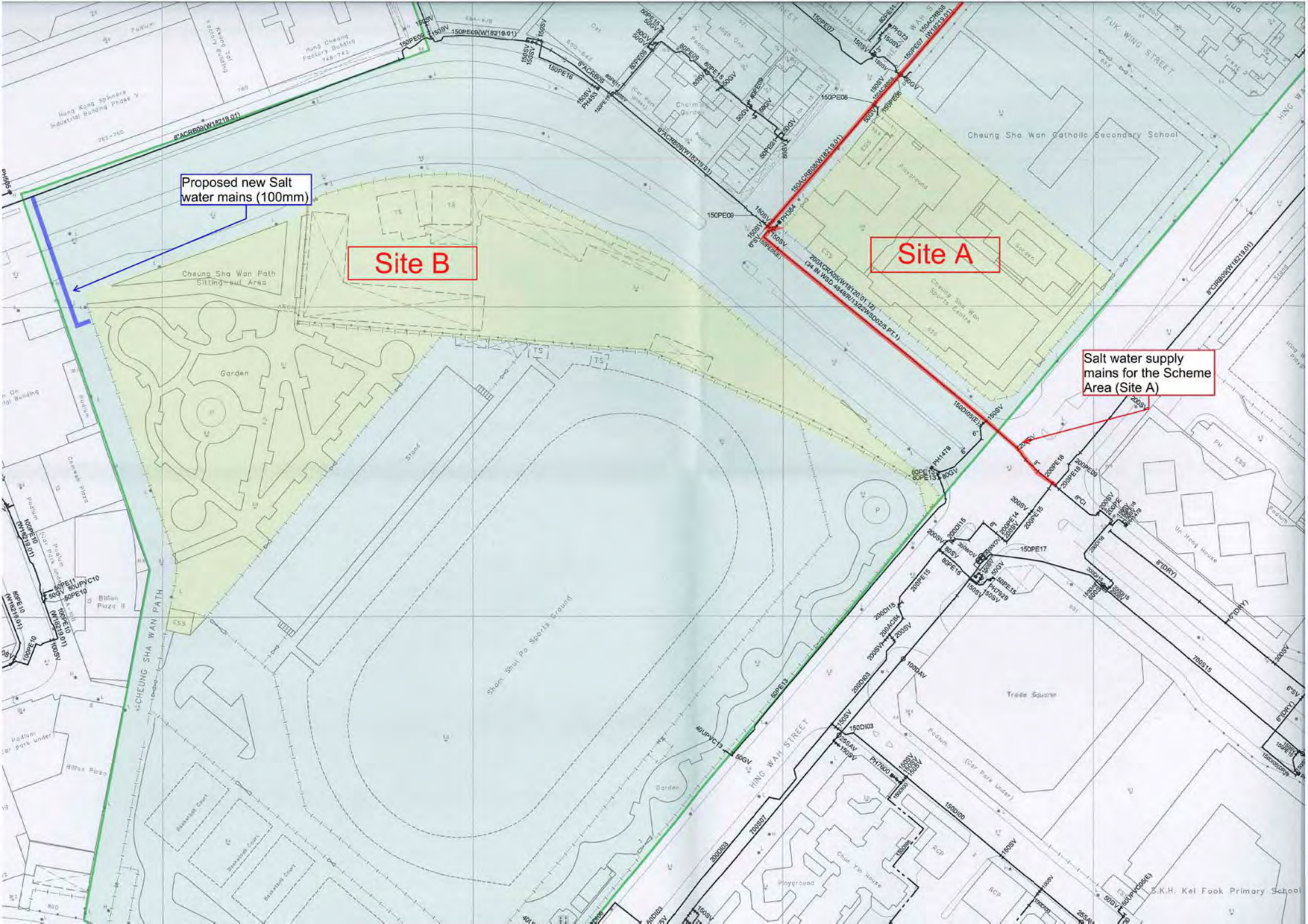
Appendix II
Fresh Water Mains Record Plan


Existing Fresh water supply mains for the Scheme Area (Site A)
Fresh water mains proposed to be upgraded (to 100mm)
Proposed new Fresh water mains (100mm)
Site A
CASTLE PEAK ROAD
UN CHAU STREET
FUK WING STREET
FUK WA STREET
KWONG CHEUNG STREET
HING WAH STREET
Cheung Sha Wan Catholic Secondary School


Site B
Fresh water supply mains for the Scheme Area (Site B)
Cheung Sha Wan Path Sitting-out Area
Garden
Sham Shui Po Sports Ground
Cheung Sha Wan Catholic Secondary School
Cheung Sha Wan Sports Centre
FUK WING STREET
HING WAH STREET
CHEUNG SHA WAN PATH
Trade Square
S.K.H. Kei Fook Primary School
Hong Kong Spinners Industrial Building Phase V
Hang Cheong Factory Building
Bilion Plaza
Stand
Playground
Basketball Court
TS
ESS

