Urban Renewal Authority Development Scheme

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

Sai Yee Street / Flower Market Road

Development Scheme

YTM-013

市區重建局
URBAN RENEWAL AUTHORITY

Planning Report

March 2024

Book 2 of 2

Appendix 6

Air Ventilation Assessment

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Air Ventilation Assessment (v2.1)

March 2024

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 Project Background

1.1.1 The Urban Renewal Authority ("URA") has proposed Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance ("URAO"). The Scheme is the first implementation of a project proposed under the Master Urban Renewal Concept Plan ("MRCP") as devised from the URA's District Study for Yau Ma Tei and Mong Kok ("YMDS"), and is part of the proposed "Mong Kok East – Nullah Road Urban Waterway Development Node" ("Nullah Road DN").

1.1.2 Cinotech Consultants Limited is commissioned by the URA to conduct an Air Ventilation Assessment to support the submission of a draft Development Scheme Plan ("DSP") of the Scheme with its planning proposal to the Town Planning Board ("TPB") for consideration.

1.2 The Scheme

Location

1.2.1 The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m^2, the Scheme is divided into Site A (about 4,445sq.m.) and Site B (about 24,870m^2). The location of the Scheme is shown on **Figure 1-1**.

1.2.2 Site A of the Scheme comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

1.2.3 Site B of the Scheme is currently occupied by various leisure, recreation and GIC facilities, including Boundary Street Recreation Ground, Sai Yee Street Children's Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department ("LCSD") Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath.

Zoning

1.2.4 On the approved Mong Kok Outline Zoning Plan ("OZP") no. S/K3/36, Site A1 of the Scheme area is zoned "Residential (Group A)" ("R(A)"). Sites A2 to A5 are zoned "Other Specified Uses" annotated "Mixed Use" ("OU(MU)"). Sites A1 to A5 also covers pavement area shown as "Road". Site B covers area zoned "Government, Institution or Community" ("G/IC") and "Open Space" ("O"), and the Flower Market Path which is shown as "Road". Th existing OZP of the Sites are illustrated in **Figure 1-2**.

1.2.5 Under the draft DSP, the Scheme is proposed to be rezoned to "OU(MU)" and areas shown as "Road" for the surrounding pavement. The planning intention of the "OU(MU)" zone is primarily for comprehensive residential/ mixed-use developments with the provision of public vehicle park, at-grade Waterway Park and GIC facilities.

Proposed Development and Notional Design

1.2.6 Site A ("OU(MU)1") consists of Sub-areas Sites A1 to A5. Site A1 will be developed for residential development cum commercial podium, with a building height restriction ("BHR") of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5. Site B ("OU(MU)2") is divided into Sub-areas (1) and (2). Sub-area 1 of "OU(MU)2" zone will be for high-rise development with a BHR of 150mPD adopting a stepped height profile. Sub-area (2) of "OU(MU)2" zone comprises the Waterway Park and ancillary retail/commercial uses and LCSD's sports/ GIC facilities with a BHR of 30mPD.

1.2.7 A notional design, which is illustrated in **Figure 1-5a**, is prepared based on the development parameters allowed in the draft DSP to demonstrate the proposed planning intention and development concepts of the Scheme. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2 to A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.

1.2.8 Under the current notional design, at Sub-area (2) of Site B (i.e. north-east corner of Site B), a comprehensive mixed-use development with high-rise residential and hotel/office towers with recreation and GIC facilities at the podia is proposed. Ancillary parking and public vehicle park are proposed at the basement levels at Site B. An at-grade open space, named as "Waterway Park", is proposed within Site B. Ancillary retail facilities are proposed at ground level, basement and the Waterway Park to bring retail activities and vibrancy.

1.2.9 To enhance walkability and connectivity, four pedestrian connections are proposed:

- Footbridge to connect between Site B and Tai Hang Tung Recreation Ground;
- Subway to connect between Site A1 and Site B;
- Potential subway connection from Site A1 across Prince Edward Road West towards the Prince Edward MTR Station and/or the commercial spine along Nathan Road; and
- Subway to connect between proposed underground PVP at Site B and southern part of proposed Waterway Park.

1.2.10 All these pedestrian footbridges/ subways shall be subject to technical feasibility, detailed design and agreement with relevant Government departments. For footbridge/ subways outside DSP boundaries shall be under separate public works/ revitalization initiatives not forming part of the Scheme.

Table 1-1 Design Parameters of the Notional Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m^2	About 268m^2	About 123m^2	About 233m^2	About 251m^2
	About 4,445m^2				
Net Site Area (subject to survey)	About 2,640m^2	About 239m^2	About 109m^2	About 202m^2	About 198m^2
	About 3,388m^2				
Zoning	OU(MU)1				
At-grade Open Space	About 800m^2				
Domestic GFA [1]	23,716m^2	-	-	-	-
Non-Domestic GFA [1]	6,576m^2	-	-	100m^2	100m^2
No. of building blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m^2	-	-	-	-
At-grade Open Space	About 800m^2				

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 1-2 Design Parameters of the Notional Design (Site B)

Site B			
Gross Site Area	About 24,870m^2		
Zoning	OU(MU)2		
	Sub-area (1)	**Sub-area (2)**	**Total**
Net Site Area (subject to survey)	7,170m^2	17,700m^2	24,870m^2
Domestic GFA [1]	44,030m^2	-	44,030m^2
Non-Domestic GFA [1] - Retail - Hotel/Office	20,500m^2 (2,150m^2) (18,350m^2)	8,850m^2 (8,850m^2) -	29,350m^2 (11,000m^2) (18,350m^2)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m^2		
No. of building blocks [2]	2 residential towers and 1 hotel/office tower on top of a GIC/recreation podium + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (hotel/office tower) 1 storey (retail block)		
No. of Flats [2]	880	-	880
Average Flat Size [2]	50m^2	-	50m^2
At-grade Open Space	About 8,800m^2		
Public Vehicle Park [4]	About 235		

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
[3] The actual GIC GFA is not yet confirmed and subject to liaison with Government departments. As a conservative approach, 30,000m^2 GIC GFA is assumed in this assessment.
[4] Subject to liaison with Transport Department.

1.3 The Surrounding Environment

1.3.1 The Sites of the Scheme is located in a development area (Mong Kok East), with a mix of old tenement buildings, newer high-rise buildings. In the north, north-east and east of the Site B, there are large open areas (Tai Hang Tung Recreation Ground, Fa Hui Park, and Mong Kok Stadium). Site B currently consists of a lot of open areas that allow wind penetration from many directions. In particular, the existing Flower Market Path within Site B serves as an important air pathway, running in a NE-SW direction. Another air pathway in the E-W direction exists through the gaps between the stands of the Mong Kok Stadium leading to Playing Field Road. During S or N winds, air can penetrate Site B through Yuen Ngai Street and Tai Hang Tung Road/Tai Hang Tung Recreation Ground. The Major Prevailing Winds of the Scheme area are illustrated in **Figure 1-3** (Please refer to **Section 2.3** for details). The major at-grade air pathways within the Sites under the existing configuration are illustrated in **Figure 1-4**.

1.3.2 Making use of the natural wind to and from the open areas is a key consideration for providing good ventilation at pedestrian level.

1.4 Design Consideration

1.4.1 As Site B currently comprises mainly open areas and low-rise buildings, the design of the proposed development within Site B will be the focus of consideration of air ventilation. As mentioned previously, the existing Flower Market Path within Site B is serving as an important at-grade NE-SW air pathway. Besides, due to the large scale of Site B, the design shall consider to facilitate air pathways in south-north direction and east-west direction respectively.

1.4.2 It should also be noted that the wind availability of the Site B under ESE & SE wind directions shall be poor due to the non-aligned air pathways and the surrounding buildings. Thus locate the tower(s) on the south-east edge of the podium to enhance ground level ventilation by downwash wind is recommended.

1.5 The Proposed Scheme

1.5.1 Under the current notional design, the Proposed Scheme consists of two 150mPD residential towers on podium structure on Site A1; open space at Sites A2 & A3; one-storey retail blocks occupying around half of the lots at Sites A4 & A5; two 150mPD residential towers and 130mPD hotel/office tower on podia and one-storey retail block at Site B. The notional layout of the Proposed Scheme is illustrated in **Figure 1-5a**.

1.5.2 A few good design features have been incorporated into the design to preserve the existing at-grade air pathway within the Sites.

a) The podium of Site A1 is setback at its southeast corner to maintain the important air pathway running in a NE-SW direction.

b) Sites A2 & A3 will be open space thus no adverse air ventilation impact to the existing N/S air pathway along Yuen Ngai Street is anticipated.

c) Sites A4 & A5 will be one-storey retail blocks occupying around half of the land lots, which is much lower in height and smaller in area than the existing multi-storeys building blocks thus no adverse air ventilation impact is anticipated.

d) For Site B, a Waterway Park of about 20m in width is proposed along the existing Flower Market Path to preserve the existing air pathway. In addition, a 15m building separation between the residential tower(s) and the hotel/office tower will be maintained as according to SBD Guidelines to allow penetration of wind flow.

e) The podium of Site B will be divided into two podia at the eastern portion and a decked walkway will be provided on the western portion to allow better wind flow at-grade.

1.5.3 In addition, to facilitate the downwash wind under ESE & SE wind directions, a tower is proposed to be deposited at the south-east edge of the podium (western portion) of Site B. Together with the aforementioned guided at-grade air pathways, the formation of low air flow re-circulation zone (i.e.: wake) within Site B shall be reduced and the ventilation performance of the Propose Scheme shall not be compromised.

1.5.4 The proposed measures within the Sites are illustrated in **Figure 1-5b**.

1.6 The Baseline Scheme

1.6.1 To compare the ventilation performance of the Proposed Scheme, a Baseline Scheme fulfilling the OZP has been prepared based on a common market practice. The layout plan of the Baseline Design is presented **Figure 1-6**.

1.6.2 In the Baseline Scheme:

- The existing configuration of Site B have been adopted as GIC and Open Space uses under prevailing OZP.
- The existing building at Site A3 is adopted in view that the site is too small (only about 123m^2) to be redeveloped as permitted under the OZP due to site constraints.
- For Site A1, a residential tower of 115mPD with a 20mPD podium has been adopted as permitted under the prevailing OZP.
- For each of Sites A2, A4 and A5, residential towers of 110mPD atop 15m podia have been adopted as permitted under the prevailing OZP.

1.6.3 A summary of the Baseline and Proposed Schemes are listed in **Table 1-3** and illustrated in **Figures 1-7 & 1-8**.

Table 1-3 Summary of the Baseline Scheme and Proposed Scheme

	Baseline Scheme	Proposed Scheme	Air Ventilation Consideration in the Proposed Scheme
Site A1	**Composite Development** • Residential Tower atop podium: 115mPD (Podium: 20mPD)	**Composite Development** • Residential Tower atop podium: 150mPD (Podium: 21mPD)	Setback at southeast corner has been provided to the podium in order to maintain the NE-SW air pathway.
Site A2	**Residential Development** • Residential Tower atop podium: 110mPD (Podium: 15mAG)	**Open Space**	Open Space have been provided thus no adverse air ventilation impact is anticipated.
Site A3	**Existing Development** • ~21mPD	**Open Space**	
Site A4	**Residential Development** • Residential Tower atop podium: 110mPD (Podium: 15mAG)	**Single Story Retail block** • 13mPD	The proposed single storey development is much smaller than that of the Baseline Scheme and the existing development. Therefore, no adverse air ventilation impact is anticipated.
Site A5	**Residential Development** • Residential Tower atop podium: 110mPD (Podium: 15mAG)	**Single Story Retail block** • 13mPD	
Site B	**Existing Developments** • Sparse low-rise developments of up to ~17mPD	**Composite Development** • Residential Towers atop podium: 150mPD ○ Podium (west): 21.4mPD ○ Podium (east): 42.4mPD **Hotel/Office Development** • Tower atop podium: 130mPD ○ Podium: 29.4mPD	Compare to the existing configuration, development of Site B will inevitably obstruct the at-grade wind flow across the Site to some extent. In order to minimise the potential impact, the existing at-grade NE-SW air pathway along the existing Flower Market Path will be preserved; the other at-grade air pathways will be provided by the podium disposition and opening at ground floor. Additionally, a 15m building separation between the residential tower(s) and the hotel/office tower will be maintained. A tower is proposed to be deposited at the south-east edge of the podium (western portion) of Site B to facilitate the downwash wind under ESE & SE wind directions.

Remarks:
* Proposed Scheme is subject to changes at detailed design stage.

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 be worsen, if not better, than the Baseline Scheme, which has adopted the development controls and permitted uses as provided in the approved Mong Kok OZP no. S/K3/36, by quantitatively comparing the Baseline Scheme and Proposed Scheme. 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 Proposed 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 a feasible design under the current OZP and the notional design under the proposed planning parameters of the Scheme.

2 SITE WIND AVAILABILITY

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. There are two HKO weather stations within 3km from the Site, including:

- Kowloon City Automatic Weather Station, ~1.6km away from the Site
- King's Park Automatic Weather Station, ~1.3km away from the Site.

2.2.3 Since the measurement locations are normally within 3-10m above ground level, the measured wind directions are likely affected by the nearby high-rise developments. With the large horizontal distance, the measured wind direction distribution at the Automatic Weather Stations may not represent the site wind condition. Therefore, the data from aforementioned weather stations should only be adopted when no other alternatives are preferred.

2.2.4 Besides, 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 could be adopted in AVA study when no more suitable data is available.

2.2.5 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 Study for Mong Kok, Hong Kong - Investigation Report WWTF007-2007*". The site of this development is near the boundary of its study area. The wind data from WWTF007-2007 is suitable for this study.

2.2.6 Experimental data is reliable source of information; however, experiments were not perfect and there are drawbacks of using data from WWTF007-2007. Due to the nature of wind tunnel experience, normalised mean wind profiles are provided (Appendix A in WWTF007-2007), while the actual corresponding scaled wind speeds are not provided. Adopting this normalised mean wind speed require multiplying the normalised mean wind speed by certain

1 https://www.pland.gov.hk/pland_en/resources/info_serv/site_wind/index.html
2 https://www.pland.gov.hk/pland_en/info_serv/site_wind/site_wind/index.html

scale factors. As the turbulence response is known to be non-linear[3], despite the response of the flow is like linear for high Reynolds Number flow, a Reynolds Number independent flow is unlikely achieved for the wind tunnel experiments of flow over urban roughness[4] thus potential error will be arisen from the selection of the scale factor.

2.2.7 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.

2.2.8 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.

2.2.9 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[5] in Planning Department website. The AVA study (AVG/G/136) is centred at the site near the junction of Tonkin Street and Lai Chi Kok Road, which is around 1.7km in the north-west from the Scheme area. In that study, wind roses at 500m and vertical wind profile from grid [76,46] in RAMS had been adopted.

2.2.10 The Scheme and assessment area is mostly fall within grid [80,44]. 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 [80,44] from RAMS is best suited for this AVA study. The Major Prevailing Winds of the Scheme area are illustrated in **Figure 1-3**.

2.3 Adopted Wind Conditions

2.3.1 The wind roses and the vertical wind profiles of grid [80,44] from RAMS[6] has been adopted in order to provide a realistic flow condition.

2.3.2 The wind direction at 500m elevation has been adopted in the analysis of general wind condition of the site, while the vertical wind profiles has been adopted as the inlet boundary conditions of the numerical analysis.

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3 M Kadivar, D Tormey, G McGranaghan, A review on turbulent flow over rough surfaces: Fundamentals and theories, International Journal of Thermofluids, Volume 10, 2021, 100077, ISSN 2666-2027, https://doi.org/10.1016/j.ijft.2021.100077. (https://www.sciencedirect.com/science/article/pii/S266620272100015X)

4 Y Lin, J Hang, H Yang, *et al.*, Investigation of the Reynolds number independence of cavity flow in 2D street canyons by wind tunnel experiments and numerical simulations, Building and Environment, Volume 201, 2021, 107965, ISSN 0360-1323, https://doi.org/10.1016/j.buildenv.2021.107965. (https://www.sciencedirect.com/science/article/pii/S0360132321003693)

5 https://www.pland.gov.hk/pland_en/resources/info_serv/ava_register/government.html

6 https://www.pland.gov.hk/pland_en/info_serv/site_wind/site_wind/080044.html

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 [80,44] and the wind profile from RAMS are illustrated in **Figure 2-1a & Figure 2-1b**. The top 80% of wind directions, which shall be assessed by CFD models, are presented in **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 directions, 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 ~61% of the time, the wind comes from NE, ENE, E, ESE, or SE (45-135 deg). Around 17% of the wind comes from S, SSW, or SW (180-225deg). The occurrence chances for the rest of wind directions are all at or below 6% each.

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 35% of the wind comes from E, ESE, SE, or SSE (90-157.5 deg). The occurrence chance for the rest of wind directions is all below 6% each.

2.3.7 Generally, the major wind directions of concern are the NE to SE for the whole year and S to SW 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 at 500m Elevation (Annual)

Wind Direction	Wind Direction (degree)	Occurrence Probability at 500m elevation
E	90	21.9%
ENE	67.5	12.5%
ESE	112.5	11.9%
NE	45	8.6%
SW	225	6.5%
NNE	22.5	6.0%
SSW	202.5	5.9%
SE	135	5.7%
S	180	4.5%
Sum		**83.5%**

Table 2-2 Occurrence Probability for Each Wind Directions at 500m Elevation (Summer)

Wind Direction	Wind Direction (degree)	Occurrence Probability at 500m elevation
SW	225	15.8%
SSW	202.5	12.7%
ESE	112.5	10.1%
WSW	247.5	9.6%
S	180	9.5%
E	90	9.0%
SE	135	7.9%
SSE	157.5	7.5%
Sum		**82.1%**

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	3.4	1.9	2.0	2.1
50	3.7	1.9	2.1	2.2
100	3.9	2.0	2.2	2.3
150	4.1	2.2	2.3	2.6
200	4.6	2.6	2.6	3.4
250	5.1	3.0	2.9	4.1
300	5.6	3.5	3.2	4.5
350	6.1	3.9	3.4	4.8
400	6.6	4.3	3.6	5.0
450	7.0	4.7	3.9	5.1
500 and above	7.2	5.1	4.0	5.0

3 ASSESSMENT METHODOLOGY

3.1 Assessment Tool

3.1.1 The microclimate around the Site for the two Schemes has 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 Surrounding 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.

3.2.2 The height of the proposed development at Sites A1 & B is 150mPD. With ground elevation of around 6mPD, the building height is 144m (150 - 6 = 144m). Sites A2 - A5 are planned to be either open area or single storey non-residential developments. In the Baseline Scheme, Sites A2, A4 & A5 are residential towers of 110mPD and Site A3 is a ~15m residential building. Therefore, the adopted H, which is the highest building within the Sites, shall be 144m.

3.2.3 It should be noted that there is a large flat open area to the north of Site B (Tai Hang Tung Recreation Ground). With surrounding area of 2H from site boundary, the wind from north can reach the Site B without any obstacle, leading to potential unrealistic result. As a result, the surrounding area has been extended to 3H from site boundary in order to include the southern portion of the Tai Hang Tung Estate in the assessment. Therefore, the adopted Assessment Area and the Surrounding Area are 144m & 432m from the Site boundaries.

3.2.4 The building heights of the Baseline and Proposed Scheme are listed in **Table 3-1**; the Assessment Area and Surrounding Area are illustrated in **Figure 3-1**.

Table 3-1 Building Height of Each Site of the Scheme

	Building Height Baseline		Building Height Proposed	
	(mPD)	(mAG)	(mPD)	(mAG)
A1	115	111	150	**144**
A2	110	104	N/A	N/A
A3	21	15	N/A	N/A
A4	110	103	13	6
A5	110	103	13	6
B	17	11	150	**144**

Note: The highest building height (in mAG) has been **Bold underlined**.

3.2.5 There is a planned commercial development[7] identified near the junction of Argyle Street and Sai Yee Street that fall within the surrounding area. According to the OZP, the site of the planned development is zoned as "Commercial (4)" with building height restriction of

[7] Planning and Design Study on the Redevelopment of Government Sites at Sai Yee Street and Mong Kok East Station – Feasibility Study - https://www.pland.gov.hk/pland_en/info_serv/ava_register/ProjInfo/AVRG126_AVA_ISReport.pdf

320mPD for tower(s), 40mPD for podium(s) and 23mPD for the building gap. For the purpose of assessment in this study, it is assumed that there will be a rectangular podium with a height of 40mPD (with a 23mPD building gap) and a single large residential tower with a height of 320mPD, as illustrated in **Figure 3-11**.

3.3 Test Points

3.3.1 A total of 115 perimeter test points (Site A1: P001-P022; Site A2: P023-P028; Site A3: P029-P033; Site A4: P034-P037; Site A5: P038-P043; Site B: P044-P115) have been used to examine the air ventilation around the Site. The perimeter test points are evenly spread, with around 10m separation, along the boundary of the Sites. As the Sites A2 – A5 are adjoining the neighbourhood building(s), test points are given to the boundaries with available space only. The locations of the perimeter test points are illustrated in **Figure 3-2**.

3.3.2 A total of 309 overall test points (Road Surface: O001-O181; Open Area: O182-O309) have been used to examine the air ventilation of the local area with public assess. Overall test points are evenly spread on road surface within the Assessment Area with around 25m separation. For some very wide road, two row of test points have been provided. For open area other than road surface, test points with similar density have been provided. As some areas are narrow, the distance between test points have been reduced (e.g., O286 – O302). The locations of the overall test points are illustrated in **Figure 3-3**.

3.3.3 In order to assess the ventilation performance at the open areas of the Scheme area, 70 special test points (D001-D070) have been designated. These test points are located within Site A1 and Site B of the Scheme. For Site B, a total of 55 test points (D001-D055) have been placed in the open space, including decked open space, which is available in both the Baseline Scheme and the Proposed Scheme. Additionally, 5 test points (D056-D060) have been specifically allocated for the decked walkway, which is only present in the Proposed Scheme. For Site A1, 10 test points (D061-D070) have been positioned in the open spaces at the ground level of the Proposed Scheme. As the at-grade open space is not available in the Baseline Scheme, these test points have been raised to the podium level. The test points within Site A1 and Site B have been evenly distributed, with approximately 8-10 meters and 15 meters of separation, respectively. The locations of the special test points within the proposed development of the Scheme are illustrated in **Figure 3-4**.

3.3.4 The ventilation performance between the Baseline Scheme and Proposed Scheme in the neighbourhood, including the effectiveness of the design considerations stated in **Section 1.4** has been quantified using the predicted wind speed at the perimeter test points and overall test points.

3.3.5 In order to examine the localised ventilation, the spatial averaged VRs are broken into individual focus zones for road sections and open areas for demonstrating the localised ventilation performance. The focus areas are illustrated in **Figures 3-5a & 3-5b** and listed in **Table 3-2**.

3.3.6 The vertical locations of all test points are 2m above ground or slab.

Table 3-2 List of Focus Areas

Road Section	
R1	Boundary Street (O001 – O028)
R2	Prince Edward Road West (O029 – O076)
R3	Tai Hang Tung Road (O077 – O086)
R4	Tat Chee Avenue (O087 – O091)
R5	Embankment Road (O092 – O097)
R6	Sai Yee Street (From Boundary Street to Prince Edward Road West) (O098 – O107)
R7	Flower Market Road and Yuen Po Street (O108 – O122)
R8	Yuen Ngai Street (O123 – O125)
R9	Sai Yee Street (From Prince Edward Road West to the South) (O126 – O130)
R10	Fa Yuen Street (O131 – O145)
R11	Tung Choi Street (From Boundary Street to Prince Edward Road West) (O146 – O155)
R12	Playing Field Road (O156 – O163)
R13	Sai Yeung Choi Street North (O164 – O165)
R14	Sai Yeung Choi Street South (O166 – O168)
R15	Tung Choi Street (From Prince Edward Road West to the South) (O169 – O173)
R16	Nullah Road (O174 – O181)
Open Area	
A1	Yau Yat Chuen School (O182 – O183)
A2	Fa Hui Park (Flat Area: O184 – O189 ; Slope Area: O303 – O309)
A3	Chan's Creative School (O190 – O193)
A4	Tai Hang Tung Recreation Ground & Tai Hang Tung Sitting-Out Area (O167 – O225)
A5	Police Sports and Recreation Club (O226 – O241)
A6	Mong Kok Stadium (O242 – O271)
A7	Queen Elizabeth School (O272 – O277)
A8	Prince Edward Road/Nullah Road Garden (O278 – O281)
A9	The Church of Christ in China Heep Woh Primary School (O282 – O285)
A10	Yuen Po Street Bird Garden (O286 – O293)
A11	Diocesan Boys' School (O294 – O302)
Open Area within the Site	
Z1	Site B – Open Space (D001 – D044)
Z2	Site B – Decked Open Area (D045 – D055)
Z3	Site B – Decked Walkway (D056 – D060) (Proposed Scheme only)
Z4	Site A1 – Open Area (D061 – D070) (Baseline Scheme: on podium; Proposed Scheme: at-grade)

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).

Wind Direction-Weighted Average VR at Individual Test Point

3.4.2 In the assessment, the wind direction-weighted averaged VR at each individual test point has been calculated using the following equation:

$$Average\ VR_i = \frac{\sum_{all\ adopted\ wind\ direction} VR_{i,w} \times P_w}{\sum_{all\ adopted\ wind\ direction} P_w}$$

where

Average VRi	is the wind direction-weighted averaged VR at individual test point
$VR_{(i,w)}$	is the VR at test point ***i*** and wind direction ***w***.
P_w	is the occurrence probability of wind direction ***w***.

3.4.3 Please note that the adopted wind direction and their corresponding occurrence probabilities are different for the annual and summer conditions. In each scenario, there are two average VR values at each test point, one for the annual condition and another for the summer condition

Spatial Averaged VR

3.4.4 According to the Technical Circular, Site spatial average Velocity Ratio (SVR) and the Local spatial average velocity ratio (LVR) shall be used for quantifying the air ventilation performance of the Assessment Area. The SVR is calculated by taking the average of the VRs for the perimeter test points. On the other hand, the LVR is determined by averaging the VR for both the perimeter test points and the overall test points.

3.4.5 Spatial averaged VRs for the focus areas are used to quantify the effect of the Project to air ventilation of individual regions within the Assessment Area. The spatial averaged VRs for the focus areas are calculated by averaging the VRs of all the test points within each respective focus area.

3.4.6 In the assessment, the spatial average VRs have been calculated using the following equations:

$$SVR = \frac{\sum_{all\ perimeter\ test\ points} Average\ VR_i}{Number\ of\ Perimeter\ test\ points}$$

$$LVR = \frac{\sum_{all\ perimeter\ and\ overall\ test\ points} Average\ VR_i}{Number\ of\ Perimeter\ \&\ Overall\ test\ points}$$

$$Spatial\ Averaged\ VR\ for\ Focus\ Area = \frac{\sum_{all\ test\ points\ in\ the\ focus\ area} Average\ VR_i}{Number\ of\ test\ points\ in\ the\ focus\ area}$$

where

Average VRi	Is the wind direction-weighted averaged VR at individual test point
SVR	Site spatial average Velocity Ratio
LVR	Local spatial average Velocity Ratio

3.4.7 It should be noted that the VRs and the spatial average VRs 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.

3.5 Studied Scenarios

3.5.1 Two scenarios have been considered in this study. The first scenario is the Baseline Scheme and the other is the Proposed Scheme as mentioned below. 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)[8] of Hong Kong provided by Lands Department and illustrated in **Figure 3-6a**. The buildings included in the CFD (under Baseline Scheme) are illustrated in **Figure 3-6b**.

3.5.3 The difference between the two scenarios are the buildings within the Site, which are descripted in **Sections 1.5 to 1.6** and shown in **Figures 1-7 & 1-8**. The simplified 3D model of the development adopted in both scenarios are illustrated in **Figures 3-7a & 3-7b** for Baseline Scheme and Proposed Scheme, respectively.

3.5.4 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 2800m (length) x 2800m (width) x 2000m (height) centred at 835690m (E), 820730m (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 Baseline Scheme as an example.

3.6.2 The computation domains have been discretized by triangle and tetrahedral meshes for 2D surfaces and 3D volumes, respectively. The 2D triangle meshes on the surface of buildings are mostly in the range of 0.6m – 6m. The 2D triangle meshes on the ground are mostly in the range of 0.6m – 20m. The 3D tetrahedral meshes with size of 0.6m - 100m are being 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 will be applied on the Ground and building surfaces (including flyover and foot bridge). The different in size of neighbourhood grids, also called grid expansion ratio, are less than 30% for the whole domain. Generally, smaller grids are be placed near the building surfaces and ground in order to resolve the near surface flow properly. The 2D and 3D meshes of the model are illustrated in **Figures 3-9 & 3-10** respectively.

[8] Lands Department - Digital Terrain Model (DTM) - https://data.gov.hk/en-data/dataset/hk-landsd-openmap-5m-grid-dtm

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 has been 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 has been adopted to handle the velocity-pressure coupling.

3.7.3 Convergence criterion of <1.0E-4 has been adopted to control when the iteration stops. The solution is also regarded as converged when the flows at the position of interest are constant or oscillate around a constant value.

3.7.4 A summary of the model setting can be found in **Table 3-3**.

Table 3-3 Summary of Model Settings

Software	Pre-processing	Ansys Fluent Mesh
	Processing	Ansys Fluent CFD
	Post- Processing (Contour Plot)	Ansys CFD-Post
Domain Size	2800m x 2800m x 2000m (Width x Length x Height)	
Assessment Area	1H (144m) from Site Boundary	
Surrounding Area	3H (432m) from Site Boundary	
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 [1]	< 30%	
Blockage Ratio [1]	< 3%	
Prismatic Layer [1]	6 prism layers with a total thickness of 3.0m (~0.5m each in average)	
Turbulence Model	Realisable k-ε turbulence model	
Solving Algorithms	SIMPLE algorithm for momentum and pressure coupling	
Convergence Criteria [1]	< 1.0E-4, or the flows at the position of interest are constant or oscillate around a constant value.	
Number of 3D Elements	~38 million (Baseline Scenario); ~44 million (Proposed Scenario)	

Note:
[1] According to Proceedings paper of 4th International Symposium on Computational Wind Engineering (CWE 2006) "Recommendations of the COST action C14 on the use of CFD in predicting pedestrian wind environment" by Jörg Franke, the followings item had been recommended:
- Blockage Ratio of below 3%;
- Maximum expansion ratio of 1.3;
- Prismatic cells should be used at the wall with tetrahedral cells away from the wall; &
- Residual of at least four orders of magnitude (i.e.: < 1e-4). In addition, if the flows at the position of interest are constant or oscillate around a constant value, the solution can be regarded as converged.

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 11 wind directions with two scenarios in total of 22 configurations have been conducted for this study (**Table 3-4**).

Table 3-4 List of Wind Conditions Included in the AVA Study

Wind Direction		Occurrence Probability (Annual)	Occurrence Probability (Summer)
NNE	22.5	6.0%	
NE	45	8.6%	
ENE	67.5	12.5%	
E	90	21.9%	9.0%
ESE	112.5	11.9%	10.1%
SE	135	5.7%	7.9%
SSE	157.5		7.5%
S	180	4.5%	9.5%
SSW	202.5	5.9%	12.7%
SW	225	6.5%	15.8%
WSW	247.5		9.6%
Total		**83.5%**	**82.1%**

4 ASSESSMENT RESULT

4.1 Model Results - Spatial Averaged Velocity Ratios

4.1.1 Two scenarios, namely Baseline and Proposed, have been conducted for the Baseline Scheme and Proposed Scheme, respectively. Each scenario includes 11 wind directions, as stated in **Table 3-4**, and was conducted based on the methodology mentioned in **Section 3**. **Table 4-1** presents a summary of the predicted spatially averaged Velocity Ratios (VRs) of the test points, 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). Additionally, **Table 4-2** & **Table 4-3** present the averaged VRs for each focus area for road and open area, respectively, as shown in **Figures 3-5a & 3-5b**.

Table 4-1 Summary of Spatial Averaged Velocity Ratios – Overall

ID	Location	Baseline		Proposed	
Overall		Annual	Summer	Annual	Summer
SVR	Site Air Ventilation Assessment (SVR) (All P Points)	0.09	0.06	0.13	0.09
SA1	SVR - Site A1 (P001 - P022)	0.11	0.08	0.16	0.11
SA2	SVR - Site A2 (P023 - P028)	0.06	0.03	0.08	0.04
SA3	SVR - Site A3 (P029 - P033)	0.06	0.06	0.08	0.05
SA4	SVR - Site A4 (P034 - P037)	0.10	0.05	0.08	0.06
SA5	SVR - Site A5 (P038 - P043)	0.07	0.05	0.05	0.04
SB	SVR - Site B (P044 - P115)	0.08	0.06	0.14	0.10
LVR	Local Air Ventilation Assessment (LVR) (All P & O Points)	0.10	0.07	0.13	0.10

Spatial Averaged Velocity Ratios
Increase – Cell coloured in Green
Decrease – Cell coloured in Orange

Table 4-2 Summary of Spatial Averaged Velocity Ratios – Road Sections

ID	Location	Baseline		Proposed	
Road Section		Annual	Summer	Annual	Summer
R1	Boundary Street (O001 – O028)	0.13	0.08	0.14	0.09
R2	Prince Edward Road West (O029 – O076)	0.11	0.09	0.12	0.10
R3	Tai Hang Tung Road (O077 – O086)	0.07	0.06	0.12	0.12
R4	Tat Chee Avenue (O087 – O091)	0.08	0.06	0.07	0.08
R5	Embankment Road (O092 – O097)	0.08	0.05	0.08	0.06
R6	Sai Yee Street (From Boundary Street to Prince Edward Road West) (O098 – O107)	0.10	0.08	0.15	0.10
R7	Flower Market Road and Yuen Po Street (O108 – O122)	0.07	0.05	0.10	0.07
R8	Yuen Ngai Street (O123 – O125)	0.08	0.05	0.11	0.06
R9	Sai Yee Street (From Prince Edward Road West to the South) (O126 – O130)	0.12	0.13	0.11	0.13
R10	Fa Yuen Street (O131 – O145)	0.10	0.08	0.10	0.09
R11	Tung Choi Street (From Boundary Street to Prince Edward Road West) (O146 – O155)	0.13	0.07	0.11	0.06
R12	Playing Field Road (O156 – O163)	0.10	0.06	0.14	0.09
R13	Sai Yeung Choi Street North (O164 – O165)	0.09	0.06	0.10	0.07
R14	Sai Yeung Choi Street South (O166 – O168)	0.12	0.08	0.12	0.09
R15	Tung Choi Street (From Prince Edward Road West to the South) (O169 – O173)	0.08	0.08	0.08	0.09
R16	Nullah Road (O174 – O181)	0.07	0.08	0.07	0.08

Spatial Averaged Velocity Ratios
Increase – Cell coloured in Green
Decrease – Cell coloured in Orange

Table 4-3 Summary of Spatial Averaged Velocity Ratios – Open Areas

ID	Location	Baseline		Proposed	
Open Area		Annual	Summer	Annual	Summer
A1	Yau Yat Chuen School (O182 – O183)	0.04	0.04	0.05	0.06
A2	Fa Hui Park (O184 – O189)	0.11	0.07	0.11	0.09
A3	Chan's Creative School (O190 – O193)	0.06	0.05	0.08	0.08
A4	Tai Hang Tung Recreation Ground & Tai Hang Tung Sitting-Out Area (O167 – O225)	0.09	0.08	0.15	0.12
A5	Police Sports and Recreation Club (O226 – O241)	0.14	0.10	0.15	0.09
A6	Mong Kok Stadium (O242 – O271)	0.09	0.05	0.10	0.07
A7	Queen Elizabeth School (O272 – O277)	0.04	0.03	0.03	0.03
A8	Prince Edward Road/Nullah Road Garden (O278 – O281)	0.09	0.08	0.12	0.09
A9	The Church of Christ in China Heep Woh Primary School (O282 – O285)	0.06	0.04	0.05	0.03
A10	Yuen Po Street Bird Garden (O286 – O293)	0.13	0.07	0.13	0.07
A11	Diocesan Boys' School (O294 – O302)	0.06	0.06	0.06	0.07

Open Area within the Site		Annual	Summer	Annual	Summer
Z1	Site B – Open Space (D001 – D044)	0.07	0.06	0.17	0.13
Z2	Site B – Decked Open Area (D045 – D055)	0.10	0.07	0.16	0.12
Z3	Site B – Decked Walkway (D056 – D060)	--	--	0.12	0.12
Z4	Site A1 – Open Area (D061 – D070) (Baseline Scheme: on podium; Proposed Scheme: at-grade)	0.14	0.11	0.20	0.12

Spatial Averaged Velocity Ratios
Increase – Cell coloured in Green
Decrease – Cell coloured in Orange

4.1.2 The detailed simulated Velocity Ratios (VRs) at individual test points can be found in **Appendix 4-1**, along with bar charts comparing the two scenarios. The contours and vectors of VRs at 2m above ground level are illustrated in **Figures 4-1a to 4-1k** and **Figures 4-2a to 4-2k**, respectively, for the Assessment Area and the full extent of the domain. For Podium and Roof of Surrounding Buildings, the contours and vectors of VRs at 2m above slab level are illustrated in **Figures 4-4a to 4-4k**. Additionally, the contours of the annual and summer weighted averaged VRs at 2m above ground level are illustrated in **Figures 4-3a and 4-3b**, respectively. Similarly, the contours of the annual and summer weighted averaged VRs at 2m above slab level of Podium and Roof of Surrounding Buildings are illustrated in **Figures 4-5a and 4-5b**, respectively

4.2 Overall Spatial and Wind Directions Averaged VRs

4.2.1 The SVRs and LVRs are used in this study to quantify the change in air ventilation performance of the sites and the local area. It is important to note that the SVR and LVR values used in this study are only valid for comparing different schemes within this study and are not applicable for comparing with other studies.

4.2.2 The SVRs and LVRs are better under the annual condition compared to the summer average. This is because most of the open areas in the vicinity are located to the north and north-east of the Scheme, such as Tai Hang Tung Recreation Ground and Fa Hui Park, which favour the prevailing wind direction under annual condition.

4.2.3 The overall SVRs for the Baseline Scheme and Proposed Scheme are 0.09 and 0.13, respectively, under annual wind condition. During the summer, the SVRs are 0.06 and 0.09 for the Baseline Scheme and Proposed Scheme, respectively. The Proposed Scheme shows better SVRs compared to the Baseline Scheme, with improvements of 0.04 and 0.03 for annual and summer conditions, respectively.

4.2.4 Although general improvements are found along the site boundaries, when looking into individual sites, local reductions in Velocity Ratios (VRs) can be identified. For Site A3, a slight reduction of SVR (0.01) is anticipated under summer condition. For Site A4, a slight reduction of SVR (0.02) is anticipated under annual condition. For Site A5, reductions of SVR are anticipated under both annual condition (0.02) and summer condition (0.01).

4.2.5 For Site A3 (SA3), the site is designed as an open space under the Proposed Scheme. The slight reduction of SVR could be induced by the sharp deceleration along the back alley due to the wider space, which can be found at 180 deg to 247.5 deg (**Figures 4-1h to 4-1k**).

4.2.6 For Sites A4 (SA4) and A5 (SA5), similar to Site A3, the flow is expected to decelerate due to the wider space. Moreover, the winds flows are generally forced to pass through the back alley in the Baseline Scheme resulting in higher wind speed within the back alley in general.

Under the Proposed Scheme, the air can escape from the back alley to Flower Market Road through the opening provided by Site A4 which will change the flow speed and direction along the back alley. The reduction of flow speed along the back alley near Sites A4 & A5 can be found at 67.5 deg to 112.5 deg (**Figures 4-1c to 4-1e**).

4.2.7 Although the VRs have been reduced due to the wider air pathways, the amount of airflow through the Flower Market Road and back alley shall not be reduced. The evidence is that the averaged VRs of Flower Market Road and Yuen Ngai Street (R7 and R8; **Table 4-2**) have increased in the Proposed Scheme, indicating that the overall ventilation performance near Sites A3 to A5 is not adversely affected.

4.2.8 The LVRs for the Baseline Scheme and Proposed Scheme are 0.10 and 0.13, respectively, under annual wind condition. During summer, the LVRs are 0.07 and 0.10 for the Baseline Scheme and Proposed Scheme, respectively. The LVRs of the Proposed Scheme are better than those of the Baseline Scheme, with improvements of 0.03 for both annual and summer conditions.

4.2.9 The increase in SVR and LVR under the Proposed Scheme suggests that the current notional design's incorporation of air ventilation considerations is effective in general.

4.3 Effectiveness of the Design Consideration

4.3.1 In general, bulky structures tend to block the flow of wind and generate a low wind speed flow recirculation region (wake) on the leeward side of the façade. The proposed design features listed in **Section 1.5.2** play a significant role in mitigating the potential adverse ventilation impact and further improving the air ventilation in general. The design elements that contribute to the observed flow patterns are briefly explained in the following sections.

Air Pathways Provided by Site B

4.3.2 The podia and other structures of Site B in the Proposed Scheme guide the wind along the provided air pathways, preventing the wind from freely flowing into the undesired areas, as well as reduce the generation of stagnations or wakes in general.

Waterway Park

4.3.3 When the prevailing wind is aligned with the orientation of the Waterway Park (i.e. under wind directions 45 deg & 225 deg), the prevailing wind can penetrate the core region of Site B and reach the downstream area (**Figures 4-1b & 4-1j**). When the prevailing wind is not aligned with the orientation of the Waterway Park, e.g. under wind directions 112.5 deg & 135 deg (**Figures 4-1e & 4-1f**), the adjoining building structures will guide the at-grade wind flow, including the downwash wind, to flow along the Waterway Park.

4.3.4 As the south-west exit of Waterway Park is connected to junction of major roads, the provision of the guided air pathway along the Waterway Park not only maintains the downstream air ventilation under aligned prevailing wind, but also improve the downstream ventilation under non-aligned prevailing wind in general.

Building Separation

4.3.5 A 15m building separation between the residential tower(s) and the hotel/office tower will be maintained as according to SBD Guidelines to allow penetration of wind flow. The results shown that the building separation allows the flow to reach the downstream area under

southernly wind in general (i.e. under wind directions from 157.5 deg to 202.5 deg; **Figures 4-1g to 4-1i**).

Setback of Site A1

4.3.6 The setback of Site A1 in the Proposed Scheme allows for increased airflow from Site B to reach Nullah Road under wind directions ranging from 45 deg to 90 deg (**Figures 4-1b to 4-1d**). Similarly, it permits more airflow from Nullah Road to reach Site B under wind directions of 202.5 deg and 225 deg (**Figures 4-1i and 4-1j**).

Open Area Provided by Sites A2 – A5

4.3.7 The open spaces provided are not expected to adversely affect the air ventilation in the surrounding. The evidence is that the averaged VRs of Flower Market Road and Yuen Ngai Street (R7 and R8; **Table 4-2**) have increased in the Proposed Scheme, indicating that the overall ventilation performance near Sites A2 to A5 is not adversely affected.

Downwash Wind of Site B

4.3.8 The flow pattern around the proposed development suggests the presence of downwash wind near the windward facades of the high-rise towers. More specifically, the ventilation in the vicinity of the southeast facades of the residential towers is predominantly influenced by downwash wind when wind directions range from 135 deg to 180 deg (as shown in **Figures 4-1f to 4-1h**). This downwash wind contributes to improved airflow and air quality, thus enhancing ventilation in Site B and the surrounding areas.

4.3.9 Furthermore, downwash wind is also observed on the lower podium (western portion) of Site B under wind directions ranging from 202.5 deg to 247.5 deg (**Figures 4-4i to 4-4k**). This downwash wind in turn leads to increased ground-level wind in the northeast area (**Figures 4-1i to 4-1k**).

4.3.10 Considering that Site B is surrounded by existing development in east, south and west direction. The wind availability of Site B and its downstream area shall be poor under certain wind directions. In those case, the downwash wind plays an important role in bring in air flow from mid-air to the ground level and improve the air ventilation.

4.4 Directional Analysis

4.4.1 The overall spatial and wind directions averaged VRs have been presented in **Section 4.2**, and it is concluded that the Proposed Scheme will induce a general improvement in overall SVR and LVR for both annual and summer conditions.

4.4.2 This section presents the air ventilation performance under different wind directions and explores the relationship between the design features of the Proposed Scheme.

4.4.3 The focus is primarily on Site B and the south-east corner of Site A1 because significant changes in flow patterns or speeds have been observed under different wind directions within the Sites A1 & B. Additionally, all significant changes in spatially averaged VRs are attributed to the promoted south-north air movement under easterly winds of Site B, the alignment and smoothness of air pathways for north-easterly & south-westerly winds at Sites A1 & B, as well as the downwash wind in Site B.

NNE (22.5 deg) wind direction (**Figure 4-1a**)

4.4.4 In the Baseline Scheme, the prevailing wind from the open space to the north of Site B can reach the core of Site B without much resistance and then leave Site B via Yuen Ngai Street and Sai Yee Street to the south. However, due to the orientation of the street block, the flow leaving via Sai Yee Street can either go straight or sharply turn to the west, which is not aligned with the prevailing wind direction.

4.4.5 In the Proposed Scheme, some of the prevailing wind from the open space north of Site B has been diverted to the west, and the remaining flow can reach the core of Site B through the building separation. The aligned air pathways, along with the flow being brought down by the towers, result in improved flow speeds within Site B. The air within Site B also exits the site via Yuen Ngai Street and Sai Yee Street to the south. As the podium of Site A1 is setback at its southeast corner, the flow escaping Site B via the Sai Yee Street junction experiences less resistance and reaches the downstream Nullah Road, which is more aligned with the prevailing wind direction.

4.4.6 Although the air ventilation in the downstream region is improved in general, reductions in ventilation performance in local downstream areas are observed. Firstly, the podium structure of Site B reduces the wind from entering Playing Field Road via its intersection with Sai Yee Street, resulting in lower flow speed along Playing Field Road. Secondly, while the aligned air pathway provided by the podium structures of Site B and the setback of Site A1 allows more flow to reach the downstream of Nullah Road, significantly less wind flow can reach the downstream of the non-aligned Prince Edward Road West and Sai Yee Street.

NE (45 deg) wind direction (**Figure 4-1b**)

4.4.7 In the Baseline Scheme, the prevailing wind from the open space to the north of Site B can reach the core of Site B without much resistance and then leave Site B via Yuen Ngai Street and Sai Yee Street to the south. The podium of Site A1 forces the flow that leaves via Sai Yee Street to sharply turn west.

4.4.8 In the Proposed Scheme, similar to the 22.5 deg wind direction, some of the prevailing wind from the open space north of Site B has been diverted to the west, and the remaining flow can reach the core of Site B through the building separation. The aligned air pathways, along with the flow being brought down by the towers, result in improved flow speeds within Site B. More air within Site B will exit to the south via Sai Yee Street. As the podium of Site A1 is setback at its southeast corner, the flow escaping Site B via the Sai Yee Street junction experiences less resistance and reaches the downstream Nullah Road, which is more aligned with the prevailing wind direction.

4.4.9 Similar to the case of 22.5 deg wind direction, the flow entering Playing Field Road via the junction of Sai Yee Street has been reduced. resulting in lower flow speed along Playing Field Road and its branch such as the Fa Yuen Street Section in the south.

4.4.10 Another noticeable reduction in flow speed is identified at the downstream of the non-aligned Prince Edward Road West, but to a lesser extent compared to the case of the 22.5 deg wind direction. On the other hand, for the downstream area of the non-aligned Sai Yee Street, increased flow speed and a pattern of downwash wind is observed.

4.4.11 As a result of the increased flow escape at Site B via the Sai Yee Street junction, the flow speed along Yuen Ngai Street (R8) decreases. However, this has the effect of eliminating the

recirculation of relatively low-speed flow along the nearby section of Prince Edward Road West.

ENE (67.5 deg) wind direction (**Figure 4-1c**)

4.4.12 In the Baseline Scheme, the flow within Site B is not guided and eventually hits the walls that are perpendicular to the flow direction, resulting in sharp changes in flow directions and speed.

4.4.13 In the Proposed Scheme, the flow within Site B is smoother due to the guidance of aligned air pathways. Additionally, some of the wind has been brought down by the towers, resulting in higher flow speeds within Site B as well as along Boundary Street (R1), Prince Edward Road West (R2), and Playing Field Road (R12) sections in the downstream.

4.4.14 With the increased flow speed along the downstream sections of Prince Edward Road West and Playing Field Road, the flow pattern in the adjoining areas is also affected. Particularly, higher flow speeds have been observed in the southeast portion of the Mong Kok Police Station.

E (90 deg) wind direction (**Figure 4-1d**)

4.4.15 In the Baseline Scheme, the majority of the prevailing wind only pass through the northern portion of Site B before escaping to Boundary Street and Playing Field Road. The flow in the core region and the southern portion of Site B is generally slow because it is located in the shadowed region of the stands of Mong Kok Stadium.

4.4.16 In the Proposed Scheme, the airflow has been guided by the proposed air pathways, promoting south-north air movement. This allows the flow to penetrate Site B and reach the air pathways (i.e. roads) in the downstream more easily, resulting in overall better ventilation in downstream regions. The downwash wind should also play some role in the increase flow for the in the ground level. It should be noted that there would be a slight reduction of wind speed along Boundary Street close to the podia of the proposed development.

ESE (112.5 deg) wind direction (**Figure 4-1e**)

4.4.17 Under 112.5 deg wind, the ground-level flow is not effectively penetrating Site B for both Schemes. The key difference between the two Schemes is the increased flow speed within Site B due to the downwash wind being brought down by the high-rise structures in the Proposed Scheme, resulting in ground level flow escaping the Site B in openings of each direction.

4.4.18 However, the increased flow speed also leads to the generation of a low-speed flow recirculation at the area immediately north of the podium of Site B; the area immediately north of the ramp up of the Boundary Street Flyover; the core region of the Mong Kok Stadium; and the eastern portion of Mong Kok Police Station.

SE (135 deg) wind direction (**Figure 4-1f**)

4.4.19 Under 135-degree wind, most of the ground level flow entering the Site B via the intersection of Sai Yee Street and Prince Edward Road West in both Schemes.

4.4.20 The key difference between the two Schemes is the setback at Site A1 allows more flow entering the Site at-grade and the downwash wind due to the high-rise structures of Site B in the Proposed Scheme.

4.4.21 However, the increased flow speed also leads to the generation of a low-speed flow recirculation at the areas immediately north of the podium of Site B; and the core region of the Mong Kok Stadium.

SSE (157.5 deg) wind direction (**Figure 4-1g**)

4.4.22 Under 157.5 deg wind, there is little airflow entering Site B at ground level due to the presence of surrounding buildings.

4.4.23 In the Baseline Scheme, the ground level flow of Site B relies on upstream flow via Sai Yee Street and Yuen Ngai Street. As the southern portion of Site B falls into the wake region created by the rows of buildings along Flower Market Road, below averaged ventilation within Site B is observed.

4.4.24 In the Proposed Scheme, despite no change of the upstream condition, the high-rise structures within Site B play a crucial role to create downwash wind and thus bring the air from higher elevations down to the ground level, improving the ventilation not only within Site B but also in the surrounding region. The disposition of the high-rise towers at Site B enhance the overall ventilation and creates a more favorable airflow pattern in and around Site B. It should be noted that the downwash wind at the Proposed Scheme dominate the ground level wind in Site B, countering the upstream flow at-grade from the Sai Yee Street and Yuen Ngai Street.

4.4.25 Under this wind direction, the podium of Site B reduces the wind speed along its downstream aeras, including the western portion of Tai Hang Tung Recreation Ground (A4). However, it should be noted that the Eastern portion of Tai Hang Tung Recreation Ground (A4) is benefited by the air pathways of Site B leading to net increase in spatial averaged VRs under 157.5 deg wind.

4.4.26 On the other hand, Police Sports and Recreation Club (A5) is expected to experience net decrease in spatial averaged VRs under 157.5 deg wind.

S (180 deg) wind direction (**Figure 4-1h**)

4.4.27 Under 180 deg wind, there is little airflow entering Site B at ground level due to the presence of surrounding buildings.

4.4.28 In the Baseline Scheme, similar to the case of 157.5 deg wind, the ground level flow of Site B relies on upstream flow via Sai Yee Street and Yuen Ngai Street. As the southern portion of Site B falls into the wake region created by the rows of buildings along Flower Market Road, poor ventilation within Site B is observed.

4.4.29 In the Proposed Scheme, similar to the case of 157.5 deg wind, the downwash wind improves the ventilation within Site B and the surrounding region. The downwash wind at the Proposed Scheme also dominates the ground level wind in Site B, countering the upstream flow at-grade from the Sai Yee Street and Yuen Ngai Street similar to the case of 157.5 deg wind.

4.4.30 Under this wind direction, the podium of Site B reduces the wind speed along its downstream aeras, but to a lesser extent compared to the case of the 157.5 deg wind direction.

SSW (202.5 deg) wind direction (**Figure 4-1i**)

4.4.31 Under 202.5 deg wind, most of the ground level flow enters Site B via the intersection of Sai Yee Street at Prince Edward Road West, Playing Field Road and Boundary Street in both Schemes.

4.4.32 In the Baseline Scheme, wakes are expected to form in Site B. This stagnant airflow can negatively impact ventilation within Site B and the downstream area.

4.4.33 In the Proposed Scheme, the proposed developments in Sites A1 and B play a crucial role in improving the ventilation in Site B and the downstream area. Firstly, the setback of Site A1 allow more flow on ground level to enter the Site at the south-east corner. Then the guided air pathway in Site B aligned the flow within Site B to avoid the formation of slow speed recirculation. Lastly, the downwash wind generated, that not only by the towers but also the podium of Site B, largely increases the wind availability of the Site and downstream area. As a result, the Proposed Scheme improves ventilation and minimizes stagnation issues that are present in the Baseline Scheme. The guided airflow helps to maintain a more consistent and efficient air movement throughout the site.

4.4.34 Since the amount of upstream ground level flow is the same in both Scheme, more flow entering the Site B will lead to less flow entering the non-aligned road sections, i.e. reduction of flow speed at Sai Yee Street Section (R6) and Fa Yuen Street to the north of Prince Edward Road West (R10).

SW (225 deg) wind direction (**Figure 4-1j**)

4.4.35 Similar to the case of 202.5 deg wind, under 225 deg wind, most of the ground level flow enters Site B via the intersection of Sai Yee Street at Prince Edward Road West, Playing Field Road and Boundary Street in both Schemes.

4.4.36 In the Baseline Scheme, wakes are expected to form in Site B. This stagnant airflow can negatively impact ventilation within Site B and the downstream area.

4.4.37 In the Proposed Scheme, the setback of Site A1 allow more flow on ground level to enter the Site at the south-east corner. However, recirculation is expected between the podia of Site B and the effect of downwash is not significant within Site B. On the other hand, strong downwash wind is identified at the lower podium (of ~21mPD; **Figure 4-4j**) of Site B that in turn increasing the flow speed at ground level in the north of the podium. Therefore, the ventilation performance within Site B is similar to that of the Baseline Scheme while the downstream area has been improved.

WSW (247.5 deg) wind direction (**Figure 4-1k**)

4.4.38 In the Baseline Scheme, the majority of ground-level flow enters Site B through Playing Field Road. This creates the formation of slow-speed recirculation within Site B, which has a negative impact on ventilation within the site and the downstream area.

4.4.39 In the Proposed Scheme, recirculation is expected to occur between the podia of Site B. However, it is important to note that a strong downwash wind is identified at the lower podium (~21mPD; **Figure 4-4k**) of Site B. This downwash wind, in turn, increases the flow speed at ground level both to the south and north of the podium. As a result, the ventilation performance within Site B and the downstream area has been improved.

4.4.40 It should be noted that under a 247.5 deg wind direction, there is a significant decrease in the flow entering Site B and the Sai Yee Street Section (R6) through its junction at Prince Edward Road West. Consequently, an increased flow rate has been identified along the section of Prince Edward Road West downstream of Site A1.

4.5 Localised Spatial and Wind Directions Averaged VRs (Road Section)

General

4.5.1 In general, the spatially averaged VRs for the roads are mostly either improved or remain unchanged. Road sections showing noticeable improvement are Tai Hang Tung Road (R3) and Playing Field Road (R12) under both annual and summer conditions. Another road sections with noticeable improvement are Sai Yee Street - from Boundary Street to Prince Edward Road West (R6), Flower Market Road and Yuen Po Street (R7) as well as Yuen Ngai Street (R8) under annual condition.

4.5.2 The exceptions are Tat Chee Avenue (R4), Sai Yee Street (From Prince Edward Road West to the South) (R9) and Tung Choi Street Section (R11). The spatially averaged VRs for Tat Chee Avenue (R4) and Sai Yee Street Section (R9) are expected to be slightly reduced by 0.01 under annual condition. The spatially averaged VRs for Tung Choi Street Section (R11) is expected to be slightly reduced by 0.02 and 0.01 under annual and summer conditions, respectively.

Tai Hang Tung Road (R3)

4.5.3 For Tai Hang Tung Road (R3), the most noticeable improvements are identified under 90 deg and around 180 deg winds.

4.5.4 As stated in **Section 4.4.15**, under 90 deg wind in the Baseline Scheme (**Figure 4-1d**), the primary cluster of wind within and around northern portion of Site B flows parallelly from east to west, with little south-north airflow. As a result, the southern portion of Site B and the area immediately west of Yau Yat Chuen School form a wake (low air flow re-circulation zone), leading to stagnation.

4.5.5 In the Proposed Scheme, the proposed podia at Site B and setback of Site A1 guide the airflow along the air pathways. With the increased ground level wind due to the downwash wind contributed by the high-rise towers, the south-north air movement has been enhanced and fewer stagnations are observed. Consequently, more airflow from Boundary Street is expected to enter Tai Hang Tung Road, leading to higher VR under annual conditions.

4.5.6 Under 180 deg wind (**Figure 4-1h**), under the Baseline Scheme, a large wake is expected to form at Site B, resulting in stagnation downstream of Site B. In the Proposed Scheme, similar to the 90-degree wind scenario, the proposed podia in Sites A1 and B guide the airflow to the along the air pathways to the north, and the high-rise structures in Site B bring the downwash wind from higher elevation, resulting more air flow within Site B and its downstream area. Similar situations are also found at 202.5 degrees (**Figure 4-1i**). As a result, more airflow can reach Site B and Tai Hang Tung Road under summer conditions.

Playing Field Road (R12)

4.5.7 For Playing Field Road (R12), the most noticeable improvements are identified under 112.5 deg wind.

4.5.8 Under 112.5 deg wind, under Baseline Scheme, only a little amount of wind can reach the core of the Site B thus less wind can reach Playing Field Road at downstream location. In the Proposed Scheme, significant amount of air flow at the core of Site B has been generated by the downwash wind due to the design of the podium and disposition of the towers. As a result, much more wind flow can reach the Playing Field Road at downstream location improving the ventilation there under both annual and summer conditions.

Sai Yee Street Section (R6) and Yuen Ngai Street (R8)

4.5.9 For both Sai Yee Street Section (R6) and Yuen Ngai Street (R8), the most noticeable improvement is identified under 90 deg wind.

4.5.10 As stated in **Section 4.4.15**, under the Baseline Scheme for 90 deg wind (**Figure 4-1d**), it is expected that most of the wind within and around northern portion of Site B flows parallelly from east to west, with little south-north airflow. Since both Sai Yee Street Section and Yuen Ngai Street are oriented in the south-north direction, its ventilation performance is poor under the Baseline Scheme during 90 deg wind. In the Proposed Scheme, the south-north air movement has been promoted not only within Site B but also in the surrounding area, together with the downwash wind at the core of Site B, resulting in better ventilation to the surrounding south-north orientated road under annual conditions.

Flower Market Road (R7)

4.5.11 For Flower Market Road (R7), the most noticeable improvement is identified under 67.5 deg wind.

4.5.12 Under 67.5 deg wind (**Figure 4-1c**), there are stagnations and wake areas along the western portion of Flower Market Road under the Baseline Scheme. With the proposed development of Site B, the re-circulation region has been limited to the area shaded by the proposed one-storey retail block of Site B. The stagnations and wake areas along the western portion of Flower Market Road have been eliminated by the guided air pathways of the Proposed Scheme in Site B and setback of Site A1, resulting in better ventilation at the western portion of Flower Market Road under annual condition.

Tat Chee Avenue (R4)

4.5.13 For Tat Chee Avenue (R4), reductions of VRs are identified under 22.5 deg to 90 deg wind.

4.5.14 Under 22.5 deg wind (**Figures 4-1a & 4-1b**), the most noticeable different in the Proposed Scheme is the downwash wind due to the hotel/office tower. Under those wind directions, the downwash wind of the hotel/office tower are blowing north-easterly at-grade countering the flow exiting Tat Chee Avenue.

4.5.15 Under 67.5 deg and 90 deg wind (**Figures 4-1c & 4-1d**), besides the downwash wind, the promotion of north going wind along southern portion of Tai Hang Tung Road in Proposed Scheme is also countering the flow exiting Tat Chee Avenue.

Sai Yee Street (From Prince Edward Road West to the South) (R9)

4.5.16 For the Sai Yee Street Section (R9), the most noticeable reduction of VRs is identified under 22.5 deg wind.

4.5.17 Under the Baseline Scheme, it is noticed that the at-grade flow escaping the south-west corner of Site B are flowed into the Prince Edward Road West and the Sai Yee Street Section

(R9). In the Proposed Scheme, with the podium setback of Site A1, the flow escaping the Site B are mostly guided to the Nullah Road instead of the non-aligned Sai Yee Street Section (R9).

Tung Choi Street Section (R11)

4.5.18 For Tung Choi Street Section (R11), the most noticeable reduction of VRs is identified under 90 deg.

4.5.19 Under 90 deg wind (**Figure 4-1d**), there are at-grade flow flowing along the Tung Choi Street Section (R11) in north to south direction under the Baseline Scheme. Under the Proposed Scheme, with the increase flow along Playing Field Road, the flow along Tung Choi Street Section (R11) has been disturbed resulting in slower flow speed particularly in the immediately south of the Playing Field Road junction.

4.6 Localised Spatial and Wind Directions Averaged VRs (Open Area)

General

4.6.1 In general, the spatially averaged VRs for the Open Areas are either improved or remain unchanged under both annual and summer conditions. The Open Areas with noticeable improvement are Chan's Creative School (A3) under summer conditions, and Tai Hang Tung Recreation Ground & Tai Hang Tung Sitting-Out Area (A4) as well as Site B (Z1) under both annual and summer conditions.

4.6.2 The exceptions are Police Sports and Recreation Club (A5), Queen Elizabeth School (A7) and The Church of Christ in China Heep Woh Primary School (A9).

4.6.3 The spatially averaged VRs for Police Sports and Recreation Club (A5) is expected to slightly reduced by 0.01 under summer condition. The spatially averaged VRs for Queen Elizabeth School (A7) is expected to slightly reduced by 0.01 under annual condition. The spatially averaged VRs for The Church of Christ in China Heep Woh Primary School (A9) is expected to be slightly reduced by 0.01 under both annual and summer conditions.

Chan's Creative School (A3)

4.6.4 For Chan's Creative School (A3), the most noticeable improvements are identified under 157.5 deg to 202.5 deg winds.

4.6.5 As stated in **Sections 4.3, 4.4.24, 4.4.29 & 4.4.33**, in the Proposed Scheme, the proposed podia in Sites A1 and B guide the airflow along the air pathways, and the high-rise towers bring the downwash wind from higher elevation, resulting in higher flow speed in the downstream area under southernly winds (**Figures 4-1g to 4-1i**). Therefore, more airflow can reach and penetrate Site B and reach Chan's Creative School under the Proposed Scheme for summer conditions.

Tai Hang Tung Recreation Ground & Tai Hang Tung Sitting-Out Area (A4)

4.6.6 For Tai Hang Tung Recreation Ground & Tai Hang Tung Sitting-Out Area (A4), the most noticeable improvements are identified under 90 deg and around 202.5 deg winds.

4.6.7 Similar to the case of Tai Hang Tung Road (R3; **Section 4.5.4)**, under the Baseline Scheme for 90 deg wind (**Figure 4-1d**), it is expected that most of the wind within and around Site B flows parallelly from east to west, with little south-north airflow. As a result, not much

airflow along Boundary Street enters Tai Hang Tung Recreation Ground, and the ventilation of the Tai Hang Tung Recreation Ground relies on building gaps and the road surface in the east, which is not aligned with the prevailing wind (90 deg). In the Proposed Scheme, the south-north airflow has been promoted not only within Site B but also in the surrounding area, resulting in more airflow from Boundary Street to Tai Hang Tung Recreation Ground and better ventilation under annual conditions.

4.6.8 As stated in **Section 4.4.32**, under the Baseline Scheme, a large wake is expected to form at Site B, resulting in stagnations downstream of Site B for 202.5 deg wind. This leads to low wind speeds in the nearby downstream region of Site B in general, including Tai Hang Tung Recreation Ground. In the Proposed Scheme, the proposed developments in Sites A1 and B guide the airflow along the air pathways, and bring the downwash wind from higher elevation (please refer to **Section 4.3.9**), resulting in fewer locations with low-speed flow re-circulation in the downstream area under 202.5 deg wind (**Figures 4-1i**). Therefore, more airflow can reach Tai Hang Tung Recreation Ground under the Proposed Scheme under summer conditions.

Site B

4.6.9 Under the current notional design, the open space at Site B (Z1) and the decked open spaced in Site B (Z2) are expected to experience a significant increase in VRs under both annual and summer conditions.

4.6.10 In the Baseline Scheme, the Site B is surrounded by existing development in east, south and west direction. Without high-rise structure(s) to bring the downwash wind and/or guided air pathways, the core and southern portion of Site B is expected to experience poor ventilation under most wind directions, despite being an open area.

4.6.11 In the Proposed Scheme, with enhancement features including the Waterway Park of about 20m in width and the 15m building separation at Site B, the wind flow within Site B has been guided along with the aligned opening at the southeast corner of Site A1 facilitated by the proposed podium setback at Site A1, therefore, it is anticipated that a higher wind speed shall passing through the open area of Site B under major prevailing wind directions. Additionally, the proposed structures within Site B are expected to bring downwash wind from the mid-air down to ground level, further increasing ventilation near the buildings. In the Proposed Scheme, areas with low-speed flow re-circulations are significantly reduced. These areas (areas with low-speed flow re-circulations) are only identified between the Podium (western portion) and the one-storey retail block under 22.5 deg and 45 deg winds (**Figures 4-1a & 4-1b**), and between the two Podia under 225 deg and 247.5 winds (**Figures 4-1j & 4-1k**). In overall, the Proposed Scheme demonstrates a significant improvement in ventilation performance at Site B, which will add comfort to the proposed Waterway Park and its surroundings.

Site A1 (Z4)

4.6.12 Firstly, it should be noted that the VRs at Z4 in both Schemes are not comparable as they are taken as different elevation. Instead, they are better to be compared with the average of the assessment area (i.e., LVR). In both Schemes, the VRs of Z4 are better than that of the corresponding LVR, showing the ventilation at the open area of Site A1 is better than the average of the area.

Police Sports and Recreation Club (A5)

4.6.13 For Police Sports and Recreation Club (A5), reductions of VRs are identified under 112.5 & 157.5 deg wind direction.

4.6.14 Under both 112.5 and 157.5 deg wind directions, flow recirculation is observed in the north and north-west of Site B, which in turn leads to lower spatially averaged VR in the Police Sports and Recreation Club (A5). As explained in **Sections 4.4.17-4.4.18**, this low-speed flow recirculation is likely caused by the increased flow speed along the building separation of Site B.

4.6.15 On the other hand, significant improvement is observed for the 67.5 deg wind direction (for annual conditions only) and the 90 deg wind direction (for both annual and summer conditions). Resulting in a net improvement in spatial averaged VR under annual conditions and a slight reduction under summer conditions.

Queen Elizabeth School (A7)

4.6.16 For Queen Elizabeth School (A7), reductions of VRs are identified under 45 deg wind direction.

4.6.17 Under the 45-degree wind direction, as compared with the Baseline Scheme, the flow along the road section of Prince Edward Road West to the north of the school in the Proposed Scheme is smoother. This alters the flow pattern within the school's grounds, resulting in a minor reduction in the spatially averaged VR.

The Church of Christ in China Heep Woh Primary School (A9)

4.6.18 For The Church of Christ in China Heep Woh Primary School (A9), reductions of VRs are identified under 90 deg wind direction.

4.6.19 Under the 90-degree wind direction, as compared with the Baseline Scheme, the flow along the upstream section of Prince Edward Road West, before reaching Yuen Ngai Street, has been reduced in the Proposed Scheme. On the other hand, the flow at the intersection of Prince Edward Road West and Yuen Ngai Street has increased. The non-uniform changes in flow patterns at the immediately north-west and north-east of the school alters the flow direction within the school's grounds, resulting in a minor reduction in the spatially averaged ventilation rate (VR).

5 CONCLUSION

5.1.1 The Urban Renewal Authority (URA) has proposed the Sai Yee Street / Flower Market Road Development Scheme (YTM-013) 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.

5.1.2 The microclimate around the Site for the two scenarios, i.e. the Baseline Scheme (i.e. OZP-compliance development for the Scheme) 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 similar studies to ensure the reliability of the model results.

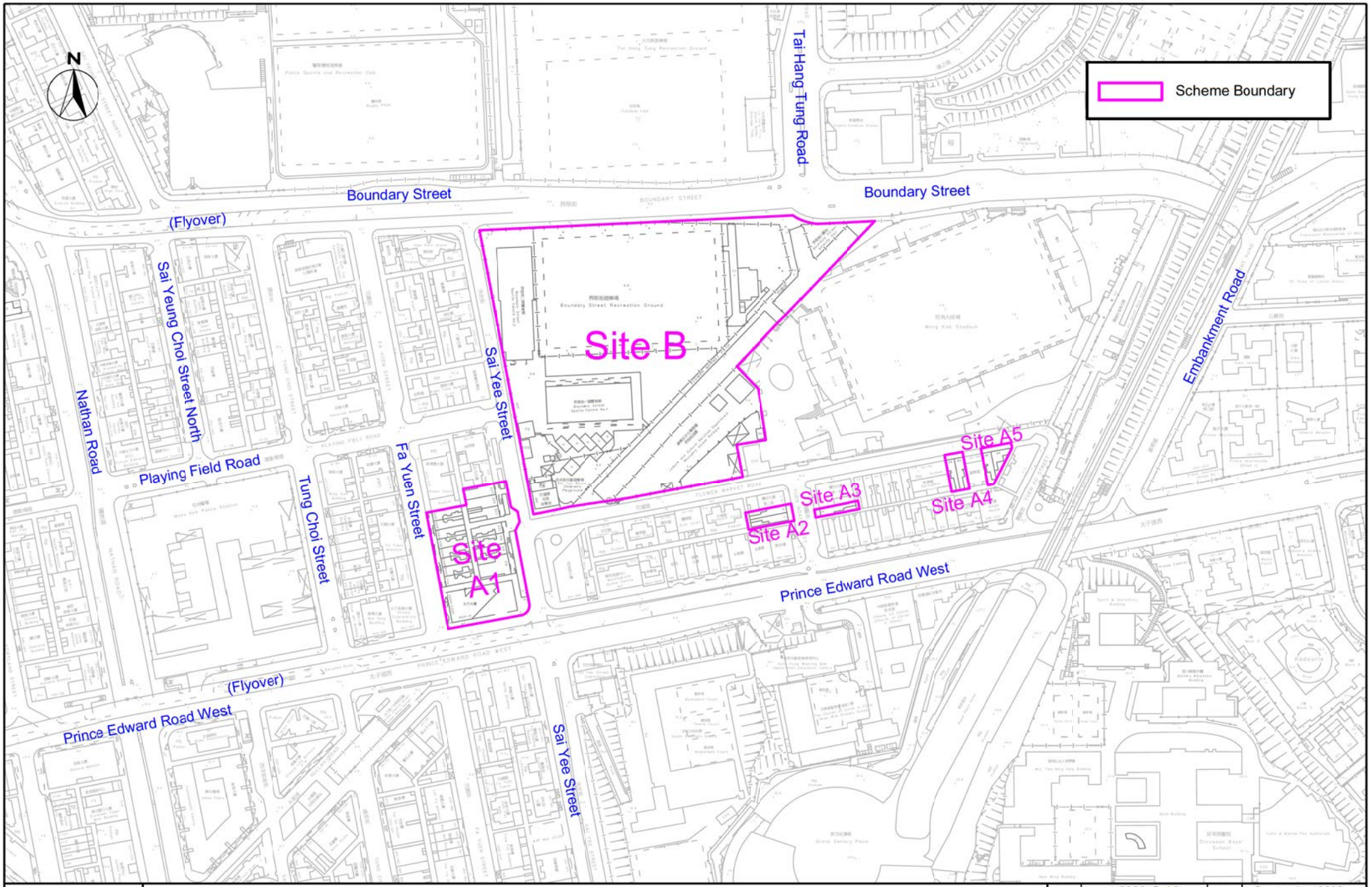
5.1.3 The model results suggested that the averaged air ventilation performance of the Proposed Scheme is better than that of the Baseline Scheme in general under both annual and summer conditions.

5.1.4 The most significant improvement compared to the Baseline Scheme can be observed at Site B (Z1), Tai Hang Tung Road (R3), Sai Yee Street Section (R6), Flower Market Road and Yuen Po Street (R7), Yuen Ngai Street (R8), Playing Field Road (R12), Chan's Creative School (A3), and Tai Hang Tung Recreation Ground (A4). These areas experience notable improvements mainly due to the wind enhancement features and appropriate block disposition of the current notional design that guide the airflow within Sites A1 and B.

5.1.5 In specific wind directions, several areas, namely Tat Chee Avenue (R4), Sai Yee Street (R9), Tung Choi Street (R11), Police Sports and Recreation Club (A5), Queen Elizabeth School (A7), and The Church of Christ in China Heep Woh Primary School (A9), may experience a slight degradation in ventilation performance. However, it is important to note that for Tat Chee Avenue (R4), ventilation performance is generally improved during summer conditions, while for Police Sports and Recreation Club (A5), ventilation performance is generally improved during annual conditions. This highlights that the potential adverse impact on air ventilation is localized and specific to certain wind directions.

5.1.6 In conclusion, no adverse air ventilation impact is anticipated for the Proposed Scheme as compared to the Baseline Scheme.

FIGURES



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location Plan

SCALE	1:2000 @ A3	DATE	September 2023
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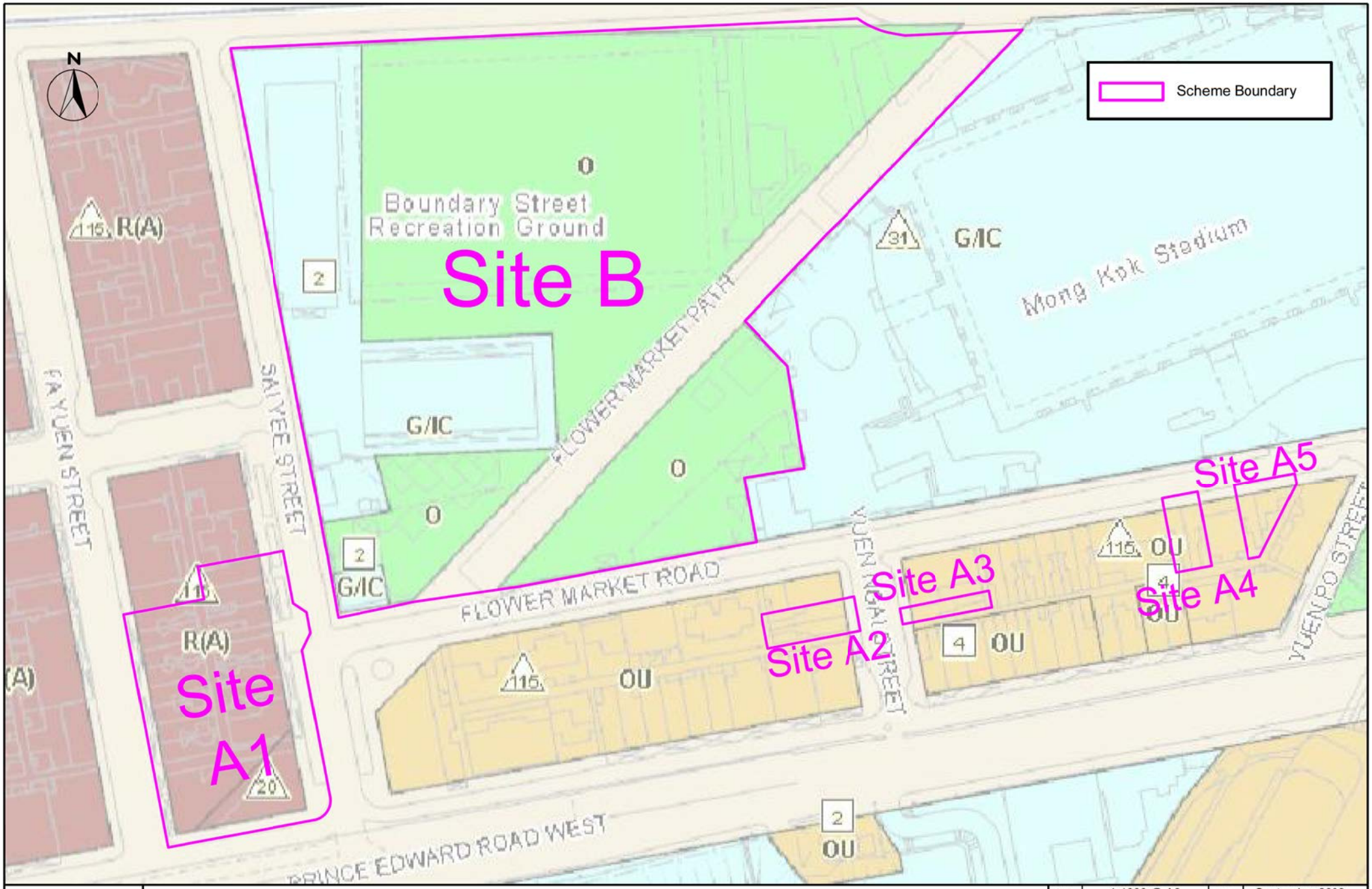
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Outline Zoning Plan

SCALE	1:1000 @ A3	DATE	September 2023
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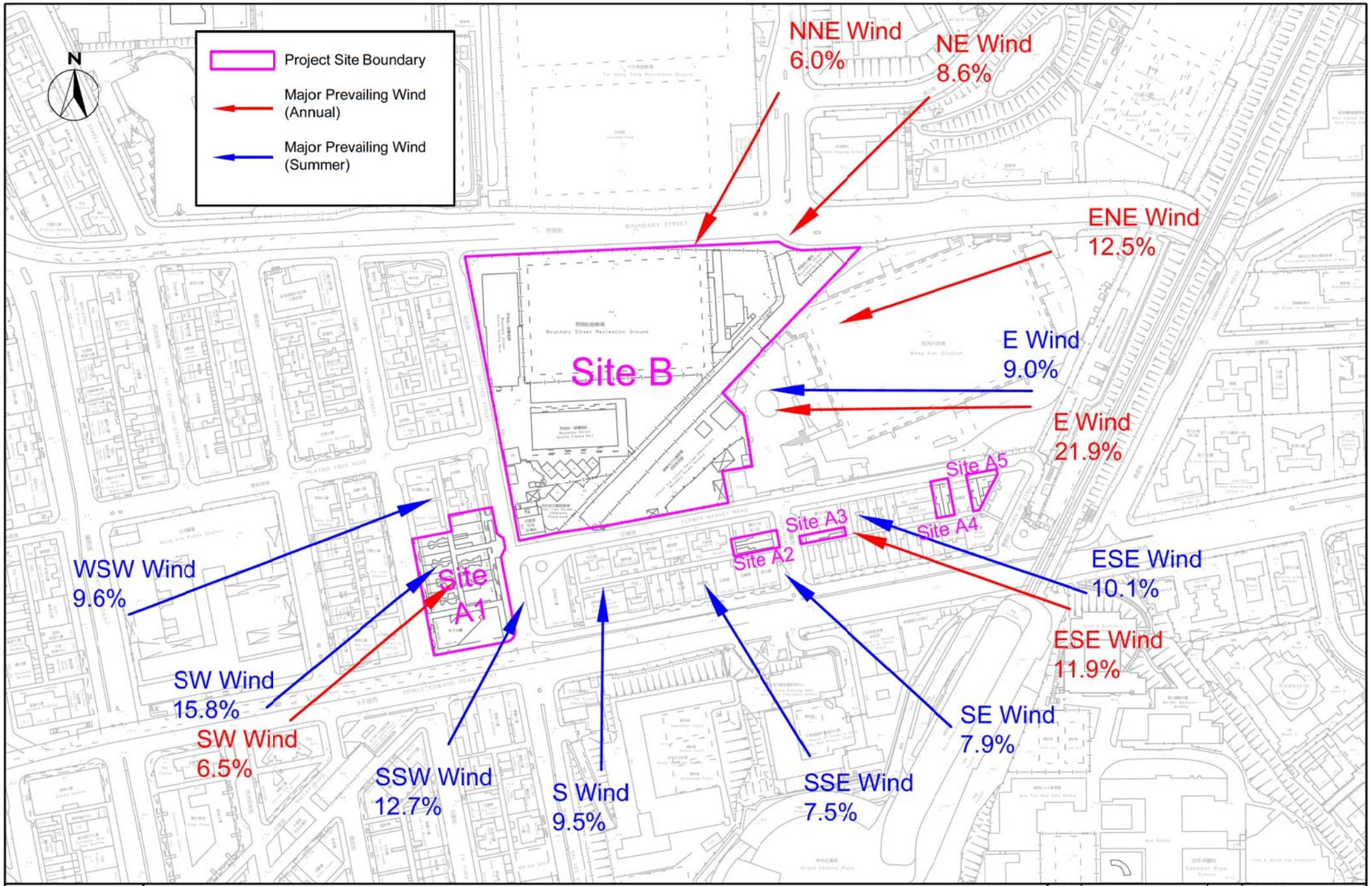
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Major Prevailing Winds for the Sites

SCALE	1:2000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
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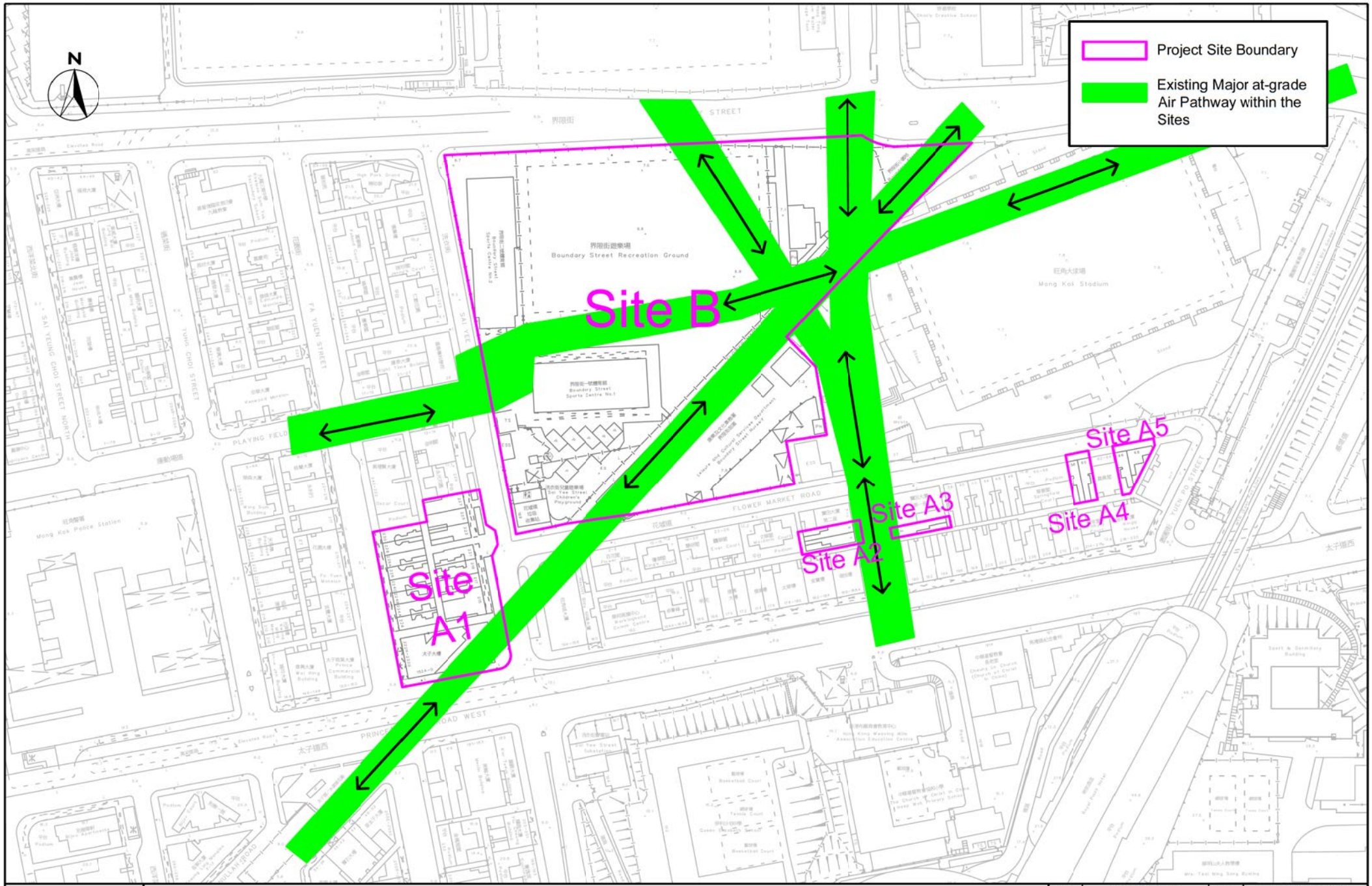

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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Major at-grade Air Pathway within the Sites

SCALE	1:1500 @ A3	DATE	September 2023
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JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 1-4
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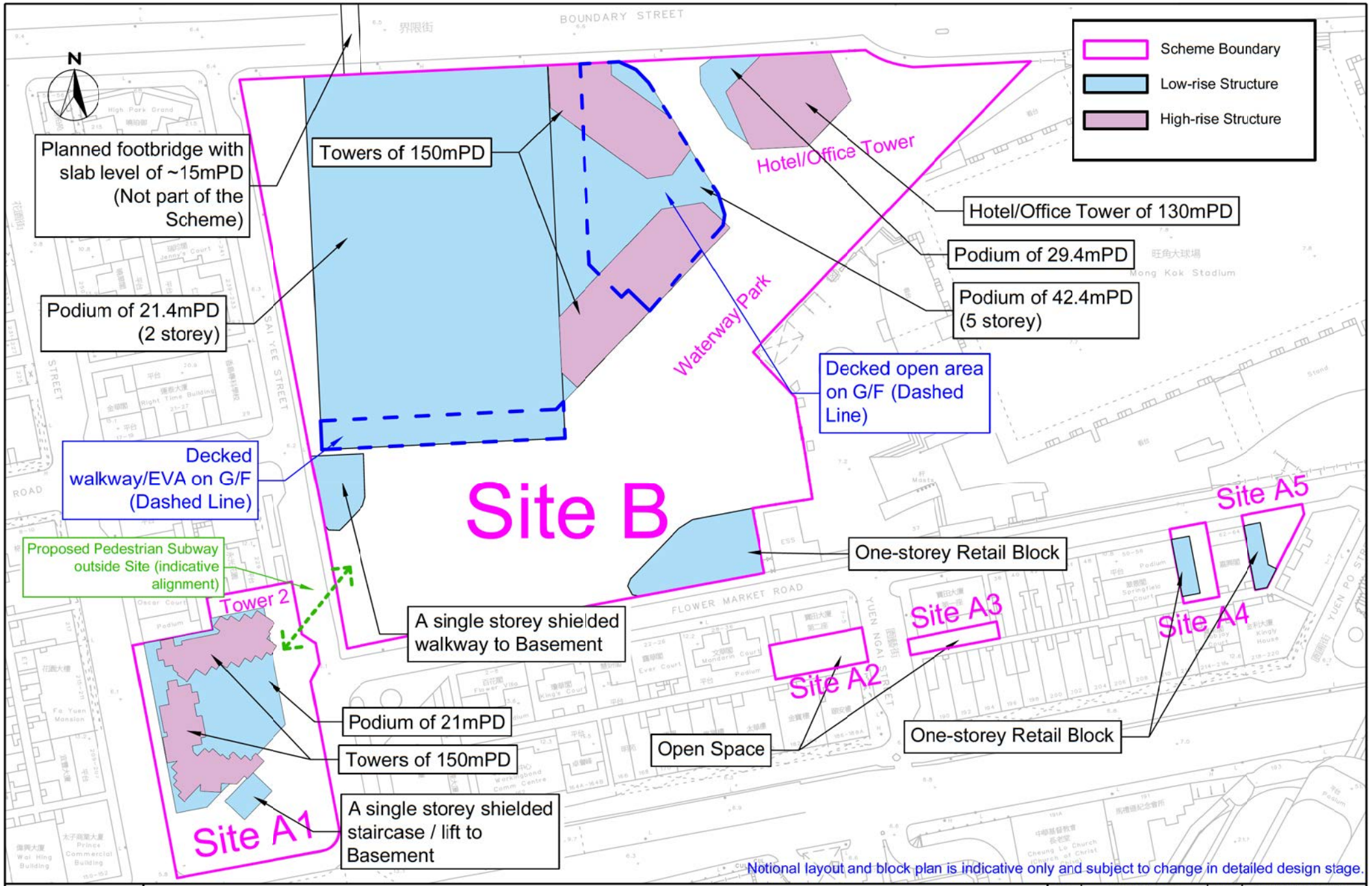

CINOTECH
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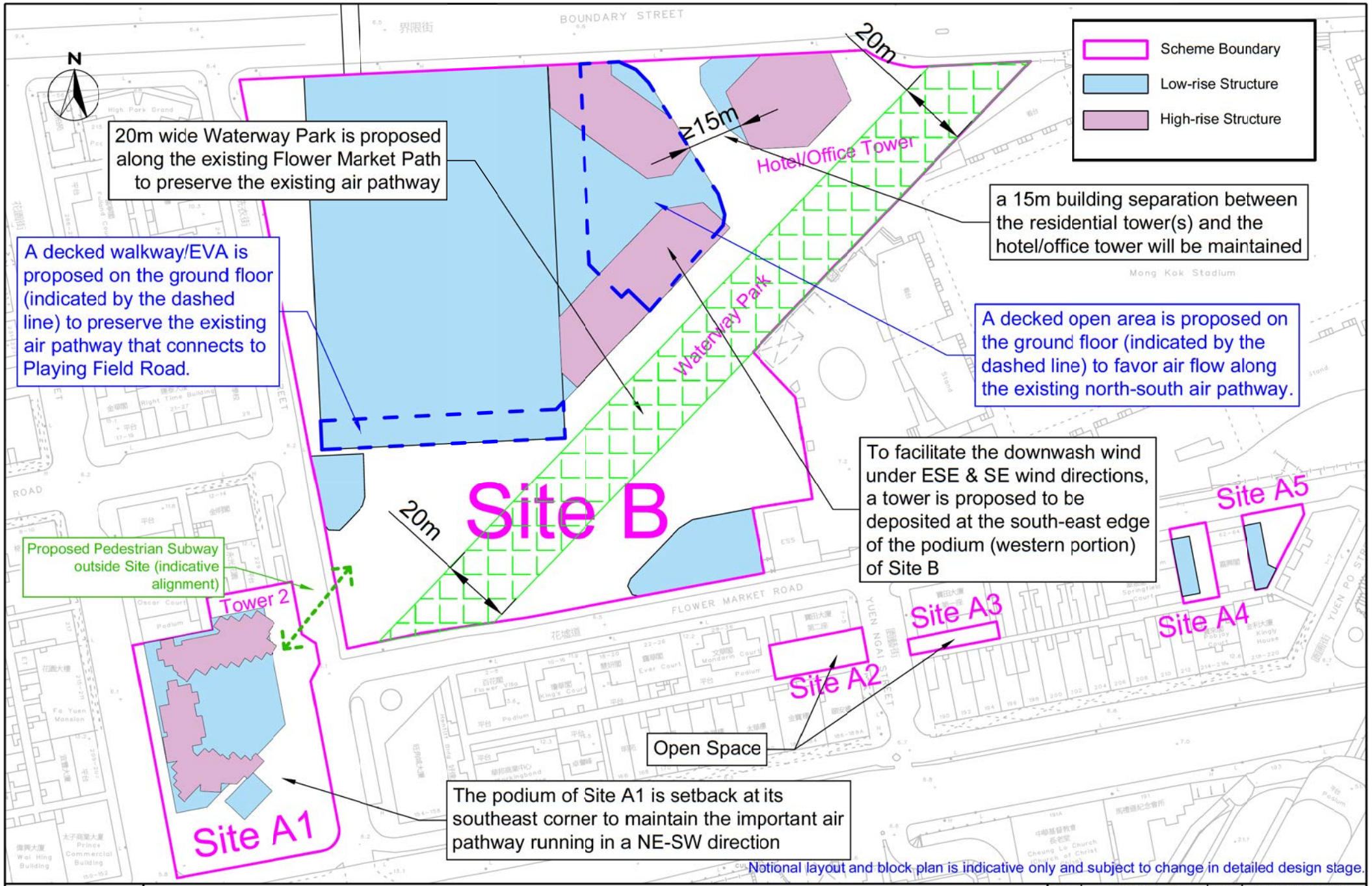
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

The Proposed Scheme

SCALE	1:1000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 1-5a
		REV	-



Notional layout and block plan is indicative only and subject to change in detailed design stage.

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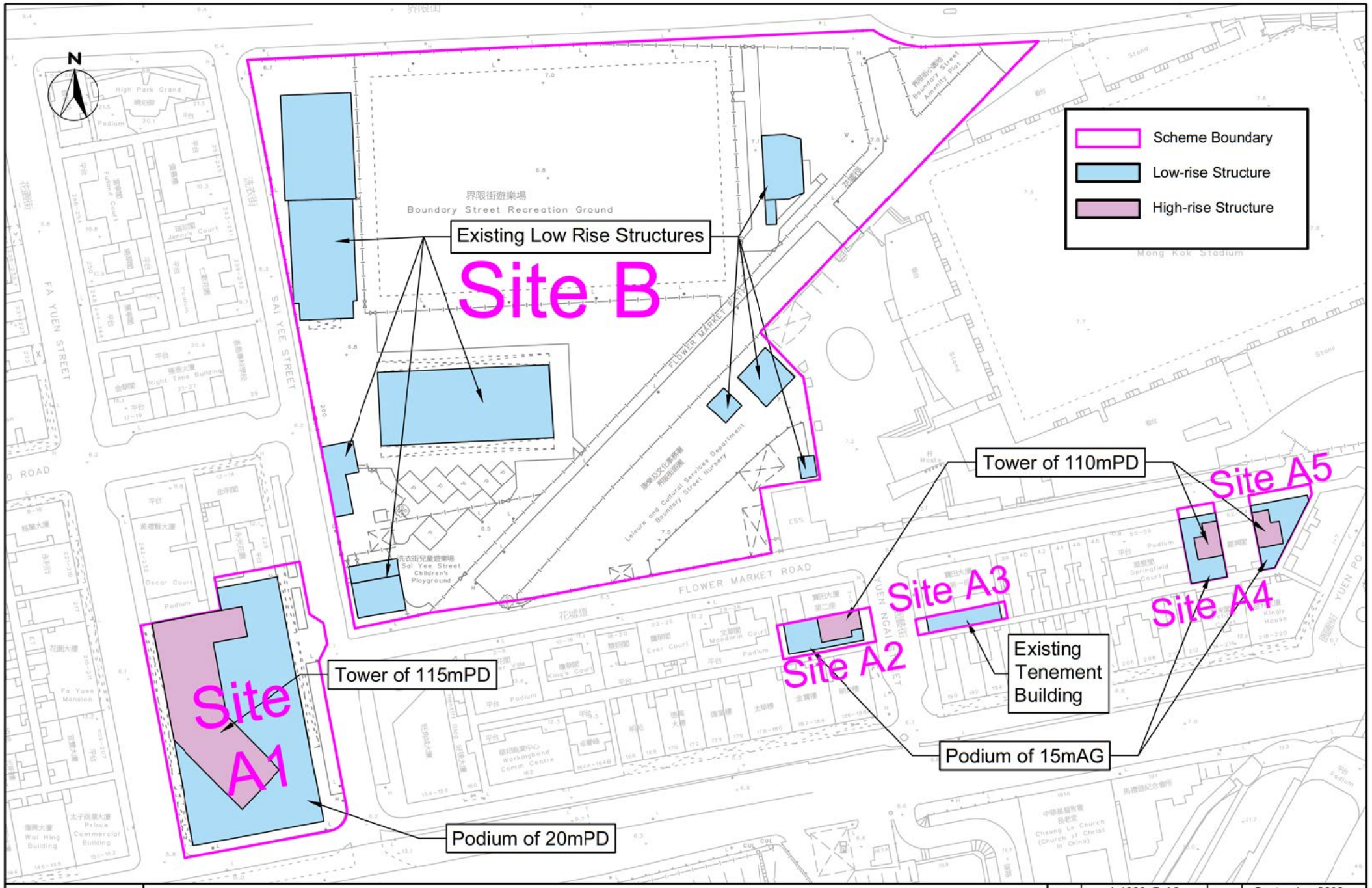
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

The Proposed Scheme (Good Design Features)

SCALE	1:1000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 1-5b
		REV	-



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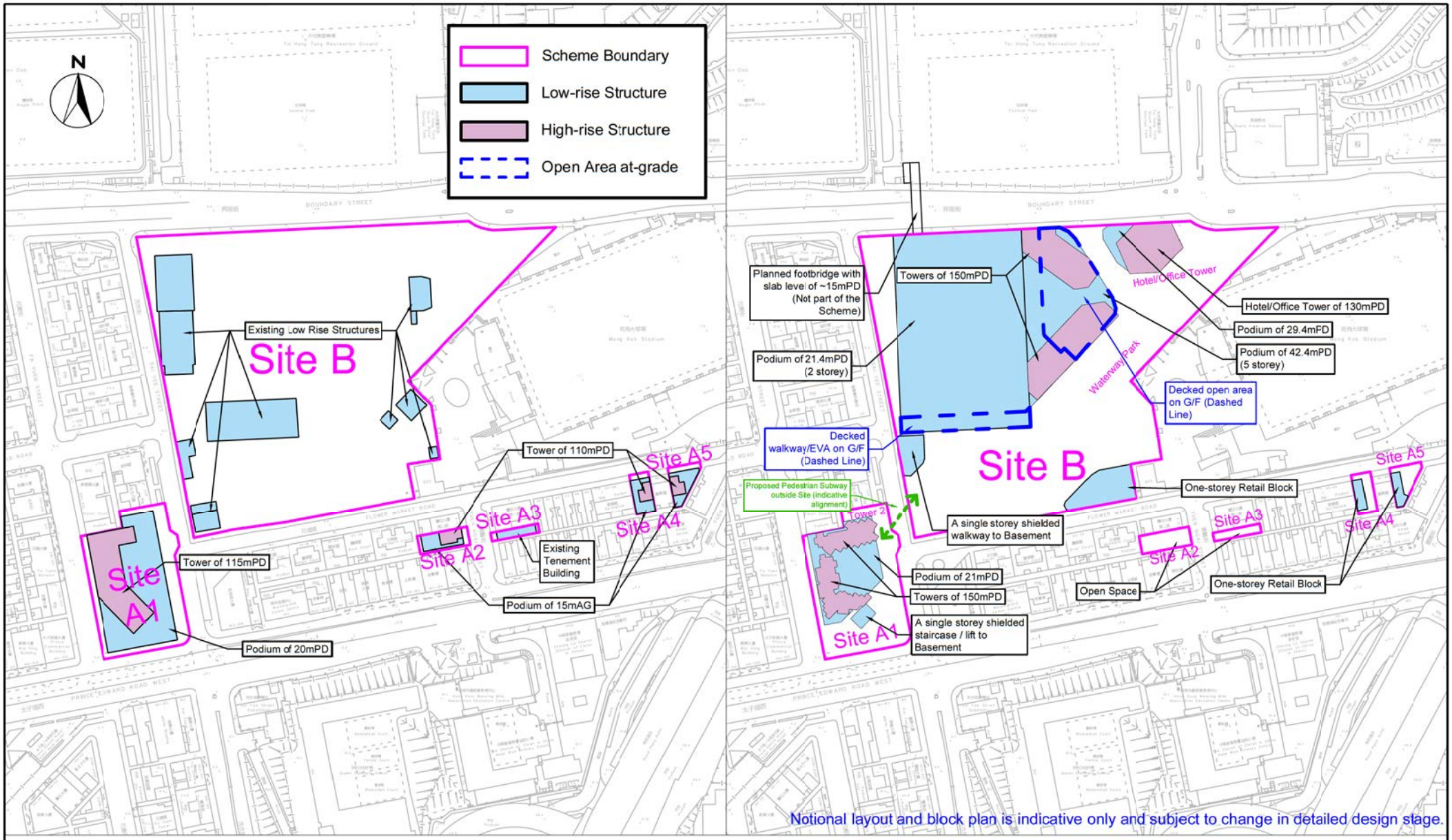
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

The Baseline Scheme

SCALE	1:1000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 1-6
		REV	-



Baseline Scheme

Proposed Scheme

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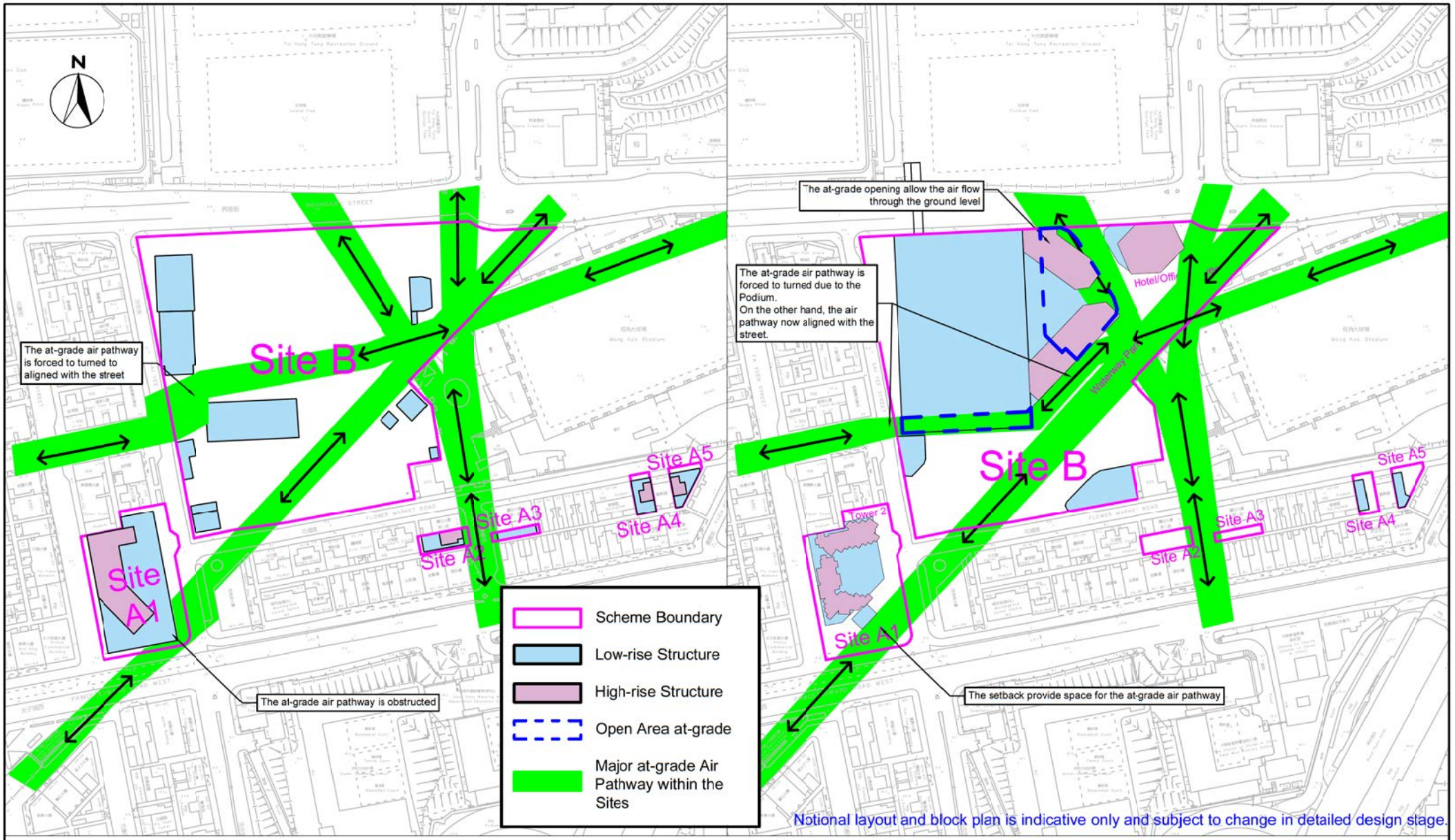
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Comparison of the Schemes