Appendix III

Salt Water Mains Record Plan



Site A
Site B
Salt water supply mains for the Scheme Area (Site A)
Proposed new Salt water mains (100mm)
Cheung Sha Wan Catholic Secondary School
Cheung Sha Wan Sports Centre
Cheung Sha Wan Path Sitting-out Area
Garden
Sham Shui Po Sports Ground
Stand
Trade Square
Un Hong House
Chun Yin House
S.K.H. Kei Fook Primary School
FUK WING STREET
HING WAH STREET
CHEUNG SHA WAN PATH
Hong Kong Spinners Industrial Building Phase V
Kwong Tai Factory Building
Hung Cheong Factory Building
Charming Garden
High One
Billion Plaza
Billion Plaza II
Camwah Plaza

Appendix IV
Detailed Water Demand Calculation

Existing Water Demands

Floor Area (Site A - Cheung Sha Wan Sports Centre)

	UFA (m^2) [1]		UFA (ha)	
Cheung Sha Wan Sports Centr	6565	m^2	6.565	ha

Note [1] - Estimated value.

Site B - Cheung Sha Wan Sports Centre

	UFA (m^2)	UFA (ha)
None [1]	--	--

Note [1] - There is currently no facility with significant water demand in Site B

Water Demands

Refer to **WSD Departmental Instruction 1309**

Site A - Commercial & G/IC

	Category	UFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m3/ha/day)	Daily Demand Fresh Water (m^3/d)	Daily Demand Salt Water (m^3/d)
Government, Institution/Community	G/IC	6.6	0.2	0.070	1.31	0.46

Total

	Daily Demand Fresh Water (m^3/d)	Daily Demand Salt Water (m^3/d)
Site A	1.31	0.46
Site B	--	--
Total	**1.31**	**0.46**

Predicted Water Demands

Populations (Site A - Resiidential)

	Units [1]	PPF [2]	Popn.	
Residential Accommodation (R2 & Service Trade)	838	2.6	**2,179**	**Persons**
Management/Club House Staff (Service Trade)			**20**	**Persons**

Note [1] - The development profile is provided by URA based on the latest Scheme.

Note [2] - The average domestic household size is 2.4 persons for Lai Chi Kok North District Council Constituency Area according to Population By-census 2016.

Floor Area (Site A - Commercial & G/IC)

	UFA (m^2) [1]		UFA (ha)	
Commercial (C/R)	5,197	**m^2**	5.197	**ha**
Government, Institution/Community (G/IC)	5,197	**m^2**	5.197	**ha**

Note [1] - The development profile is provided by URA based on the latest Scheme.

Floor Area (Site B - G/IC)

	UFA (m^2) [1]		UFA (ha)	
Government, Institution/Community (G/IC)	33,696	**m^2**	33.696	**ha**

Note [1] - The development profile is provided by URA based on the latest Scheme.

Water Demands

Refer to WSD Departmental Instruction 1309

Site A - Residiential

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/d)	Daily Demand Salt Water (m^3/d)
Residential Accommodation	R2	2,179	0.300	0.070	653.64	152.52
Residential Accommodation	Service Trade	2,179	0.035	0.000	76.26	0.00
Management and Club House Staff	Service Trade	20	0.035	0.070	0.70	1.40

Site A - Commercial & G/IC

	Category	UFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m3/ha/day)	Daily Demand Fresh Water (m^3/d)	Daily Demand Salt Water (m^3/d)
Commercial	C/R	5.2	2	0.700	10.39	3.64
Government, Institution/Community	G/IC	5.2	0.2	0.070	1.04	0.36

Site B - G/IC

	Category	UFA (ha)	Unit Demand Fresh Water (m3/ha/day)	Unit Demand Salt Water (m3/ha/day)	Daily Demand Fresh Water (m^3/d)	Daily Demand Salt Water (m^3/d)
Government, Institution/Community	G/IC	33.7	0.2	0.070	6.74	2.36

Total

	Daily Demand Fresh Water (m^3/d)	Daily Demand Salt Water (m^3/d)
Site A	742.03	157.92
Site B	6.74	2.36
Total	**748.77**	**160.28**

Summary of Water Demands

Scenario	Daily Demand - Fresh Water (m^3/d)	Daily Demand - Salt Water (m^3/d)
Existing (Site A only)	**1.31**	**0.46**
Future (Site A)	742.03	157.92
Future (Site B)	6.74	2.36
Future (Total)	**748.77**	**160.28**
Increase	**747.46**	**159.82**
	0.747 (MLD)	**0.160 (MLD)**

Fresh Water Reservoir Capacity

Reservoir	Capacity (x 1,000 m^3)	Supply Capacity @ Capacity Factor = 0.8 (MLD)	Existing Daily Consumption (MLD)	Spare Capacity (MLD)	Remarks
Shek Kip Mei No.2 FWSR	40.000	50.000	83	**27**	>> 0.747 MLD Additional Demand from Development
Shek Kip Mei No.3 FWSR	48.188	60.235			

Salt Water Pumping Capacity

Pumping Station	Design Pumping Capacity (MLD)	Existing Daily Consumption (MLD)	Spare Capacity (MLD)	Remarks
Cheung Sha Wan SWPS	96	72	**24**	>> 0.160 mLD Additional Demand from Development

Appendix 10

Tentative Implementation Programme

SSP-018 URA Cheung Wah Street / Cheung Sha Wan Road Development Scheme

Tentative Implementation Programme