SCALE	1:2000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 1-7
		REV	-



Baseline Scheme

Proposed Scheme

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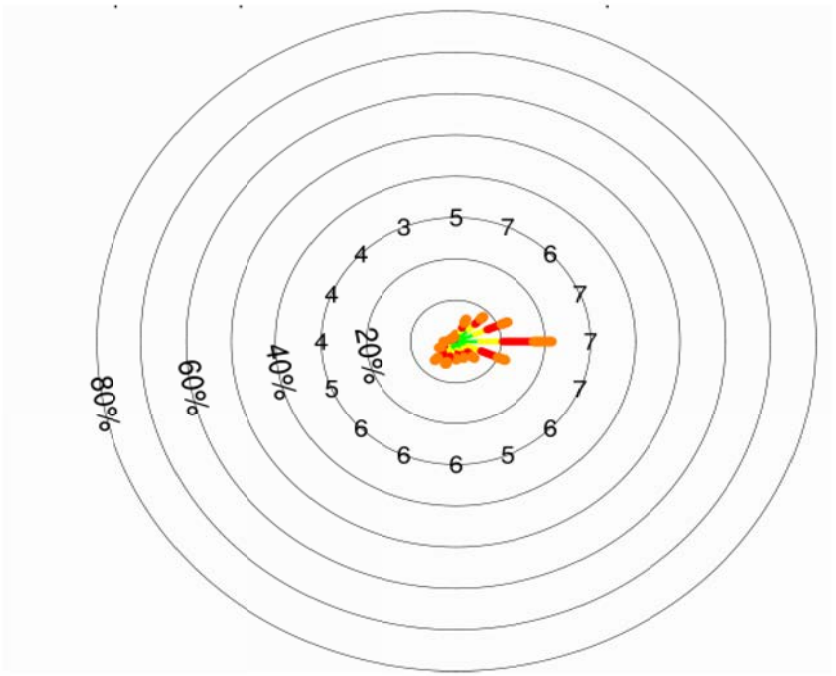
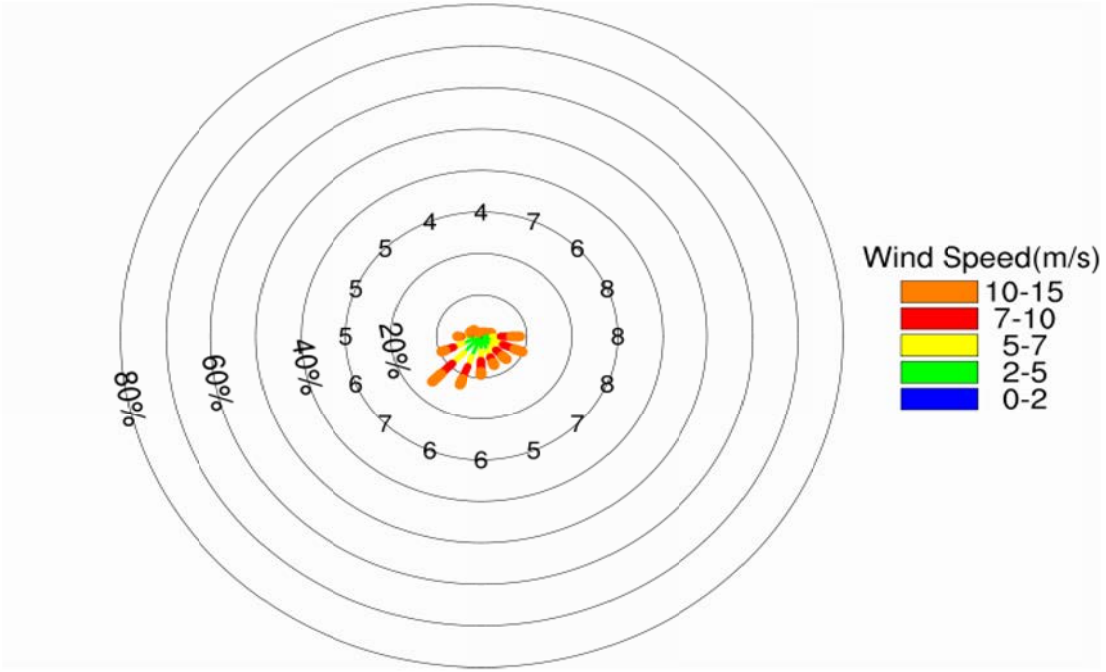
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Comparison of the Schemes (at-grade Air Pathways)

SCALE	1:2000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 1-8
		REV	-



Annual



Summer

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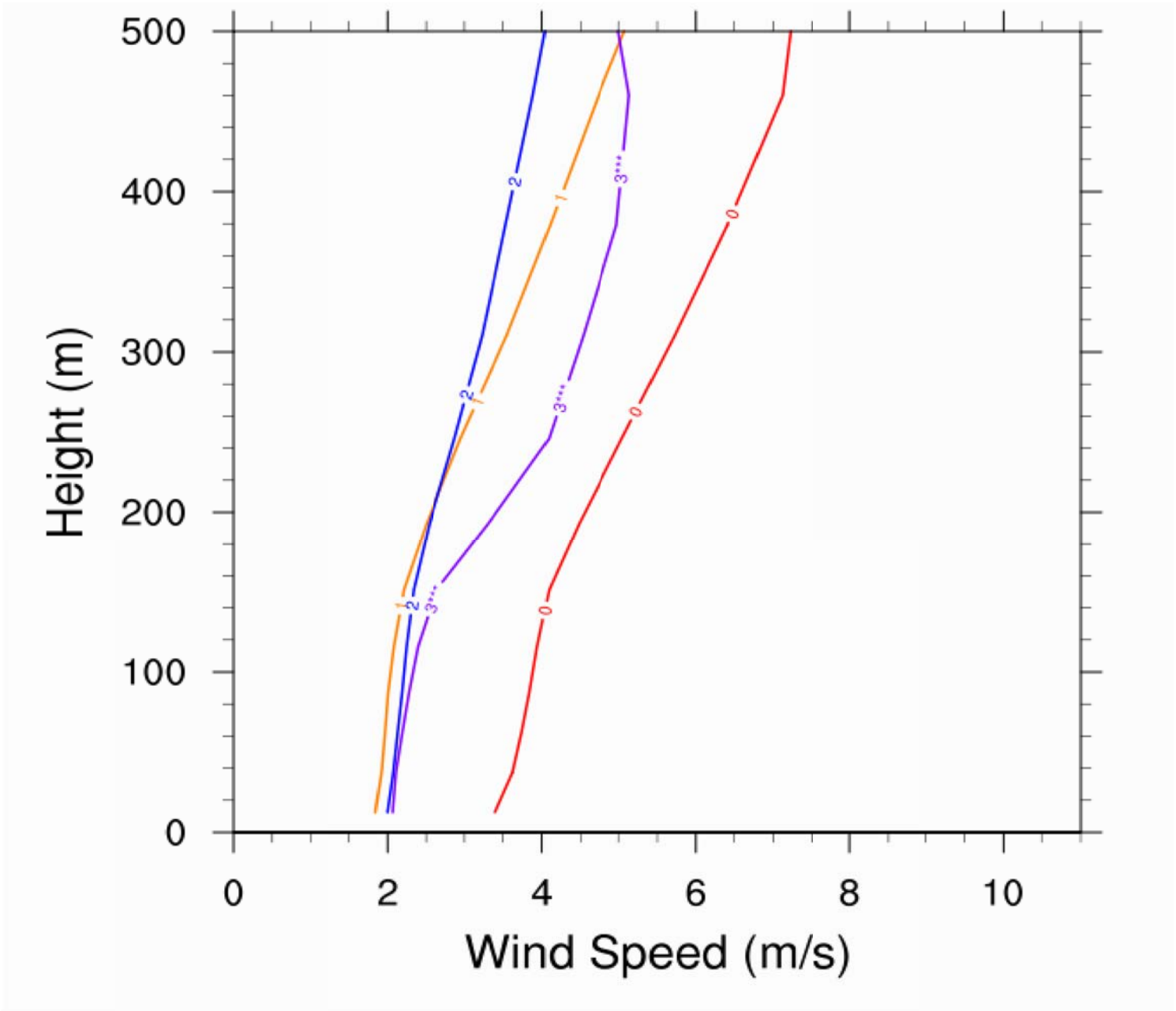
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

The Wind Roses at grid [080,044] from RAMS

SCALE	N.T.S.	DATE	Sep-23
CHECK	KC	DRAWN	CC
JOB NO.	IA1902\1\WMM1-01-P1	FIGURE NO.	2-1a
			REV. -



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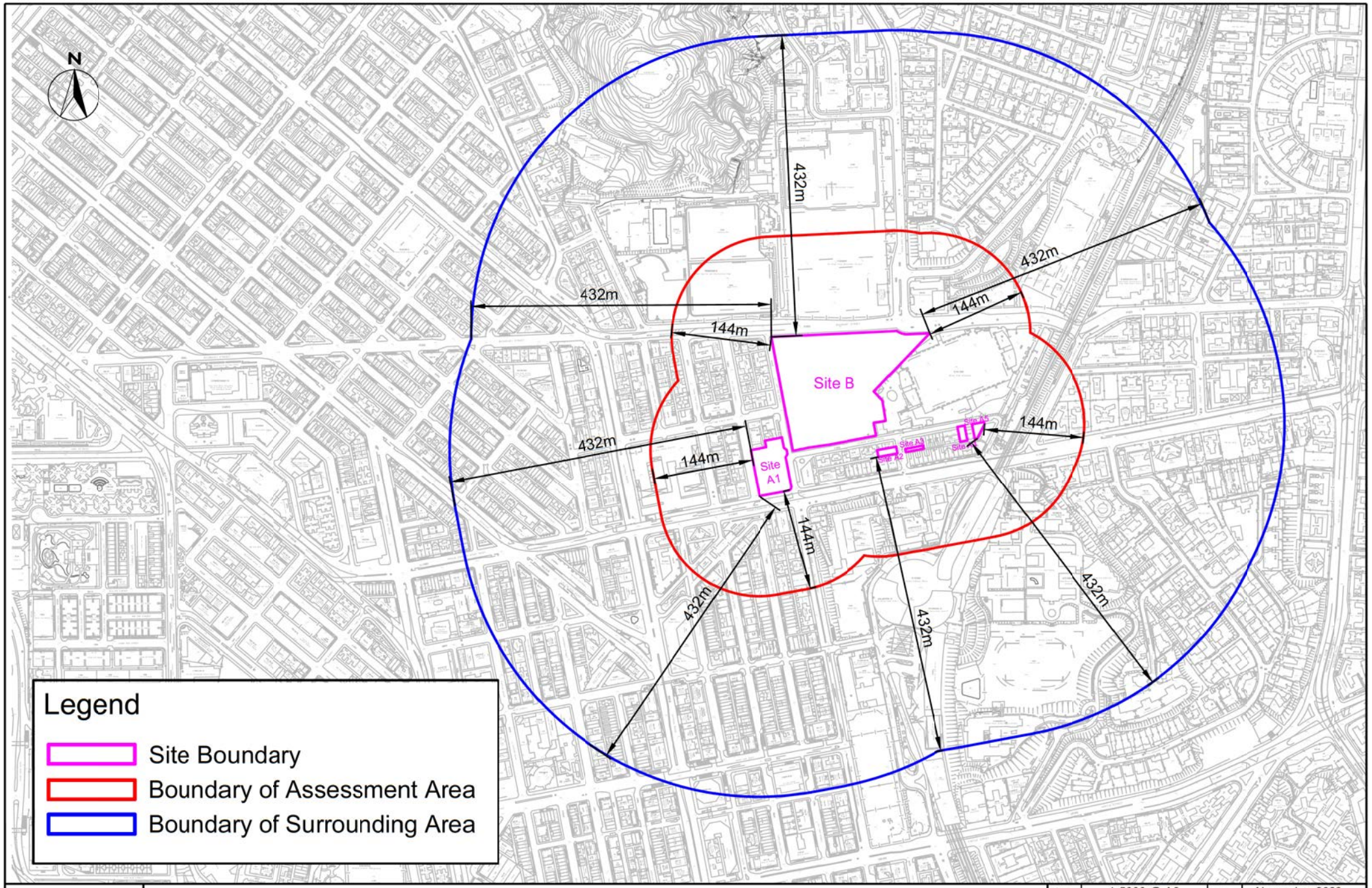
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

The Wind Profile at grid [080,044] from RAMS

SCALE	N.T.S.	DATE	Sep-23	
CHECK	KC	DRAWN	CC	
JOB NO.	tA1902111YAMM1-01-P1	FIGURE NO.	2-1b	REV.
				-



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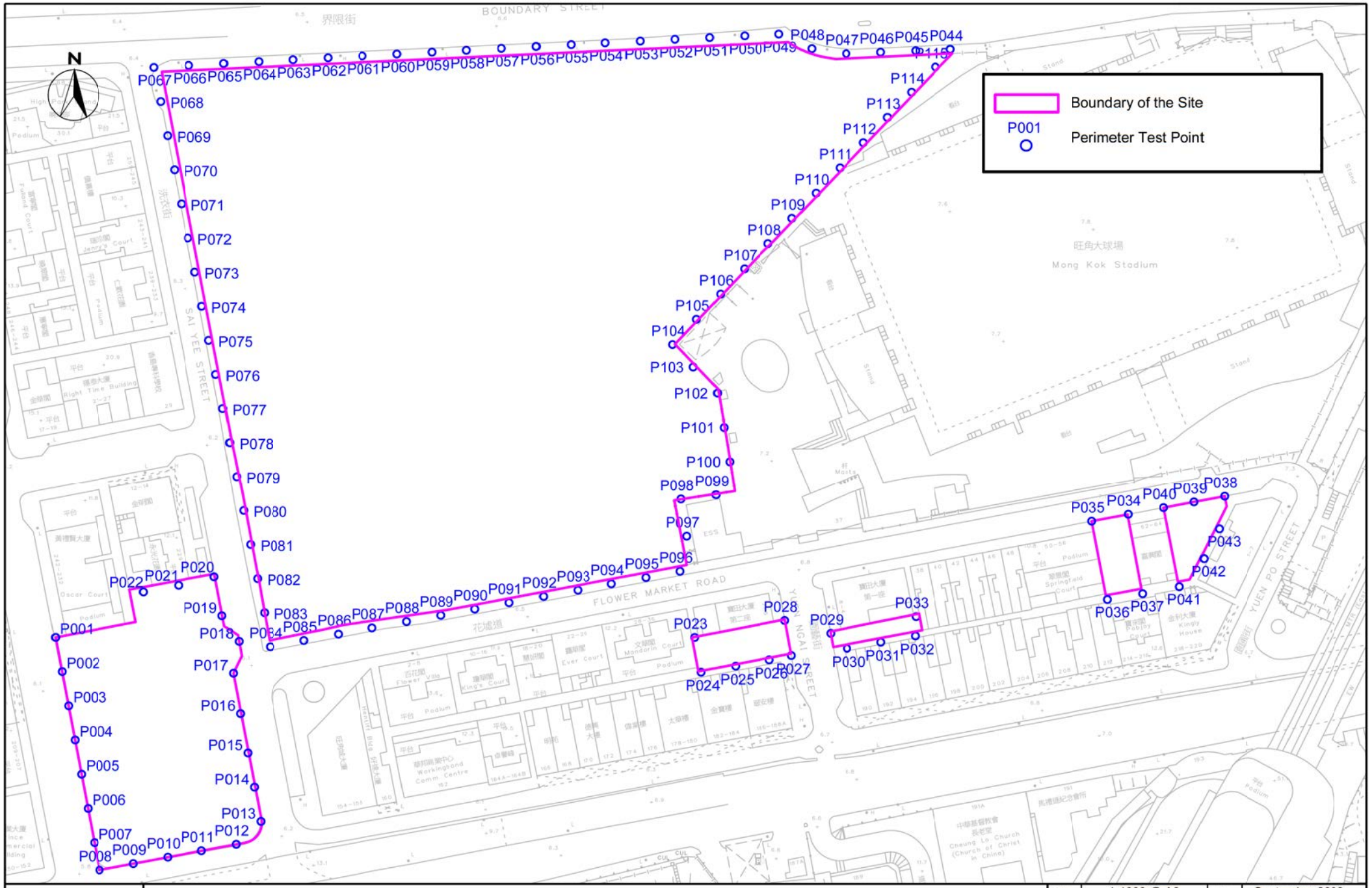
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Area and Surrounding Area

SCALE	1:5000 @ A3	DATE	November 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-1
		REV	-



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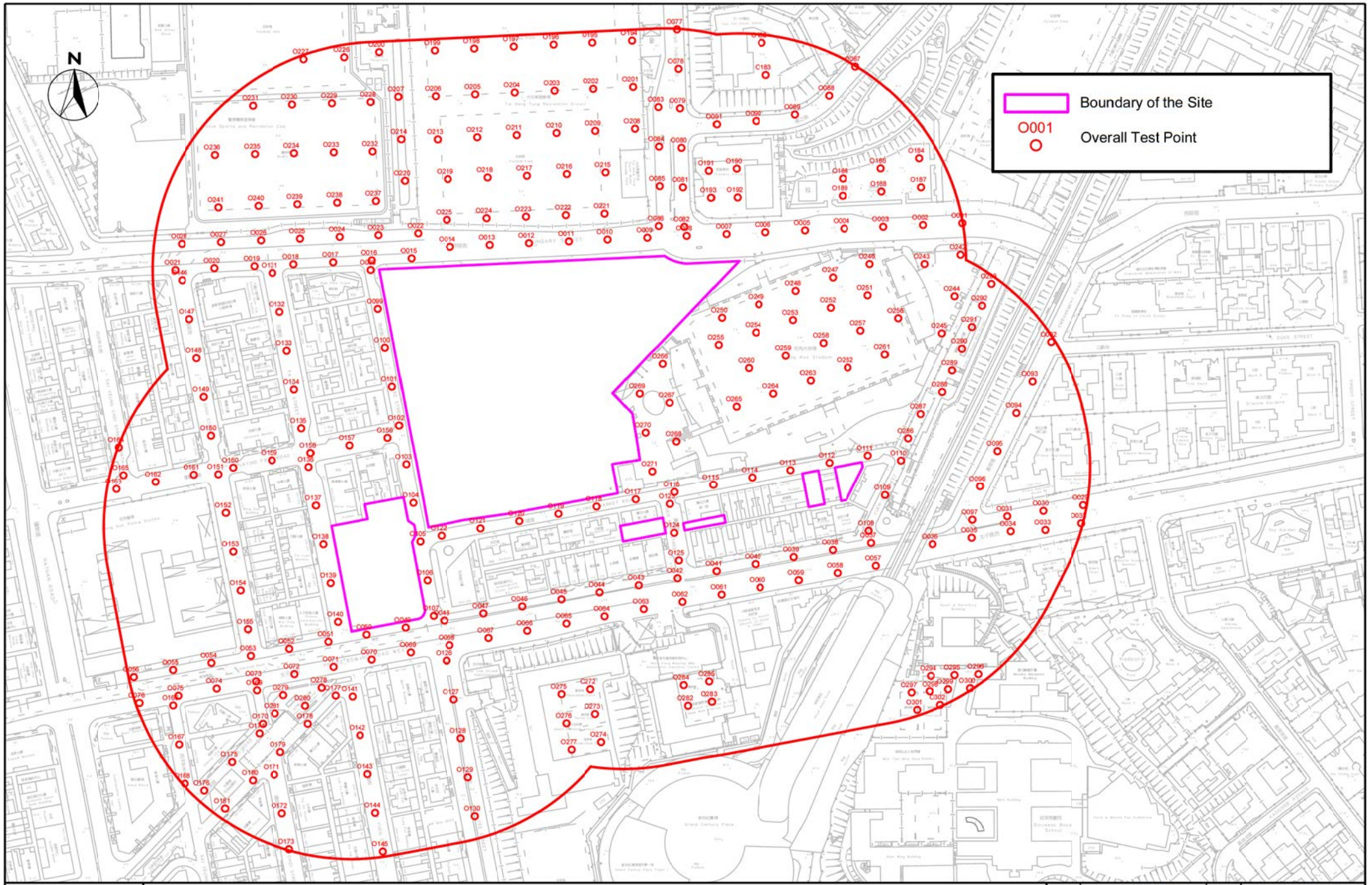
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Perimeter Test Points

SCALE	1:1000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-2
		REV	-



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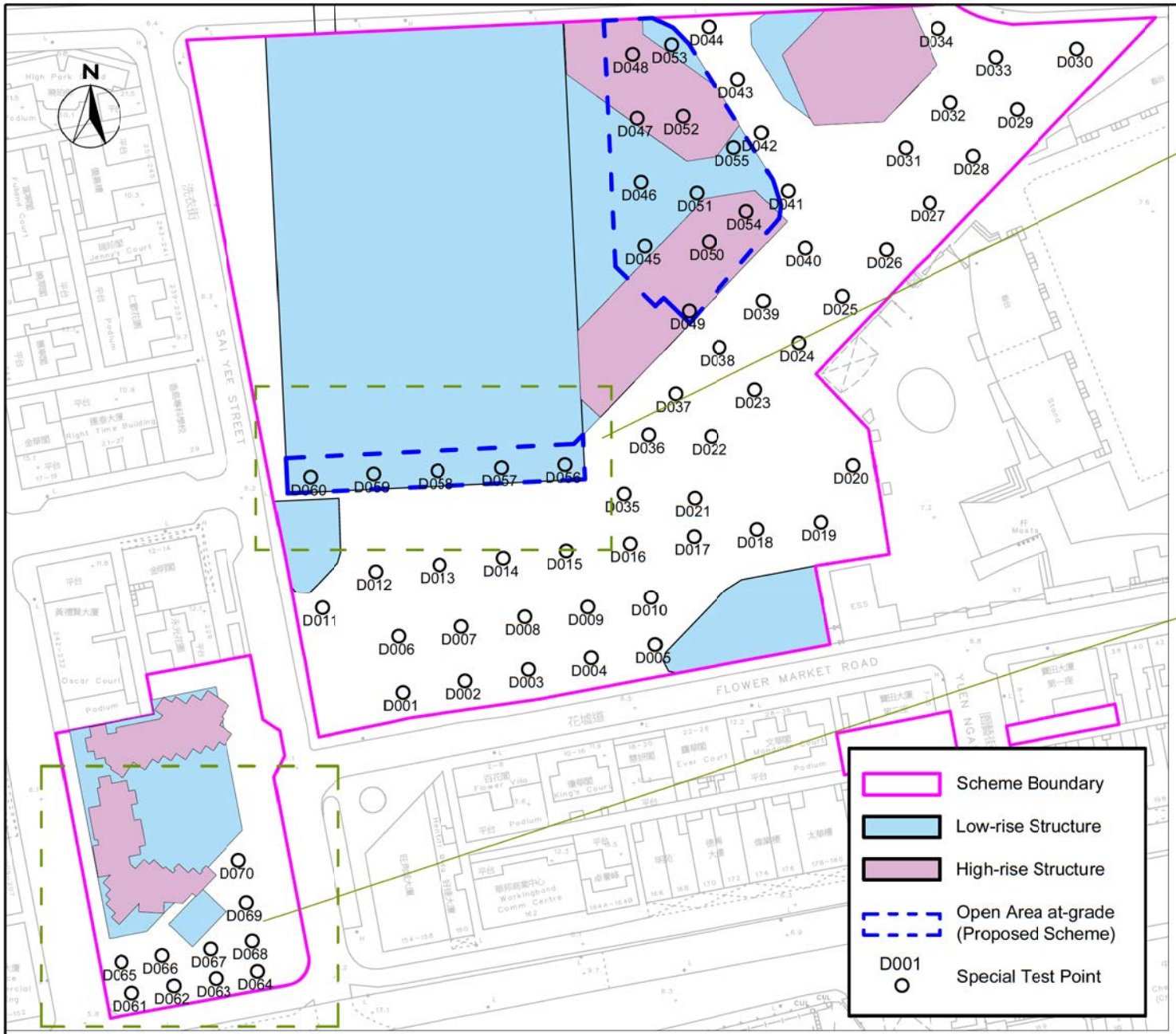
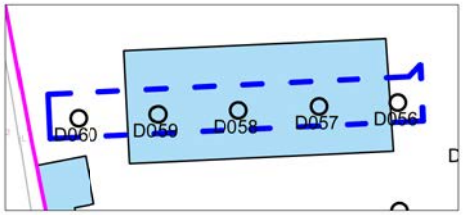
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Overall Test Points

SCALE	1:2200 @ A3	DATE	December 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-3
		REV	-



Proposed Scheme



Baseline Scheme

Site B

In the Baseline Scheme, test points D056 to D060 have been omitted due to the unavailability of most of the test points for the decked walkway.

Baseline Scheme

Site A1

In the Baseline Scheme, test points D061 to D070 have been raise to the podium level.

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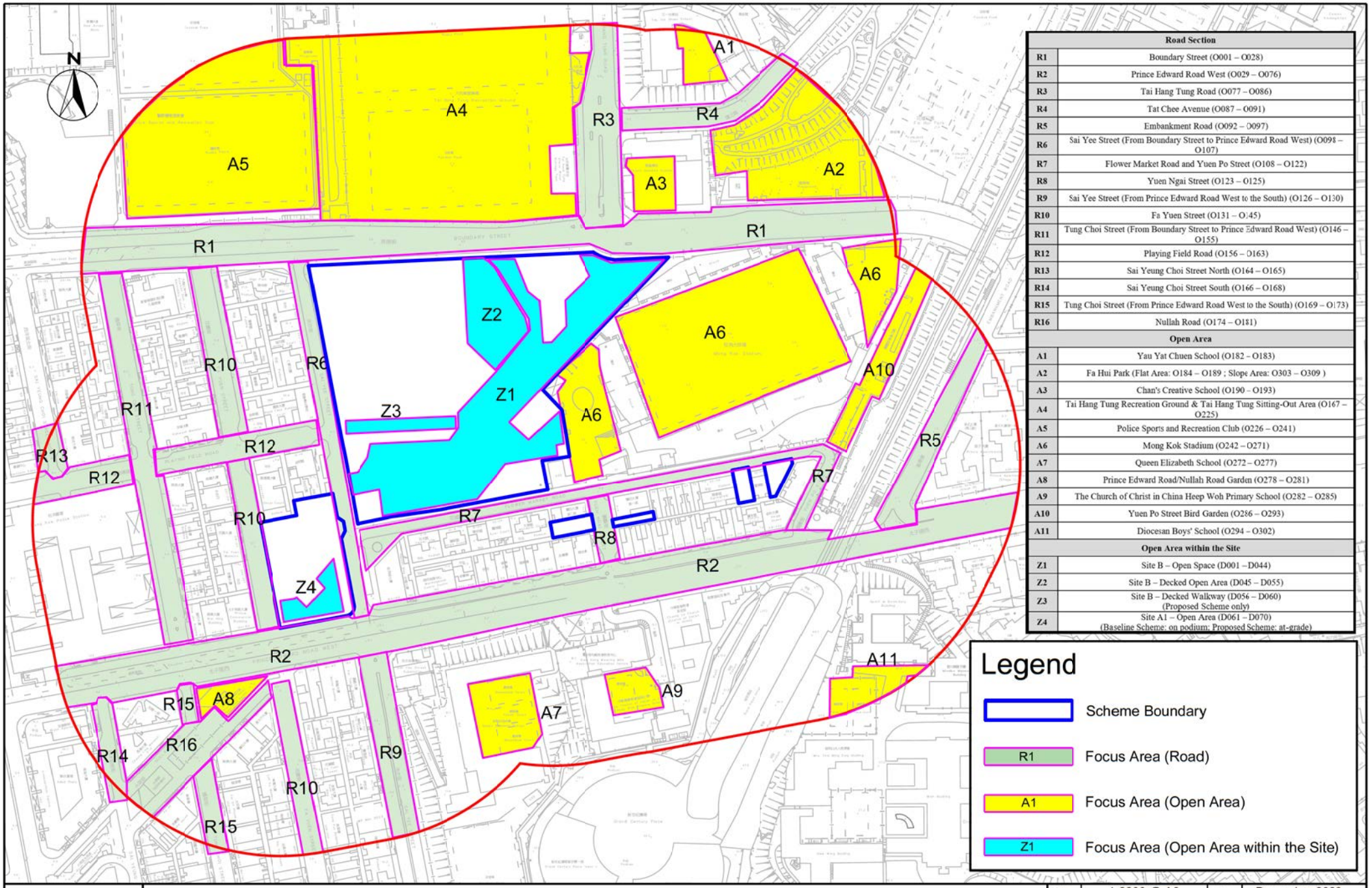
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Special Test Points

SCALE	1:1000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-4
		REV	-



Road Section	
R1	Boundary Street (O001 – O028)
R2	Prince Edward Road West (O029 – O076)
R3	Tai Hang Tung Road (O077 – O086)
R4	Tat Chee Avenue (O087 – O091)
R5	Embankment Road (O092 – O097)
R6	Sai Yee Street (From Boundary Street to Prince Edward Road West) (O098 – O107)
R7	Flower Market Road and Yuen Po Street (O108 – O122)
R8	Yuen Ngai Street (O123 – O125)
R9	Sai Yee Street (From Prince Edward Road West to the South) (O126 – O130)
R10	Fa Yuen Street (O131 – O145)
R11	Tung Choi Street (From Boundary Street to Prince Edward Road West) (O146 – O155)
R12	Playing Field Road (O156 – O163)
R13	Sai Yeung Choi Street North (O164 – O165)
R14	Sai Yeung Choi Street South (O166 – O168)
R15	Tung Choi Street (From Prince Edward Road West to the South) (O169 – O173)
R16	Nullah Road (O174 – O181)
Open Area	
A1	Yau Yat Chuen School (O182 – O183)
A2	Fa Hui Park (Flat Area: O184 – O189 ; Slope Area: O303 – O309)
A3	Chan's Creative School (O190 – O193)
A4	Tai Hang Tung Recreation Ground & Tai Hang Tung Sitting-Out Area (O167 – O225)
A5	Police Sports and Recreation Club (O226 – O241)
A6	Mong Kok Stadium (O242 – O271)
A7	Queen Elizabeth School (O272 – O277)
A8	Prince Edward Road/Nullah Road Garden (O278 – O281)
A9	The Church of Christ in China Heep Woh Primary School (O282 – O285)
A10	Yuen Po Street Bird Garden (O286 – O293)
A11	Diocesan Boys' School (O294 – O302)
Open Area within the Site	
Z1	Site B – Open Space (D001 – D044)
Z2	Site B – Decked Open Area (D045 – D055)
Z3	Site B – Decked Walkway (D056 – D060) (Proposed Scheme only)
Z4	Site A1 – Open Area (D061 – D070) (Baseline Scheme: on podium; Proposed Scheme: at-grade)

Legend

- Scheme Boundary
- R1 — Focus Area (Road)
- A1 — Focus Area (Open Area)
- Z1 — Focus Area (Open Area within the Site)

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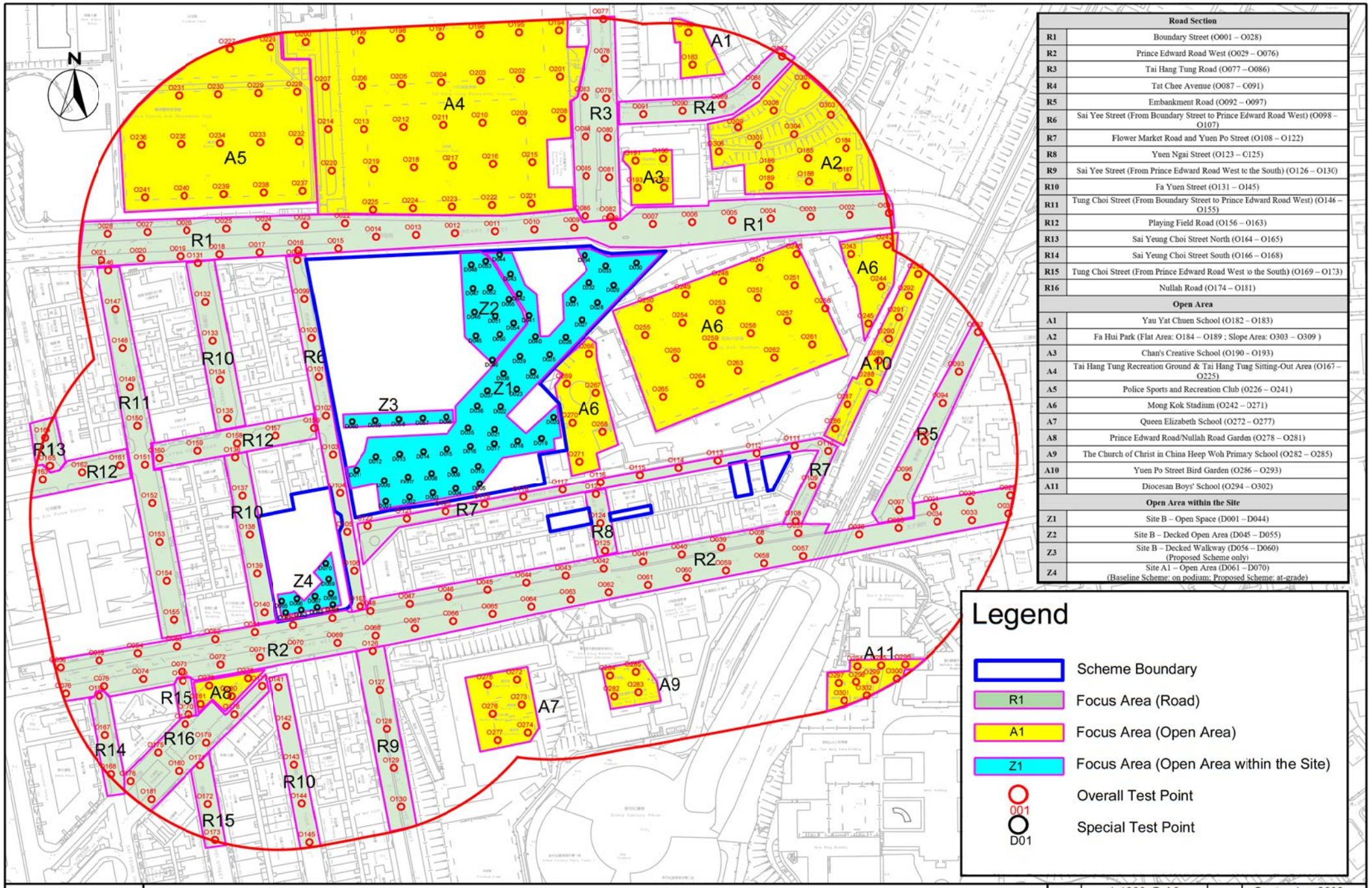
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Focus Areas

SCALE	1:2200 @ A3	DATE	December 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-5a
		REV	-



Road Section	
R1	Boundary Street (O001 – O028)
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R3	Tai Hang Tung Road (O077 – O086)
R4	Tat Chee Avenue (O087 – O091)
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R13	Sai Yeung Choi Street North (O164 – O165)
R14	Sai Yeung Choi Street South (O166 – O168)
R15	Tung Choi Street (From Prince Edward Road West to the South) (O169 – O173)
R16	Nullah Road (O174 – O181)
Open Area	
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A5	Police Sports and Recreation Club (O226 – O241)
A6	Mong Kok Stadium (O242 – O271)
A7	Queen Elizabeth School (O272 – O277)
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Open Area within the Site	
Z1	Site B – Open Space (D001 – D044)
Z2	Site B – Decked Open Area (D045 – D055)
Z3	Site B – Decked Walkway (D056 – D060) (Proposed Scheme only)
Z4	Site A1 – Open Area (D061 – D070) (Baseline Scheme: on podium; Proposed Scheme: at-grade)

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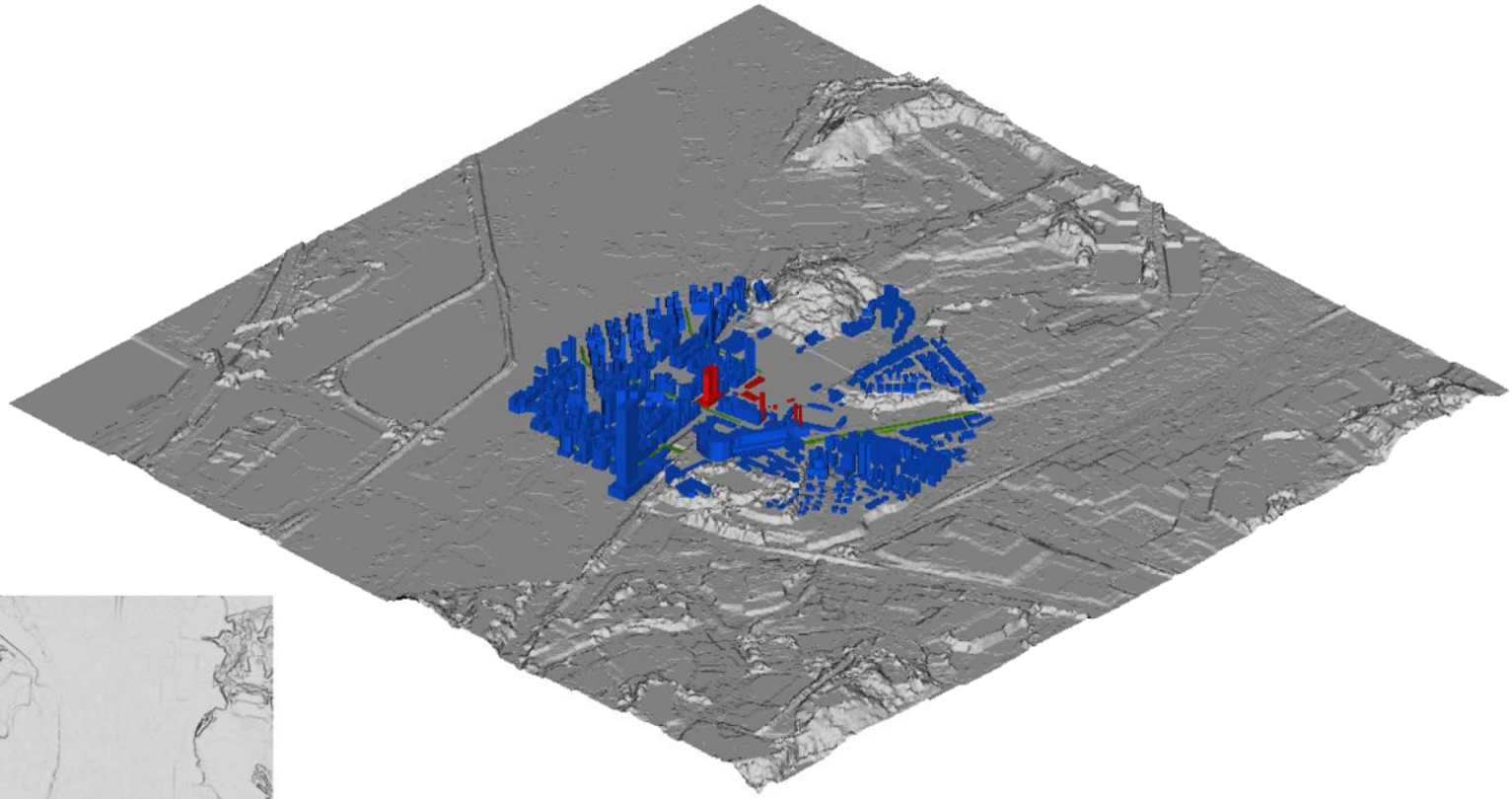
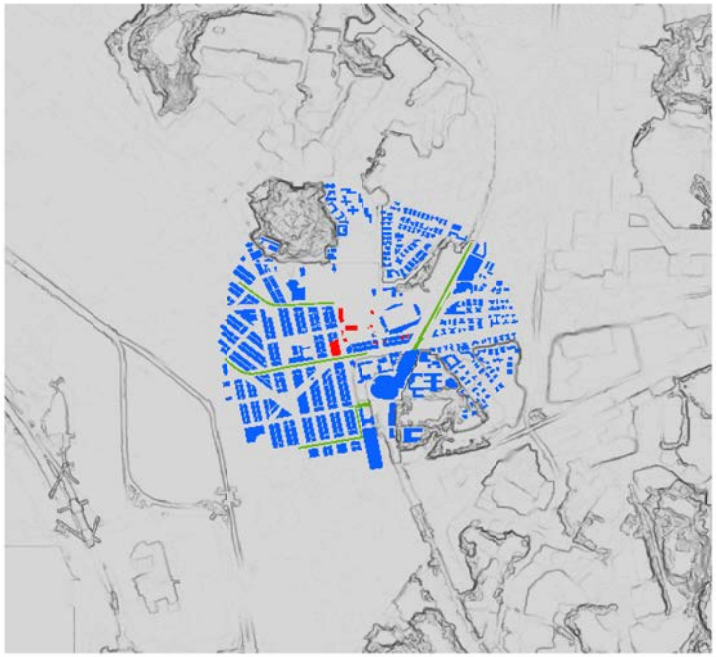
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Focus Areas (With Test Points)

SCALE	1:1000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-5b
		REV	-





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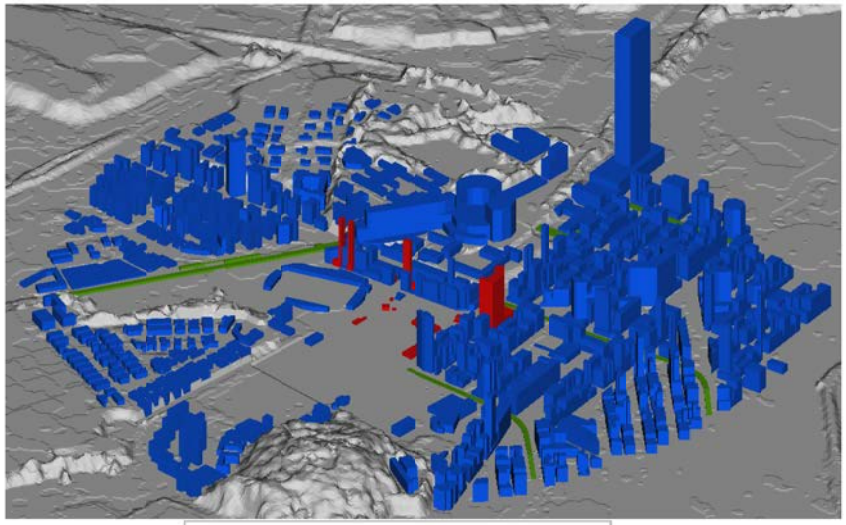
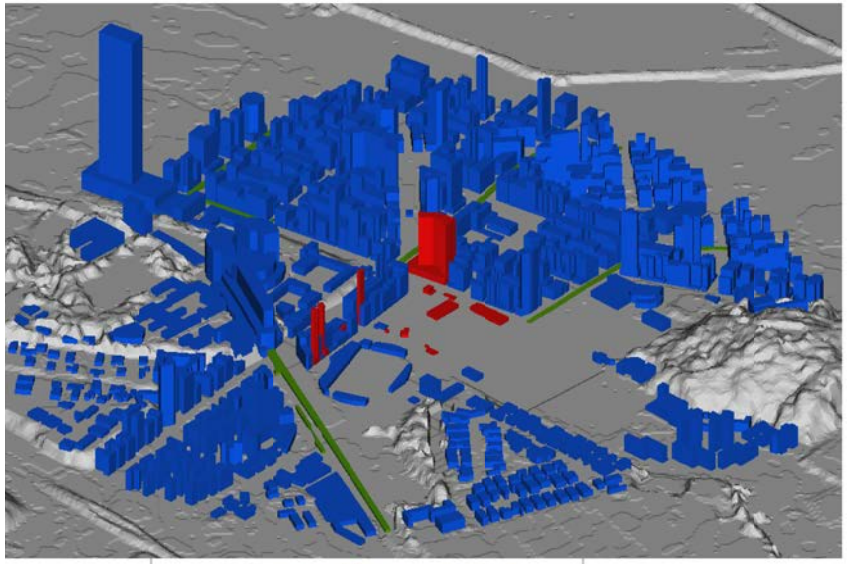
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Terrain Included in the CFD Models

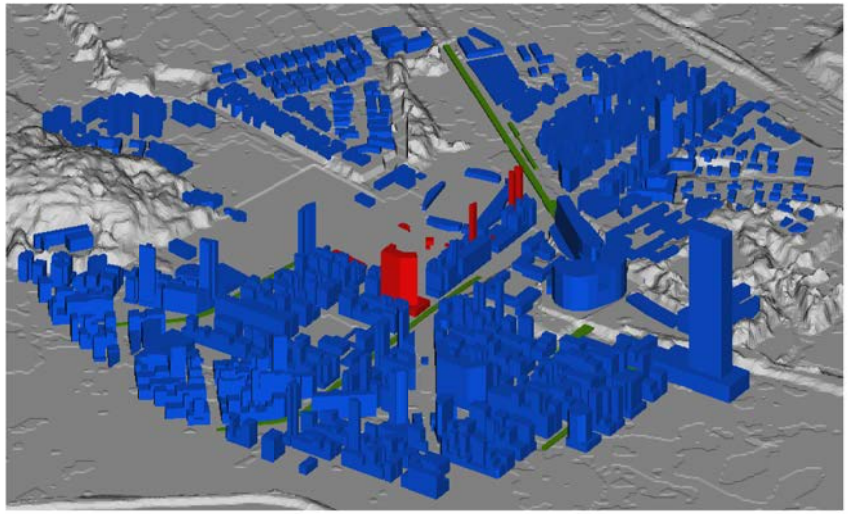
SCALE	N.T.S.	DATE	Dec-23	
CHECK	KC	DRAWN	CC	
JOB NO.	IA1902\YAMM1-01-P1	FIGURE NO.	3-6a	REV.
				-



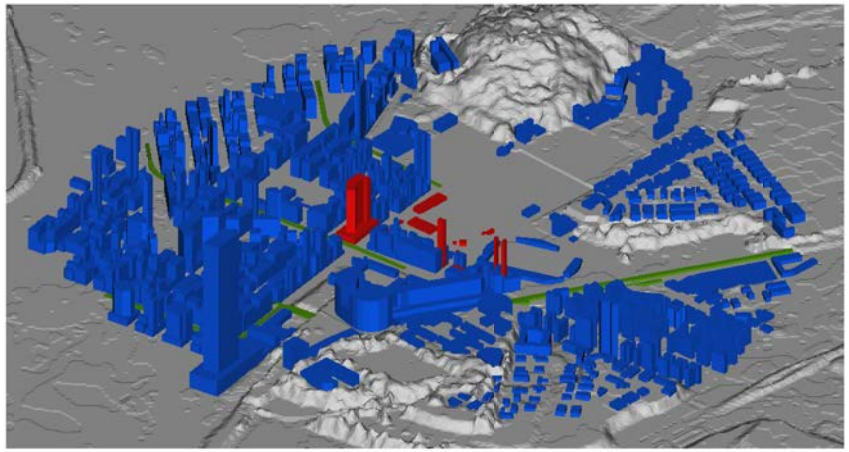
View from NW



View from NE



View from SW



View from SE

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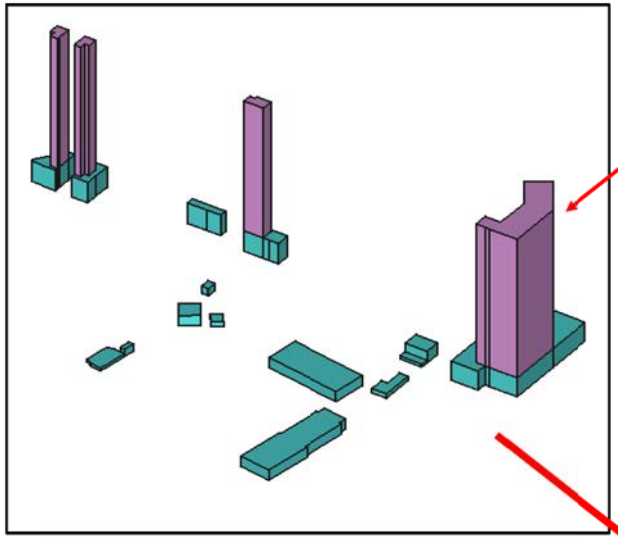
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

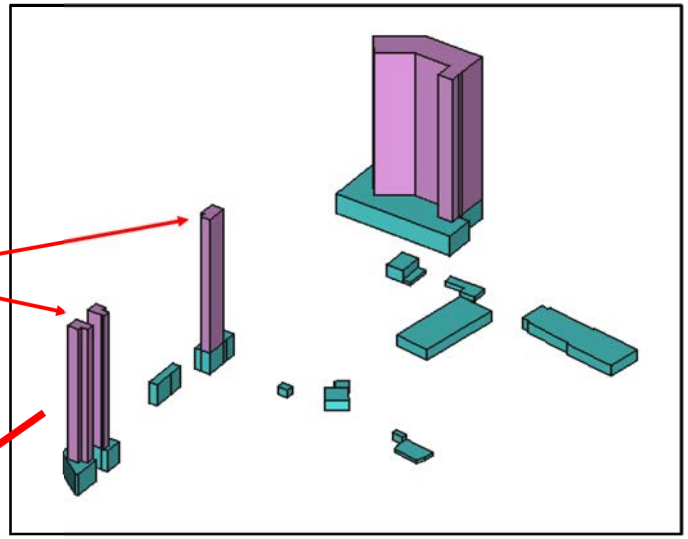
Buildings Included in the CFD Models (Baseline Scheme)

SCALE	N.T.S.	DATE	Dec-23
CHECK	KC	DRAWN	CC
JOB NO.	IA1902\YAMM1-01-P1	FIGURE NO.	3-6b
			REV. -



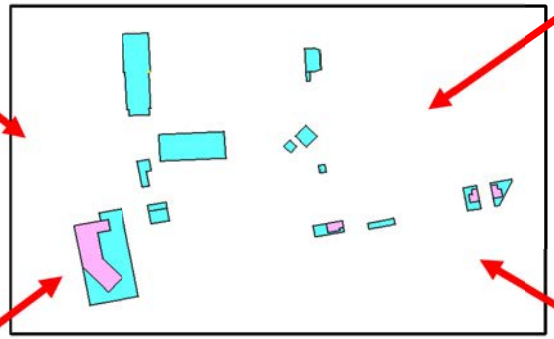
Tower of 115 mPD

Towers of 110 mPD



View from NW

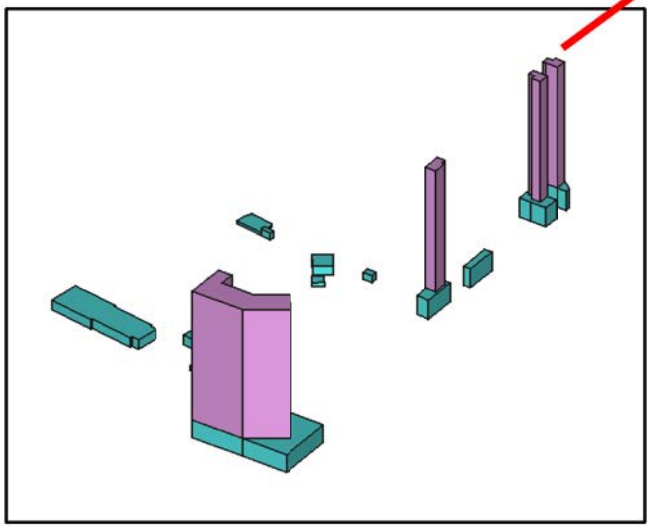
View from NE

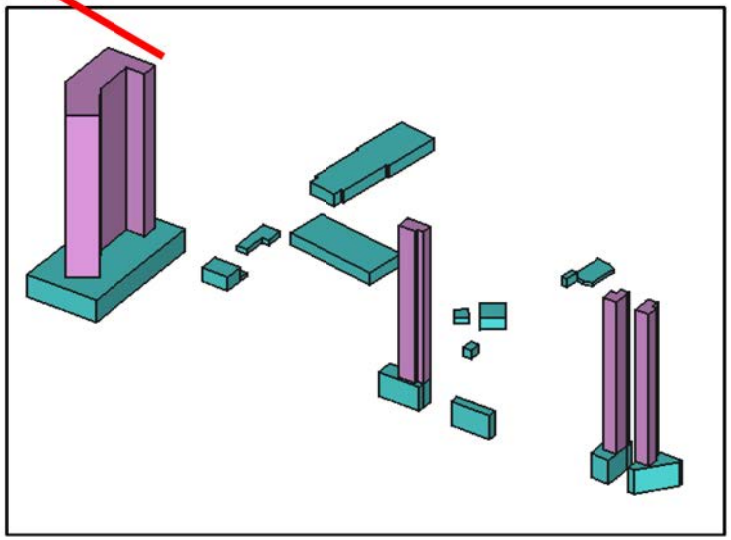


View from SW

View from Top

View from SE





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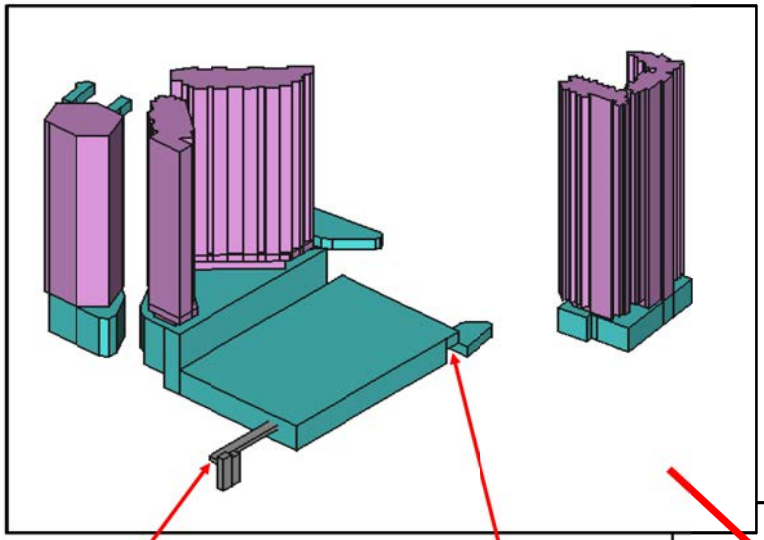
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

3D Model of the Baseline Buildings

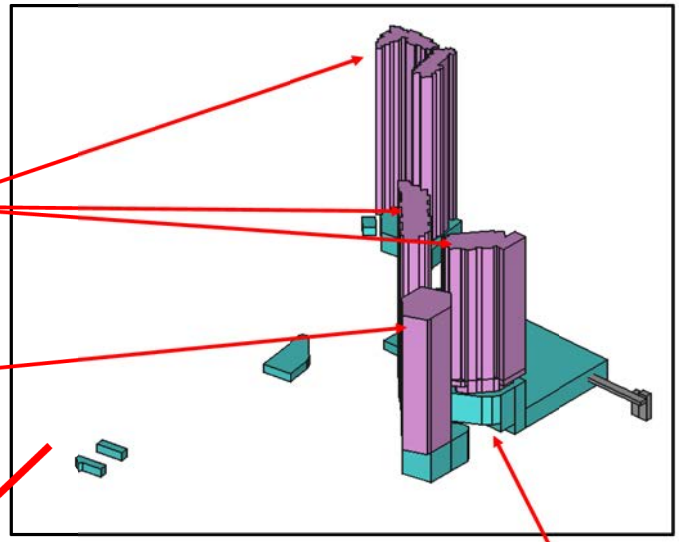
SCALE	N.T.S.	DATE	Dec-23
CHECK	KC	DRAWN	CC
JOB NO.	IA1902/YAMM1-01-P1	FIGURE NO.	3-7a
			REV. -



View from NW

The planned footbridge (not part of the Scheme) is included in the model of Propsoed Scheme

Decked Walkway

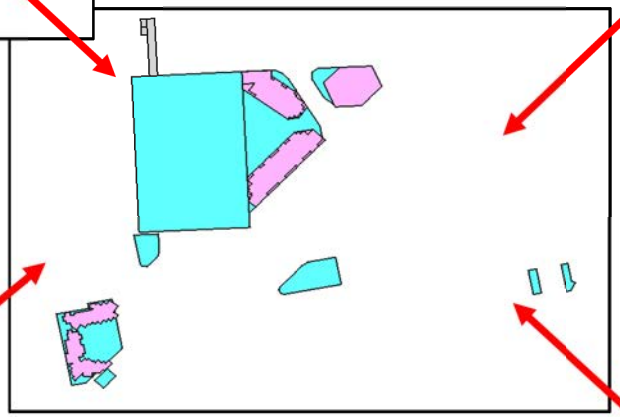


Residential Towers of 150 mPD

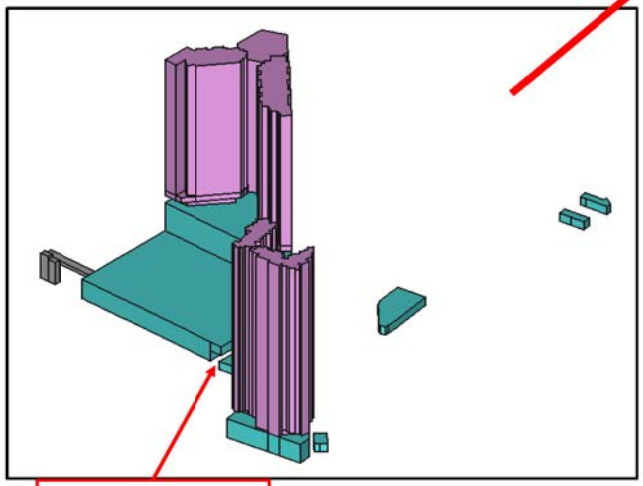
Hotel/Office Tower of 130 mPD

View from NE

Opening at-grade



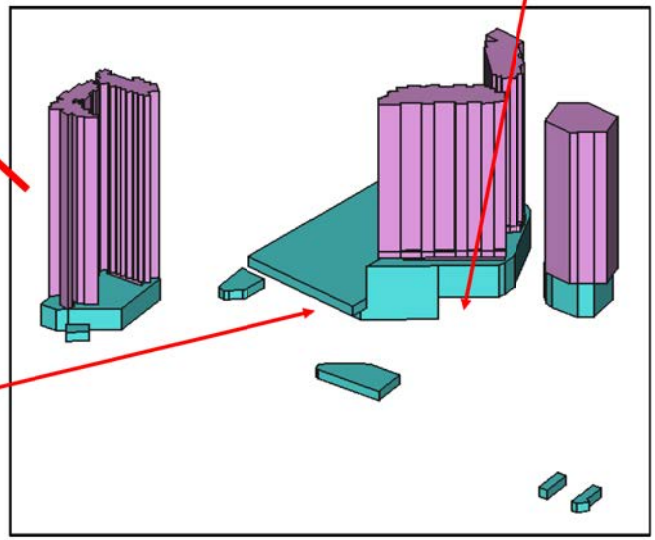
View from Top



View from SW

Decked Walkway

View from SE



Decked Walkway

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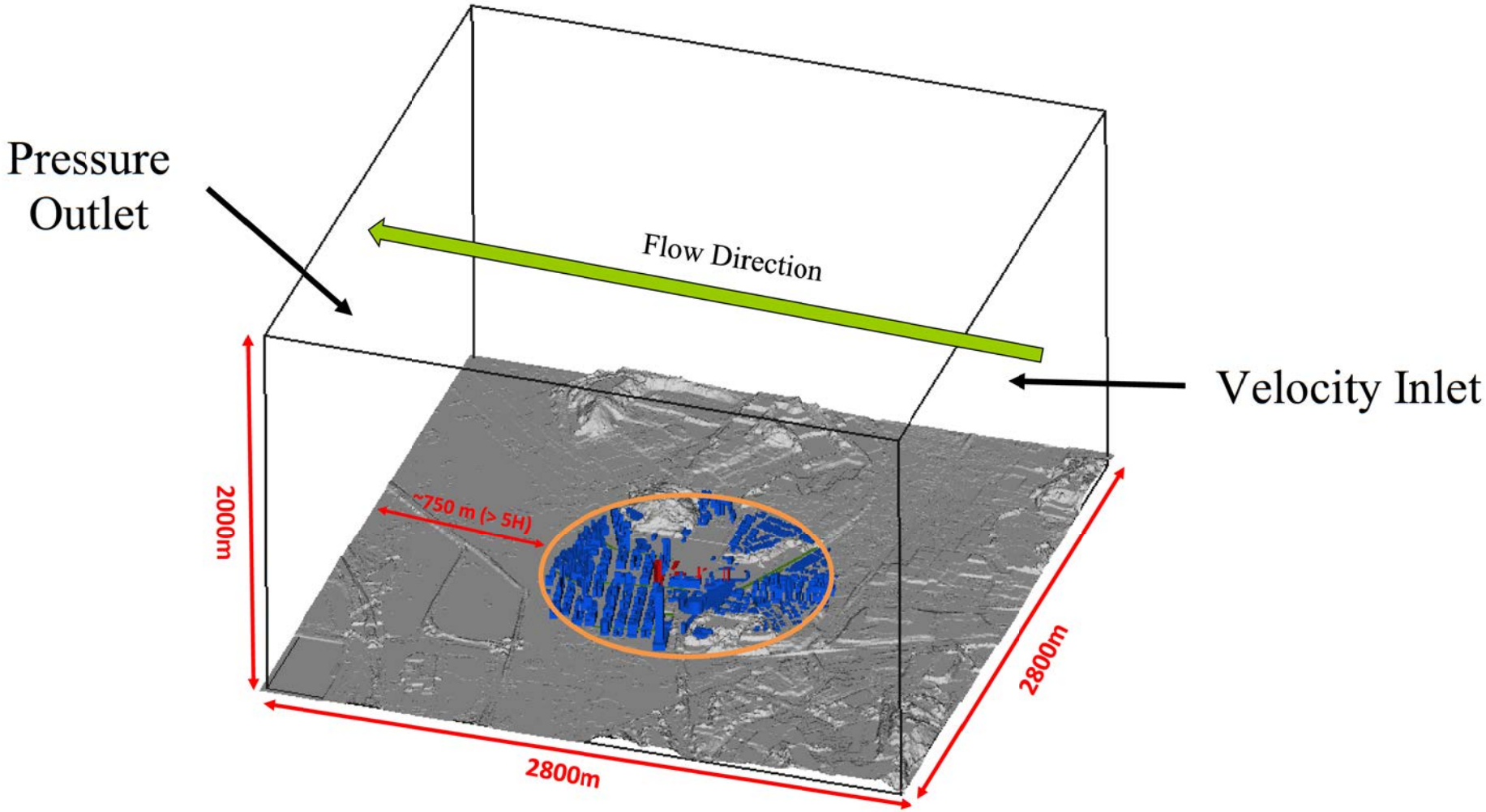
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

3D Model of the Proposed Buildings

SCALE	N.T.S.	DATE	Dec-23
CHECK	KC	DRAWN	CC
JOB NO.	IA1902/YAMM1-01-P1	FIGURE NO.	3-7b
			REV. -



Ground & Building Walls: Solid Wall

* Setting for 90 deg Wind is adopted in this example
# Height of Proposed Development, H = 144 m ; Required Distance from Boundary = 5 x 144 = 720m

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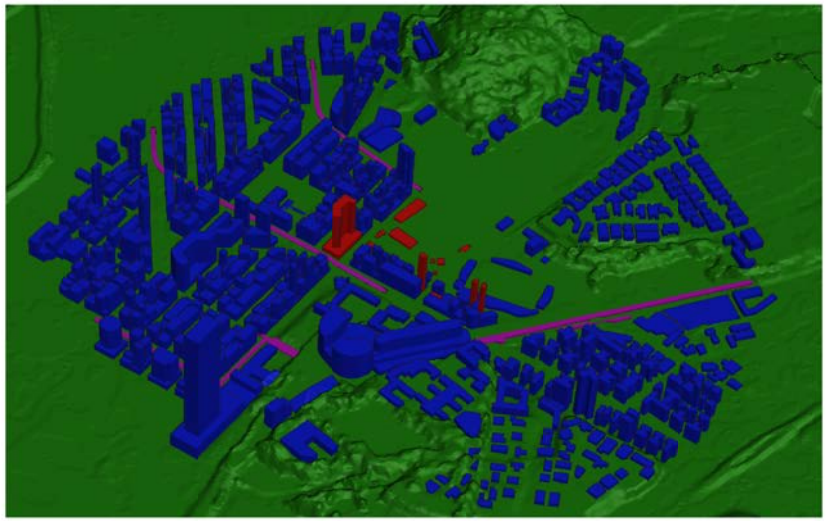
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

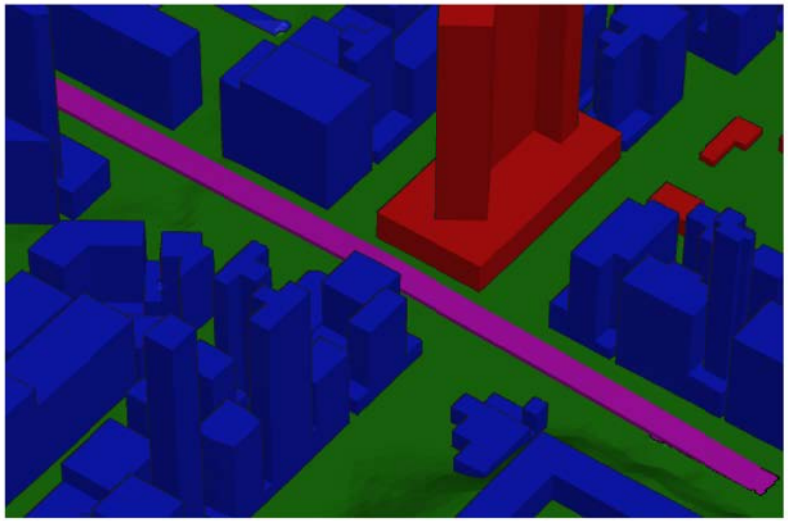
Computational Domain

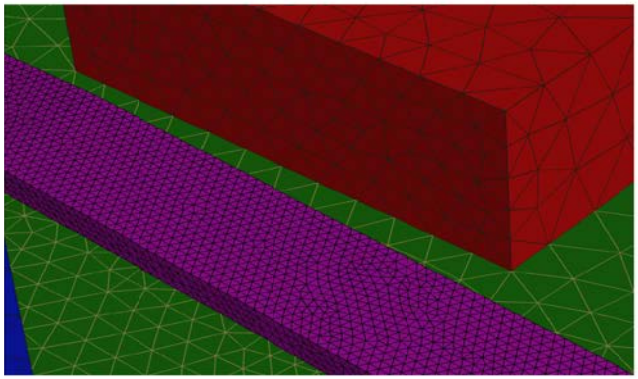
SCALE	N.T.S.	DATE	Dec-23
CHECK	KC	DRAWN	CC
JOB NO.	IA1902\YAMM1-01-P1	FIGURE NO.	3-8
			REV. -

All building in the Baseline Scheme

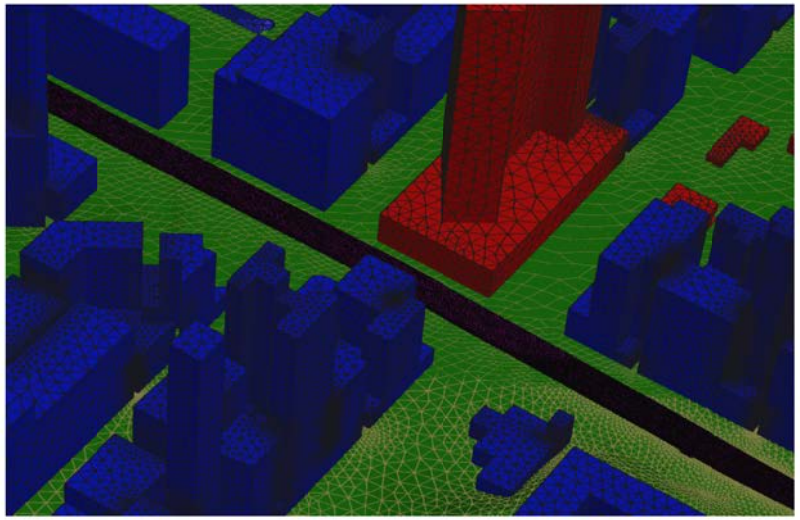


Near Baseline Building (Site A1)





2D Meshes of the Flyover



2D Meshes Near Baseline Building (Site A1)

Screen capurted from the Baseline Scheme

CINOTECH 漢蘇 consultants limited

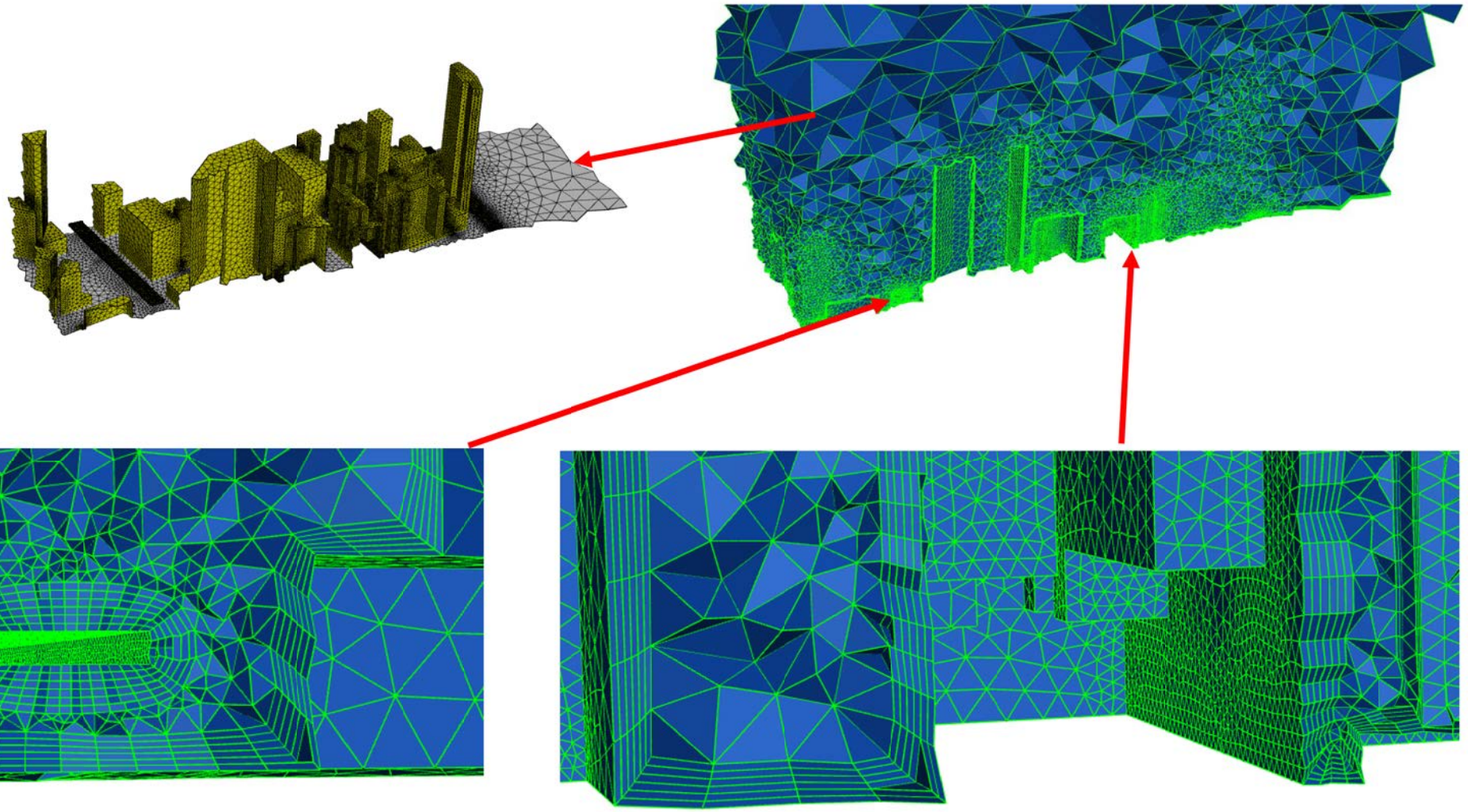
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Meshes on 2D Surfaces

SCALE	N.T.S.	DATE	Dec-23
CHECK	KC	DRAWN	CC
JOB NO.	IA19021YAMM1-01-P1	FIGURE NO. 3-9	REV. -

Portion of the Domain

3D Meshes of the Portion



Prism Layers on ground and flyover (6 layers)

Prism Layers on ground and building facades (6 layers)

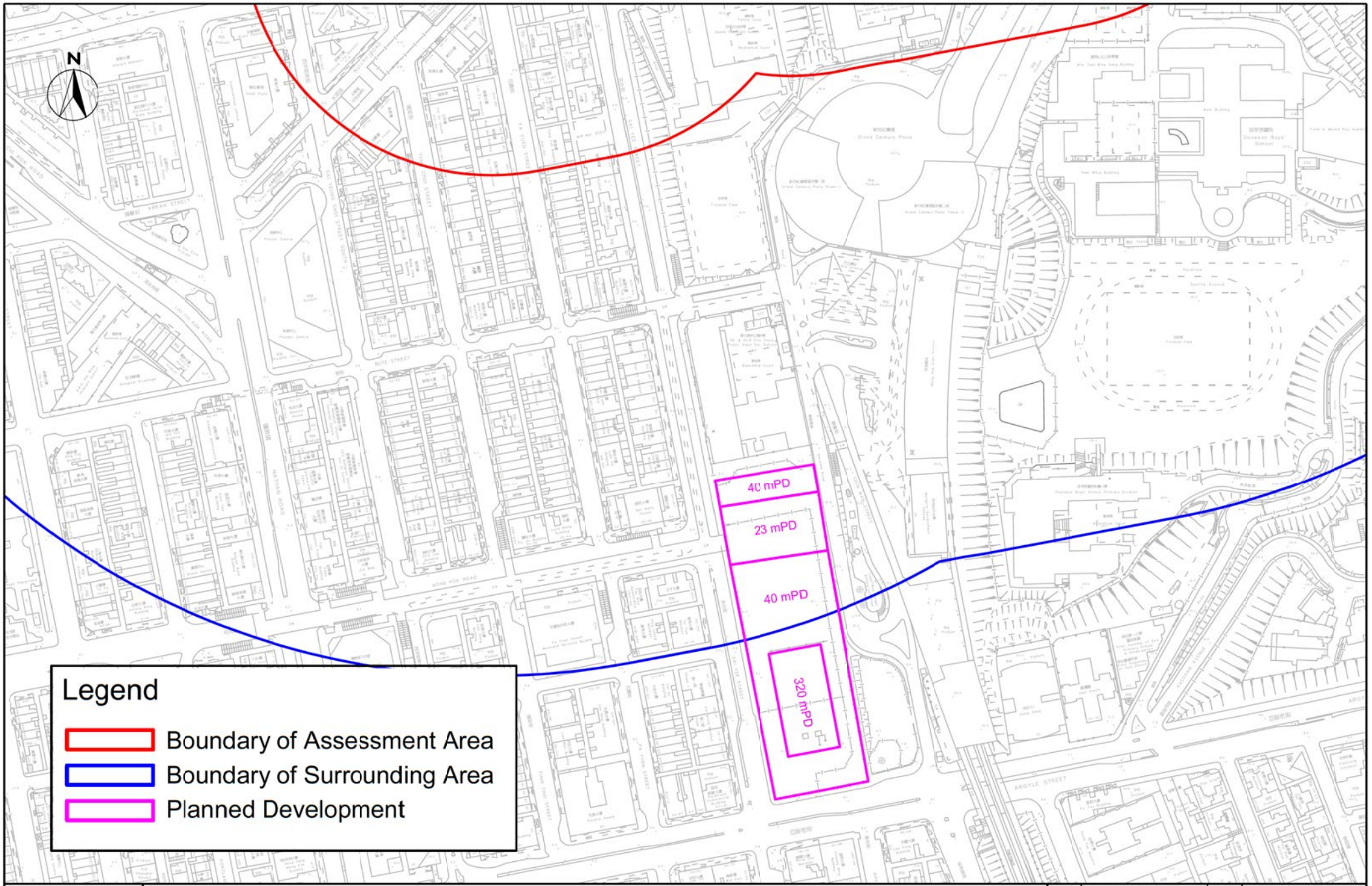
Screen capurted from the Baseline Scheme

CINOTECH consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Meshes on 3D Space

SCALE	N.T.S.	DATE	Dec-23
CHECK	KC	DRAWN	CC
JOB NO.	IA1902\YAMM1-01-P1	FIGURE NO.	3-10
			REV. -



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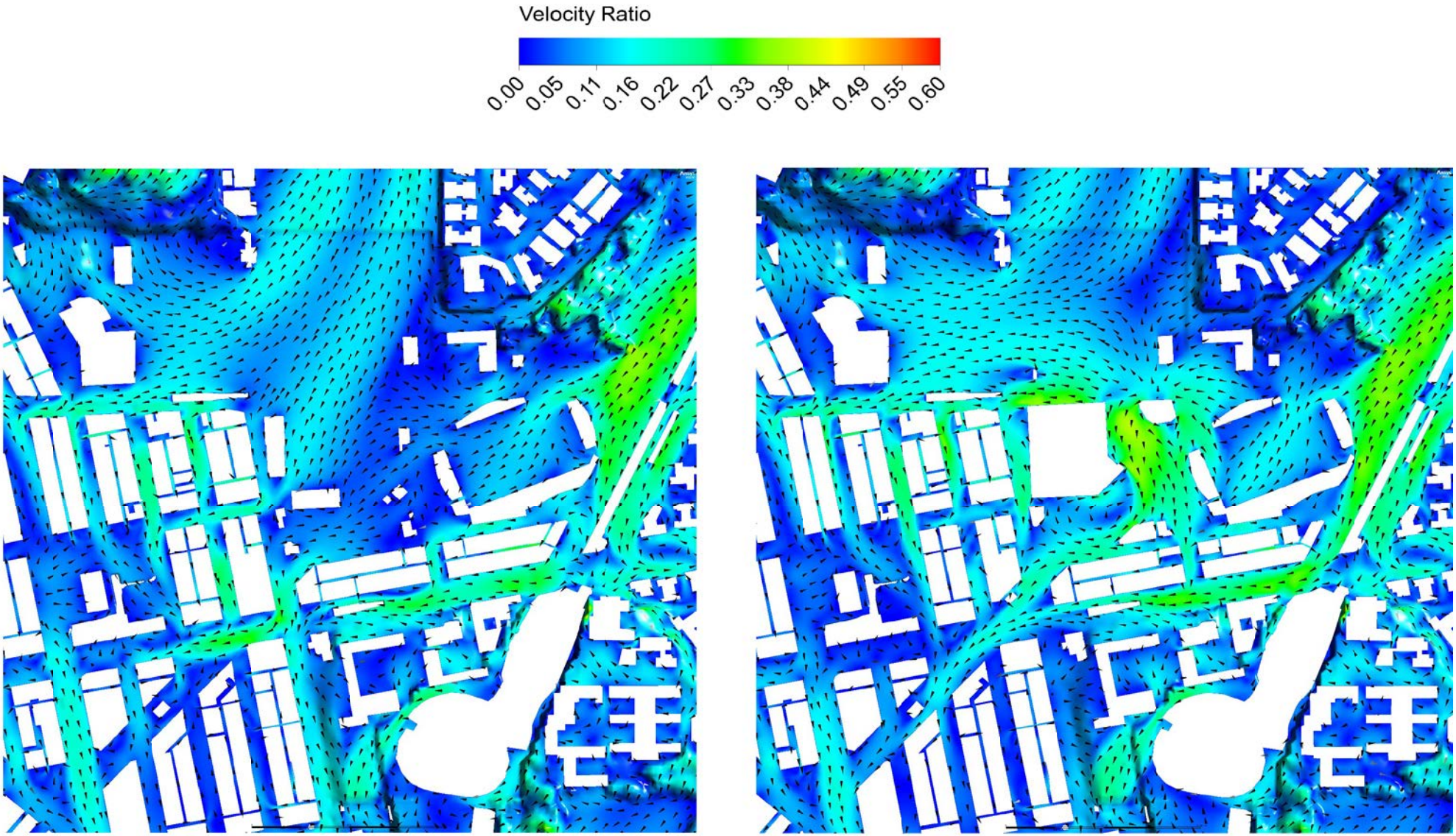
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Identified Planned Development

SCALE	1:2000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-11
		REV	-



Baseline Scheme

Proposed Scheme

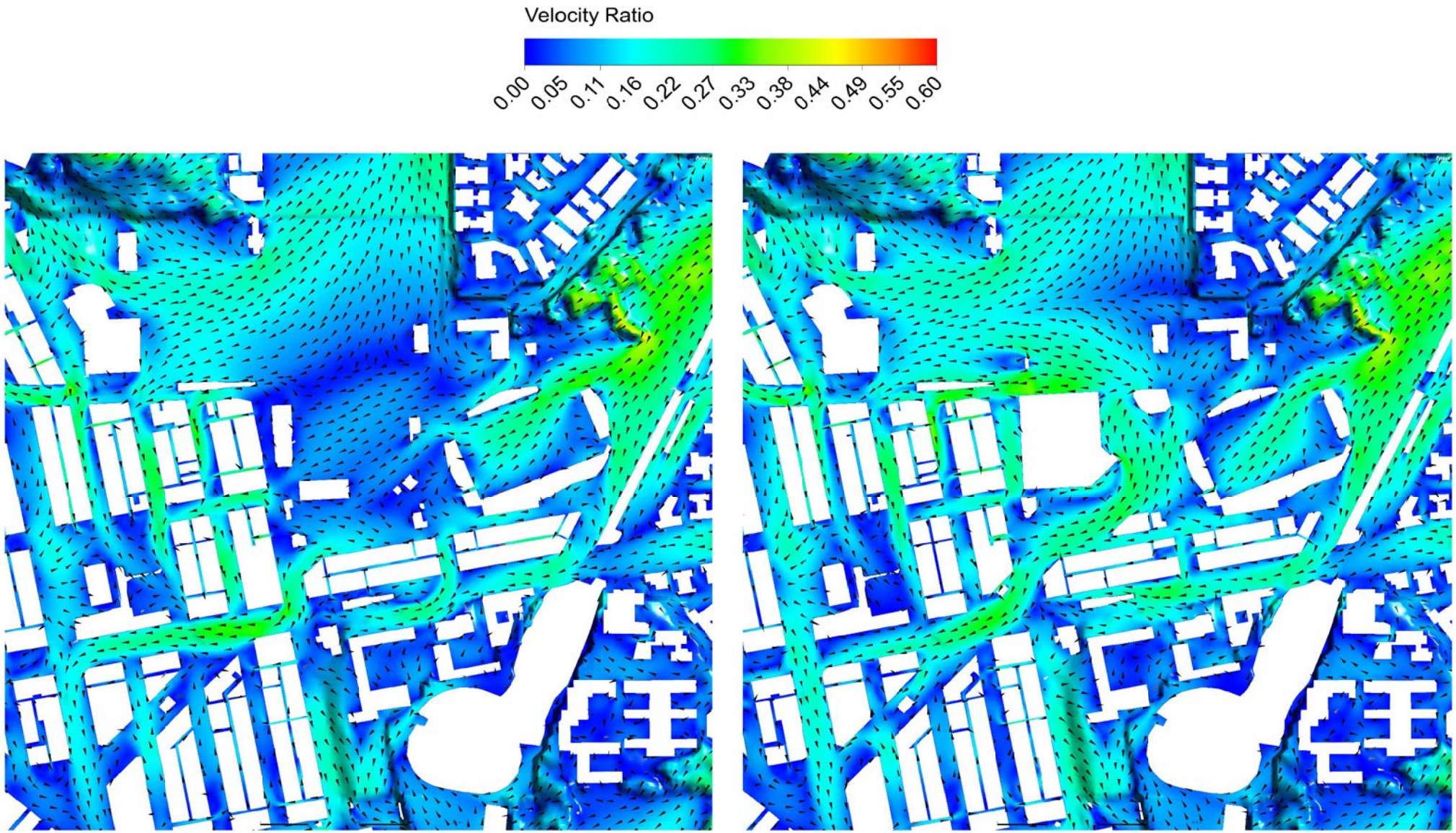
022.5 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1a	REV.
				-



Baseline Scheme

Proposed Scheme

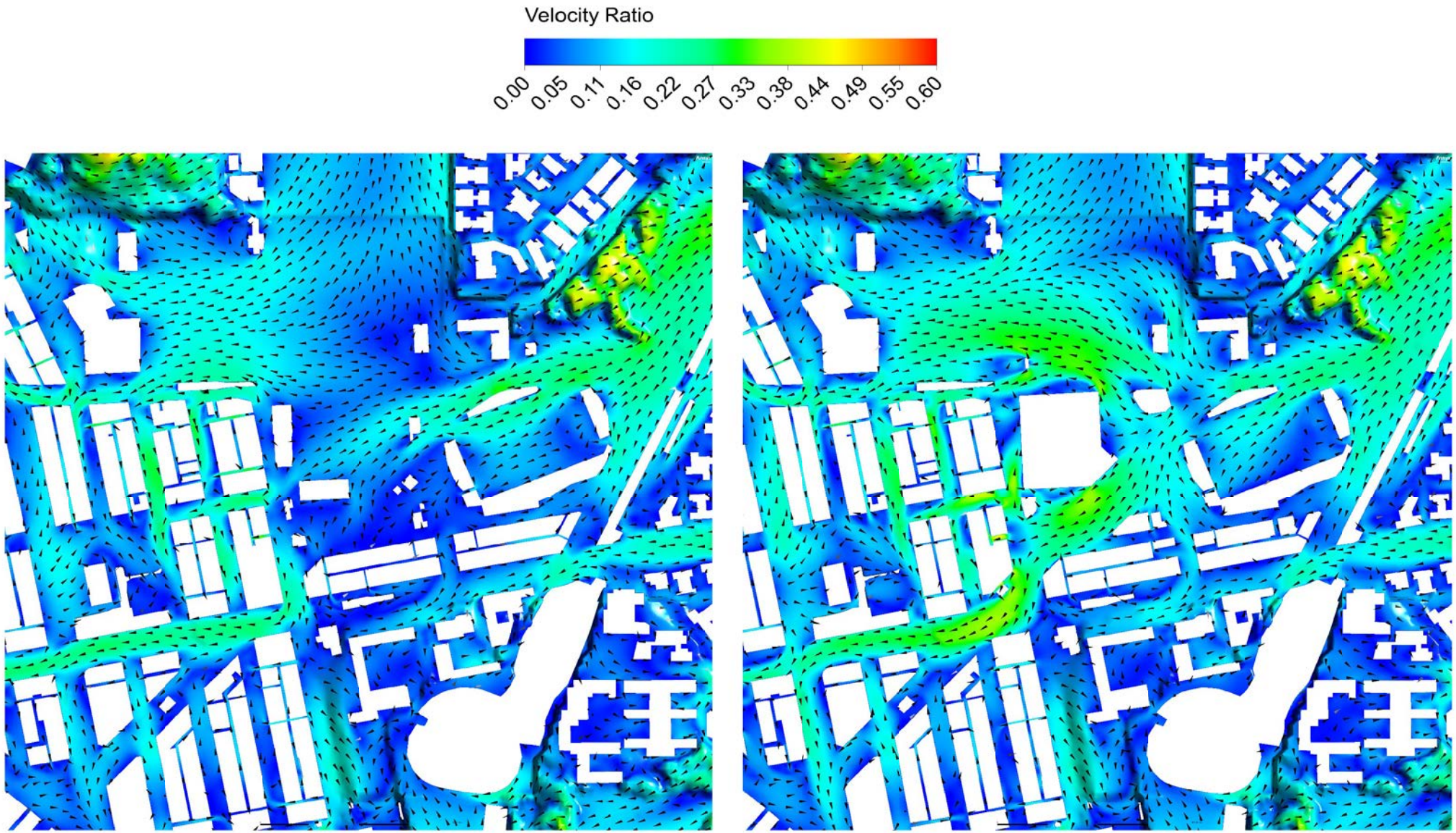
045 deg Wind Direction

CINOTECH 漢蓁 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1b	REV.
				-



Baseline Scheme

Proposed Scheme

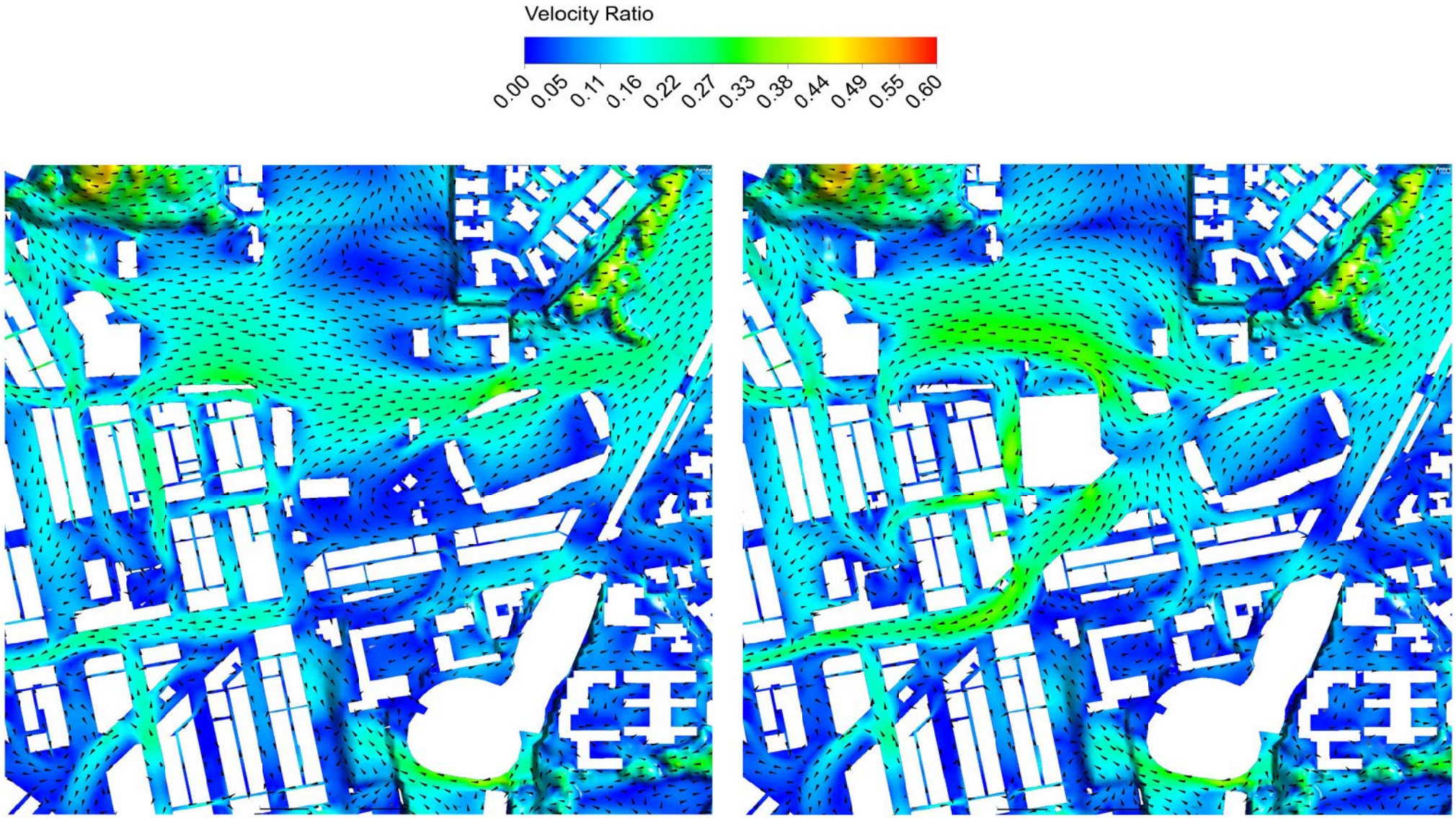
067.5 deg Wind Direction

CINOTECH 漢蒽 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1c	REV.
				-



Baseline Scheme

Proposed Scheme

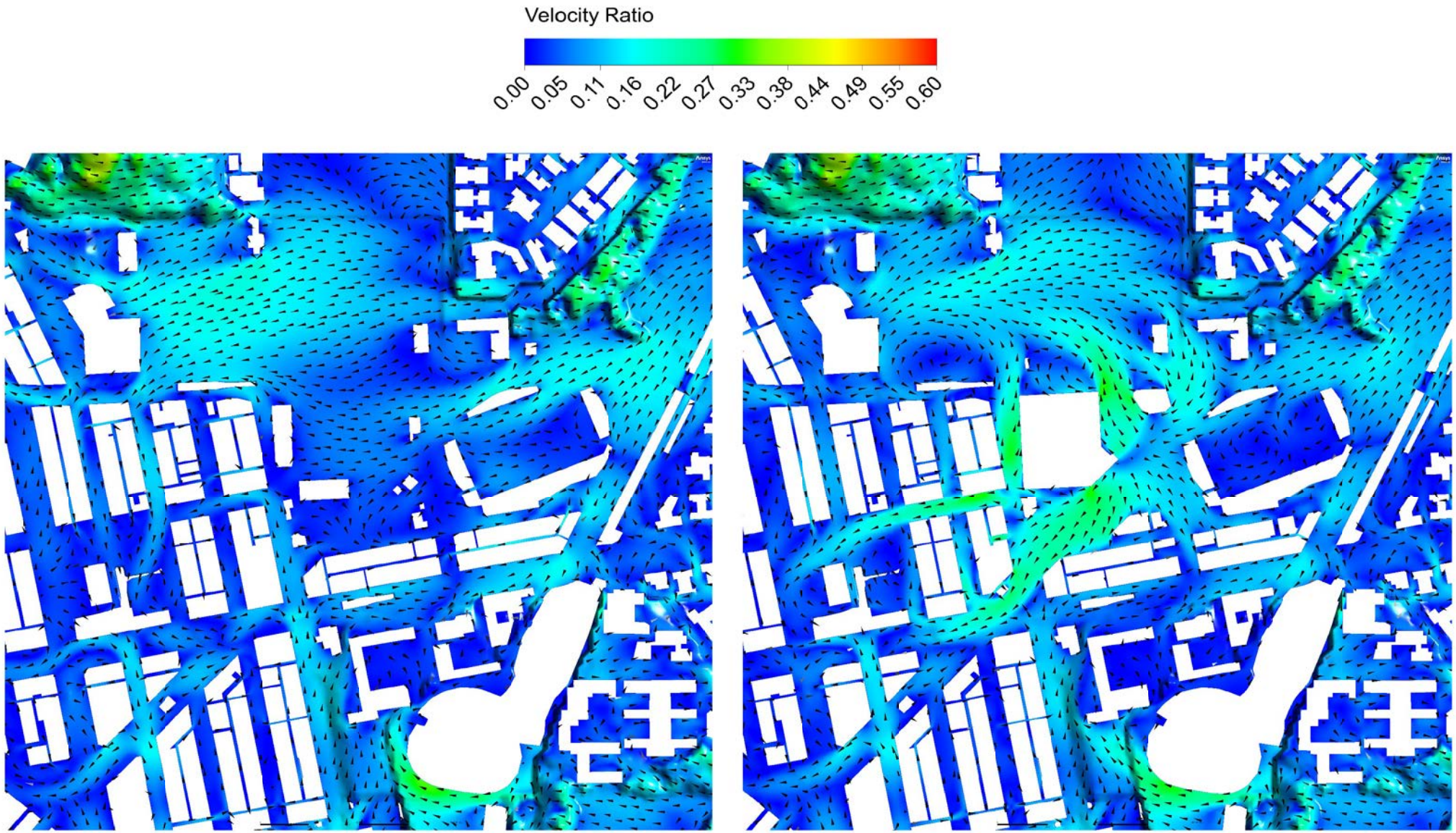
090 deg Wind Direction

CINOTECH 漢蒽 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1d	REV.
				-



Baseline Scheme

Proposed Scheme

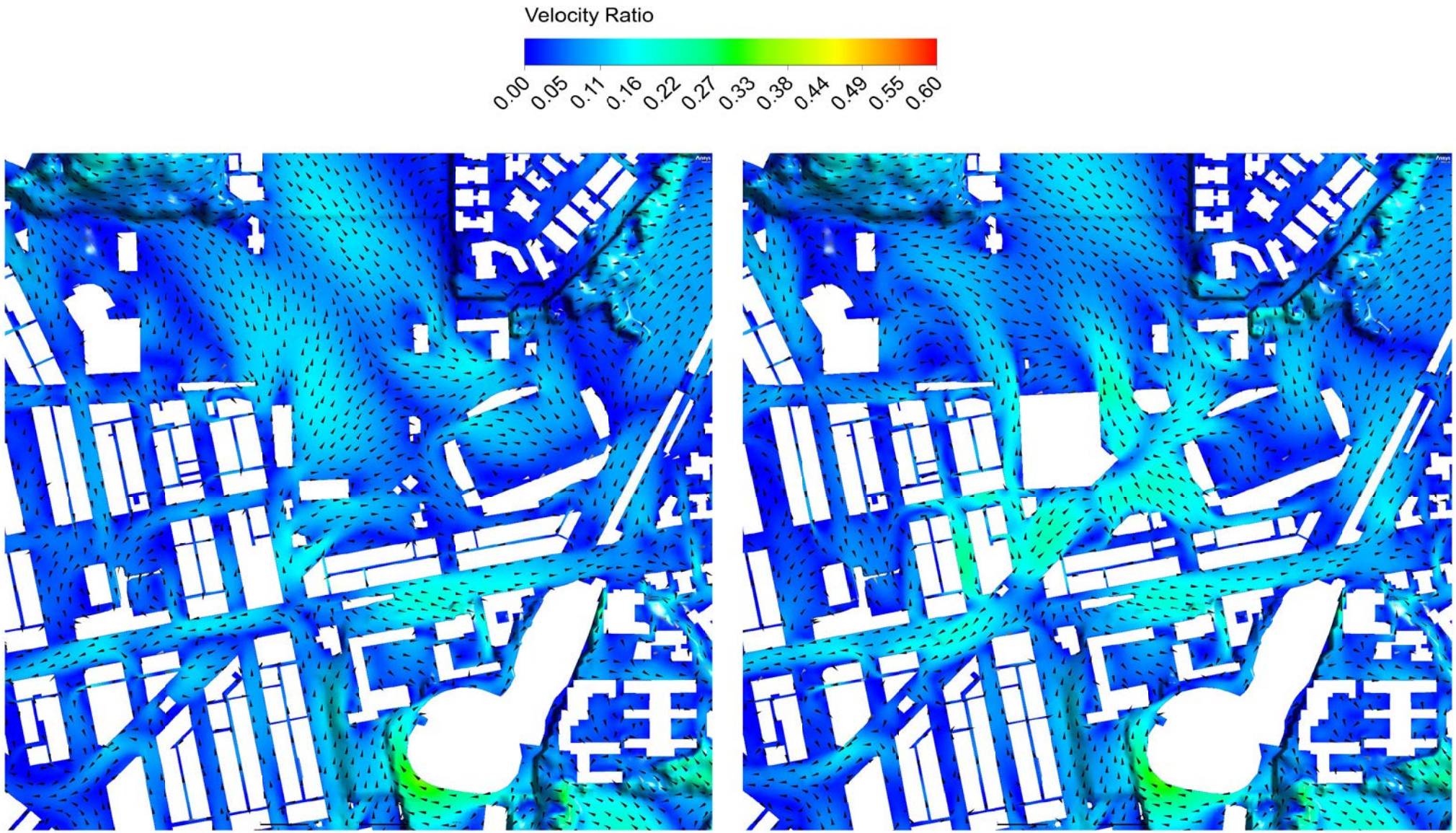
112.5 deg Wind Direction

CINOTECH 漢蕾 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1e	REV.
				-



Baseline Scheme

Proposed Scheme

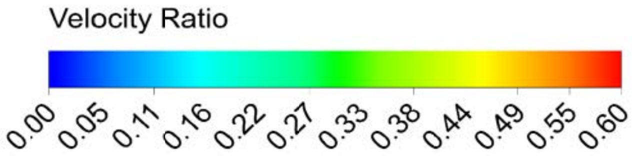
135 deg Wind Direction

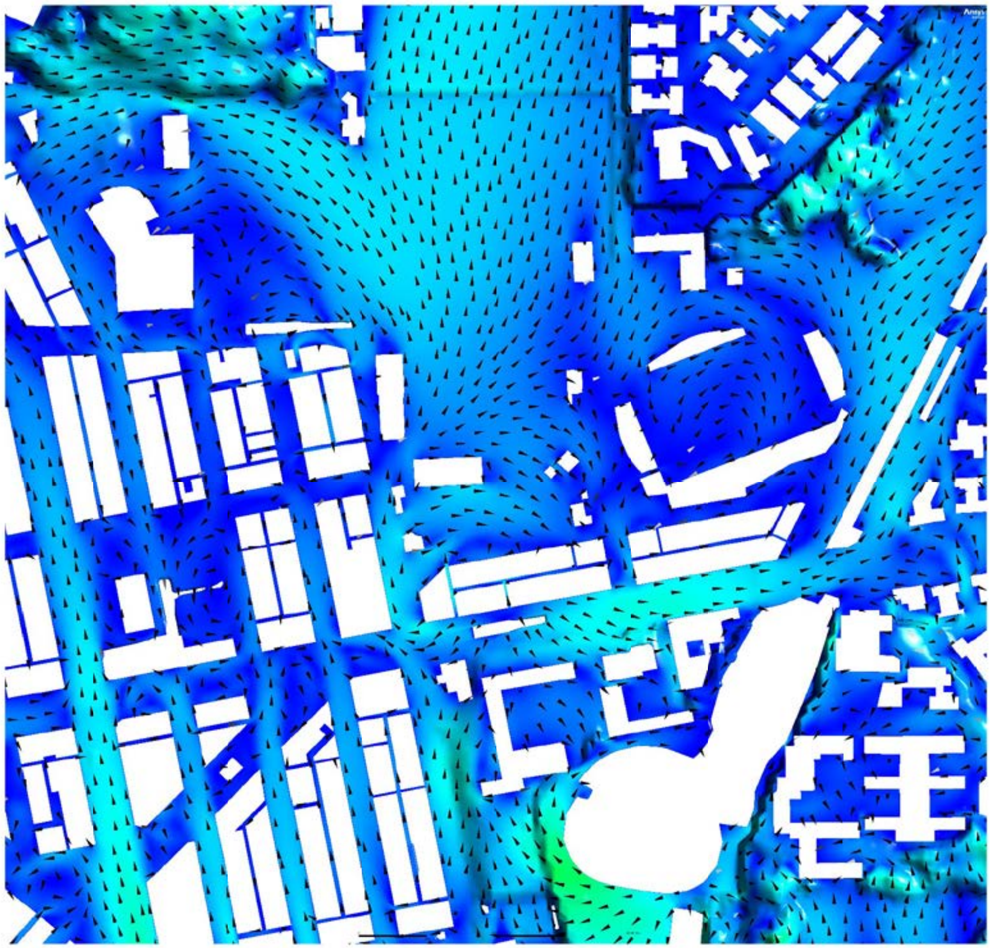
CINOTECH 漢蕾 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

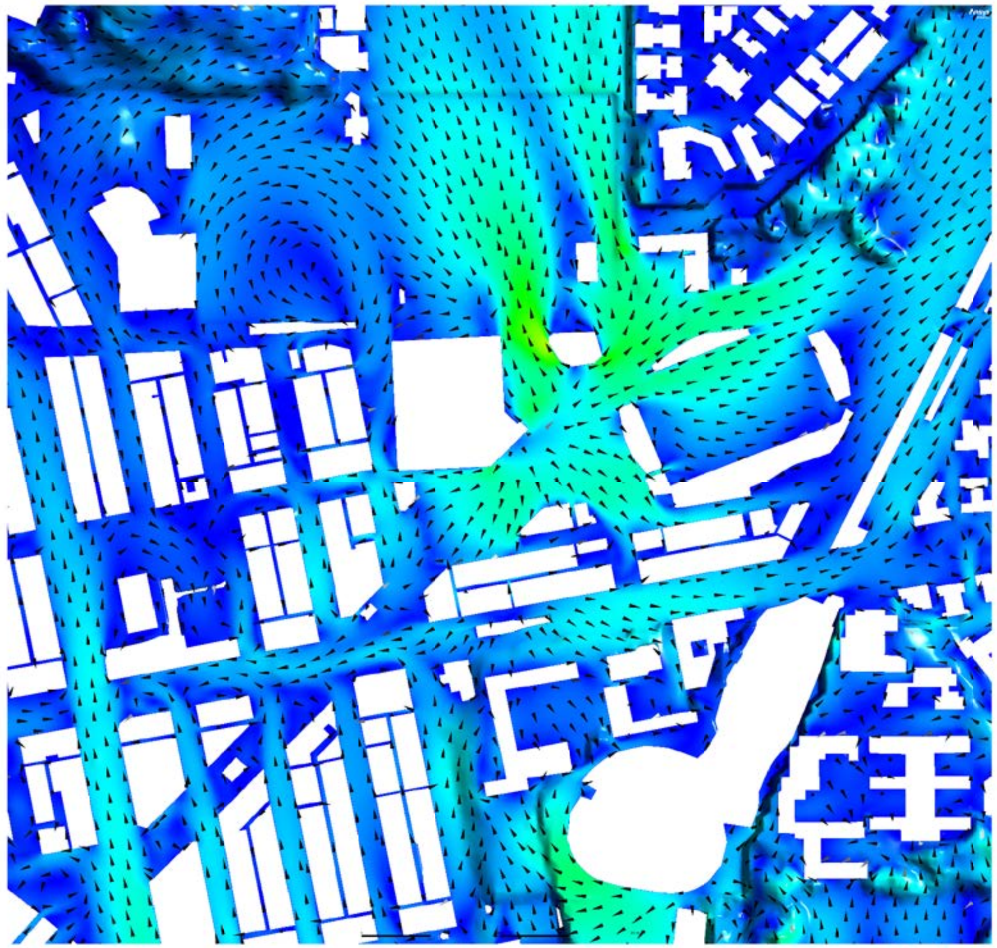
Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1f	REV.
				-





Baseline Scheme



Proposed Scheme

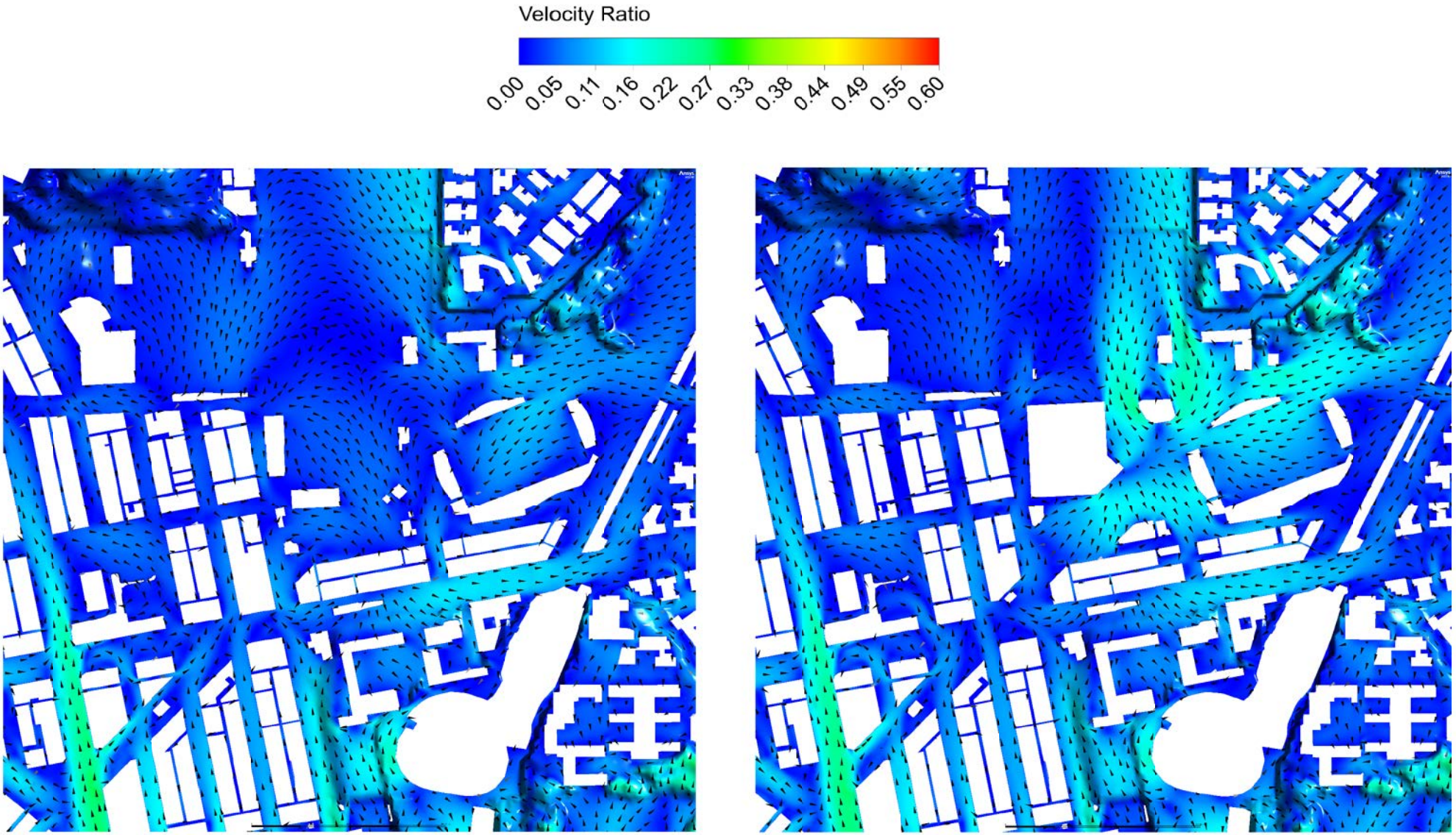
157.5 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24
CHECK	KC	DRAWN	CC
JOB NO.	IA19021-YMAA101P1	FIGURE NO. 4-1g	REV. -



Baseline Scheme

Proposed Scheme

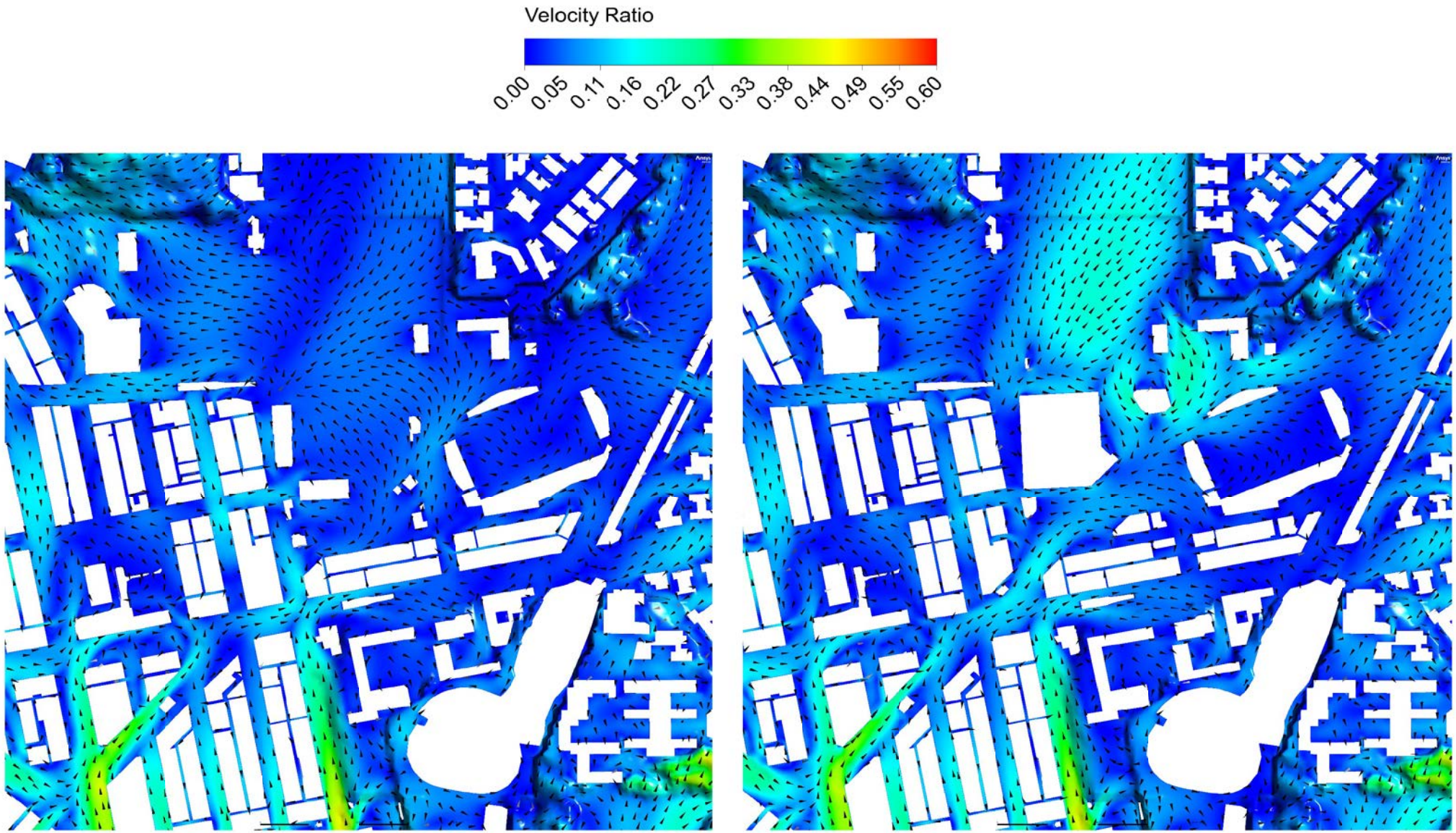
180 deg Wind Direction

CINOTECH 漢蓁 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1h	REV.
				-



Baseline Scheme

Proposed Scheme

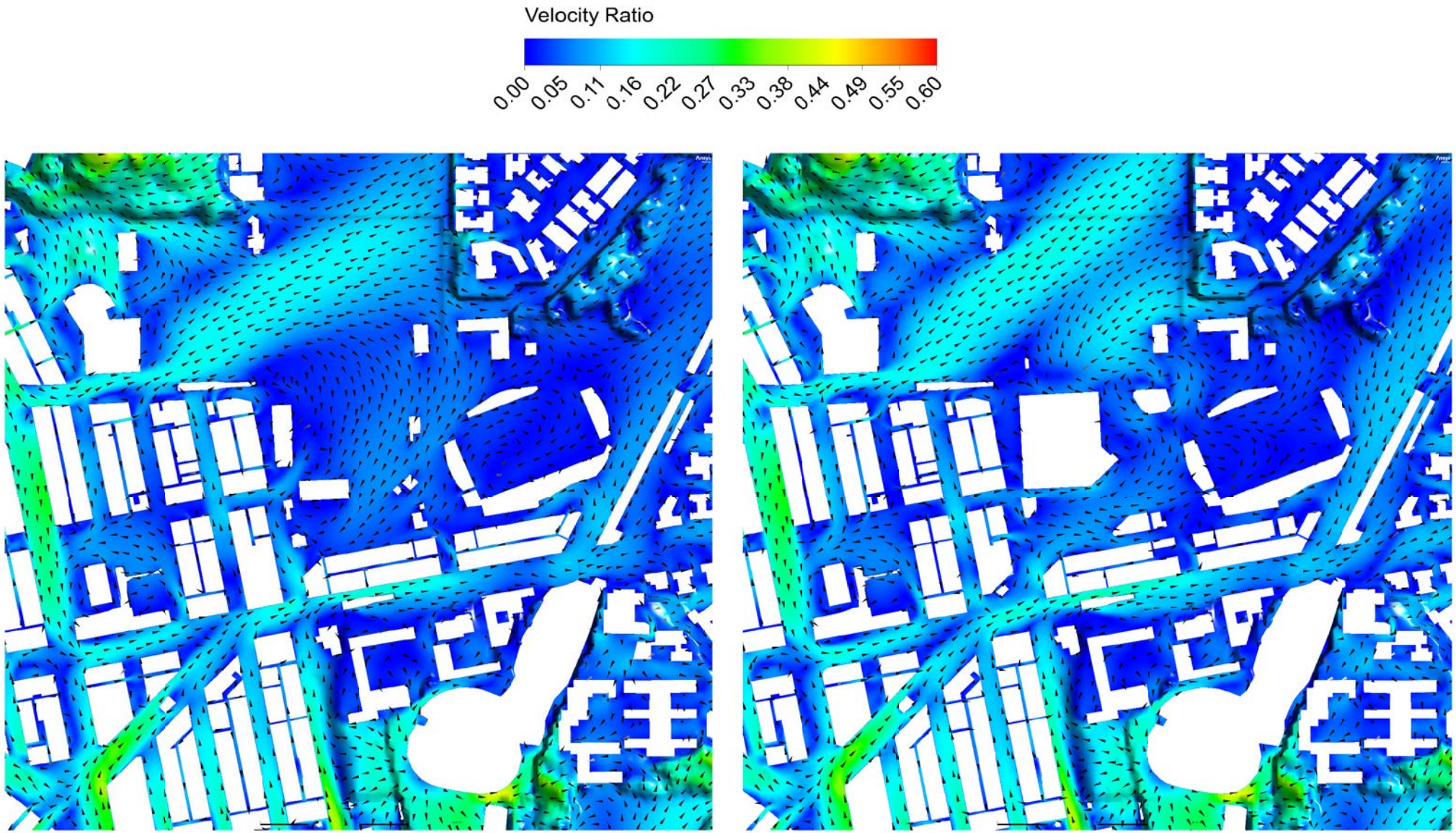
202.5 deg Wind Direction

CINOTECH 漢蒽 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1i	REV.
				-



Baseline Scheme

Proposed Scheme

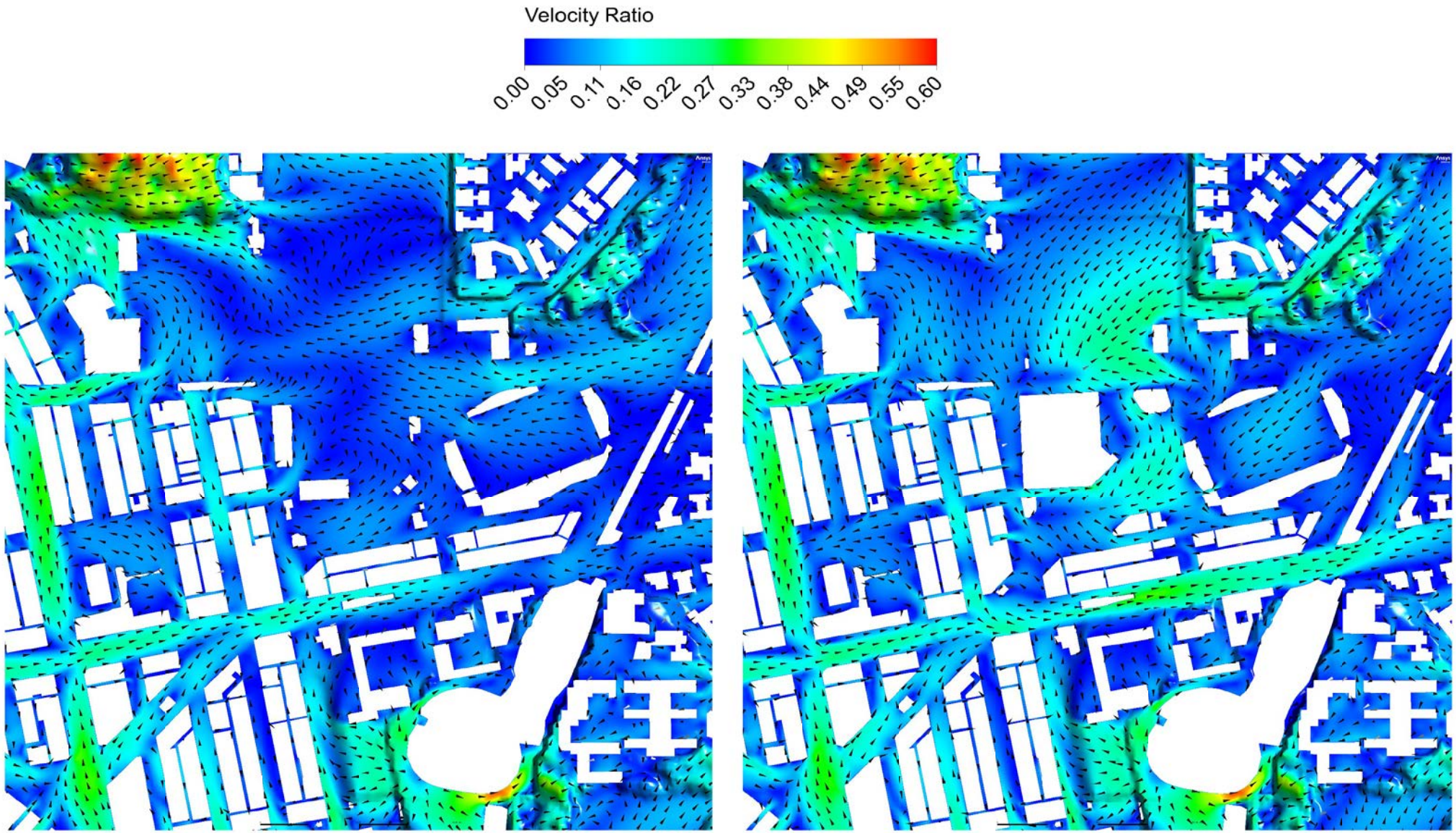
225 deg Wind Direction

CINOTECH 漢蒽 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1j	REV.
				-



Baseline Scheme

Proposed Scheme

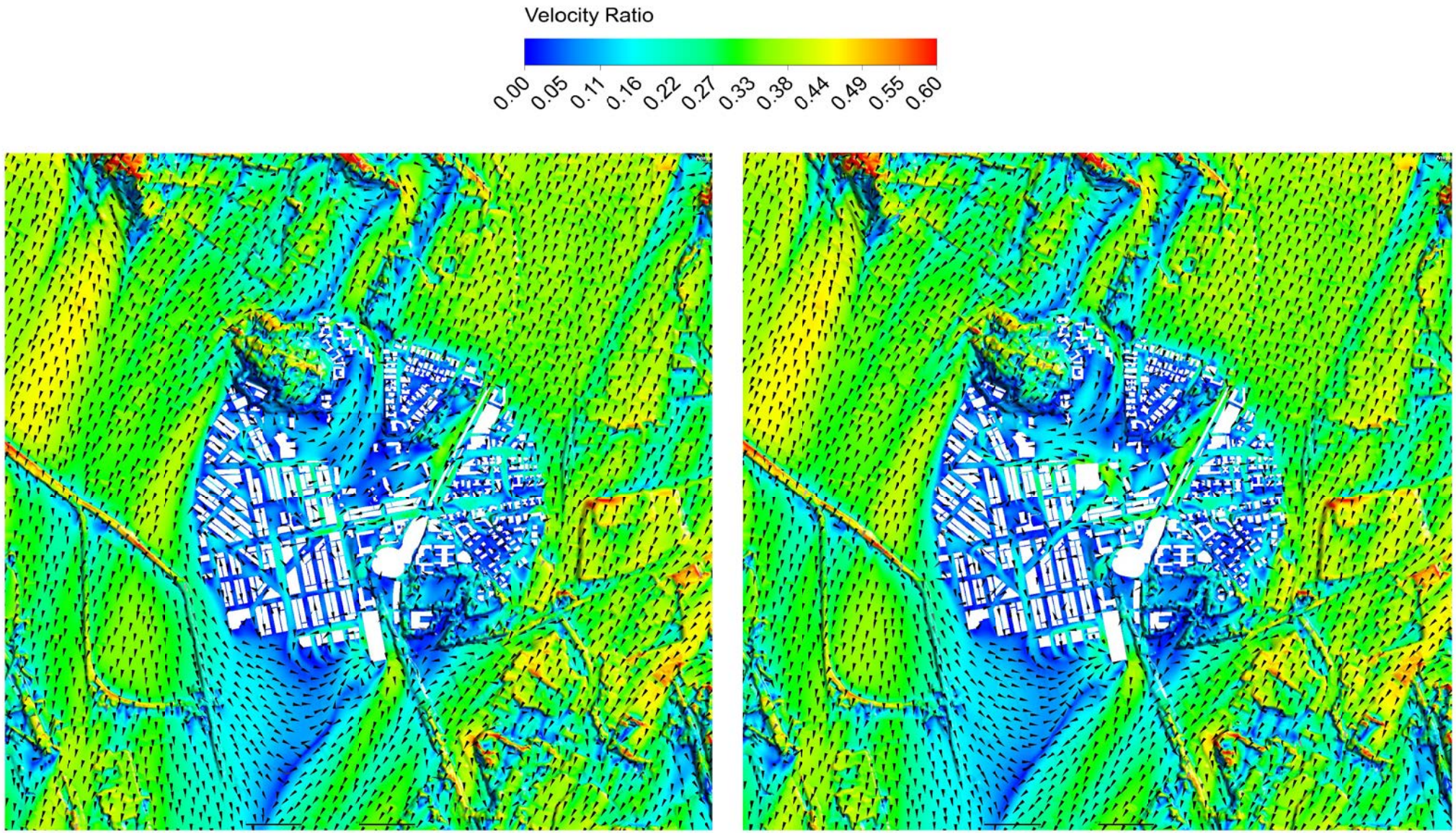
247.5 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Assessment Area)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-1k	REV.
				-



Baseline Scheme

Proposed Scheme

022.5 deg Wind Direction

CINOTECH 漢蒝 consultants limited

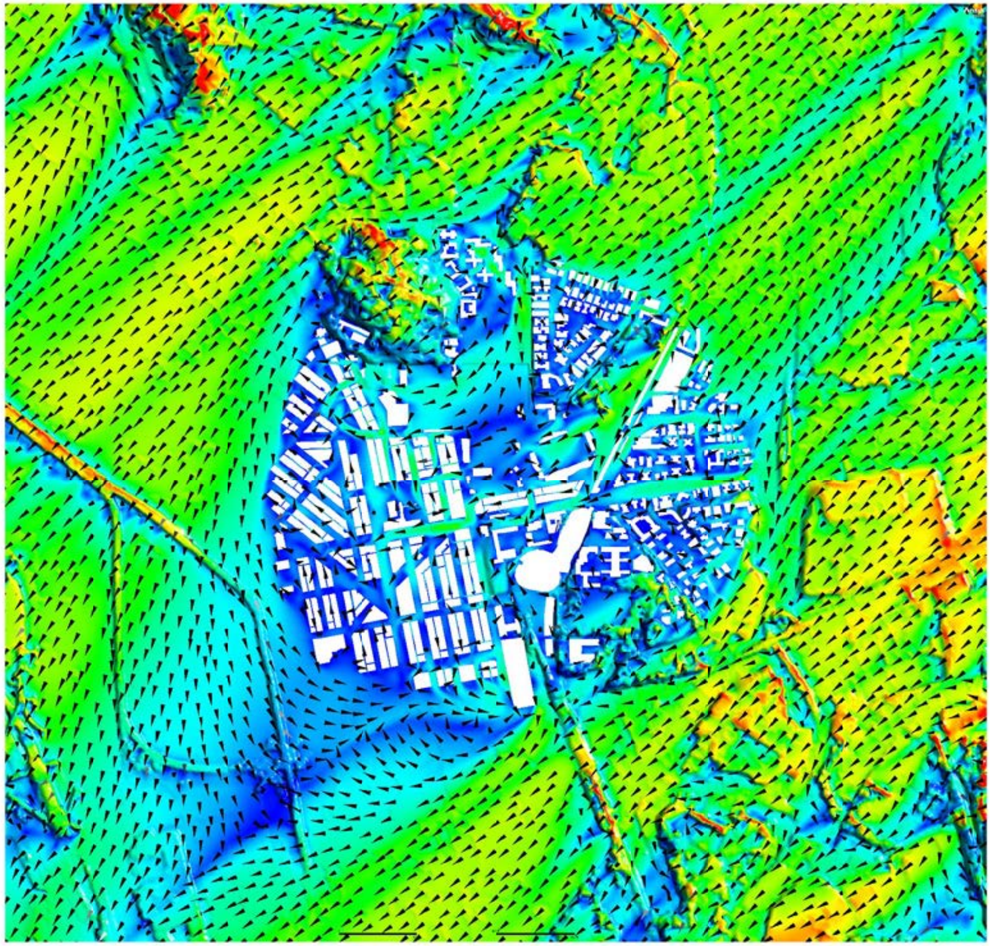
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

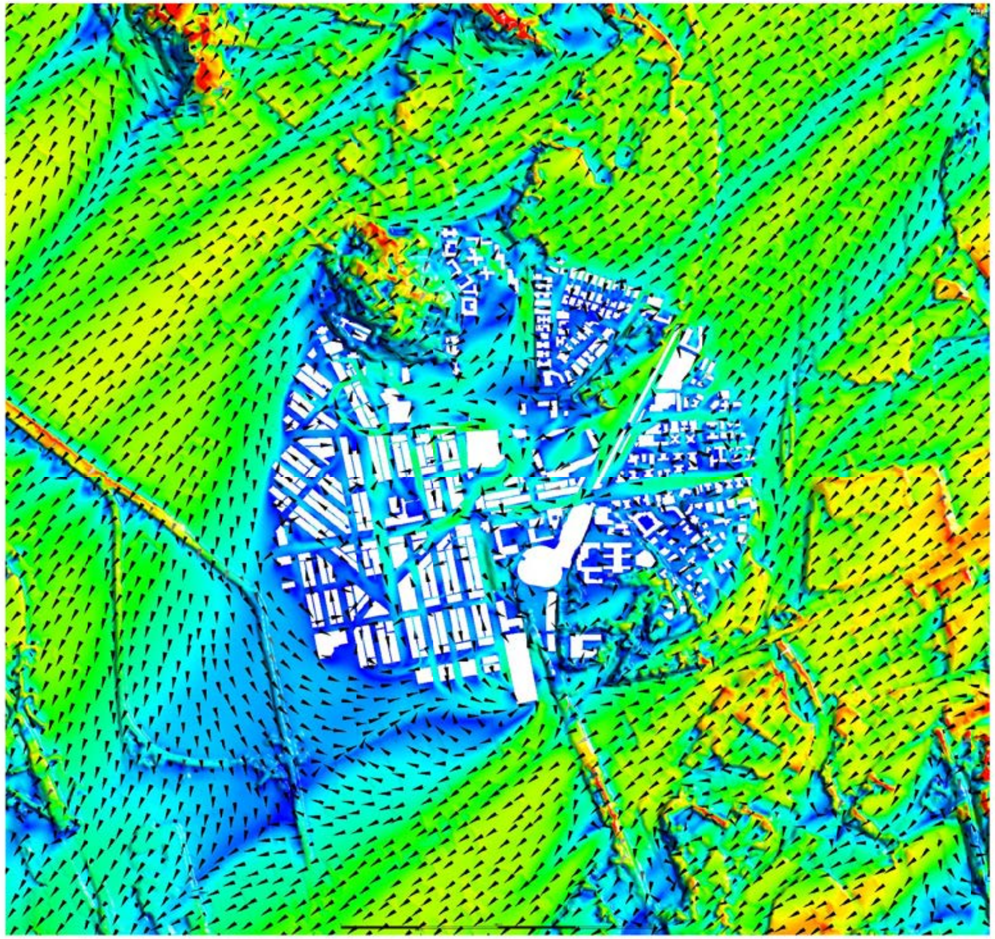
SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2a	REV.
				-

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

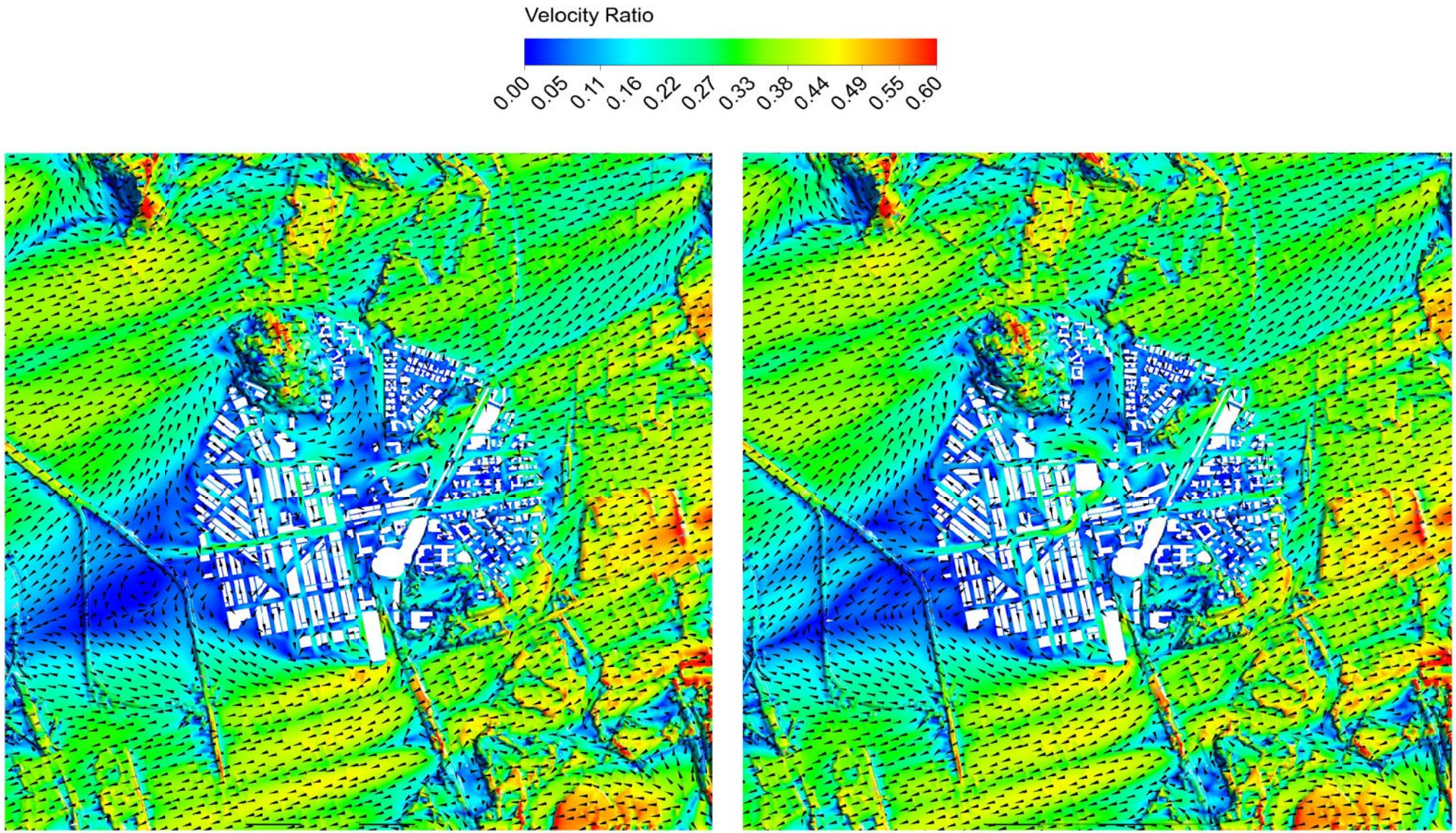
045 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2b	REV.
				-



Baseline Scheme

Proposed Scheme

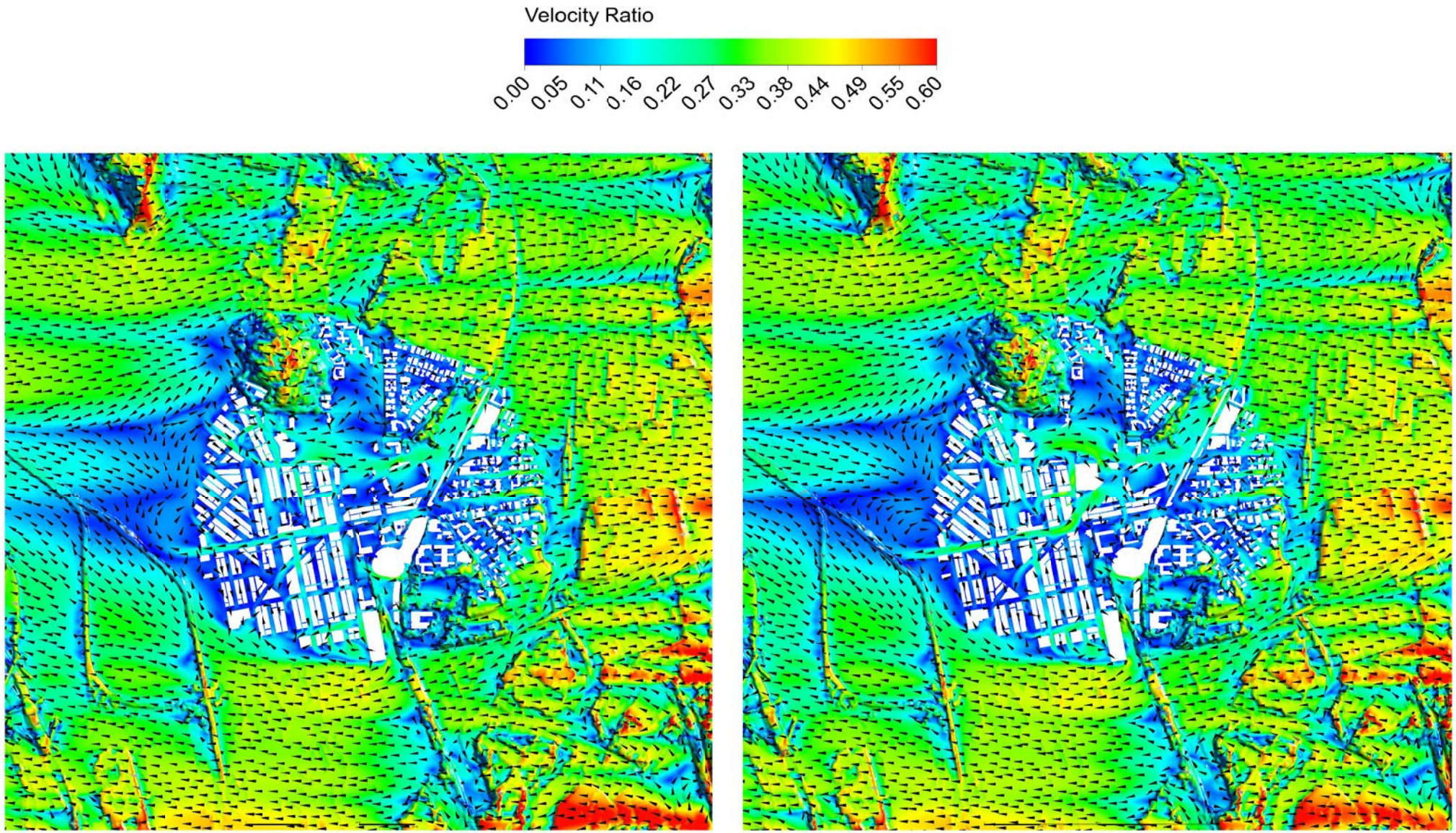
067.5 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2c	REV.
				-



Baseline Scheme

Proposed Scheme

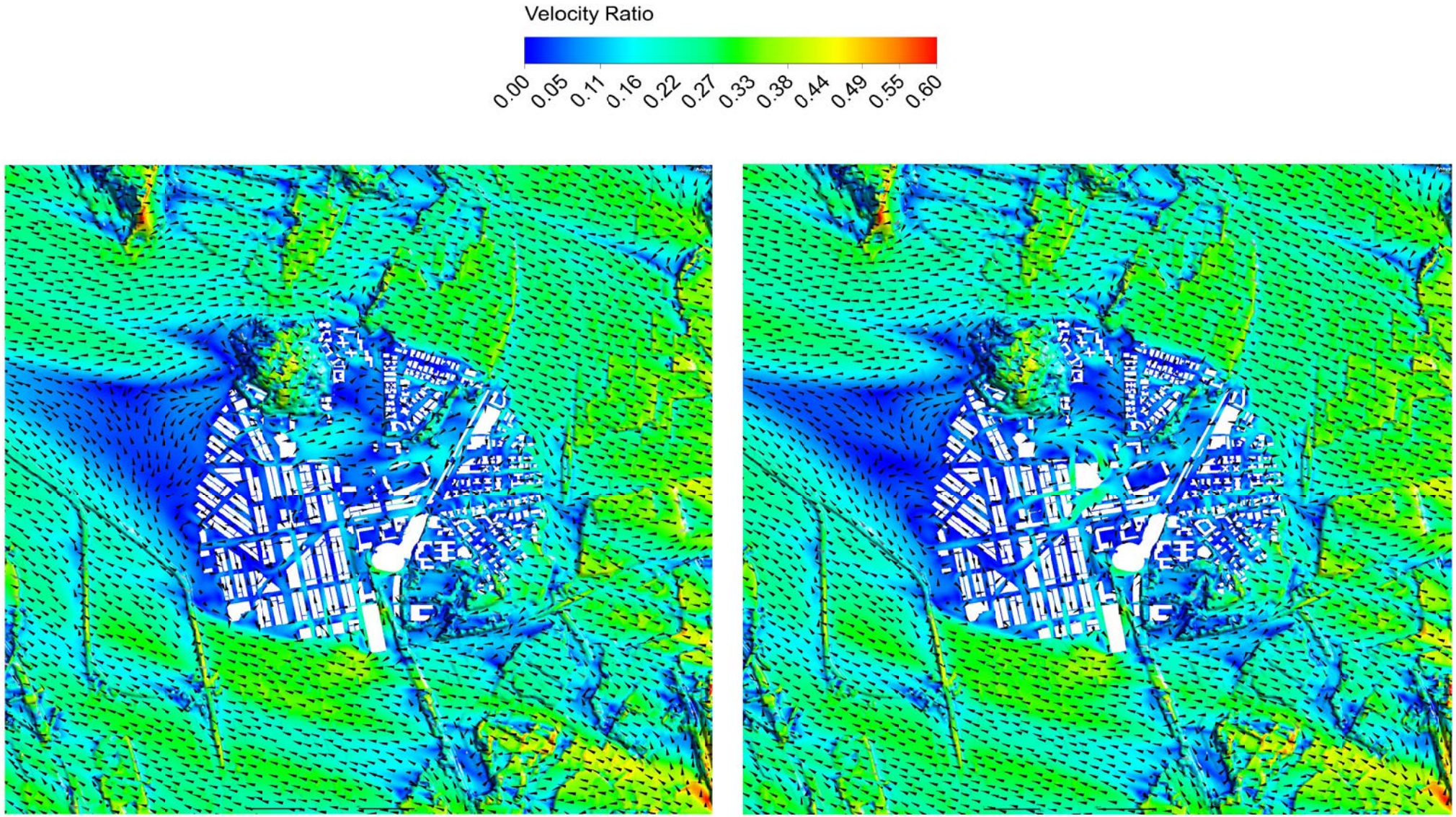
090 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2d	REV.
				-



Baseline Scheme

Proposed Scheme

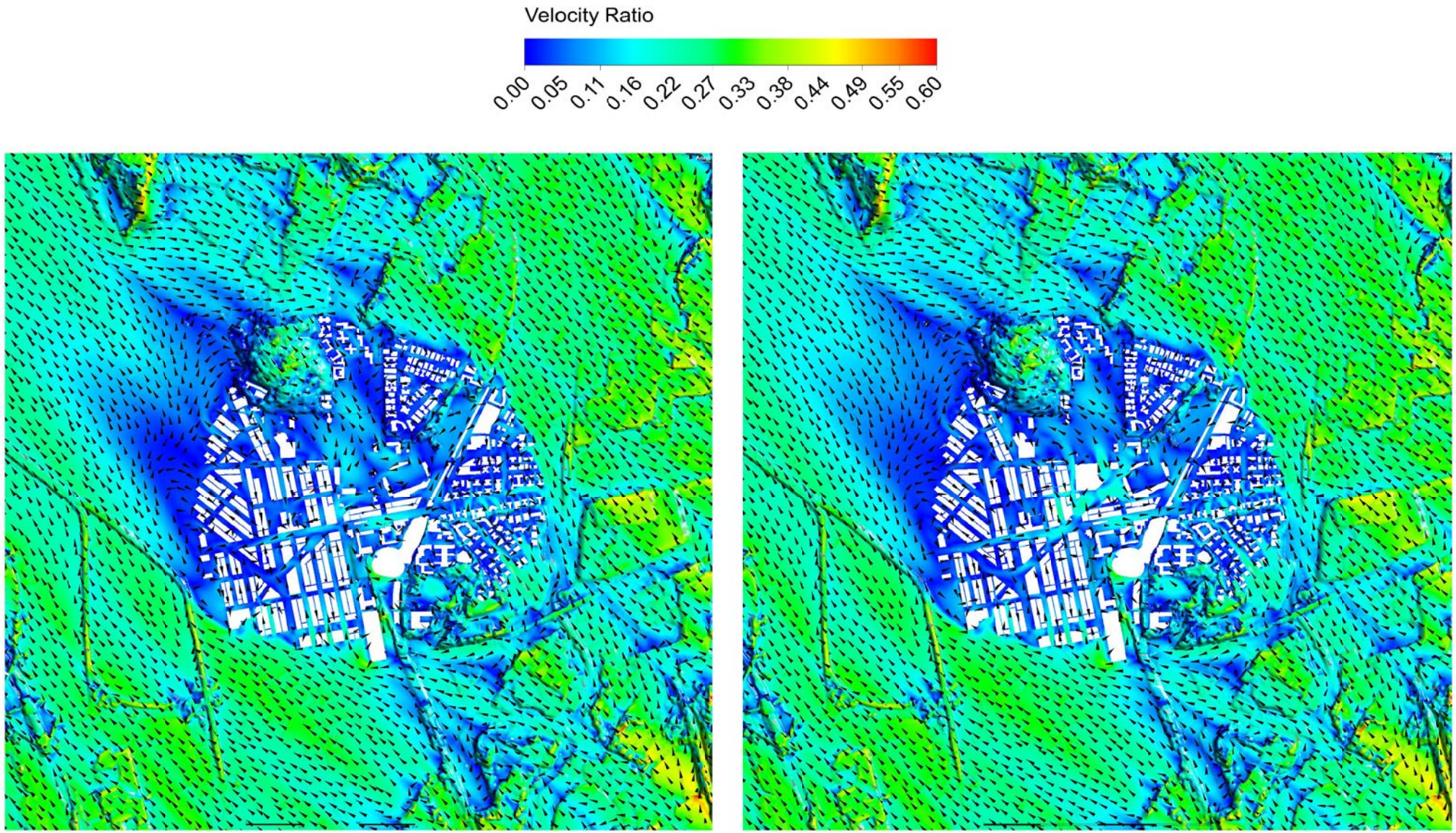
112.5 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2e	REV.
				-



Baseline Scheme

Proposed Scheme

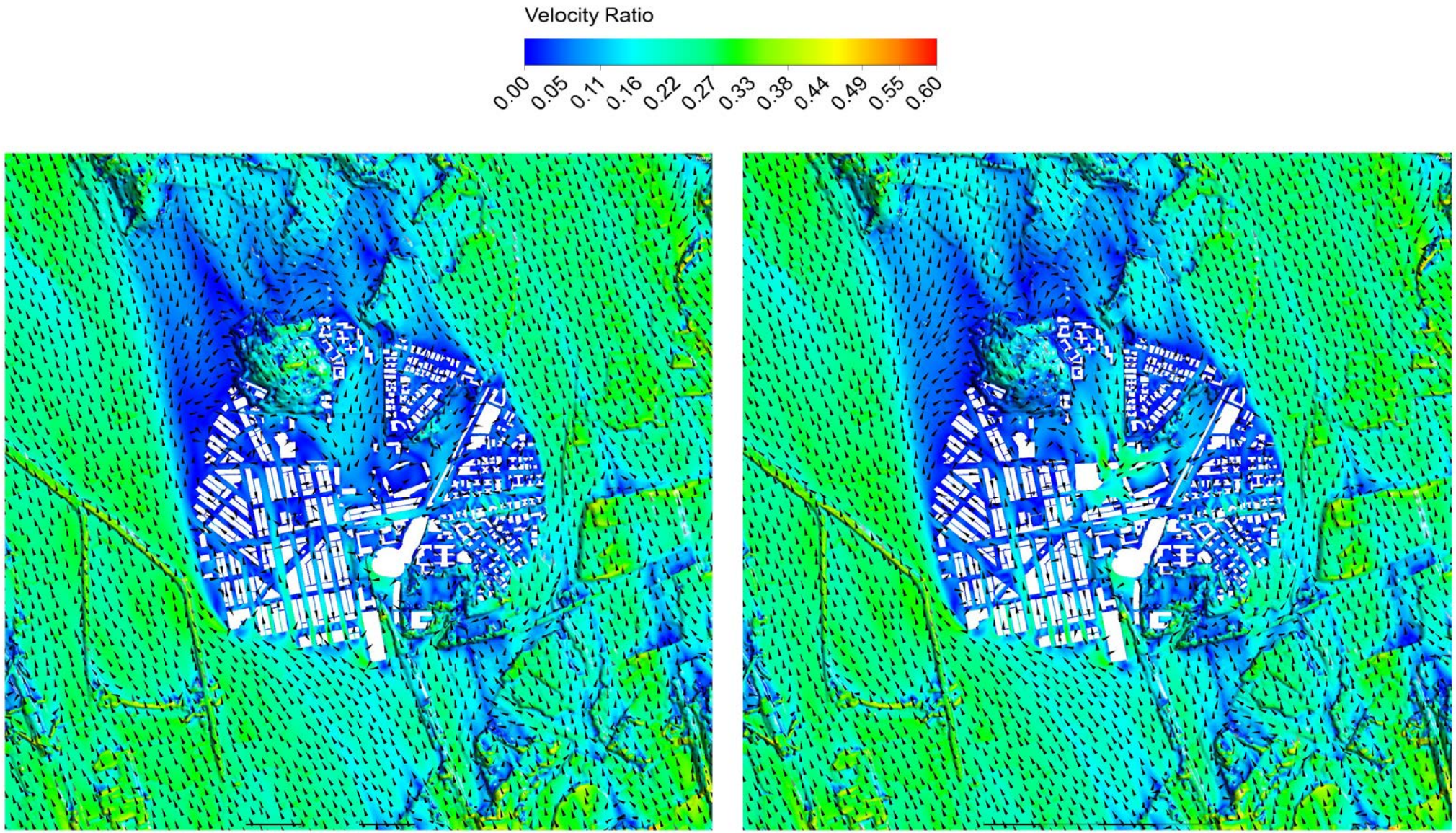
135 deg Wind Direction

CINOTECH 漢蒽 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2f	REV.
				-



Baseline Scheme

Proposed Scheme

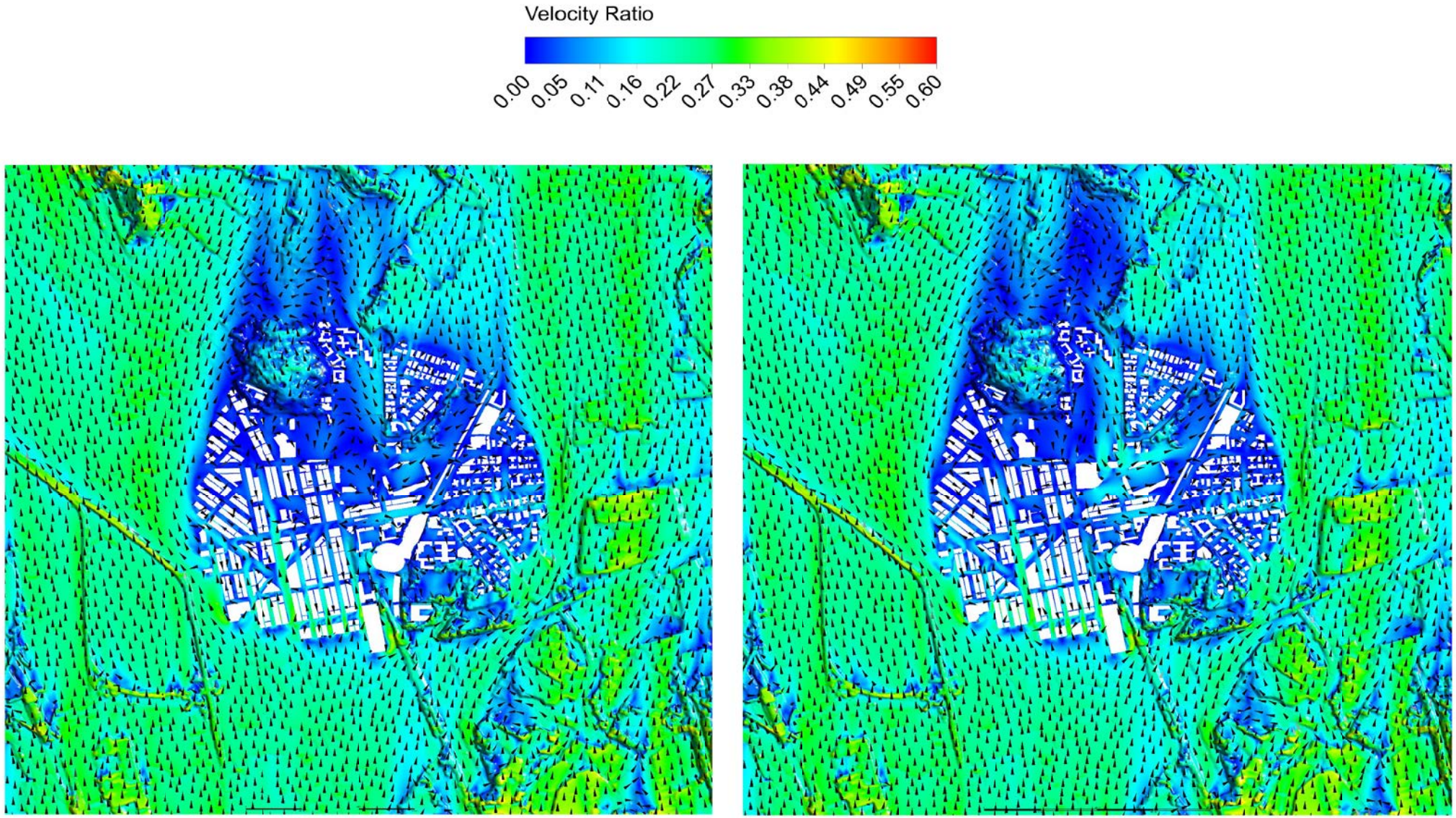
157.5 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2g	REV.
				-



Baseline Scheme

Proposed Scheme

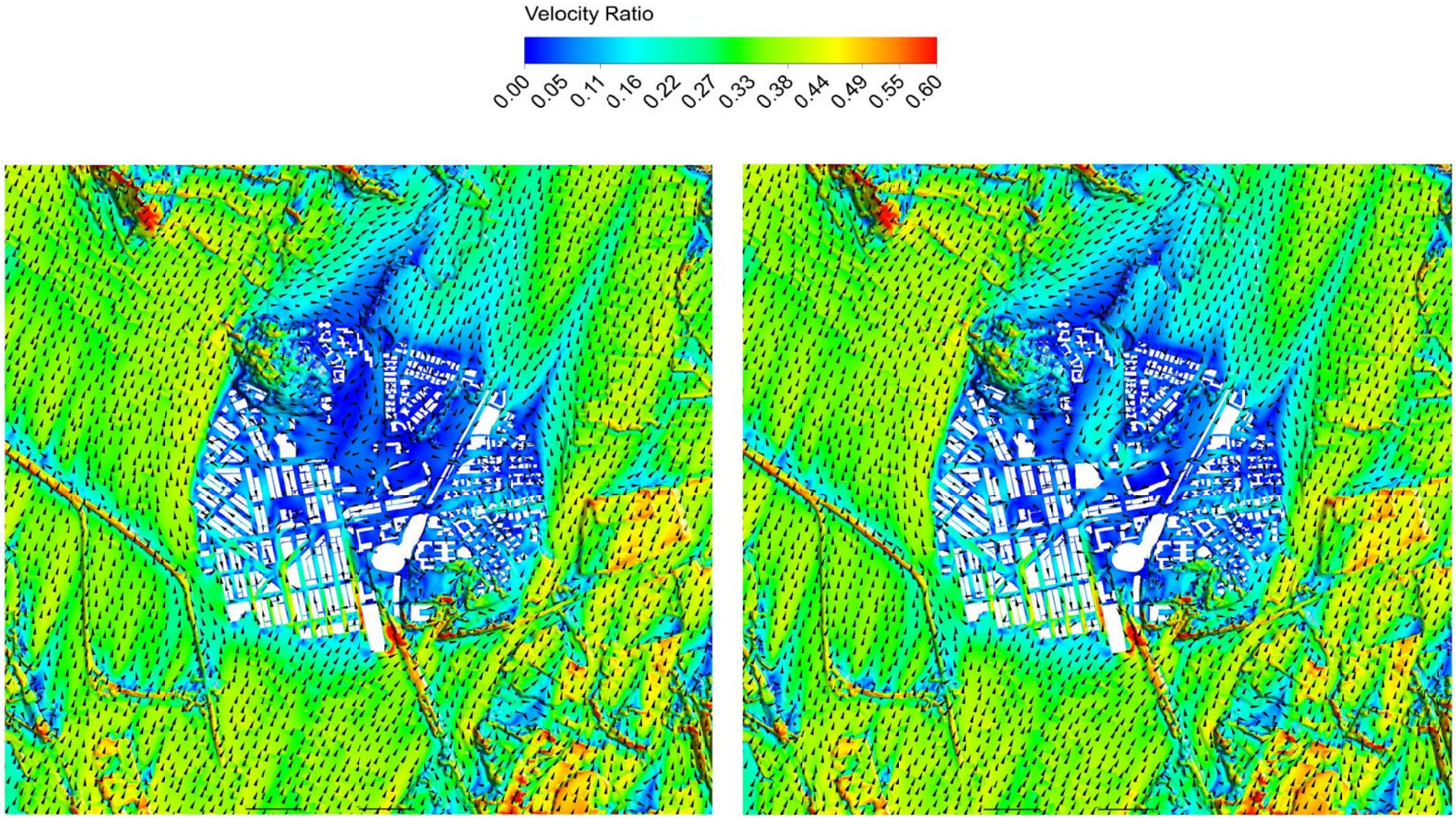
180 deg Wind Direction

CINOTECH 漢蒽 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2h	REV.
				-



Baseline Scheme

Proposed Scheme

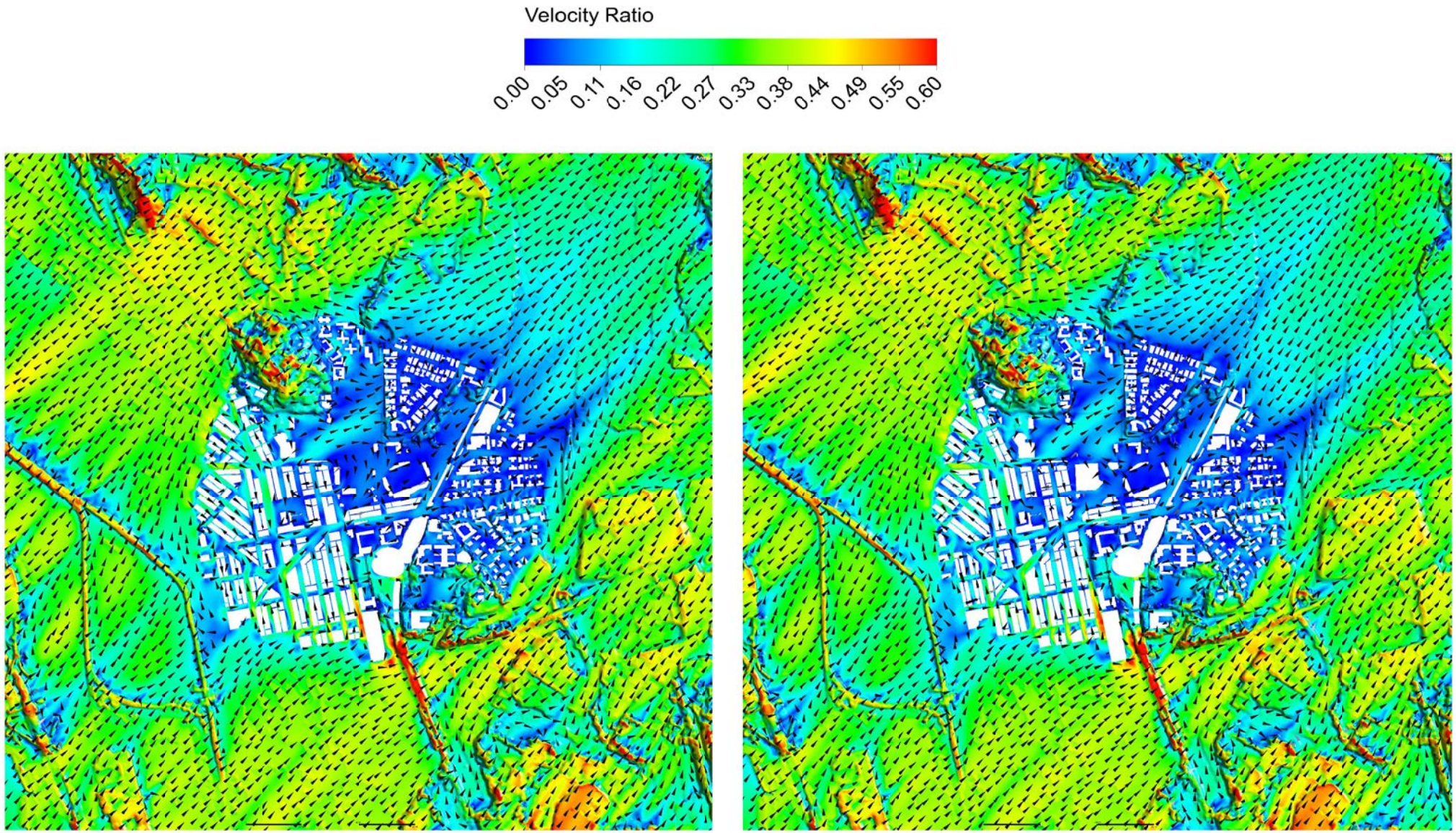
202.5 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2i	REV.
				-



Baseline Scheme

Proposed Scheme

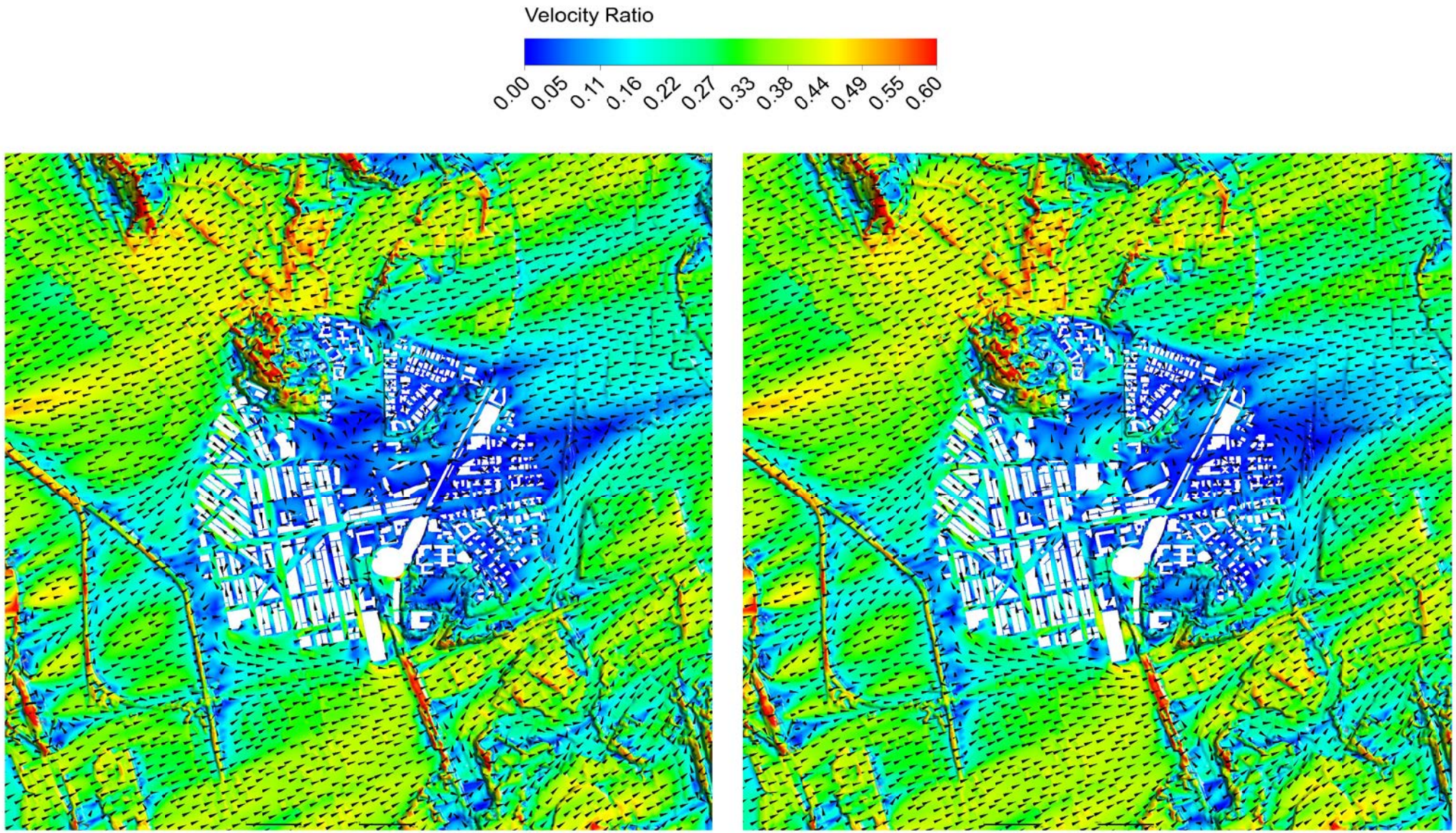
225 deg Wind Direction

CINOTECH consultants limited 漢蔡

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2j	REV.
				-



Baseline Scheme

Proposed Scheme

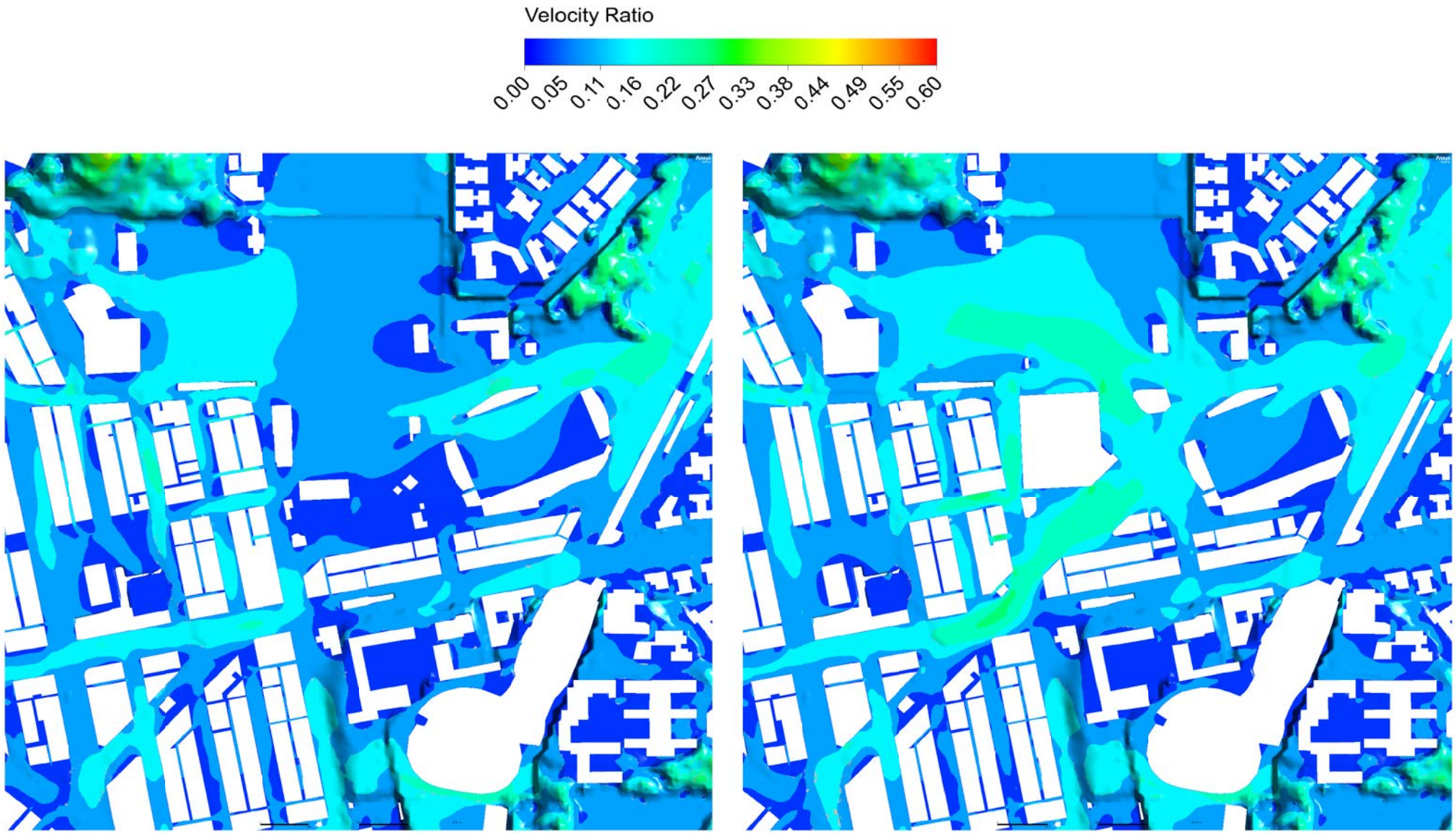
247.5 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2mAG (Computation Domain)

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-2k	REV.
				-



Baseline Scheme

Proposed Scheme

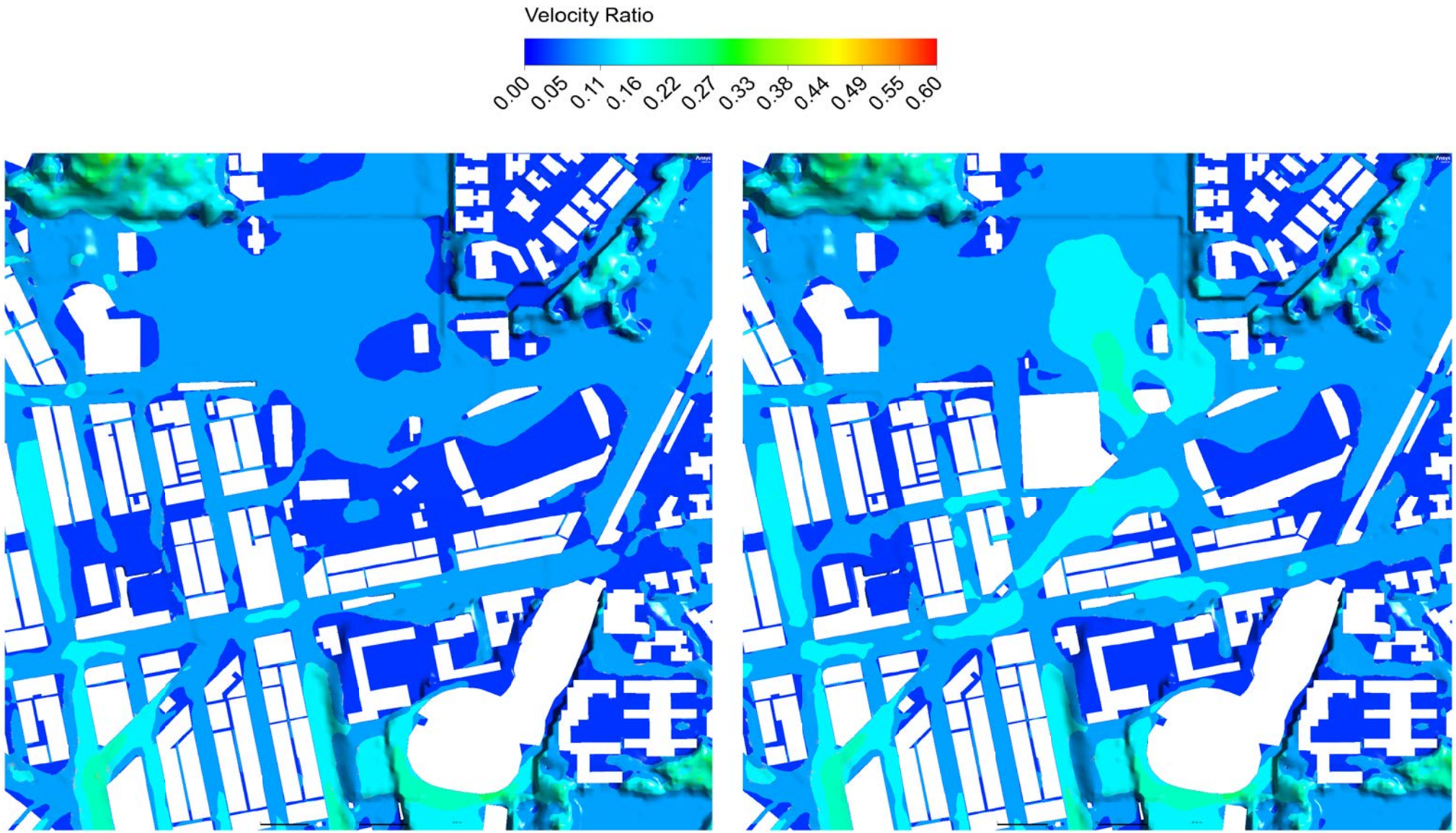
Annual

CINOTECH 漢蓁 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours of Wind Velocity Ratio at 2mAG (Annual Condition)

SCALE	N.T.S.	DATE	Dec-23	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-3a	REV.
				-



Baseline Scheme

Proposed Scheme

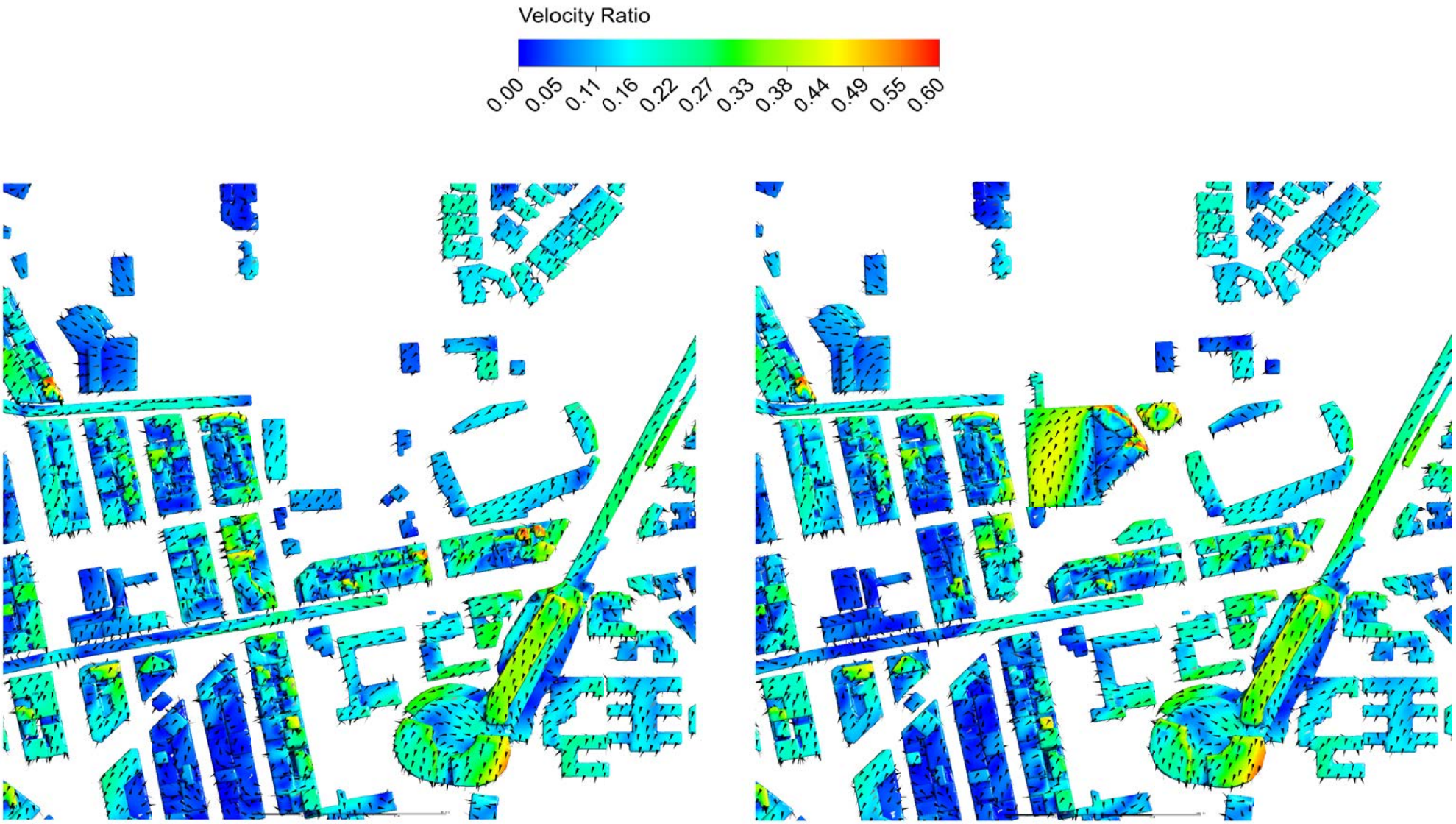
Summer

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours of Wind Velocity Ratio at 2mAG (Summer Condition)

SCALE	N.T.S.	DATE	Dec-23	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-3b	REV.
				-



Baseline Scheme

Proposed Scheme

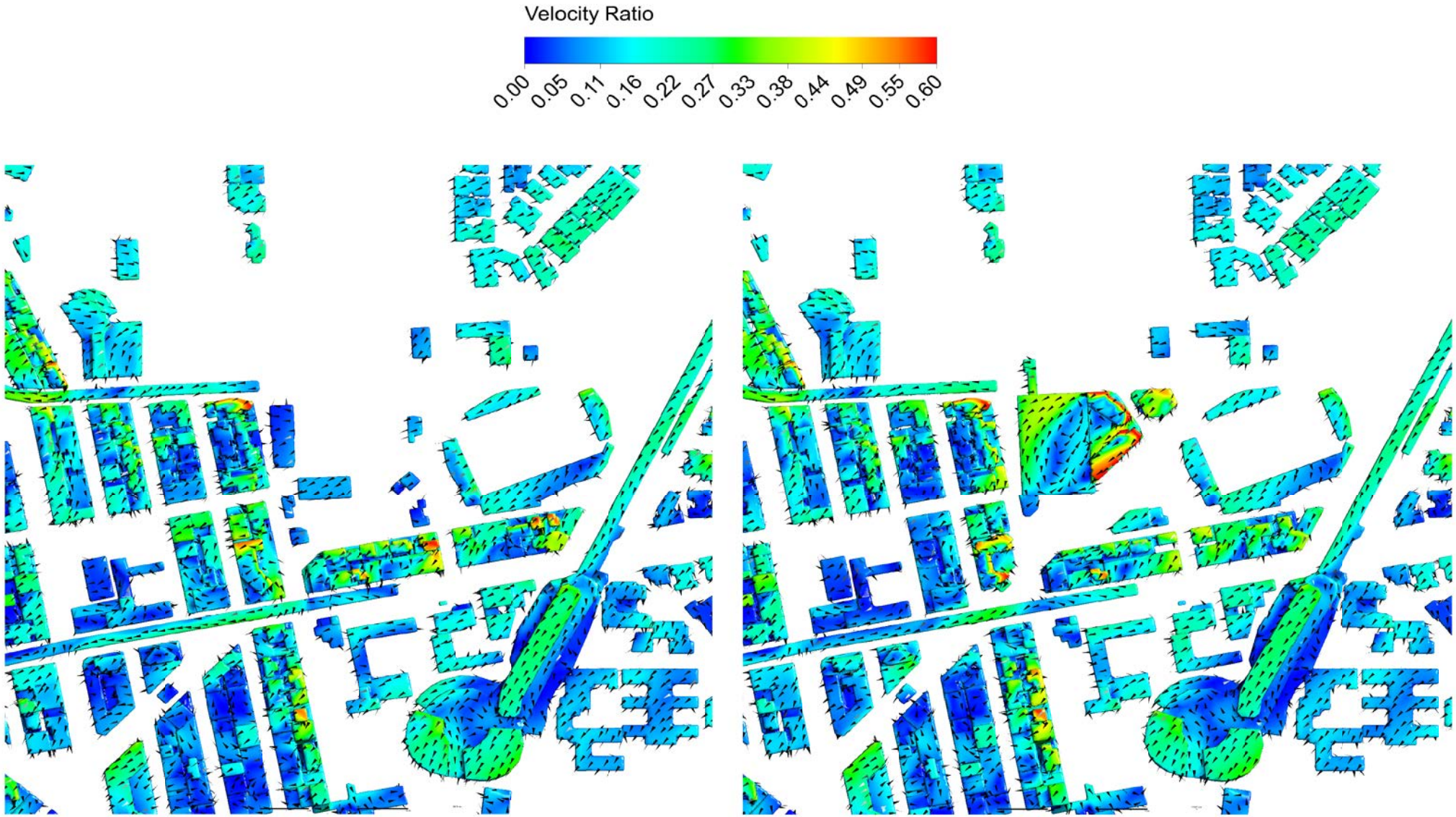
022.5 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4a	REV.
				-



Baseline Scheme

Proposed Scheme

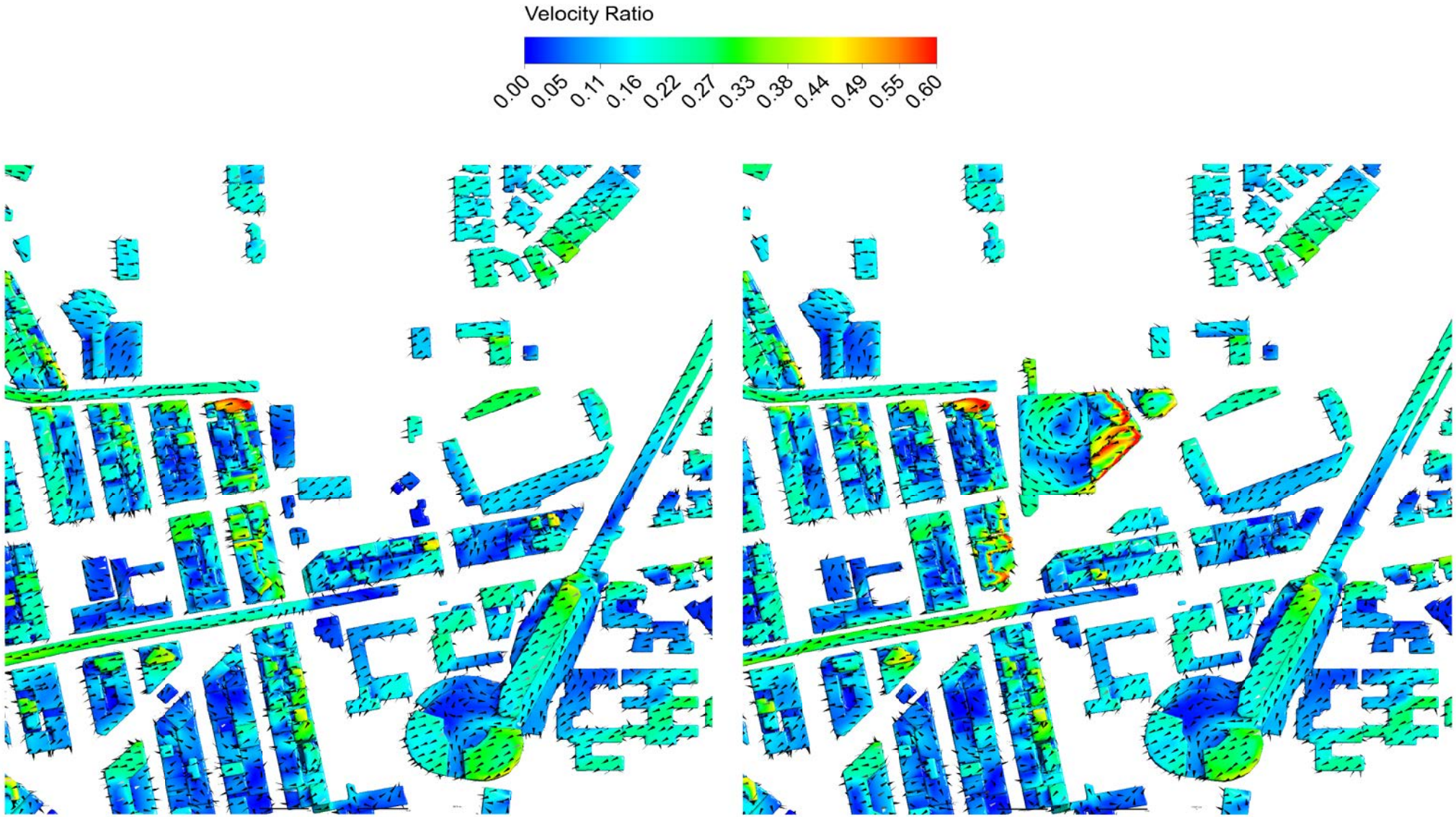
045 deg Wind Direction

CINOTECH 漢蓁 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4b	REV.
				-



Baseline Scheme

Proposed Scheme

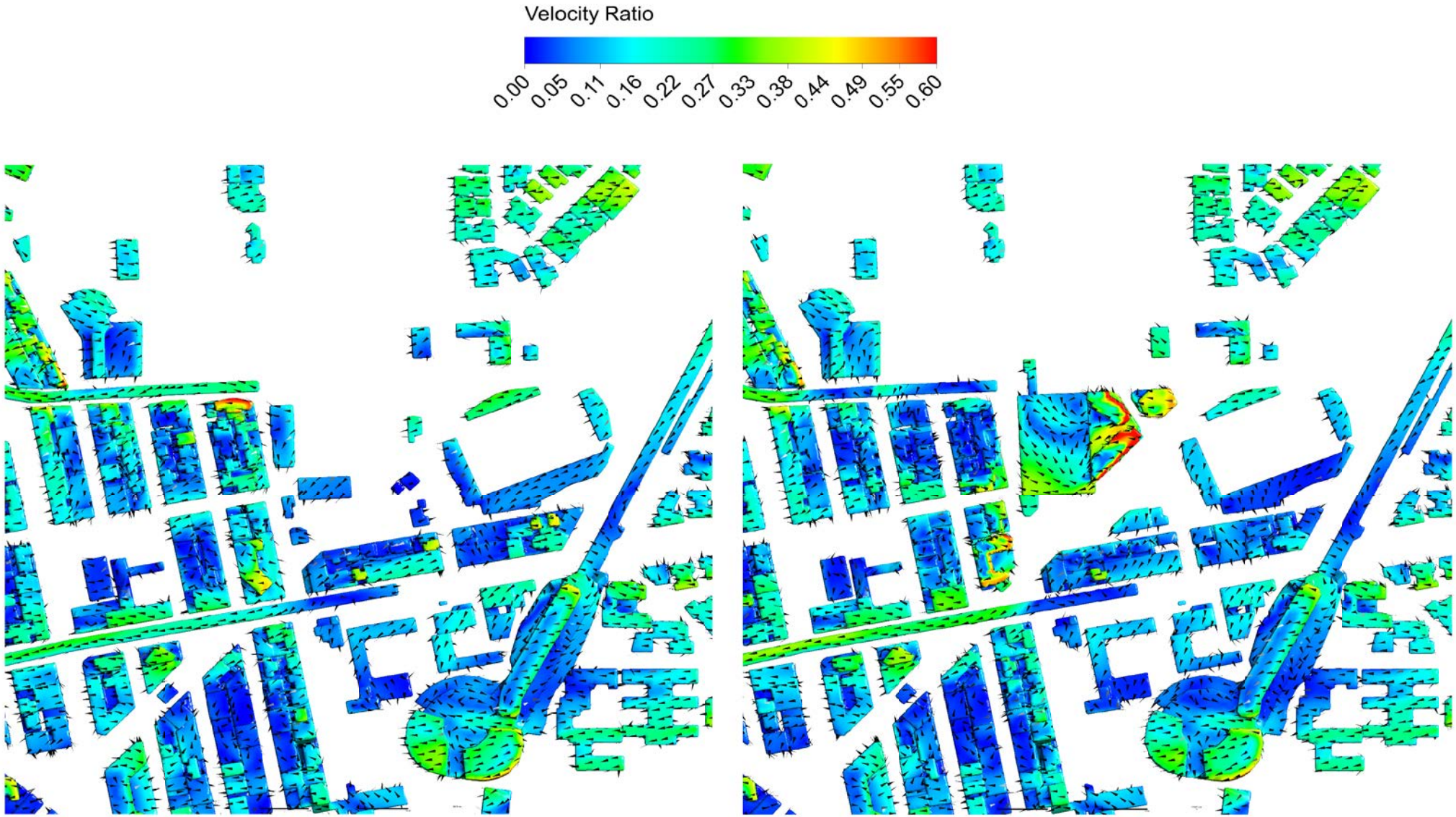
067.5 deg Wind Direction

CINOTECH 漢蒽 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4c	REV.
				-



Baseline Scheme

Proposed Scheme

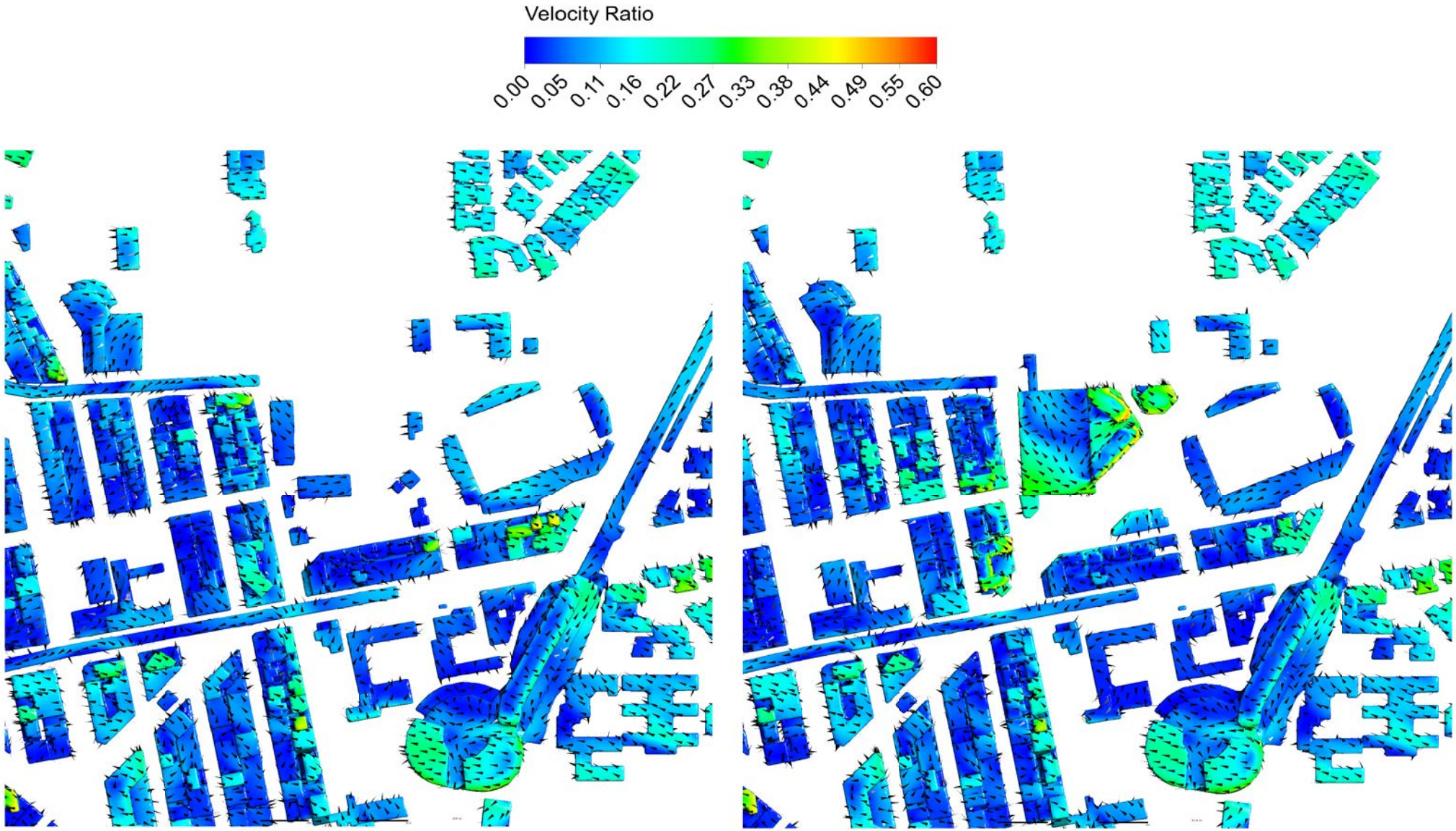
090 deg Wind Direction

CINOTECH 漢蓁 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4d	REV.
				-



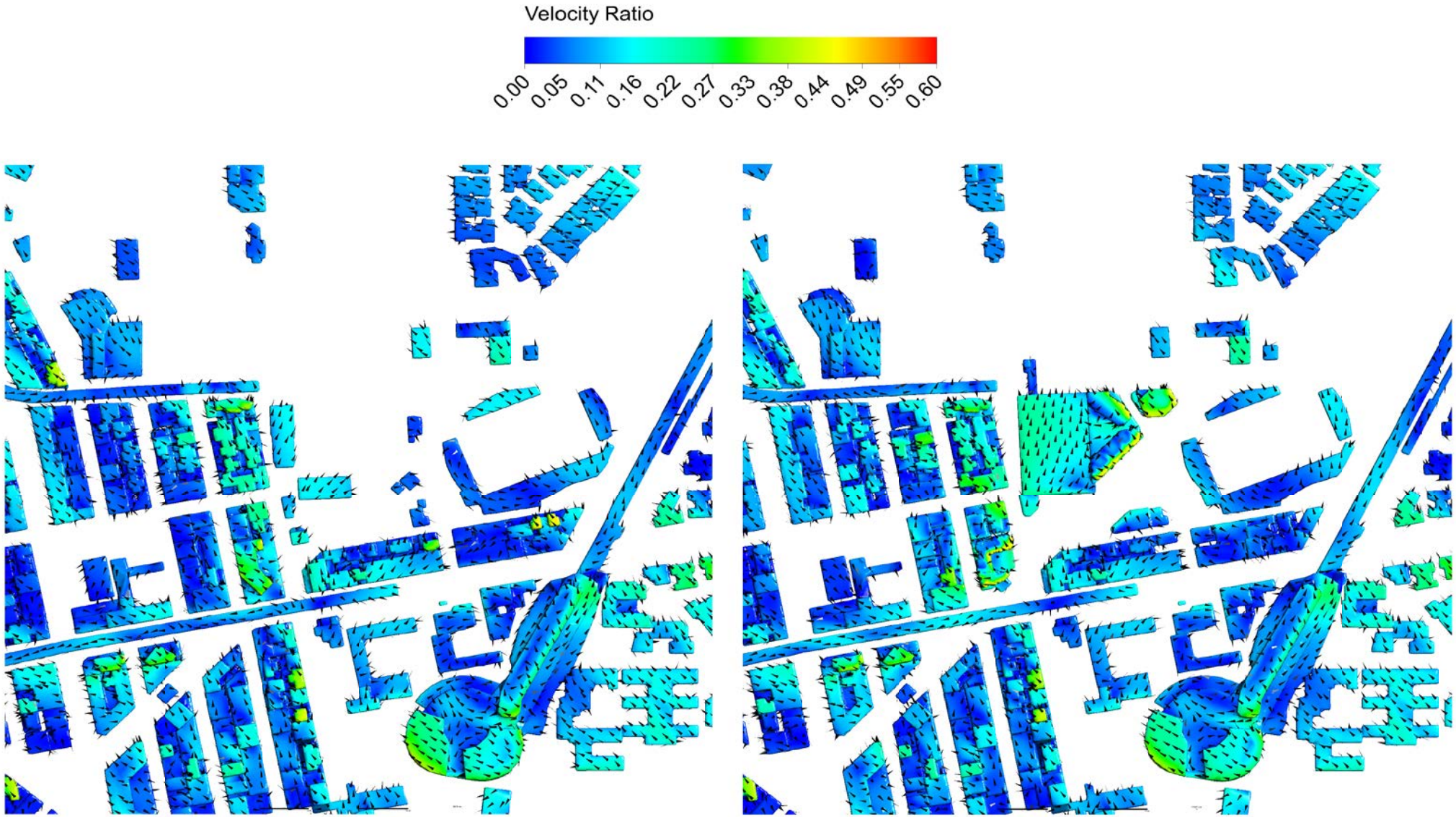
112.5 deg Wind Direction

CINOTECH 漢蓁 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4e	REV.
				-



Baseline Scheme

Proposed Scheme

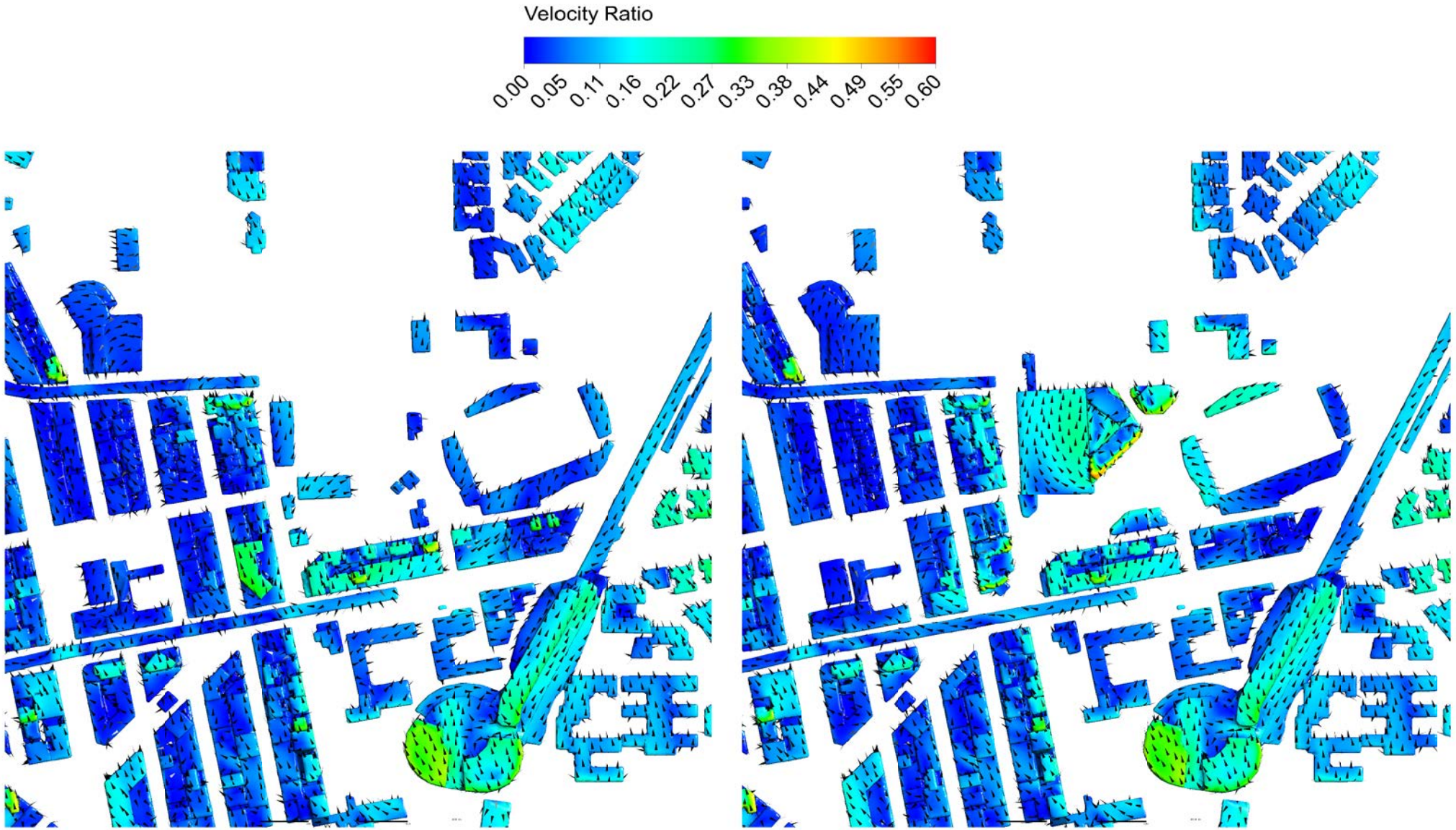
135 deg Wind Direction

CINOTECH 漢蓁 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4f	REV.
				-



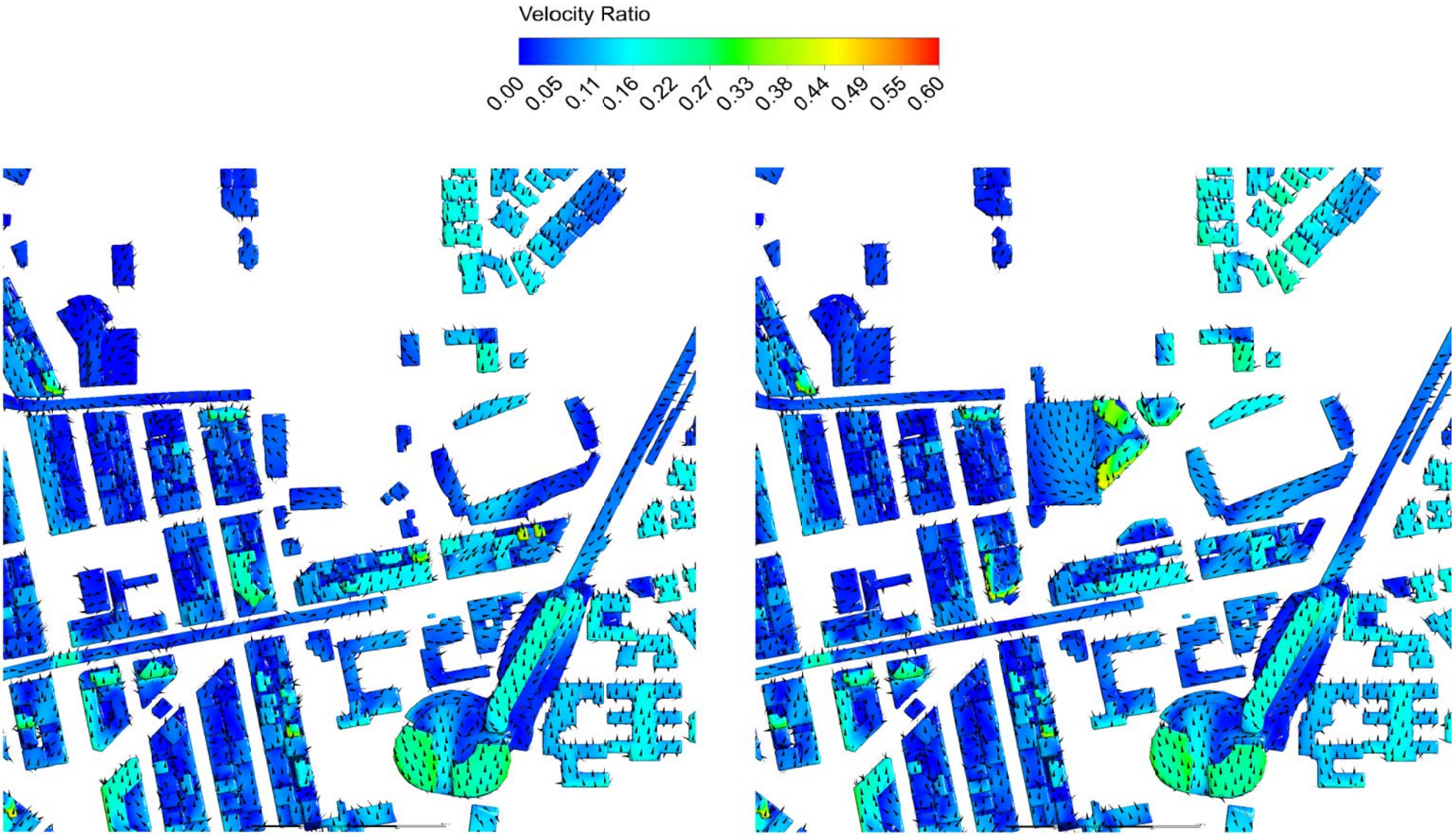
157.5 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4g	REV.
				-



Baseline Scheme

Proposed Scheme

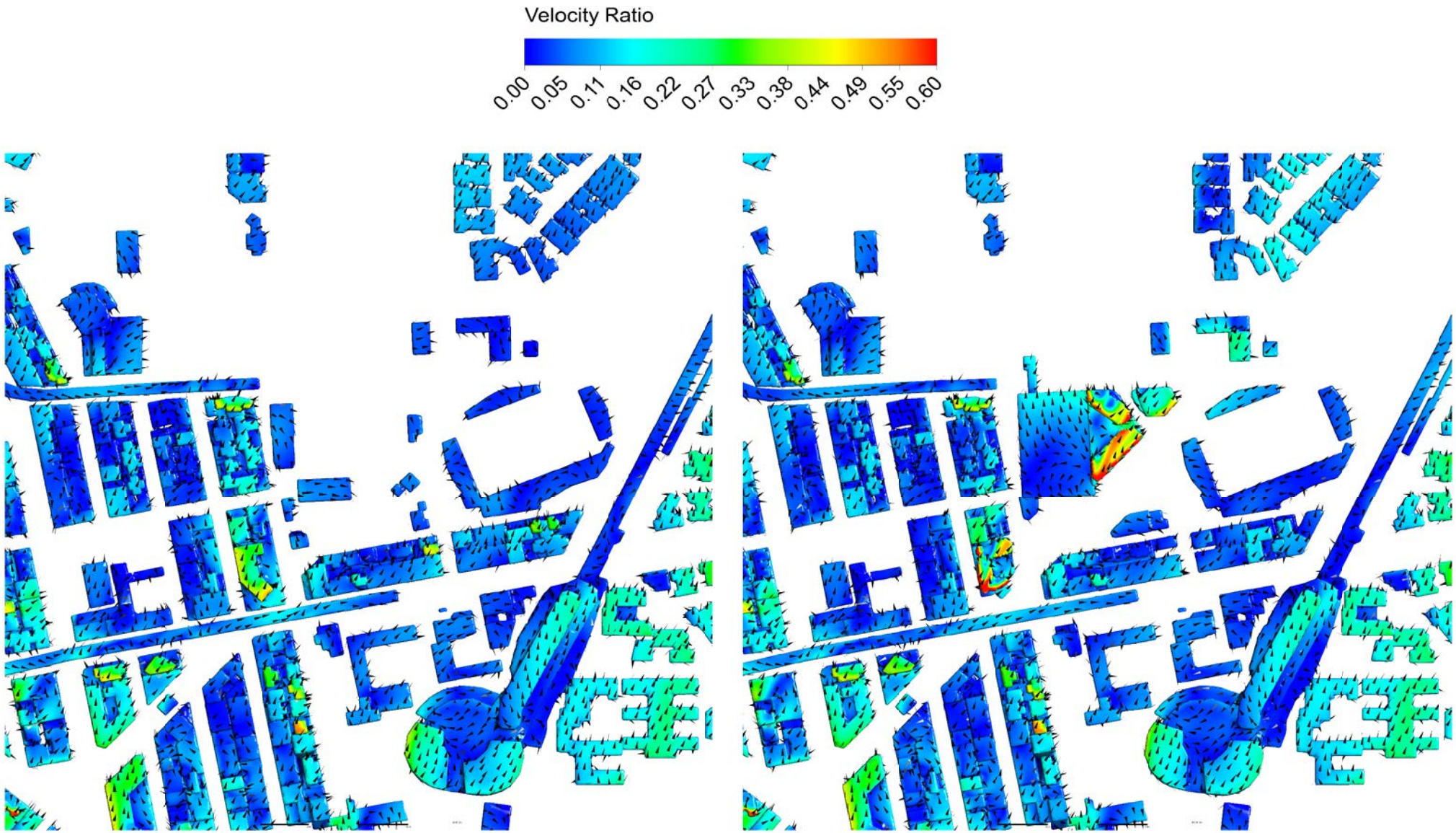
180 deg Wind Direction

CINOTECH consultants limited 漢臻

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4h	REV.
				-



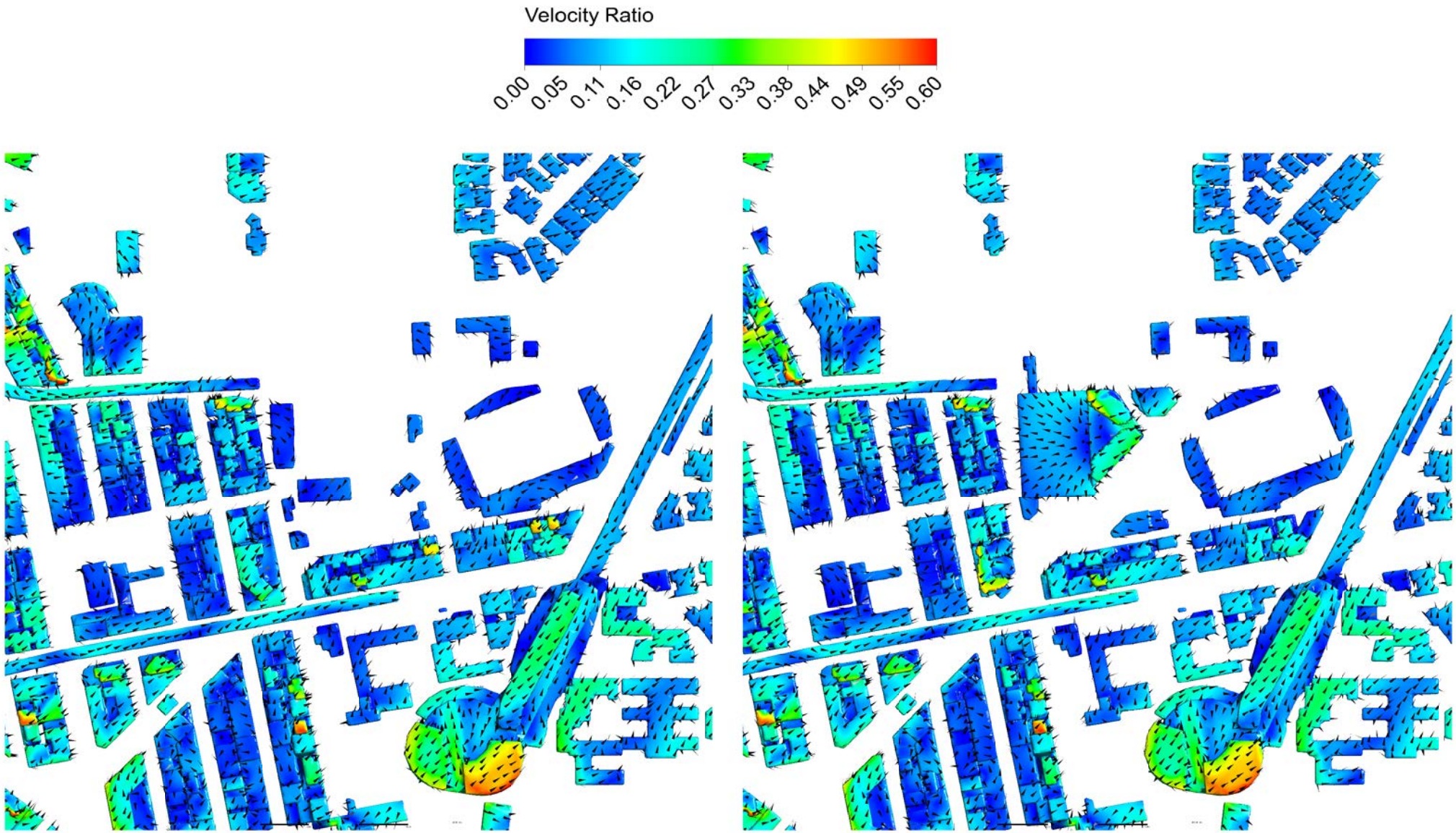
202.5 deg Wind Direction

CINOTECH 漢蔡 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4i	REV.
				-



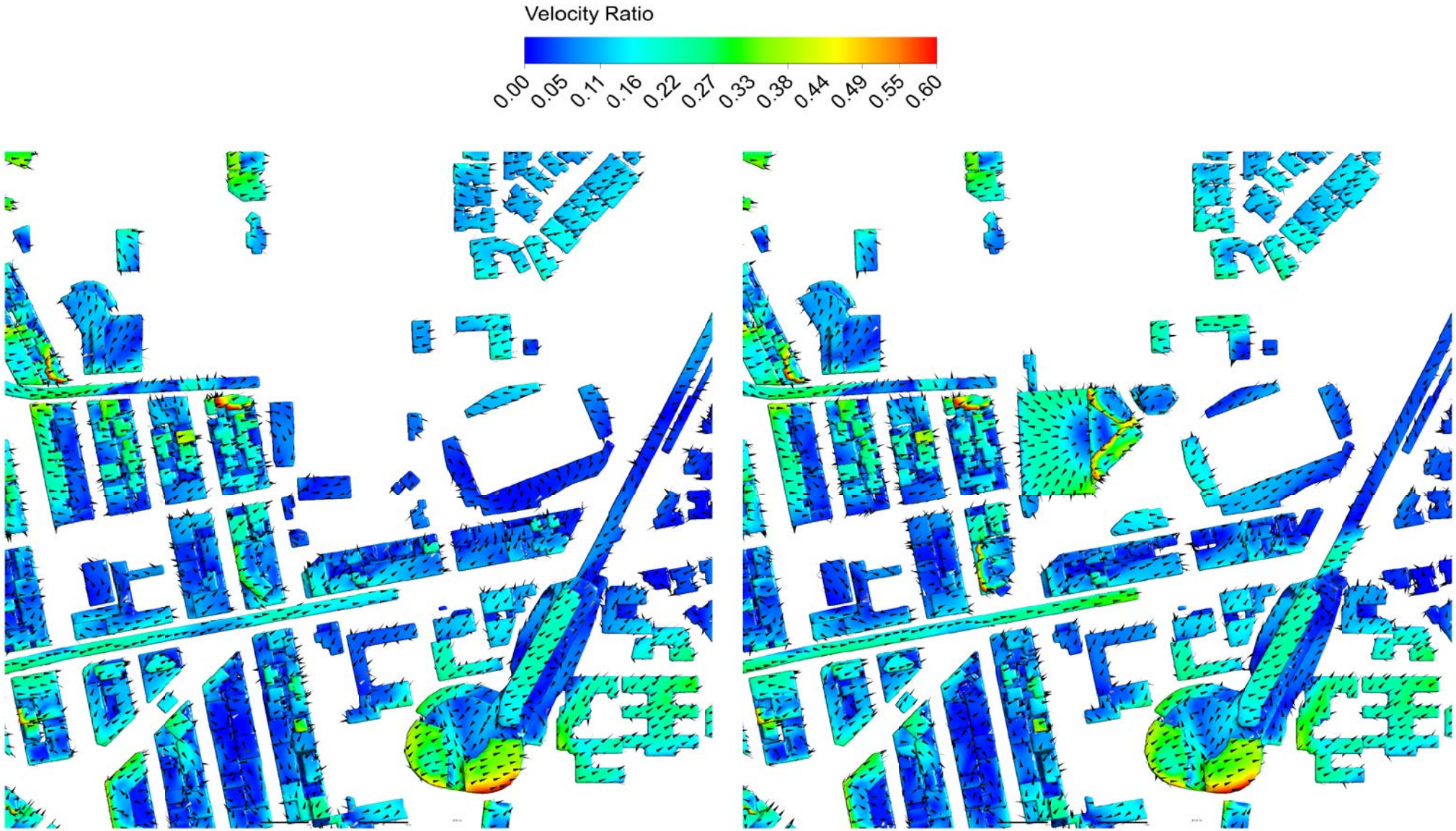
225 deg Wind Direction

CINOTECH 漢臻 consultants limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4j	REV. -



Baseline Scheme

Proposed Scheme

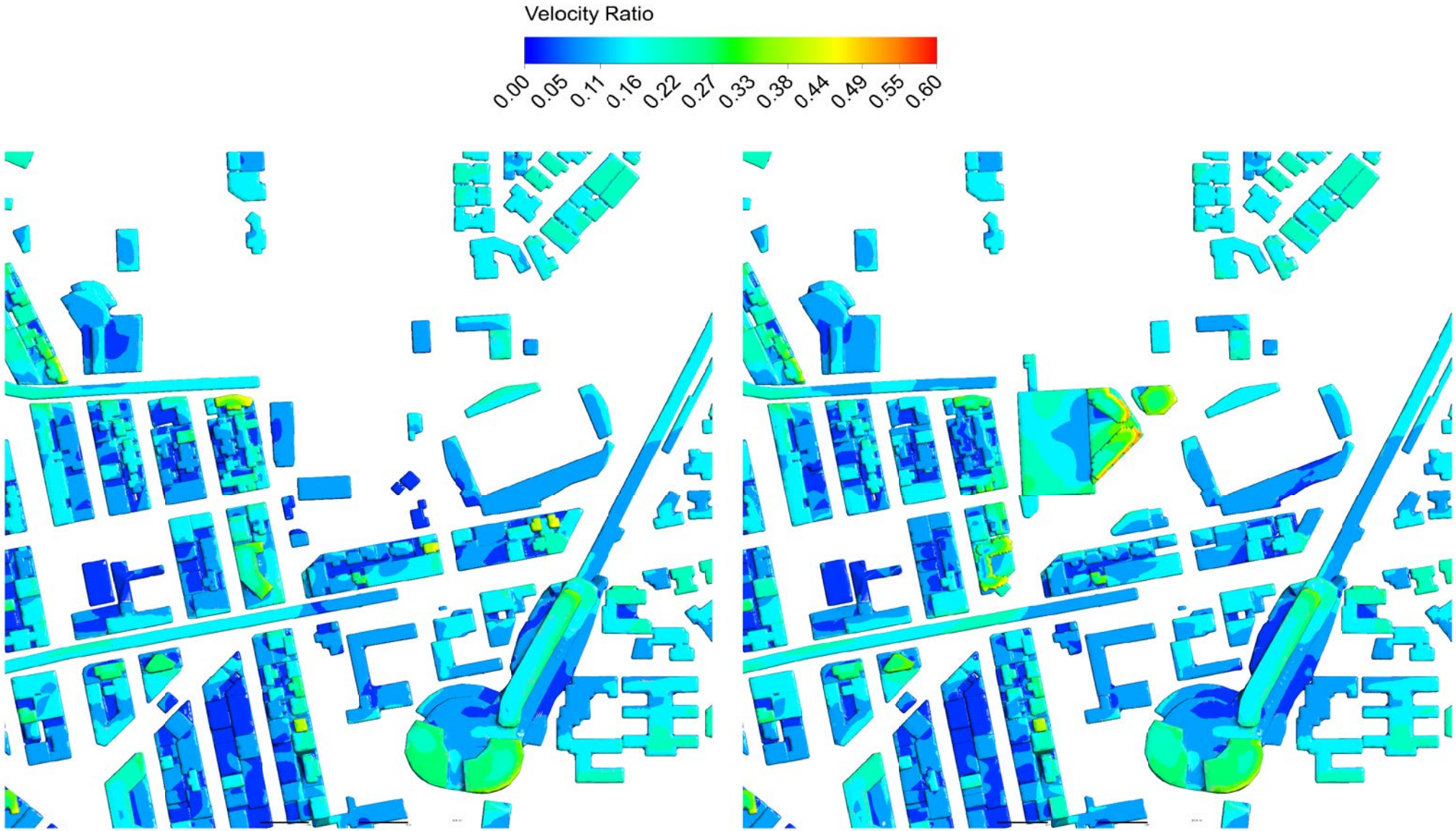
247.5 deg Wind Direction

CINOTECH consultants limited 漢蒸

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours and Vectors of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings

SCALE	N.T.S.	DATE	Jan-24
CHECK	KC	DRAWN	CC
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-4k
			REV. -



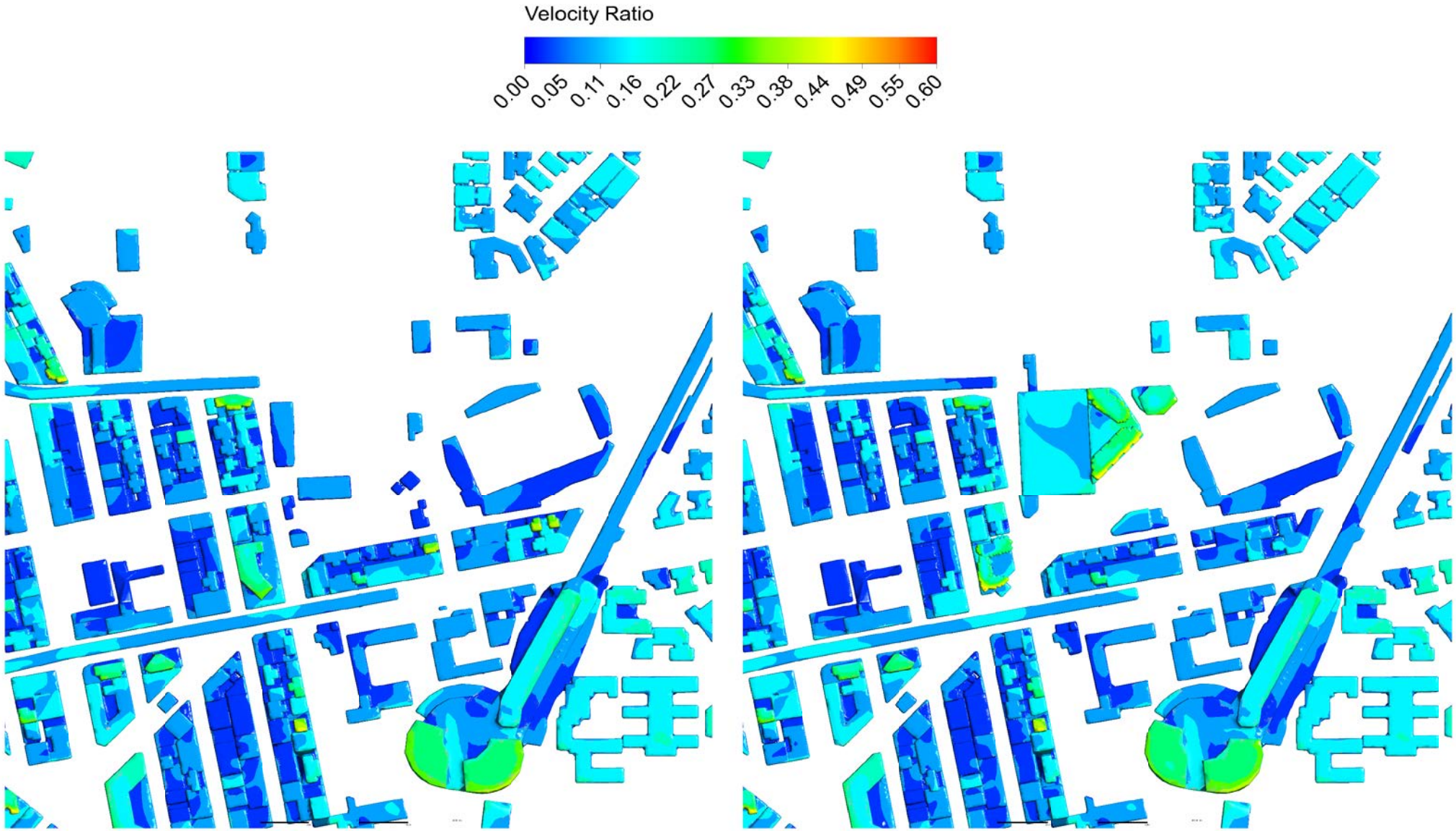
Annual

CINOTECH consultants limited 漢蔡

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings (Annual Condition)

SCALE	N.T.S.	DATE	Dec-23	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-5a	REV.
				-



Summer

CINOTECH consultants limited 漢蓁

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Contours of Wind Velocity Ratio at 2m above Podium and Roof of Surrounding Buildings (Summer Condition)

SCALE	N.T.S.	DATE	Dec-23	
CHECK	KC	DRAWN	CC	
JOB NO.	IA19021-YMAA101P1	FIGURE NO.	4-5b	REV.
				-

APPENDIX 2-1
WIND DATA AT GRID [80,44] FORM RAMS

Occurrence Probability at 500m elevation (Annual)

e_01397	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	0.06	0.086	0.125	0.219	0.119	0.057	0.043	0.045	0.059	0.065	0.039	0.026	0.014	0.012	0.011
00_to_01	0.021	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001
01_to_02	0.057	0.002	0.004	0.005	0.006	0.007	0.003	0.003	0.003	0.004	0.004	0.003	0.003	0.004	0.002	0.002	0.002
02_to_03	0.09	0.004	0.007	0.009	0.011	0.011	0.005	0.005	0.006	0.005	0.006	0.006	0.005	0.004	0.002	0.002	0.003
03_to_04	0.106	0.003	0.007	0.013	0.013	0.014	0.007	0.006	0.007	0.006	0.007	0.006	0.006	0.005	0.002	0.002	0.002
04_to_05	0.111	0.002	0.006	0.011	0.015	0.018	0.011	0.006	0.006	0.005	0.007	0.007	0.006	0.004	0.002	0.002	0.001
05_to_06	0.116	0.001	0.005	0.011	0.015	0.024	0.016	0.007	0.006	0.005	0.006	0.008	0.005	0.003	0.002	0.002	0.001
06_to_07	0.114	0.001	0.005	0.009	0.015	0.027	0.017	0.007	0.005	0.006	0.006	0.008	0.004	0.001	0.002	0.001	0
07_to_08	0.105	0.001	0.005	0.008	0.013	0.027	0.017	0.006	0.004	0.005	0.006	0.006	0.004	0.001	0.001	0.001	0
08_to_09	0.085	0.001	0.004	0.006	0.012	0.025	0.013	0.005	0.002	0.003	0.005	0.005	0.002	0.001	0	0	0
09_to_10	0.064	0	0.003	0.004	0.009	0.02	0.01	0.004	0.001	0.002	0.004	0.004	0.002	0	0	0	0
10_to_11	0.047	0	0.003	0.003	0.006	0.016	0.007	0.003	0.001	0.001	0.002	0.003	0.001	0	0	0	0
11_to_12	0.03	0	0.002	0.002	0.003	0.011	0.004	0.001	0.001	0.001	0.001	0.002	0.001	0	0	0	0
12_to_13	0.019	0	0.002	0.001	0.002	0.006	0.003	0.001	0	0	0.001	0.002	0	0	0	0	0
13_to_14	0.012	0	0.002	0.001	0.001	0.004	0.002	0.001	0	0	0.001	0.001	0	0	0	0	0
14_to_15	0.007	0	0.001	0.001	0.001	0.002	0.001	0	0	0	0	0	0	0	0	0	0
15_to_16	0.005	0	0.001	0	0.001	0.001	0	0	0	0	0	0	0	0	0	0	0
16_to_17	0.004	0	0.001	0	0.001	0.001	0	0	0	0	0	0	0	0	0	0	0
17_to_18	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18_to_19	0.001	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	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_01397	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	0.011	0.014	0.026	0.09	0.101	0.079	0.075	0.095	0.127	0.158	0.096	0.054	0.027	0.022	0.011
00_to_01	0.021	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.003	0	0.001	0
01_to_02	0.06	0.001	0.001	0.001	0.003	0.004	0.004	0.005	0.005	0.007	0.007	0.007	0.004	0.005	0.002	0.001	0.002
02_to_03	0.099	0.002	0.002	0.003	0.003	0.005	0.006	0.008	0.01	0.008	0.013	0.014	0.01	0.009	0.002	0.002	0.002
03_to_04	0.112	0.001	0.001	0.002	0.002	0.005	0.006	0.008	0.011	0.01	0.015	0.016	0.015	0.01	0.004	0.003	0.002
04_to_05	0.118	0	0.001	0.001	0.002	0.008	0.01	0.009	0.01	0.01	0.015	0.016	0.015	0.01	0.005	0.005	0.002
05_to_06	0.112	0.001	0	0.001	0.002	0.01	0.013	0.008	0.008	0.01	0.013	0.018	0.013	0.007	0.004	0.004	0.001
06_to_07	0.105	0.001	0	0.001	0.001	0.009	0.012	0.008	0.008	0.012	0.013	0.02	0.009	0.003	0.004	0.002	0.001
07_to_08	0.099	0	0.001	0.001	0.002	0.009	0.013	0.008	0.007	0.013	0.013	0.014	0.01	0.002	0.003	0.002	0.001
08_to_09	0.073	0	0.001	0.001	0.002	0.008	0.008	0.007	0.005	0.009	0.011	0.013	0.005	0.002	0.002	0.001	0
09_to_10	0.052	0	0.001	0	0.001	0.007	0.007	0.005	0.003	0.005	0.008	0.008	0.005	0.001	0.001	0.001	0
10_to_11	0.043	0	0.001	0	0.001	0.006	0.005	0.004	0.003	0.004	0.006	0.009	0.003	0.001	0	0	0
11_to_12	0.029	0	0	0.001	0.001	0.004	0.003	0.003	0.002	0.001	0.003	0.007	0.002	0.001	0	0	0
12_to_13	0.023	0	0	0.001	0.001	0.003	0.004	0.002	0.001	0.001	0.003	0.005	0.001	0	0	0	0
13_to_14	0.017	0	0	0	0.001	0.002	0.003	0.001	0	0.001	0.002	0.004	0.001	0	0	0	0
14_to_15	0.009	0	0	0	0.001	0.002	0.002	0.001	0	0	0.001	0.002	0.001	0	0	0	0
15_to_16	0.008	0	0	0	0.001	0.002	0.001	0	0	0.001	0	0.001	0	0	0	0	0
16_to_17	0.006	0	0	0	0	0.002	0.001	0	0	0.001	0	0.001	0	0	0	0	0
17_to_18	0.003	0	0	0	0	0.001	0	0	0	0	0	0.001	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	0.002	0	0	0	0	0	0.001	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	0.001	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, Baseline Scheme

Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
P001	835562.15	820668.20		0.212	0.212	0.177	0.101	0.038	0.058	0.063	0.070	0.104	0.076	0.101		0.11	0.08
P002	835564.01	820658.38		0.240	0.223	0.186	0.120	0.025	0.072	0.065	0.071	0.077	0.055	0.064		0.12	0.07
P003	835565.88	820648.56		0.244	0.218	0.172	0.134	0.032	0.078	0.063	0.073	0.038	0.031	0.036		0.12	0.06
P004	835567.75	820638.73		0.246	0.210	0.156	0.142	0.037	0.079	0.060	0.073	0.016	0.022	0.049		0.12	0.05
P005	835569.61	820628.91		0.242	0.194	0.125	0.133	0.036	0.072	0.050	0.073	0.032	0.033	0.071		0.11	0.06
P006	835571.48	820619.08		0.230	0.161	0.080	0.098	0.027	0.053	0.034	0.071	0.031	0.048	0.077		0.09	0.05
P007	835573.35	820609.26		0.188	0.086	0.040	0.069	0.029	0.040	0.042	0.065	0.032	0.056	0.086		0.06	0.05
P008	835574.84	820601.39		0.105	0.091	0.135	0.169	0.101	0.130	0.064	0.054	0.078	0.110	0.132		0.12	0.10
P009	835584.67	820603.23		0.050	0.126	0.136	0.153	0.112	0.130	0.076	0.042	0.085	0.139	0.112		0.12	0.11
P010	835594.50	820605.08		0.069	0.123	0.119	0.131	0.111	0.117	0.089	0.051	0.104	0.156	0.132		0.12	0.11
P011	835604.33	820606.92		0.041	0.053	0.052	0.095	0.095	0.086	0.084	0.044	0.123	0.168	0.160		0.08	0.11
P012	835614.16	820608.77		0.164	0.186	0.160	0.134	0.052	0.027	0.067	0.043	0.152	0.189	0.185		0.13	0.12
P013	835621.22	820615.36		0.264	0.272	0.233	0.119	0.085	0.047	0.123	0.091	0.132	0.125	0.106		0.15	0.11
P014	835619.36	820625.18		0.245	0.252	0.224	0.104	0.090	0.088	0.127	0.096	0.082	0.064	0.058		0.14	0.09
P015	835617.50	820635.01		0.215	0.217	0.212	0.096	0.097	0.120	0.131	0.093	0.098	0.089	0.078		0.14	0.10
P016	835615.40	820646.32		0.166	0.154	0.191	0.094	0.100	0.139	0.130	0.087	0.105	0.101	0.083		0.12	0.10
P017	835613.38	820657.92		0.119	0.084	0.162	0.097	0.101	0.143	0.124	0.075	0.101	0.101	0.084		0.11	0.10
P018	835615.02	820667.06		0.086	0.040	0.134	0.083	0.099	0.140	0.120	0.065	0.110	0.111	0.088		0.10	0.10
P019	835610.16	820674.43		0.077	0.026	0.117	0.087	0.102	0.135	0.119	0.058	0.090	0.093	0.071		0.09	0.09
P020	835607.91	820685.62		0.057	0.016	0.098	0.090	0.094	0.112	0.108	0.042	0.072	0.083	0.072		0.08	0.08
P021	835597.61	820683.16		0.157	0.212	0.227	0.134	0.050	0.016	0.014	0.003	0.039	0.024	0.079		0.12	0.04
P022	835587.50	820681.26		0.226	0.302	0.328	0.199	0.088	0.029	0.010	0.005	0.053	0.038	0.086		0.17	0.06
P023	835746.16	820668.18		0.159	0.160	0.065	0.019	0.012	0.048	0.049	0.035	0.033	0.024	0.042		0.05	0.03
P024	835747.99	820658.20		0.104	0.107	0.044	0.063	0.016	0.045	0.034	0.024	0.030	0.038	0.041		0.05	0.04
P025	835757.84	820659.95		0.049	0.053	0.026	0.076	0.016	0.040	0.020	0.008	0.024	0.017	0.020		0.04	0.03
P026	835767.67	820661.74		0.058	0.057	0.037	0.097	0.024	0.047	0.016	0.003	0.029	0.004	0.013		0.05	0.03
P027	835774.06	820662.99		0.210	0.223	0.082	0.094	0.007	0.041	0.027	0.013	0.032	0.035	0.034		0.08	0.03
P028	835772.13	820673.06		0.202	0.192	0.073	0.009	0.012	0.010	0.019	0.034	0.045	0.023	0.020		0.06	0.02
P029	835785.29	820669.37		0.039	0.090	0.027	0.034	0.012	0.013	0.091	0.107	0.017	0.088	0.082		0.04	0.06
P030	835790.05	820665.02		0.109	0.051	0.020	0.078	0.118	0.062	0.020	0.022	0.089	0.053	0.043		0.07	0.06
P031	835799.88	820666.83		0.109	0.079	0.004	0.040	0.136	0.081	0.021	0.023	0.096	0.075	0.070		0.07	0.07
P032	835809.72	820668.63		0.129	0.116	0.012	0.003	0.153	0.090	0.030	0.033	0.101	0.088	0.081		0.07	0.08
P033	835809.91	820674.18		0.127	0.130	0.040	0.014	0.008	0.006	0.015	0.023	0.011	0.019	0.008		0.04	0.01
P034	835870.92	820703.59		0.116	0.098	0.103	0.072	0.070	0.018	0.026	0.020	0.041	0.066	0.041		0.07	0.05
P035	835860.52	820701.61		0.145	0.121	0.096	0.055	0.035	0.030	0.027	0.035	0.043	0.049	0.041		0.07	0.04
P036	835865.05	820679.08		0.296	0.262	0.137	0.109	0.122	0.071	0.033	0.047	0.019	0.009	0.007		0.12	0.05
P037	835875.05	820680.76		0.309	0.264	0.149	0.118	0.123	0.048	0.030	0.063	0.032	0.055	0.012		0.13	0.06
P038	835898.58	820708.81		0.058	0.059	0.063	0.041	0.048	0.030	0.015	0.024	0.027	0.019	0.009		0.04	0.03
P039	835889.85	820707.15		0.073	0.064	0.072	0.053	0.030	0.022	0.006	0.019	0.020	0.030	0.019		0.05	0.03
P040	835881.11	820705.50		0.093	0.077	0.085	0.064	0.041	0.021	0.010	0.015	0.016	0.057	0.029		0.06	0.03
P041	835885.65	820682.77		0.327	0.260	0.133	0.096	0.108	0.011	0.034	0.083	0.065	0.102	0.025		0.13	0.07
P042	835892.68	820690.83		0.247	0.181	0.005	0.028	0.133	0.051	0.002	0.055	0.080	0.088	0.003		0.08	0.06
P043	835897.07	820699.41		0.143	0.093	0.001	0.052	0.186	0.083	0.013	0.061	0.088	0.085	0.007		0.08	0.08
P044	835819.80	820837.34		0.117	0.164	0.259	0.298	0.150	0.121	0.043	0.031	0.045	0.038	0.089		0.18	0.09
P045	835809.81	820836.92		0.093	0.105	0.227	0.282	0.124	0.115	0.058	0.016	0.054	0.053	0.087		0.16	0.09
P046	835799.82	820836.49		0.074	0.059	0.194	0.270	0.100	0.108	0.070	0.021	0.058	0.060	0.087		0.14	0.09
P047	835789.83	820836.10		0.062	0.032	0.161	0.257	0.082	0.100	0.073	0.033	0.057	0.064	0.088		0.13	0.09
P048	835779.85	820837.52		0.052	0.019	0.116	0.246	0.064	0.099	0.068	0.035	0.053	0.063	0.087		0.11	0.09
P049	835770.43	820841.70		0.042	0.020	0.057	0.219	0.039	0.103	0.060	0.032	0.050	0.059	0.084		0.09	0.08
P050	835760.44	820841.20		0.040	0.040	0.047	0.214	0.040	0.094	0.046	0.026	0.052	0.056	0.080		0.09	0.07
P051	835750.45	820840.70		0.038	0.058	0.050	0.211	0.042	0.081	0.035	0.024	0.054	0.056	0.073		0.09	0.07
P052	835740.46	820840.19		0.034	0.072	0.051	0.212	0.043	0.062	0.036	0.024	0.056	0.058	0.065		0.09	0.07
P053	835730.48	820839.69		0.028	0.076	0.061	0.211	0.046	0.040	0.045	0.026	0.056	0.057	0.055		0.09	0.07
P054	835720.49	820839.19		0.035	0.078	0.060	0.212	0.045	0.031	0.057	0.028	0.058	0.053	0.045		0.09	0.06
P055	835710.50	820838.68		0.063	0.075	0.064	0.210	0.046	0.054	0.069	0.030	0.058	0.049	0.035		0.10	0.07
P056	835700.52	820838.14		0.089	0.069	0.070	0.212	0.046	0.075	0.079	0.032	0.058	0.045	0.025		0.10	0.07
P057	835690.53	820837.60		0.113	0.062	0.074	0.210	0.047	0.096	0.088	0.034	0.058	0.041	0.017		0.10	0.07
P058	835680.55	820837.05		0.129	0.052	0.076	0.209	0.048	0.113	0.093	0.036	0.058	0.037	0.018		0.10	0.07
P059	835670.56	820836.51		0.141	0.042	0.079	0.210	0.049	0.129	0.098	0.038	0.056	0.033	0.026		0.11	0.07
P060	835660.57	820835.97		0.145	0.032	0.080	0.207	0.051	0.140	0.104	0.041	0.054	0.030	0.035		0.11	0.07
P061	835650.59	820835.42		0.144	0.022	0.083	0.203	0.054	0.147	0.109	0.042	0.051	0.027	0.044		0.10	0.08
P062	835640.60	820834.88		0.133	0.017	0.087	0.201	0.059	0.147	0.113	0.042	0.047	0.026	0.052		0.10	0.08
P063	835630.62	820834.34		0.115	0.023	0.094	0.202	0.067	0.134	0.113	0.040	0.043	0.028	0.060		0.10	0.08
P064	835620.63	820833.79		0.096	0.032	0.102	0.210	0.075	0.063	0.088	0.035	0.038	0.021	0.070		0.10	0.07
P065	835610.65	820833.25		0.085	0.016	0.095	0.198	0.063	0.028	0.035	0.029	0.028	0.004	0.076		0.09	0.05
P066	835600.66	820832.71		0.080	0.016	0.097	0.152	0.055	0.112	0.070	0.026	0.021	0.022	0.083		0.08	0.06
P067	835590.48	820832.11		0.060	0.032	0.155	0.189	0.103	0.122	0.098	0.030	0.015	0.050	0.096		0.11	0.08
P068	835592.46	820822.31		0.102	0.007	0.117	0.144	0.090	0.117	0.093	0.007	0.011	0.038	0.062		0.09	0.06
P069	835594.45	820812.51		0.111	0.016	0.087	0.106	0.076	0.084	0.073	0.021	0.034	0.009	0.042		0.07	0.05
P070	835596.44	820802.71		0.093	0.029	0.067	0.080	0.064	0.047	0.031	0.045	0.073	0.019	0.033		0.06	0.05
P071	835598.42	820792.91		0.097	0.020	0.043	0.062	0.044	0.032	0.020	0.060	0.095	0.023	0.034		0.05	0.05
P072	835600.41	820783.11		0.098	0.017	0.037	0.069	0.021	0.021	0.024	0.064	0.096	0.014	0.027		0.05	0.04
P073	835602.40	820773.31		0.105	0.027	0.061	0.104	0.010	0.009	0.031	0.065	0.086	0.024	0.049		0.06	0.05
P074	835604.39	820763.51		0.117	0.029	0.084	0.144	0.008	0.019	0.033	0.062	0.073	0.032	0.055		0.08	0.05
P075	835606.37	820753.71		0.100	0.020	0.074	0.140	0.005	0.018	0.015	0.043	0.058	0.038	0.054		0.07	0.05
P076	835608.36	820743.90		0.108	0.040	0.091	0.148	0.011	0.051	0.021	0.036	0.041	0.032	0.047		0.08	0.05
P077	835610.35	820734.10		0.134	0.071	0.124	0.168	0.022	0.061	0.043	0.032	0.089	0.097	0.129		0.10	0.08
P078	835612.34	820724.30		0.100	0.061	0.084	0.145	0.033	0.067	0.059	0.025	0.112	0.076	0.090		0.09	0.08
P079	835614.32	820714.50		0.027	0.068	0.036	0.030	0.067	0.091	0.089	0.019	0.052	0.032	0.030		0.05	0.05
P080	835616.31	820704.70		0.017	0.044	0.023	0.039	0.068	0.103	0.093	0.014	0.026	0.023	0.028		0.04	0.04
P081	835618.30	820694.90		0.047	0.065	0.055	0.046	0.068	0.119	0.102	0.041	0.046	0.028	0.029		0.06	0.05
P082	835620.29	820685.10		0.076	0.025	0.073	0.044	0.077	0.155	0.130	0.051	0.053	0.024	0.014		0.06	0.06
P083	835622.27	820675.30		0.046	0.016	0.101	0.037	0.087	0.153	0.123	0.053	0.074	0.054	0.022		0.06	0.07
P084	835623.91	820665.52		0.050	0.041	0.115	0.067	0.074	0.113	0.091	0.049	0.099	0.100	0.070		0.08	0.08
P085	835633.75	820667.32		0.070	0.112	0.011	0.063	0.060	0.131	0.094	0.038	0.039	0.039	0.031		0.06	0.06
P086	835643.58	820669.13		0.139	0.164	0.070	0.068	0.069	0.177	0.120	0.041	0.029	0.019	0.050		0.08	0.06
P087	835653.42	820670.94		0.139	0.178	0.058	0.073	0.054	0.162	0.097	0.036	0.044	0.028	0.060		0.08	0.06
P088	835663.25	820672.74		0.128	0.173	0.031	0.075	0.043	0.083	0.038	0.015	0.051	0.039	0.071		0.07	0.05
P089	835673.09	820674.55		0.116	0.161	0.022	0.069	0.038	0.033	0.031	0.014	0.054	0.044	0.079		0.06	0.05
P090	835682.92	820676.36		0.107	0.151	0.019	0.062	0.037	0.037	0.025	0.025	0.054	0.046	0.084		0.06	0.05
P091	835692.76	820678.16		0.097	0.140	0.009	0.058	0.036	0.031	0.032	0.025	0.052	0.045	0.085		0.05	0.05
P092	835702.59	820679.97		0.080	0.126	0.009	0.056	0.034	0.022	0.039	0.024	0.048	0.043	0.082		0.05	0.04
P093	835712.43	820681.78		0.058	0.113	0.015	0.056	0.032	0.018	0.043	0.026	0.043	0.041	0.075		0.05	0.04
P094	835722.26	820683.58		0.035	0.100	0.016	0.056	0.028	0.027	0.047	0.030	0.037	0.039	0.064		0.04	0.04
P095	835732.10	820685.39		0.009	0.089	0.016	0.054	0.024	0.041	0.054	0.036	0.028	0.034	0.049		0.04	0.04
P096	835741.94	820687.19		0.010	0.085	0.010	0.049	0.020	0.053	0.052	0.039	0.016	0.034	0.038		0.04	0.04
P097	835743.86	820697.30		0.007	0.017	0.014	0.015	0.008	0.054	0.050	0.035	0.014	0.008	0.010		0.02	0.02
P098	835742.22	820708.00		0.033	0.029	0.039	0.031	0.029	0.057	0.041	0.028	0.043	0.046	0.054		0.04	0.04
P099	835752.24	820709.23		0.014	0.038	0.031	0.036	0.004	0.078	0.026	0.027	0.012	0.025	0.044		0.03	0.03
P100	835756.16	820718.79		0.031	0.037	0.035	0.031	0.019	0.069	0.029	0.012	0.049	0.043	0.044		0.03	0.04
P101	835754.52	820728.66		0.052	0.043	0.053	0.036	0.037	0.032	0.039	0.025	0.069	0.062	0.052		0.04	0.05
P102	835752.66	820738.55		0.049	0.034	0.036	0.024	0.026	0.020	0.052	0.036	0.072	0.061	0.041		0.04	0.04
P103	835745.72	820746.06		0.022	0.026	0.027	0.019	0.029	0.025	0.056	0.040	0.035	0.024	0.017		0.03	0.03
P104	835739.75	820752.51		0.061	0.058	0.031	0.017	0.055	0.055	0.053	0.038	0.058	0.069	0.031		0.04	0.05
P105	835746.64	820759.76		0.058	0.059	0.045	0.027	0.045	0.049	0.063	0.039	0.069	0.068	0.033		0.05	0.05
P106	835753.52	820767.01		0.062	0.061	0.049	0.038	0.035	0.053	0.050	0.028	0.081	0.072	0.035		0.05	0.05
P107	835760.41	820774.26		0.065	0.062	0.055	0.057	0.037	0.068	0.027	0.025	0.089	0.074	0.035		0.06	0.05
P108	835767.30	820781.51		0.072	0.071	0.083	0.104	0.051	0.080	0.011	0.021	0.094	0.078	0.037		0.08	0.06
P109	835774.18	820788.76		0.081	0.118	0.148	0.174	0.075	0.090	0.018	0.017	0.083	0.070	0.040		0.11	0.07
P110	835781.07	820796.01		0.084	0.162	0.186	0.196	0.093	0.096	0.021	0.029	0.074	0.064	0.062		0.13	0.08
P111	835787.96	820803.26		0.058	0.105	0.153	0.171	0.085	0.079	0.030	0.050	0.069	0.062	0.075		0.11	0.08
P112	835794.85	820810.51		0.032	0.058	0.130	0.160	0.079	0.052	0.051	0.049	0.063	0.060	0.069		0.10	0.07
P113	835801.73	820817.76		0.073	0.123	0.223	0.259	0.135	0.091	0.044	0.010	0.063	0.060	0.027		0.15	0.08
P114	835808.62	820825.01		0.091	0.150	0.251	0.290	0.151	0.111	0.039	0.020	0.055	0.049	0.052		0.17	0.09
P115	835815.51	820832.26		0.105	0.161	0.255	0.294	0.151	0.116	0.041	0.025	0.048	0.041	0.071		0.18	0.09
O001	835962.11	820860.15		0.323	0.324	0.257	0.242	0.172	0.050	0.101	0.065	0.045	0.036	0.107		0.20	0.10
O002	835937.14	820859.00		0.212	0.294	0.256	0.250	0.162	0.028	0.077	0.082	0.032	0.014	0.113		0.18	0.09
O003	835912.16	820857.85		0.140	0.254	0.278	0.269	0.163	0.024	0.025	0.093	0.027	0.006	0.116		0.18	0.08
O004	835887.19	820856.69		0.075	0.159	0.249	0.254	0.152	0.099	0.028	0.091	0.019	0.013	0.121		0.16	0.09
O005	835862.22	820855.54		0.087	0.073	0.234	0.258	0.137	0.079	0.054	0.104	0.016	0.021	0.132		0.15	0.09
O006	835837.24	820854.39		0.134	0.172	0.224	0.281	0.143	0.095	0.046	0.062	0.039	0.023	0.144		0.17	0.10
O007	835812.27	820853.24		0.060	0.072	0.080	0.185	0.033	0.135	0.063	0.027	0.048	0.053	0.103		0.10	0.08
O008	835787.30	820852.08		0.038	0.050	0.057	0.145	0.027	0.132	0.077	0.049	0.046	0.062	0.087		0.08	0.07
O009	835762.32	820850.93		0.034	0.040	0.018	0.159	0.017	0.112	0.054	0.034	0.050	0.050	0.080		0.07	0.07
O010	835737.35	820849.78		0.025	0.062	0.041	0.177	0.029	0.075	0.042	0.027	0.058	0.056	0.061		0.08	0.06
O011	835712.38	820848.63		0.064	0.054	0.063	0.185	0.038	0.043	0.070	0.024	0.058	0.048	0.037		0.09	0.06
O012	835687.40	820847.47		0.125	0.039	0.081	0.194	0.045	0.094	0.093	0.028	0.059	0.039	0.019		0.10	0.07
O013	835662.43	820846.32		0.145	0.019	0.094	0.203	0.050	0.135	0.106	0.035	0.056	0.031	0.030		0.10	0.07
O014	835637.46	820845.17		0.124	0.020	0.109	0.211	0.060	0.145	0.118	0.035	0.045	0.023	0.040		0.11	0.08
O015	835613.05	820837.83		0.092	0.028	0.112	0.218	0.075	0.040	0.070	0.028	0.029	0.019	0.062		0.10	0.06
O016	835588.08	820836.60		0.049	0.064	0.169	0.212	0.106	0.123	0.099	0.034	0.015	0.051	0.087		0.12	0.08
O017	835563.11	820835.37		0.115	0.152	0.221	0.257	0.106	0.078	0.057	0.037	0.035	0.063	0.095		0.15	0.09
O018	835538.14	820834.13		0.229	0.226	0.244	0.221	0.062	0.050	0.058	0.022	0.039	0.041	0.078		0.15	0.07
O019	835513.17	820832.90		0.187	0.131	0.192	0.158	0.033	0.059	0.028	0.007	0.023	0.043	0.114		0.11	0.05
O020	835488.20	820831.67		0.218	0.160	0.209	0.175	0.095	0.054	0.033	0.026	0.093	0.040	0.048		0.14	0.07

Wind Velocity Ratio, Baseline Scheme

Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
0021	835463.23	820830.43		0.171	0.149	0.151	0.179	0.109	0.067	0.060	0.048	0.099	0.029	0.071		0.13	0.08
0022	835617.25	820853.67		0.092	0.062	0.135	0.226	0.081	0.093	0.116	0.022	0.033	0.016	0.031		0.12	0.07
0023	835592.28	820852.56		0.058	0.086	0.171	0.261	0.109	0.128	0.093	0.008	0.029	0.013	0.041		0.13	0.08
0024	835567.30	820851.46		0.091	0.122	0.223	0.298	0.138	0.077	0.030	0.040	0.032	0.066	0.031		0.17	0.09
0025	835542.33	820850.35		0.160	0.157	0.234	0.278	0.136	0.045	0.054	0.029	0.030	0.094	0.075		0.17	0.09
0026	835517.35	820849.25		0.171	0.151	0.215	0.253	0.120	0.053	0.034	0.020	0.081	0.135	0.080		0.16	0.10
0027	835492.38	820848.14		0.169	0.145	0.192	0.223	0.107	0.040	0.015	0.007	0.102	0.158	0.086		0.15	0.10
0028	835467.40	820847.03		0.175	0.146	0.187	0.197	0.109	0.040	0.020	0.035	0.110	0.149	0.091		0.15	0.10
0029	836038.71	820681.43		0.157	0.197	0.223	0.047	0.015	0.026	0.083	0.060	0.127	0.080	0.085		0.10	0.07
0030	836013.19	820677.78		0.042	0.163	0.209	0.076	0.069	0.045	0.063	0.038	0.122	0.060	0.084		0.10	0.07
0031	835990.50	820674.34		0.110	0.131	0.206	0.079	0.056	0.045	0.026	0.021	0.083	0.026	0.076		0.09	0.05
0032	836037.50	820669.89		0.073	0.187	0.217	0.026	0.023	0.037	0.050	0.050	0.123	0.021	0.046		0.08	0.05
0033	836014.40	820665.64		0.113	0.162	0.199	0.071	0.048	0.027	0.035	0.043	0.128	0.032	0.049		0.10	0.06
0034	835992.67	820664.80		0.168	0.141	0.193	0.045	0.055	0.047	0.037	0.021	0.099	0.035	0.053		0.09	0.05
0035	835968.00	820660.74		0.088	0.112	0.170	0.023	0.053	0.071	0.071	0.069	0.059	0.073	0.051		0.08	0.06
0036	835943.34	820656.68		0.128	0.080	0.128	0.059	0.049	0.079	0.093	0.096	0.023	0.090	0.064		0.08	0.07
0037	835904.47	820657.45		0.203	0.191	0.174	0.130	0.144	0.092	0.120	0.119	0.034	0.117	0.092		0.14	0.10
0038	835879.88	820652.98		0.266	0.218	0.171	0.158	0.138	0.113	0.139	0.130	0.031	0.085	0.070		0.15	0.10
0039	835855.28	820648.52		0.248	0.165	0.103	0.115	0.126	0.128	0.152	0.134	0.027	0.055	0.050		0.12	0.09
0040	835830.68	820644.05		0.217	0.124	0.085	0.106	0.106	0.138	0.164	0.134	0.012	0.079	0.076		0.11	0.09
0041	835806.08	820639.58		0.188	0.066	0.063	0.089	0.068	0.146	0.171	0.134	0.022	0.110	0.103		0.09	0.10
0042	835781.48	820635.12		0.211	0.222	0.094	0.092	0.047	0.160	0.170	0.135	0.049	0.150	0.134		0.12	0.11
0043	835756.89	820630.65		0.062	0.111	0.049	0.062	0.095	0.163	0.143	0.101	0.052	0.171	0.150		0.09	0.12
0044	835732.29	820626.18		0.112	0.114	0.073	0.096	0.115	0.146	0.111	0.067	0.056	0.183	0.158		0.10	0.12
0045	835707.69	820621.72		0.231	0.067	0.068	0.091	0.123	0.114	0.043	0.043	0.076	0.194	0.167		0.11	0.11
0046	835683.09	820617.25		0.200	0.035	0.035	0.078	0.103	0.056	0.046	0.054	0.112	0.193	0.177		0.09	0.11
0047	835658.50	820612.78		0.126	0.032	0.048	0.031	0.073	0.067	0.111	0.073	0.127	0.147	0.184		0.07	0.11
0048	835633.90	820608.32		0.174	0.183	0.186	0.096	0.098	0.063	0.141	0.079	0.124	0.136	0.189		0.13	0.12
0049	835609.30	820603.85		0.073	0.154	0.151	0.159	0.070	0.068	0.088	0.015	0.139	0.174	0.202		0.12	0.12
0050	835584.70	820599.38		0.067	0.173	0.179	0.176	0.106	0.129	0.038	0.050	0.112	0.146	0.181		0.14	0.12
0051	835560.11	820594.92		0.113	0.210	0.218	0.154	0.052	0.132	0.044	0.048	0.064	0.095	0.144		0.13	0.09
0052	835535.51	820590.45		0.095	0.234	0.230	0.184	0.035	0.141	0.029	0.026	0.049	0.082	0.164		0.14	0.08
0053	835510.91	820585.98		0.025	0.227	0.229	0.185	0.061	0.133	0.022	0.045	0.049	0.138	0.201		0.14	0.11
0054	835486.31	820581.52		0.070	0.225	0.237	0.174	0.061	0.089	0.060	0.038	0.055	0.132	0.208		0.14	0.10
0055	835461.71	820577.05		0.062	0.210	0.246	0.194	0.056	0.084	0.051	0.034	0.063	0.101	0.203		0.14	0.10
0056	835437.12	820572.58		0.062	0.208	0.262	0.246	0.107	0.128	0.069	0.046	0.117	0.069	0.192		0.17	0.12
0057	835907.49	820642.99		0.177	0.140	0.196	0.166	0.124	0.105	0.114	0.111	0.015	0.101	0.078		0.14	0.10
0058	835882.91	820638.42		0.289	0.219	0.206	0.183	0.157	0.128	0.139	0.126	0.028	0.082	0.071		0.17	0.11
0059	835858.33	820633.85		0.293	0.220	0.130	0.131	0.122	0.153	0.159	0.132	0.028	0.042	0.031		0.14	0.09
0060	835833.75	820629.28		0.230	0.180	0.135	0.141	0.129	0.164	0.174	0.132	0.022	0.047	0.020		0.13	0.09
0061	835809.18	820624.71		0.215	0.153	0.142	0.152	0.134	0.154	0.173	0.129	0.014	0.074	0.036		0.13	0.10
0062	835784.60	820620.14		0.260	0.177	0.100	0.102	0.036	0.177	0.175	0.136	0.043	0.091	0.078		0.11	0.10
0063	835760.02	820615.57		0.287	0.154	0.094	0.040	0.056	0.191	0.163	0.120	0.049	0.091	0.091		0.10	0.09
0064	835735.44	820611.00		0.247	0.059	0.009	0.070	0.078	0.171	0.133	0.088	0.042	0.082	0.096		0.08	0.09
0065	835710.86	820606.43		0.176	0.131	0.019	0.057	0.081	0.122	0.093	0.060	0.046	0.086	0.110		0.08	0.08
0066	835686.28	820601.86		0.139	0.126	0.017	0.037	0.094	0.076	0.065	0.042	0.063	0.026	0.113		0.06	0.06
0067	835661.70	820597.29		0.101	0.092	0.028	0.013	0.060	0.062	0.070	0.044	0.027	0.005	0.109		0.04	0.04
0068	835637.12	820592.72		0.130	0.115	0.113	0.038	0.116	0.037	0.058	0.034	0.127	0.071	0.143		0.08	0.08
0069	835612.55	820588.15		0.187	0.201	0.160	0.167	0.034	0.038	0.017	0.017	0.097	0.088	0.186		0.12	0.08
0070	835587.97	820583.58		0.303	0.314	0.267	0.204	0.028	0.044	0.014	0.018	0.100	0.131	0.176		0.17	0.09
0071	835563.39	820579.01		0.297	0.304	0.255	0.178	0.065	0.054	0.034	0.014	0.035	0.101	0.109		0.16	0.08
0072	835538.81	820574.44		0.260	0.278	0.244	0.179	0.047	0.027	0.020	0.062	0.082	0.052	0.070		0.15	0.07
0073	835514.23	820569.87		0.174	0.226	0.214	0.146	0.072	0.056	0.023	0.023	0.043	0.061	0.109		0.13	0.07
0074	835489.65	820565.30		0.135	0.200	0.204	0.140	0.036	0.072	0.027	0.032	0.032	0.103	0.157		0.12	0.08
0075	835465.07	820560.73		0.091	0.175	0.183	0.109	0.095	0.036	0.063	0.047	0.050	0.128	0.186		0.11	0.09
0076	835440.49	820556.16		0.061	0.170	0.207	0.153	0.020	0.118	0.014	0.039	0.064	0.151	0.215		0.12	0.10
0077	835781.19	820982.75		0.026	0.135	0.081	0.067	0.079	0.006	0.071	0.090	0.027	0.073	0.045		0.07	0.06
0078	835782.12	820957.77		0.044	0.116	0.068	0.033	0.040	0.025	0.079	0.072	0.022	0.056	0.066		0.05	0.05
0079	835783.05	820932.79		0.058	0.060	0.040	0.126	0.104	0.034	0.074	0.059	0.031	0.088	0.098		0.08	0.08
0080	835783.98	820907.80		0.014	0.073	0.078	0.093	0.043	0.064	0.088	0.025	0.029	0.055	0.028		0.06	0.05
0081	835784.90	820882.82		0.012	0.073	0.091	0.141	0.065	0.129	0.083	0.084	0.038	0.065	0.017		0.09	0.07
0082	835785.83	820857.84		0.028	0.051	0.077	0.076	0.045	0.138	0.078	0.055	0.042	0.061	0.081		0.07	0.07
0083	835769.31	820933.57		0.037	0.087	0.046	0.085	0.075	0.086	0.078	0.057	0.029	0.066	0.084		0.07	0.07
0084	835769.73	820908.57		0.018	0.075	0.055	0.079	0.041	0.124	0.080	0.091	0.035	0.064	0.038		0.06	0.07
0085	835770.15	820883.58		0.020	0.072	0.061	0.097	0.055	0.091	0.078	0.053	0.031	0.052	0.017		0.07	0.06
0086	835769.52	820858.34		0.026	0.040	0.036	0.081	0.026	0.125	0.066	0.046	0.042	0.052	0.078		0.05	0.06
0087	835894.43	820959.20		0.103	0.135	0.184	0.073	0.059	0.010	0.036	0.086	0.021	0.060	0.141		0.09	0.06
0088	835877.50	820940.81		0.114	0.133	0.148	0.034	0.077	0.013	0.040	0.077	0.010	0.045	0.111		0.07	0.05
0089	835856.06	820928.90		0.104	0.099	0.130	0.051	0.045	0.024	0.025	0.046	0.007	0.050	0.119		0.07	0.05
0090	835831.15	820924.79		0.065	0.055	0.072	0.139	0.096	0.059	0.011	0.042	0.012	0.058	0.138		0.08	0.07
0091	835806.24	820922.67		0.060	0.047	0.035	0.139	0.093	0.022	0.022	0.051	0.019	0.062	0.122		0.07	0.07
0092	836018.16	820784.92		0.281	0.243	0.150	0.071	0.054	0.043	0.080	0.040	0.050	0.052	0.024		0.11	0.05
0093	836006.31	820759.98		0.268	0.208	0.099	0.022	0.015	0.018	0.098	0.049	0.032	0.023	0.019		0.07	0.03
0094	835996.26	820740.08		0.214	0.158	0.040	0.020	0.014	0.036	0.104	0.052	0.076	0.023	0.011		0.06	0.04
0095	835984.32	820715.87		0.222	0.098	0.041	0.029	0.028	0.092	0.131	0.078	0.039	0.041	0.006		0.06	0.05
0096	835973.26	820693.44		0.228	0.037	0.030	0.091	0.055	0.092	0.115	0.079	0.007	0.055	0.004		0.07	0.06
0097	835968.43	820672.16		0.174	0.084	0.187	0.046	0.043	0.068	0.081	0.080	0.045	0.075	0.056		0.09	0.06
0098	835587.35	820830.50		0.055	0.031	0.174	0.219	0.117	0.118	0.098	0.031	0.010	0.060	0.101		0.12	0.09
0099	835591.82	820805.90		0.112	0.020	0.066	0.083	0.063	0.051	0.050	0.037	0.063	0.012	0.030		0.06	0.05
0100	835596.30	820781.31		0.113	0.018	0.048	0.085	0.021	0.025	0.034	0.063	0.093	0.022	0.030		0.06	0.05
0101	835600.78	820756.71		0.121	0.016	0.075	0.150	0.009	0.024	0.030	0.062	0.068	0.064	0.098		0.08	0.06
0102	835605.25	820732.11		0.183	0.108	0.166	0.205	0.036	0.046	0.032	0.026	0.099	0.098	0.134		0.13	0.09
0103	835609.73	820707.52		0.018	0.075	0.043	0.084	0.085	0.091	0.093	0.006	0.017	0.052	0.049		0.06	0.06
0104	835614.20	820682.92		0.068	0.011	0.097	0.063	0.096	0.141	0.124	0.051	0.081	0.075	0.052		0.07	0.08
0105	835618.68	820658.33		0.104	0.079	0.148	0.077	0.097	0.141	0.120	0.070	0.123	0.124	0.112		0.10	0.11
0106	835623.16	820633.73		0.221	0.236	0.204	0.094	0.099	0.114	0.115	0.081	0.131	0.122	0.119		0.14	0.11
0107	835627.13	820611.30		0.224	0.233	0.204	0.107	0.097	0.053	0.135	0.081	0.147	0.175	0.186		0.14	0.13
0108	835902.92	820665.14		0.190	0.184	0.129	0.099	0.127	0.053	0.090	0.087	0.035	0.104	0.078		0.12	0.08
0109	835913.26	820687.90		0.093	0.089	0.054	0.032	0.080	0.028	0.015	0.013	0.045	0.079	0.029		0.06	0.04
0110	835923.22	820709.80		0.182	0.125	0.036	0.041	0.154	0.064	0.021	0.030	0.063	0.107	0.031		0.08	0.07
0111	835902.34	820712.96		0.100	0.084	0.072	0.059	0.102	0.042	0.017	0.028	0.041	0.023	0.013		0.07	0.04
0112	835877.77	820708.33		0.114	0.092	0.093	0.075	0.090	0.045	0.019	0.016	0.043	0.073	0.036		0.08	0.05
0113	835853.21	820703.70		0.172	0.142	0.071	0.032	0.056	0.039	0.021	0.046	0.031	0.014	0.037		0.06	0.03
0114	835828.64	820699.07		0.205	0.174	0.050	0.079	0.113	0.054	0.029	0.043	0.056	0.020	0.058		0.09	0.05
0115	835804.07	820694.44		0.160	0.126	0.038	0.058	0.066	0.048	0.021	0.018	0.031	0.016	0.069		0.06	0.04
0116	835779.50	820689.81		0.161	0.148	0.048	0.061	0.032	0.023	0.067	0.088	0.025	0.016	0.045		0.06	0.04
0117	835754.94	820685.17		0.017	0.087	0.012	0.070	0.031	0.012	0.024	0.020	0.027	0.051	0.068		0.04	0.04
0118	835730.37	820680.54		0.016	0.089	0.011	0.065	0.038	0.020	0.035	0.024	0.026	0.039	0.060		0.04	0.04
0119	835705.80	820675.91		0.077	0.126	0.009	0.068	0.040	0.031	0.027	0.017	0.047	0.041	0.078		0.05	0.04
0120	835681.24	820671.28		0.112	0.159	0.019	0.075	0.036	0.046	0.048	0.026	0.062	0.041	0.082		0.06	0.05
0121	835656.67	820666.65		0.153	0.197	0.040	0.091	0.034	0.119	0.056	0.023	0.054	0.027	0.057		0.08	0.05
0122	835632.10	820662.02		0.102	0.139	0.056	0.070	0.068	0.141	0.098	0.042	0.064	0.067	0.034		0.08	0.07
0123	835776.57	820682.27		0.186	0.159	0.058	0.055	0.025	0.025	0.059	0.079	0.033	0.050	0.033		0.07	0.04
0124	835779.34	820663.85		0.182	0.201	0.073	0.058	0.039	0.048	0.027	0.064	0.057	0.025	0.019		0.08	0.04
0125	835782.33	820646.36		0.155	0.209	0.077	0.062	0.023	0.061	0.079	0.082	0.045	0.070	0.062		0.08	0.06
0126	835635.39	820582.98		0.139	0.091	0.083	0.033	0.136	0.073	0.082	0.061	0.147	0.095	0.053		0.09	0.09
0127	835639.82	820558.38		0.155	0.057	0.043	0.107	0.122	0.067	0.091	0.081	0.187	0.127	0.098		0.10	0.12
0128	835644.25	820533.77		0.124	0.084	0.069	0.138	0.123	0.084	0.126	0.116	0.232	0.156	0.124		0.12	0.14
0129	835648.68	820509.17		0.129	0.157	0.127	0.142	0.130	0.115	0.161	0.143	0.258	0.164	0.142		0.15	0.16
0130	835653.11	820484.56		0.138	0.191	0.161	0.089	0.120	0.124	0.155	0.146	0.280	0.145	0.122		0.14	0.15
0131	835524.64	820828.60		0.196	0.193	0.189	0.156	0.025	0.108	0.076	0.008	0.093	0.106	0.160		0.13	0.09
0132	835529.26	820804.03		0.239	0.224	0.186	0.089	0.017	0.041	0.051	0.032	0.110	0.105	0.137		0.11	0.08
0133	835533.88	820779.47		0.256	0.235	0.210	0.104	0.027	0.018	0.021	0.045	0.115	0.098	0.128		0.12	0.08
0134	835538.49	820754.90		0.204	0.147	0.146	0.077	0.029	0.023	0.027	0.044	0.133	0.107	0.143		0.10	0.08
0135	835543.11	820730.33		0.101	0.052	0.051	0.030	0.018	0.020	0.017	0.041	0.134	0.113	0.162		0.05	0.08
0136	835547.73	820705.76		0.161	0.162	0.181	0.087	0.023	0.056	0.048	0.023	0.144	0.117	0.179		0.11	0.09
0137	835552.35	820681.19		0.131	0.196	0.192	0.120	0.022	0.043	0.065	0.049	0.115	0.089	0.140		0.11	0.08
0138	835556.97	820656.62		0.271	0.268	0.239	0.141	0.033	0.083	0.076	0.056	0.071	0.053	0.066		0.14	0.07
0139	835561.59	820632.05		0.262	0.239	0.186	0.182	0.049	0.096	0.077	0.052	0.018	0.013	0.070		0.14	0.06
0140	835566.20	820607.48		0.198	0.145	0.067	0.118	0.052	0.058	0.076	0.062	0.029	0.038	0.061		0.09	0.06
0141	835575.50	820560.22		0.051	0.035	0.031	0.032	0.035	0.057	0.086	0.074	0.038	0.106	0.035		0.04	0.06
0142	835580.39	820535.70		0.041	0.041	0.030	0.078	0.025	0.093	0.094	0.086	0.057	0.116	0.026		0.06	0.07
0143	835585.27	820511.18		0.059	0.078	0.069	0.094	0.036	0.093	0.096	0.092	0.077	0.124	0.021		0.08	0.08
0144	835590.16	820486.66		0.030	0.086	0.076	0.089	0.031	0.092	0.093	0.094	0.094	0.126	0.025		0.08	0.08
0145	835595.04	820462.15		0.036	0.058	0.046	0.087	0.009	0.078	0.082	0.096	0.115	0.140	0.028		0.07	0.08
0146	835467.66	820823.97		0.155	0.156	0.149	0.175	0.100	0.076	0.058	0.046	0.042	0.054	0.127		0.12	0.08
0147	835472.26	820799.39		0.115	0.142	0.174	0.222	0.087	0.047	0.038	0.027	0.029	0.064	0.110		0.13	0.08
0148	835476.87	820774.82		0.241	0.268	0.273	0.256	0.123	0.041	0.043	0.037	0.034	0.062	0.107		0.18	0.09
0149	835481.47	820750.25		0.251	0.287	0.288	0.263	0.128	0.040	0.036	0.039	0.033	0.045	0.077		0.19	0.08
0150	835486.08	820725.68		0.242	0.278	0.268	0.250	0.121	0.046	0.035	0.038	0.028	0.031	0.052		0.18	0.07
0151	835490.68	820701.10		0.209	0.249	0.245	0.226	0.096	0.078	0.018	0.033	0.058	0.032	0.044		0.16	0.07
0152	835495.29	820676.53		0.162	0.209	0.221	0.188	0.022	0.002	0.024	0.048	0.050	0.045	0.071		0.13	0.06
0153	835499.89	820651.96		0.121	0.169	0.165	0.133	0.032	0.039	0.037	0.048	0.044	0.069	0.085		0.10	0.06
0154	835504.49	820627.39		0.082	0.100	0.077	0.055	0.044	0.077	0.042	0.029	0.026	0.099	0.115		0.06	0.06
0155	835509.10	820602.81		0.117	0.076	0.026	0.076	0.028	0.065	0.058	0.022	0.038	0.055	0.044		0.06	0.05

Wind Velocity Ratio, Baseline Scheme

Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
O156	835598.00	820724.28		0.213	0.210	0.220	0.194	0.095	0.036	0.035	0.019	0.118	0.080	0.116		0.15	0.09
O157	835573.46	820719.48		0.219	0.233	0.272	0.184	0.066	0.089	0.031	0.033	0.110	0.079	0.104		0.16	0.09
O158	835548.93	820714.68		0.183	0.216	0.221	0.161	0.068	0.084	0.031	0.023	0.131	0.111	0.166		0.15	0.10
O159	835524.37	820710.00		0.157	0.193	0.176	0.145	0.057	0.104	0.011	0.016	0.028	0.010	0.020		0.11	0.04
O160	835499.81	820705.31		0.092	0.125	0.119	0.107	0.040	0.084	0.010	0.022	0.049	0.022	0.020		0.08	0.04
O161	835475.22	820700.80		0.042	0.052	0.047	0.041	0.021	0.061	0.017	0.044	0.063	0.039	0.049		0.04	0.04
O162	835450.63	820696.29		0.022	0.024	0.027	0.023	0.012	0.015	0.005	0.059	0.036	0.058	0.069		0.03	0.04
O163	835426.04	820691.78		0.089	0.108	0.061	0.069	0.054	0.069	0.042	0.061	0.022	0.088	0.075		0.07	0.06
O164	835427.60	820718.18		0.133	0.156	0.086	0.103	0.068	0.091	0.065	0.014	0.029	0.089	0.054		0.09	0.06
O165	835430.53	820700.46		0.140	0.163	0.093	0.115	0.072	0.093	0.059	0.042	0.022	0.073	0.041		0.10	0.06
O166	835461.76	820554.59		0.084	0.093	0.101	0.114	0.127	0.060	0.096	0.076	0.067	0.072	0.106		0.10	0.09
O167	835465.61	820529.89		0.124	0.129	0.129	0.183	0.119	0.049	0.092	0.041	0.039	0.054	0.030		0.12	0.07
O168	835469.45	820505.18		0.127	0.153	0.160	0.201	0.136	0.031	0.099	0.053	0.059	0.038	0.080		0.13	0.08
O169	835514.76	820564.17		0.162	0.158	0.162	0.094	0.061	0.040	0.025	0.025	0.047	0.028	0.052		0.10	0.05
O170	835518.53	820542.95		0.096	0.054	0.087	0.095	0.101	0.121	0.065	0.088	0.172	0.160	0.134		0.10	0.12
O171	835525.88	820510.82		0.032	0.103	0.099	0.020	0.048	0.052	0.101	0.072	0.085	0.077	0.077		0.06	0.07
O172	835530.80	820486.31		0.029	0.112	0.111	0.022	0.034	0.041	0.108	0.084	0.102	0.128	0.114		0.07	0.08
O173	835535.35	820463.62		0.037	0.104	0.089	0.005	0.029	0.045	0.112	0.097	0.134	0.156	0.138		0.06	0.10
O174	835516.38	820536.88		0.131	0.046	0.080	0.101	0.102	0.115	0.043	0.044	0.141	0.141	0.129		0.10	0.11
O175	835499.10	820518.81		0.048	0.081	0.075	0.109	0.077	0.064	0.012	0.052	0.180	0.161	0.099		0.10	0.11
O176	835481.82	820500.74		0.055	0.127	0.069	0.166	0.093	0.081	0.031	0.089	0.248	0.220	0.130		0.13	0.15
O177	835564.72	820560.87		0.074	0.080	0.096	0.026	0.056	0.044	0.027	0.020	0.010	0.043	0.092		0.05	0.04
O178	835547.24	820542.99		0.045	0.033	0.027	0.059	0.089	0.083	0.025	0.013	0.021	0.072	0.094		0.05	0.06
O179	835529.77	820525.11		0.032	0.091	0.076	0.022	0.092	0.102	0.091	0.079	0.086	0.114	0.130		0.07	0.09
O180	835512.30	820507.23		0.022	0.021	0.027	0.031	0.031	0.056	0.015	0.010	0.034	0.088	0.122		0.03	0.05
O181	835494.83	820489.35		0.033	0.074	0.022	0.077	0.044	0.022	0.022	0.027	0.057	0.129	0.115		0.06	0.07
O182	835834.84	820974.30		0.035	0.051	0.086	0.050	0.063	0.012	0.006	0.029	0.018	0.028	0.061		0.05	0.03
O183	835837.51	820953.89		0.030	0.030	0.050	0.031	0.083	0.023	0.020	0.053	0.020	0.028	0.120		0.04	0.05
O184	835934.73	820901.21		0.045	0.114	0.139	0.154	0.069	0.041	0.053	0.078	0.026	0.035	0.079		0.10	0.06
O185	835910.56	820894.81		0.019	0.082	0.124	0.176	0.093	0.022	0.068	0.091	0.017	0.039	0.077		0.10	0.07
O186	835886.39	820888.41		0.020	0.060	0.119	0.177	0.101	0.059	0.073	0.063	0.006	0.033	0.036		0.10	0.06
O187	835935.87	820882.85		0.024	0.124	0.212	0.235	0.139	0.033	0.075	0.081	0.032	0.023	0.098		0.14	0.08
O188	835911.02	820880.17		0.026	0.087	0.199	0.243	0.135	0.015	0.060	0.091	0.023	0.024	0.080		0.13	0.08
O189	835886.16	820877.50		0.033	0.038	0.173	0.216	0.124	0.074	0.043	0.088	0.010	0.024	0.043		0.12	0.07
O190	835818.76	820894.65		0.050	0.051	0.042	0.051	0.032	0.048	0.027	0.027	0.023	0.023	0.039		0.04	0.03
O191	835801.28	820893.31		0.056	0.062	0.048	0.108	0.066	0.049	0.029	0.058	0.010	0.020	0.025		0.06	0.04
O192	835819.33	820876.41		0.053	0.080	0.065	0.077	0.035	0.046	0.033	0.059	0.032	0.037	0.042		0.06	0.04
O193	835802.62	820876.22		0.041	0.087	0.102	0.152	0.071	0.128	0.067	0.075	0.035	0.037	0.040		0.10	0.07
O194	835752.64	820975.62		0.098	0.127	0.082	0.047	0.046	0.075	0.078	0.077	0.047	0.105	0.036		0.07	0.07
O195	835727.67	820974.37		0.132	0.126	0.088	0.025	0.060	0.107	0.096	0.061	0.055	0.127	0.020		0.08	0.07
O196	835702.70	820973.13		0.121	0.132	0.096	0.014	0.099	0.122	0.111	0.037	0.048	0.143	0.014		0.08	0.08
O197	835677.73	820971.88		0.098	0.144	0.109	0.031	0.123	0.119	0.123	0.022	0.026	0.155	0.017		0.09	0.08
O198	835652.76	820970.63		0.111	0.163	0.121	0.055	0.136	0.093	0.128	0.022	0.012	0.158	0.019		0.10	0.08
O199	835627.79	820969.38		0.147	0.192	0.139	0.091	0.147	0.079	0.130	0.036	0.022	0.154	0.018		0.12	0.09
O200	835592.71	820968.38		0.163	0.252	0.181	0.167	0.188	0.082	0.111	0.052	0.051	0.128	0.096		0.16	0.11
O201	835753.26	820946.33		0.064	0.096	0.059	0.030	0.054	0.098	0.065	0.072	0.044	0.080	0.082		0.06	0.07
O202	835728.29	820945.16		0.125	0.098	0.061	0.050	0.083	0.090	0.090	0.043	0.057	0.094	0.070		0.07	0.07
O203	835703.31	820943.99		0.133	0.106	0.070	0.059	0.106	0.103	0.106	0.022	0.056	0.111	0.046		0.08	0.08
O204	835678.34	820942.82		0.111	0.118	0.084	0.079	0.126	0.089	0.122	0.012	0.042	0.130	0.030		0.09	0.08
O205	835653.37	820941.65		0.094	0.135	0.105	0.102	0.138	0.083	0.128	0.015	0.018	0.145	0.023		0.10	0.08
O206	835628.40	820940.48		0.111	0.157	0.129	0.128	0.150	0.096	0.132	0.030	0.024	0.158	0.033		0.12	0.10
O207	835604.84	820940.10		0.137	0.182	0.152	0.153	0.163	0.110	0.133	0.049	0.038	0.162	0.048		0.14	0.11
O208	835754.49	820919.92		0.020	0.061	0.023	0.102	0.092	0.063	0.022	0.053	0.042	0.058	0.093		0.07	0.07
O209	835729.53	820918.57		0.108	0.075	0.039	0.099	0.103	0.056	0.084	0.018	0.056	0.057	0.092		0.08	0.07
O210	835704.56	820917.21		0.139	0.080	0.049	0.091	0.109	0.077	0.102	0.009	0.061	0.067	0.074		0.08	0.07
O211	835679.60	820915.86		0.126	0.087	0.064	0.116	0.123	0.072	0.119	0.004	0.057	0.079	0.062		0.09	0.08
O212	835654.64	820914.51		0.100	0.103	0.093	0.143	0.132	0.099	0.126	0.007	0.034	0.097	0.045		0.11	0.08
O213	835629.67	820913.15		0.089	0.120	0.114	0.165	0.142	0.117	0.132	0.018	0.019	0.120	0.035		0.12	0.09
O214	835606.66	820913.23		0.096	0.135	0.134	0.183	0.154	0.126	0.135	0.040	0.030	0.143	0.029		0.13	0.10
O215	835736.05	820892.28		0.046	0.027	0.025	0.038	0.021	0.047	0.067	0.008	0.023	0.043	0.031		0.03	0.03
O216	835711.08	820891.22		0.122	0.047	0.021	0.068	0.064	0.066	0.090	0.006	0.057	0.043	0.065		0.06	0.06
O217	835686.10	820890.15		0.143	0.054	0.055	0.113	0.089	0.068	0.110	0.008	0.063	0.042	0.064		0.08	0.07
O218	835661.12	820889.09		0.123	0.071	0.085	0.144	0.101	0.110	0.123	0.013	0.056	0.042	0.058		0.10	0.08
O219	835636.15	820888.03		0.098	0.087	0.112	0.172	0.114	0.132	0.130	0.011	0.032	0.048	0.057		0.11	0.08
O220	835608.89	820886.97		0.079	0.103	0.137	0.200	0.127	0.128	0.133	0.023	0.024	0.083	0.046		0.13	0.09
O221	835735.44	820866.18		0.017	0.017	0.041	0.085	0.017	0.116	0.049	0.037	0.055	0.057	0.058		0.05	0.06
O222	835710.46	820865.21		0.094	0.018	0.058	0.129	0.038	0.051	0.079	0.015	0.057	0.045	0.041		0.07	0.06
O223	835685.48	820864.24		0.137	0.021	0.077	0.156	0.055	0.085	0.102	0.019	0.061	0.037	0.031		0.09	0.06
O224	835660.50	820863.27		0.136	0.032	0.096	0.176	0.064	0.129	0.115	0.026	0.059	0.029	0.031		0.10	0.07
O225	835635.52	820862.30		0.112	0.055	0.120	0.199	0.074	0.141	0.125	0.024	0.046	0.020	0.033		0.11	0.07
O226	835570.08	820965.06		0.102	0.191	0.152	0.154	0.175	0.100	0.135	0.050	0.062	0.084	0.068		0.14	0.10
O227	835544.58	820963.83		0.091	0.171	0.140	0.146	0.138	0.087	0.133	0.048	0.068	0.043	0.022		0.12	0.08
O228	835587.29	820936.81		0.141	0.192	0.163	0.178	0.174	0.119	0.136	0.057	0.050	0.156	0.038		0.15	0.11
O229	835562.30	820936.02		0.136	0.198	0.170	0.189	0.182	0.106	0.128	0.059	0.066	0.137	0.015		0.16	0.11
O230	835537.31	820935.23		0.128	0.196	0.171	0.195	0.182	0.070	0.096	0.048	0.071	0.096	0.034		0.15	0.10
O231	835512.32	820934.45		0.119	0.193	0.164	0.184	0.176	0.076	0.036	0.032	0.061	0.052	0.066		0.14	0.08
O232	835588.51	820905.49		0.102	0.139	0.149	0.202	0.158	0.129	0.132	0.054	0.038	0.148	0.023		0.15	0.11
O233	835563.52	820904.94		0.122	0.159	0.168	0.216	0.167	0.103	0.108	0.061	0.058	0.162	0.016		0.16	0.11
O234	835538.53	820904.38		0.134	0.173	0.174	0.213	0.170	0.036	0.035	0.050	0.072	0.157	0.059		0.16	0.10
O235	835513.53	820903.83		0.130	0.169	0.165	0.194	0.165	0.028	0.019	0.033	0.070	0.124	0.088		0.14	0.09
O236	835488.54	820903.27		0.098	0.117	0.120	0.128	0.131	0.065	0.016	0.025	0.040	0.042	0.077		0.10	0.06
O237	835590.66	820874.17		0.076	0.107	0.165	0.234	0.122	0.128	0.115	0.038	0.033	0.078	0.050		0.14	0.09
O238	835565.69	820873.15		0.098	0.131	0.194	0.257	0.137	0.082	0.077	0.057	0.059	0.134	0.044		0.16	0.11
O239	835540.71	820872.14		0.132	0.155	0.204	0.256	0.142	0.046	0.043	0.047	0.075	0.169	0.100		0.17	0.12
O240	835515.73	820871.12		0.143	0.158	0.192	0.231	0.138	0.041	0.031	0.029	0.060	0.163	0.087		0.16	0.10
O241	835490.75	820870.10		0.124	0.133	0.148	0.161	0.119	0.016	0.020	0.018	0.018	0.078	0.123		0.11	0.07
O242	835961.01	820840.14		0.317	0.278	0.226	0.197	0.158	0.045	0.104	0.033	0.040	0.036	0.052		0.17	0.08
O243	835938.13	820834.27		0.156	0.147	0.111	0.121	0.091	0.010	0.061	0.012	0.031	0.012	0.016		0.09	0.04
O244	835957.30	820813.86		0.265	0.224	0.178	0.148	0.123	0.011	0.091	0.010	0.032	0.042	0.009		0.13	0.06
O245	835949.26	820790.37		0.269	0.242	0.212	0.167	0.107	0.018	0.063	0.006	0.017	0.034	0.010		0.14	0.05
O246	835903.50	820834.27		0.185	0.249	0.183	0.172	0.136	0.087	0.023	0.100	0.020	0.021	0.067		0.14	0.07
O247	835879.99	820825.76		0.164	0.285	0.228	0.209	0.142	0.096	0.034	0.117	0.025	0.015	0.078		0.17	0.08
O248	835856.48	820817.26		0.093	0.245	0.239	0.226	0.127	0.087	0.042	0.102	0.015	0.026	0.075		0.16	0.08
O249	835832.97	820808.76		0.070	0.194	0.223	0.221	0.106	0.118	0.047	0.064	0.028	0.034	0.064		0.15	0.08
O250	835809.46	820800.25		0.066	0.157	0.207	0.213	0.094	0.133	0.036	0.035	0.040	0.037	0.087		0.14	0.08
O251	835902.26	820814.48		0.092	0.092	0.072	0.052	0.023	0.090	0.028	0.081	0.013	0.020	0.061		0.06	0.04
O252	835878.53	820806.62		0.143	0.219	0.117	0.133	0.050	0.097	0.032	0.106	0.021	0.013	0.072		0.11	0.06
O253	835854.80	820798.76		0.120	0.247	0.169	0.178	0.077	0.106	0.026	0.103	0.025	0.017	0.071		0.13	0.07
O254	835831.07	820790.90		0.092	0.229	0.172	0.188	0.071	0.116	0.035	0.078	0.029	0.028	0.070		0.13	0.07
O255	835807.33	820783.04		0.071	0.169	0.129	0.160	0.058	0.091	0.029	0.039	0.025	0.031	0.064		0.10	0.06
O256	835921.43	820799.95		0.053	0.068	0.070	0.033	0.029	0.053	0.011	0.040	0.031	0.007	0.052		0.04	0.03
O257	835897.70	820792.09		0.106	0.093	0.038	0.058	0.019	0.069	0.038	0.072	0.011	0.020	0.056		0.05	0.04
O258	835873.97	820784.22		0.126	0.166	0.088	0.113	0.022	0.081	0.031	0.093	0.012	0.014	0.057		0.08	0.05
O259	835850.24	820776.36		0.117	0.202	0.118	0.136	0.040	0.093	0.022	0.092	0.023	0.010	0.054		0.10	0.05
O260	835826.51	820768.49		0.098	0.189	0.111	0.134	0.059	0.071	0.023	0.064	0.029	0.016	0.043		0.10	0.05
O261	835913.08	820777.08		0.072	0.068	0.035	0.013	0.030	0.027	0.017	0.023	0.023	0.011	0.033		0.03	0.02
O262	835889.49	820768.81		0.097	0.072	0.072	0.063	0.034	0.039	0.040	0.051	0.026	0.014	0.035		0.05	0.04
O263	835865.89	820760.55		0.119	0.118	0.102	0.087	0.049	0.047	0.020	0.074	0.028	0.019	0.034		0.08	0.04
O264	835842.30	820752.29		0.121	0.145	0.107	0.092	0.076	0.028	0.010	0.075	0.025	0.017	0.025		0.08	0.04
O265	835818.70	820744.02		0.090	0.118	0.081	0.081	0.073	0.013	0.007	0.027	0.021	0.015	0.011		0.07	0.03
O266	835772.04	820771.18		0.028	0.032	0.039	0.030	0.034	0.052	0.014	0.011	0.063	0.050	0.044		0.04	0.04
O267	835776.37	820746.55		0.024	0.063	0.051	0.029	0.029	0.067	0.024	0.028	0.050	0.037	0.047		0.04	0.04
O268	835780.70	820721.93		0.025	0.063	0.046	0.034	0.017	0.061	0.013	0.055	0.037	0.039	0.038		0.04	0.04
O269	835757.50	820752.32		0.043	0.036	0.043	0.024	0.019	0.058	0.058	0.029	0.077	0.058	0.035		0.04	0.05
O270	835761.24	820727.60		0.046	0.053	0.056	0.038	0.024	0.042	0.048	0.017	0.073	0.057	0.050		0.04	0.05
O271	835765.50	820702.96		0.014	0.078	0.036	0.029	0.018	0.015	0.028	0.046	0.046	0.042	0.050		0.03	0.04
O272	835726.39	820564.90		0.013	0.043	0.071	0.036	0.021	0.084	0.054	0.072	0.031	0.010	0.013		0.04	0.04
O273	835729.39	820549.15		0.042	0.050	0.030	0.040	0.023	0.069	0.062	0.072	0.030	0.011	0.030		0.04	0.04
O274	835733.27	820531.40		0.047	0.051	0.024	0.060	0.014	0.050	0.042	0.045	0.020	0.026	0.052		0.04	0.04
O275	835707.75	820561.78		0.039	0.048	0.057	0.050	0.034	0.041	0.034	0.038	0.026	0.029	0.023		0.04	0.03
O276	835710.88	820543.27		0.029	0.056	0.049	0.044	0.038	0.048	0.052	0.054	0.026	0.016	0.030		0.04	0.03
O277	835714.13	820526.65		0.037	0.035	0.027	0.048	0.011	0.039	0.026	0.029	0.012	0.013	0.029		0.03	0.02
O278	835555.86	820565.80		0.198	0.186	0.181	0.093	0.028	0.048	0.034	0.019	0.009	0.092	0.117		0.10	0.06
O279	835531.66	820561.11		0.148	0.134	0.169	0.090	0.055	0.066	0.067	0.079	0.125	0.113	0.086		0.11	0.09
O280	835545.56	820554.42		0.044	0.044	0.115	0.034	0.080	0.079	0.017	0.049	0.029	0.108	0.121		0.06	0.07
O281	835526.27	820549.50		0.044	0.047	0.094	0.054	0.090	0.105	0.089	0.086	0.136	0.142	0.125		0.08	0.11
O282	835788.14	820554.39		0.152	0.061	0.087	0.063	0.022	0.045	0.013	0.015	0.038	0.019	0.024		0.06	0.03
O283	835803.15	820556.97		0.149	0.074	0.115	0.098	0.020	0.033	0.040	0.035	0.050	0.055	0.071		0.08	0.05
O284	835785.42	820567.46		0.159	0.077	0.089	0.064	0.015	0.032	0.012	0.009	0.029	0.020	0.027		0.06	0.03
O285	835801.52	820569.80		0.097	0.059	0.072	0.054	0.013	0.039	0.039	0.030	0.030	0.058	0.074		0.05	0.04
O286	835927.74	820723.96		0.111	0.082	0.095	0.076	0.136	0.075	0.031	0.035	0.050	0.097	0.032		0.09	0.07
O287	835935.66	820739.36		0.084	0.112	0.141	0.115	0.104	0.073	0.038	0.027	0.028	0.068	0.030		0.10	0.06
O288	835949.53	820753.35		0.258	0.244	0.180	0.142	0.071	0.097	0.073	0.035	0.026	0.082	0.020		0.13	0.07
O289	835955.72	820767.01		0.301	0.267	0.198	0.156	0.034	0.098	0.088	0.034	0.024	0.082	0.021		0.14	0.06
O290	835961.91	820780.68		0.290	0.248	0.191	0.155	0.082	0.090	0.104	0.033	0.024	0.081	0.020		0.14	0.07

Wind Velocity Ratio, Baseline Scheme

Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
O291	835968.11	820794.33		0.285	0.238	0.187	0.156	0.110	0.071	0.114	0.030	0.028	0.079	0.014		0.14	0.07
O292	835974.50	820807.91		0.288	0.240	0.192	0.156	0.128	0.047	0.119	0.027	0.036	0.076	0.005		0.15	0.07
O293	835980.44	820821.68		0.298	0.251	0.209	0.160	0.142	0.026	0.122	0.029	0.045	0.073	0.021		0.15	0.08
O294	835942.26	820573.32		0.088	0.034	0.044	0.066	0.075	0.026	0.051	0.065	0.086	0.094	0.074		0.06	0.07
O295	835957.25	820573.88		0.067	0.019	0.036	0.046	0.051	0.035	0.060	0.052	0.062	0.053	0.051		0.05	0.05
O296	835972.24	820574.44		0.062	0.079	0.012	0.040	0.036	0.055	0.063	0.042	0.048	0.080	0.013		0.05	0.05
O297	835929.95	820562.78		0.094	0.056	0.062	0.099	0.135	0.092	0.081	0.036	0.064	0.078	0.074		0.08	0.08
O298	835941.39	820563.61		0.132	0.067	0.060	0.075	0.083	0.050	0.049	0.063	0.084	0.091	0.073		0.08	0.07
O299	835953.18	820564.90		0.133	0.047	0.047	0.047	0.048	0.037	0.038	0.070	0.090	0.076	0.062		0.06	0.06
O300	835966.97	820565.51		0.043	0.014	0.018	0.038	0.011	0.034	0.024	0.078	0.094	0.062	0.028		0.04	0.05
O301	835933.48	820551.78		0.141	0.085	0.068	0.089	0.101	0.082	0.051	0.046	0.062	0.074	0.067		0.09	0.07
O302	835948.15	820554.94		0.143	0.082	0.057	0.060	0.062	0.041	0.025	0.061	0.086	0.087	0.060		0.07	0.06
O303	835924.86	820922.28		0.057	0.133	0.084	0.076	0.117	0.042	0.026	0.066	0.028	0.024	0.043		0.08	0.05
O304	835901.97	820909.97		0.025	0.056	0.060	0.129	0.094	0.027	0.084	0.084	0.010	0.035	0.069		0.07	0.06
O305	835879.04	820903.08		0.066	0.023	0.037	0.164	0.111	0.070	0.097	0.072	0.011	0.050	0.090		0.08	0.08
O306	835853.85	820899.08		0.026	0.064	0.048	0.148	0.110	0.097	0.052	0.057	0.012	0.046	0.049		0.08	0.07
O307	835908.99	820940.90		0.287	0.319	0.400	0.387	0.281	0.079	0.184	0.114	0.090	0.092	0.232		0.28	0.17
O308	835889.06	820925.00		0.065	0.042	0.090	0.021	0.050	0.007	0.029	0.032	0.008	0.022	0.062		0.04	0.03
O309	835866.01	820914.35		0.027	0.020	0.053	0.172	0.111	0.081	0.083	0.085	0.016	0.054	0.117		0.09	0.08
D001	835643.58	820677.74		0.076	0.092	0.076	0.025	0.016	0.051	0.035	0.015	0.044	0.026	0.036		0.04	0.03
D002	835658.33	820680.47		0.109	0.142	0.048	0.048	0.033	0.135	0.083	0.036	0.028	0.038	0.068		0.06	0.05
D003	835673.08	820683.19		0.103	0.135	0.037	0.041	0.036	0.086	0.056	0.037	0.035	0.051	0.081		0.06	0.05
D004	835687.83	820685.91		0.092	0.123	0.029	0.036	0.038	0.037	0.060	0.040	0.042	0.053	0.086		0.05	0.05
D005	835702.77	820688.98		0.072	0.106	0.014	0.036	0.033	0.034	0.069	0.039	0.046	0.050	0.085		0.04	0.05
D006	835642.58	820690.97		0.072	0.095	0.054	0.047	0.019	0.078	0.075	0.047	0.030	0.034	0.051		0.05	0.04
D007	835657.40	820693.26		0.083	0.102	0.043	0.029	0.030	0.090	0.080	0.052	0.019	0.036	0.066		0.05	0.05
D008	835672.23	820695.56		0.084	0.101	0.047	0.024	0.034	0.108	0.088	0.055	0.033	0.053	0.079		0.05	0.06
D009	835687.05	820697.85		0.078	0.087	0.056	0.030	0.041	0.098	0.091	0.052	0.035	0.062	0.083		0.05	0.06
D010	835701.87	820700.14		0.066	0.074	0.032	0.030	0.040	0.086	0.094	0.049	0.043	0.060	0.082		0.05	0.06
D011	835624.60	820697.71		0.060	0.069	0.035	0.033	0.042	0.121	0.104	0.048	0.045	0.024	0.028		0.05	0.05
D012	835637.33	820706.20		0.058	0.067	0.020	0.036	0.023	0.107	0.091	0.050	0.057	0.020	0.033		0.04	0.05
D013	835652.25	820707.81		0.062	0.070	0.019	0.016	0.026	0.120	0.107	0.061	0.061	0.016	0.049		0.04	0.05
D014	835667.16	820709.41		0.062	0.073	0.021	0.015	0.021	0.125	0.113	0.062	0.050	0.023	0.062		0.04	0.05
D015	835682.07	820711.10		0.069	0.073	0.070	0.038	0.040	0.127	0.112	0.056	0.036	0.062	0.075		0.06	0.06
D016	835696.97	820712.78		0.060	0.051	0.065	0.039	0.046	0.115	0.098	0.047	0.038	0.069	0.073		0.05	0.06
D017	835711.88	820714.47		0.050	0.026	0.028	0.023	0.042	0.100	0.080	0.055	0.050	0.063	0.068		0.04	0.06
D018	835726.78	820716.15		0.044	0.026	0.024	0.018	0.042	0.090	0.069	0.056	0.042	0.049	0.063		0.04	0.05
D019	835741.69	820717.83		0.050	0.038	0.042	0.030	0.046	0.075	0.037	0.026	0.041	0.060	0.066		0.04	0.05
D020	835749.23	820731.16		0.044	0.036	0.045	0.031	0.043	0.018	0.013	0.013	0.040	0.056	0.046		0.04	0.04
D021	835712.04	820723.49		0.047	0.037	0.036	0.024	0.042	0.093	0.074	0.059	0.050	0.069	0.059		0.04	0.06
D022	835715.99	820737.96		0.055	0.069	0.053	0.032	0.049	0.063	0.076	0.058	0.049	0.076	0.049		0.05	0.06
D023	835726.24	820748.91		0.062	0.080	0.062	0.040	0.056	0.056	0.066	0.052	0.054	0.077	0.040		0.06	0.06
D024	835736.49	820759.86		0.064	0.084	0.082	0.061	0.061	0.052	0.062	0.049	0.058	0.071	0.034		0.07	0.06
D025	835746.74	820770.81		0.069	0.098	0.117	0.106	0.052	0.040	0.056	0.033	0.067	0.071	0.038		0.08	0.06
D026	835757.00	820781.76		0.075	0.115	0.150	0.153	0.060	0.054	0.022	0.028	0.082	0.075	0.032		0.11	0.07
D027	835767.25	820792.70		0.081	0.145	0.179	0.188	0.085	0.060	0.014	0.021	0.082	0.072	0.049		0.13	0.07
D028	835777.50	820803.65		0.069	0.121	0.184	0.205	0.103	0.051	0.032	0.034	0.076	0.069	0.070		0.13	0.08
D029	835787.75	820814.60		0.063	0.096	0.209	0.244	0.122	0.065	0.055	0.046	0.072	0.069	0.074		0.14	0.09
D030	835801.88	820828.76		0.083	0.114	0.236	0.283	0.133	0.103	0.065	0.016	0.060	0.058	0.072		0.16	0.09
D031	835761.49	820805.60		0.060	0.095	0.193	0.222	0.101	0.028	0.014	0.020	0.065	0.067	0.061		0.13	0.07
D032	835772.10	820816.21		0.062	0.076	0.206	0.254	0.113	0.051	0.043	0.030	0.064	0.067	0.077		0.14	0.09
D033	835782.71	820826.81		0.062	0.053	0.192	0.262	0.103	0.081	0.064	0.035	0.061	0.066	0.083		0.14	0.09
D034	835769.24	820833.56		0.048	0.027	0.120	0.246	0.070	0.085	0.054	0.028	0.053	0.061	0.083		0.11	0.08
D035	835695.55	820724.48		0.054	0.062	0.077	0.045	0.047	0.083	0.061	0.042	0.035	0.071	0.058		0.06	0.06
D036	835701.33	820738.33		0.050	0.071	0.071	0.048	0.054	0.050	0.073	0.056	0.040	0.073	0.046		0.06	0.06
D037	835707.54	820747.95		0.050	0.077	0.076	0.063	0.062	0.060	0.080	0.057	0.039	0.075	0.039		0.06	0.06
D038	835717.88	820758.81		0.051	0.077	0.081	0.082	0.067	0.064	0.073	0.056	0.042	0.075	0.033		0.07	0.06
D039	835728.22	820769.68		0.048	0.073	0.085	0.099	0.064	0.057	0.062	0.054	0.049	0.070	0.035		0.07	0.06
D040	835738.01	820782.14		0.010	0.018	0.033	0.037	0.028	0.037	0.050	0.044	0.053	0.057	0.046		0.03	0.05
D041	835734.02	820795.49		0.042	0.066	0.137	0.132	0.055	0.041	0.038	0.041	0.046	0.070	0.046		0.09	0.06
D042	835727.78	820809.14		0.047	0.081	0.164	0.228	0.082	0.053	0.045	0.040	0.048	0.068	0.053		0.12	0.08
D043	835722.25	820821.63		0.042	0.089	0.110	0.240	0.072	0.051	0.052	0.037	0.053	0.060	0.050		0.12	0.07
D044	835715.31	820833.92		0.050	0.083	0.069	0.222	0.052	0.049	0.062	0.032	0.057	0.052	0.040		0.10	0.07
D045	835700.42	820782.60		0.053	0.077	0.146	0.150	0.068	0.096	0.071	0.052	0.040	0.065	0.030		0.10	0.07
D046	835699.51	820797.58		0.062	0.090	0.136	0.200	0.071	0.103	0.072	0.050	0.046	0.059	0.035		0.11	0.08
D047	835698.61	820812.55		0.073	0.096	0.098	0.226	0.069	0.101	0.075	0.045	0.053	0.052	0.032		0.12	0.08
D048	835697.54	820827.51		0.088	0.085	0.070	0.224	0.056	0.092	0.079	0.039	0.057	0.046	0.021		0.11	0.07
D049	835710.73	820767.39		0.044	0.064	0.104	0.088	0.068	0.075	0.073	0.055	0.037	0.073	0.029		0.07	0.06
D050	835715.40	820783.58		0.044	0.068	0.138	0.122	0.061	0.075	0.062	0.053	0.041	0.071	0.036		0.09	0.06
D051	835712.51	820795.03		0.047	0.080	0.157	0.182	0.069	0.082	0.063	0.050	0.044	0.067	0.041		0.11	0.07
D052	835709.26	820813.04		0.053	0.093	0.116	0.229	0.072	0.083	0.066	0.044	0.052	0.058	0.040		0.12	0.08
D053	835706.56	820829.76		0.067	0.086	0.073	0.223	0.055	0.072	0.071	0.036	0.057	0.050	0.032		0.11	0.07
D054	835724.24	820790.70		0.045	0.071	0.150	0.139	0.058	0.061	0.053	0.050	0.044	0.072	0.044		0.09	0.06
D055	835721.29	820805.67		0.046	0.083	0.158	0.216	0.077	0.065	0.053	0.045	0.047	0.067	0.049		0.12	0.08
D056	835681.76	820731.36		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		--	--
D057	835666.77	820730.62		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		--	--
D058	835651.79	820729.89		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		--	--
D059	835636.81	820729.15		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		--	--
D060	835621.83	820728.42		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		--	--
D061	835580.02	820607.28		0.093	0.057	0.080	0.181	0.110	0.162	0.057	0.050	0.057	0.119	0.110		0.11	0.10
D062	835589.87	820608.98		0.055	0.077	0.109	0.181	0.124	0.159	0.047	0.049	0.120	0.156	0.171		0.13	0.13
D063	835599.73	820610.69		0.125	0.185	0.169	0.149	0.082	0.091	0.042	0.067	0.162	0.206	0.162		0.14	0.13
D064	835609.58	820612.39		0.327	0.357	0.320	0.170	0.090	0.035	0.103	0.069	0.175	0.206	0.164		0.20	0.14
D065	835577.54	820614.56		0.138	0.076	0.066	0.133	0.084	0.127	0.051	0.043	0.045	0.041	0.094		0.09	0.07
D066	835587.15	820616.10		0.020	0.020	0.034	0.100	0.060	0.092	0.034	0.020	0.086	0.062	0.141		0.06	0.07
D067	835598.45	820617.65		0.087	0.121	0.121	0.122	0.057	0.080	0.029	0.075	0.125	0.140	0.083		0.11	0.10
D068	835608.37	820619.51		0.293	0.330	0.299	0.165	0.079	0.057	0.096	0.084	0.165	0.180	0.102		0.19	0.12
D069	835606.97	820628.49		0.276	0.334	0.322	0.191	0.093	0.096	0.114	0.099	0.145	0.099	0.049		0.20	0.11
D070	835605.11	820638.40		0.198	0.259	0.273	0.188	0.091	0.108	0.107	0.088	0.124	0.053	0.043		0.17	0.10

Wind Velocity Ratio, Proposed Scheme

Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
P001	835562.15	820668.20		0.139	0.122	0.143	0.114	0.062	0.225	0.130	0.072	0.070	0.071	0.091		0.11	0.10
P002	835564.01	820658.38		0.103	0.152	0.194	0.097	0.038	0.212	0.123	0.070	0.050	0.051	0.055		0.11	0.08
P003	835565.88	820648.56		0.114	0.153	0.205	0.081	0.024	0.192	0.112	0.063	0.030	0.030	0.040		0.10	0.06
P004	835567.75	820638.73		0.119	0.140	0.195	0.065	0.051	0.174	0.100	0.056	0.034	0.049	0.083		0.10	0.07
P005	835569.61	820628.91		0.124	0.128	0.176	0.043	0.054	0.148	0.084	0.048	0.052	0.098	0.156		0.09	0.08
P006	835571.48	820619.08		0.121	0.100	0.121	0.089	0.139	0.170	0.116	0.069	0.054	0.139	0.213		0.11	0.12
P007	835573.35	820609.26		0.071	0.143	0.175	0.181	0.192	0.129	0.082	0.040	0.064	0.116	0.194		0.15	0.12
P008	835574.84	820601.39		0.099	0.259	0.317	0.271	0.217	0.141	0.067	0.023	0.126	0.102	0.172		0.21	0.14
P009	835584.67	820603.23		0.163	0.284	0.345	0.306	0.240	0.136	0.064	0.026	0.130	0.124	0.163		0.24	0.15
P010	835594.50	820605.08		0.179	0.292	0.356	0.324	0.242	0.118	0.057	0.032	0.133	0.137	0.142		0.25	0.15
P011	835604.33	820606.92		0.163	0.269	0.341	0.310	0.204	0.092	0.058	0.047	0.130	0.156	0.130		0.23	0.14
P012	835614.16	820608.77		0.137	0.204	0.290	0.265	0.108	0.066	0.069	0.055	0.117	0.174	0.110		0.19	0.13
P013	835621.22	820615.36		0.075	0.158	0.255	0.236	0.075	0.048	0.036	0.055	0.110	0.137	0.061		0.16	0.10
P014	835619.36	820625.18		0.149	0.219	0.294	0.288	0.206	0.083	0.038	0.041	0.126	0.078	0.035		0.21	0.11
P015	835617.50	820635.01		0.217	0.237	0.302	0.294	0.241	0.120	0.067	0.053	0.136	0.082	0.072		0.22	0.13
P016	835615.40	820646.32		0.220	0.213	0.275	0.267	0.234	0.155	0.090	0.073	0.119	0.072	0.070		0.21	0.13
P017	835613.38	820657.92		0.152	0.116	0.172	0.186	0.187	0.181	0.095	0.076	0.034	0.044	0.036		0.15	0.10
P018	835615.02	820667.06		0.119	0.083	0.104	0.152	0.172	0.179	0.109	0.071	0.036	0.036	0.045		0.12	0.09
P019	835610.16	820674.43		0.094	0.073	0.053	0.112	0.142	0.176	0.127	0.072	0.067	0.044	0.044		0.10	0.09
P020	835607.91	820685.62		0.138	0.098	0.078	0.112	0.126	0.138	0.126	0.068	0.042	0.061	0.096		0.10	0.09
P021	835597.61	820683.16		0.052	0.244	0.349	0.287	0.200	0.198	0.136	0.059	0.090	0.117	0.178		0.22	0.15
P022	835587.50	820681.26		0.097	0.269	0.419	0.335	0.244	0.183	0.132	0.054	0.074	0.091	0.136		0.25	0.15
P023	835746.16	820668.18		0.196	0.146	0.102	0.106	0.055	0.030	0.008	0.036	0.010	0.028	0.032		0.09	0.04
P024	835747.99	820658.20		0.073	0.080	0.036	0.029	0.018	0.020	0.056	0.056	0.060	0.048	0.013		0.04	0.04
P025	835757.84	820659.95		0.118	0.102	0.087	0.086	0.049	0.046	0.044	0.063	0.048	0.013	0.026		0.07	0.04
P026	835767.67	820661.74		0.072	0.111	0.106	0.108	0.049	0.049	0.024	0.069	0.051	0.010	0.032		0.08	0.05
P027	835774.06	820662.99		0.187	0.178	0.110	0.118	0.038	0.031	0.024	0.051	0.039	0.021	0.027		0.09	0.04
P028	835772.13	820673.06		0.217	0.188	0.048	0.081	0.035	0.015	0.024	0.058	0.040	0.033	0.042		0.08	0.04
P029	835785.29	820669.37		0.051	0.100	0.147	0.183	0.113	0.096	0.100	0.021	0.025	0.069	0.064		0.11	0.08
P030	835790.05	820665.02		0.123	0.187	0.067	0.100	0.057	0.062	0.040	0.030	0.033	0.043	0.043		0.08	0.05
P031	835799.88	820666.83		0.142	0.194	0.053	0.051	0.059	0.046	0.021	0.011	0.036	0.022	0.029		0.07	0.03
P032	835809.72	820668.63		0.071	0.090	0.034	0.057	0.077	0.048	0.027	0.019	0.026	0.029	0.019		0.05	0.04
P033	835809.91	820674.18		0.125	0.143	0.085	0.086	0.066	0.064	0.059	0.026	0.039	0.008	0.043		0.08	0.04
P034	835870.92	820703.59		0.126	0.078	0.055	0.104	0.022	0.106	0.104	0.093	0.010	0.039	0.075		0.07	0.06
P035	835860.52	820701.61		0.118	0.068	0.035	0.124	0.072	0.121	0.124	0.107	0.022	0.032	0.092		0.08	0.08
P036	835865.05	820679.08		0.266	0.212	0.084	0.033	0.096	0.022	0.053	0.116	0.035	0.046	0.064		0.09	0.06
P037	835875.05	820680.76		0.141	0.109	0.072	0.025	0.111	0.024	0.022	0.102	0.026	0.054	0.055		0.07	0.05
P038	835898.58	820708.81		0.063	0.062	0.066	0.059	0.064	0.060	0.064	0.046	0.027	0.006	0.030		0.05	0.04
P039	835889.85	820707.15		0.091	0.073	0.056	0.079	0.045	0.082	0.082	0.068	0.023	0.019	0.036		0.06	0.05
P040	835881.11	820705.50		0.095	0.054	0.049	0.093	0.038	0.098	0.095	0.082	0.019	0.025	0.060		0.06	0.05
P041	835885.65	820682.77		0.138	0.094	0.081	0.033	0.115	0.025	0.009	0.099	0.007	0.048	0.008		0.07	0.04
P042	835892.68	820690.83		0.046	0.030	0.024	0.005	0.061	0.030	0.034	0.043	0.010	0.021	0.033		0.03	0.03
P043	835897.07	820699.41		0.018	0.047	0.013	0.012	0.020	0.032	0.032	0.019	0.014	0.015	0.026		0.02	0.02
P044	835819.80	820837.34		0.120	0.134	0.189	0.220	0.036	0.056	0.250	0.129	0.107	0.035	0.067		0.13	0.10
P045	835809.81	820836.92		0.149	0.089	0.162	0.199	0.090	0.096	0.262	0.148	0.131	0.024	0.075		0.13	0.12
P046	835799.82	820836.49		0.181	0.043	0.132	0.177	0.140	0.125	0.271	0.167	0.157	0.037	0.053		0.14	0.13
P047	835789.83	820836.10		0.210	0.064	0.096	0.153	0.168	0.144	0.279	0.186	0.183	0.064	0.037		0.14	0.14
P048	835779.85	820837.52		0.229	0.089	0.075	0.141	0.184	0.147	0.278	0.207	0.208	0.080	0.037		0.14	0.15
P049	835770.43	820841.70		0.233	0.084	0.123	0.177	0.187	0.135	0.251	0.215	0.209	0.073	0.052		0.16	0.16
P050	835760.44	820841.20		0.231	0.068	0.210	0.285	0.179	0.124	0.158	0.151	0.112	0.040	0.023		0.18	0.12
P051	835750.45	820840.70		0.106	0.087	0.098	0.104	0.051	0.029	0.025	0.038	0.029	0.029	0.030		0.07	0.04
P052	835740.46	820840.19		0.117	0.143	0.070	0.032	0.054	0.029	0.019	0.030	0.036	0.065	0.037		0.06	0.04
P053	835730.48	820839.69		0.228	0.210	0.042	0.047	0.039	0.029	0.037	0.032	0.029	0.063	0.081		0.07	0.05
P054	835720.49	820839.19		0.232	0.179	0.084	0.195	0.243	0.190	0.336	0.225	0.198	0.041	0.118		0.18	0.18
P055	835710.50	820838.68		0.176	0.159	0.205	0.282	0.277	0.208	0.334	0.215	0.178	0.049	0.087		0.22	0.19
P056	835700.52	820838.14		0.153	0.167	0.290	0.321	0.295	0.224	0.309	0.191	0.134	0.046	0.104		0.24	0.19
P057	835690.53	820837.60		0.119	0.203	0.279	0.246	0.207	0.146	0.170	0.110	0.054	0.029	0.125		0.19	0.12
P058	835680.55	820837.05		0.238	0.244	0.046	0.167	0.127	0.013	0.028	0.032	0.101	0.062	0.149		0.13	0.09
P059	835670.56	820836.51		0.307	0.279	0.069	0.211	0.145	0.040	0.081	0.031	0.129	0.073	0.141		0.16	0.11
P060	835660.57	820835.97		0.334	0.296	0.057	0.210	0.138	0.048	0.088	0.030	0.129	0.070	0.115		0.16	0.10
P061	835650.59	820835.42		0.341	0.301	0.021	0.187	0.116	0.042	0.068	0.028	0.118	0.066	0.089		0.14	0.09
P062	835640.60	820834.88		0.335	0.295	0.047	0.155	0.079	0.031	0.046	0.021	0.101	0.065	0.083		0.13	0.07
P063	835630.62	820834.34		0.333	0.298	0.026	0.097	0.021	0.019	0.025	0.014	0.079	0.052	0.074		0.10	0.05
P064	835620.63	820833.79		0.355	0.332	0.070	0.043	0.045	0.022	0.017	0.010	0.031	0.027	0.025		0.09	0.03
P065	835610.65	820833.25		0.324	0.293	0.081	0.149	0.171	0.130	0.064	0.061	0.108	0.034	0.074		0.15	0.09
P066	835600.66	820832.71		0.305	0.271	0.126	0.189	0.179	0.144	0.075	0.052	0.082	0.032	0.072		0.16	0.10
P067	835590.48	820832.11		0.249	0.220	0.142	0.134	0.102	0.118	0.051	0.030	0.068	0.042	0.093		0.13	0.08
P068	835592.46	820822.31		0.173	0.098	0.089	0.161	0.143	0.124	0.070	0.032	0.053	0.041	0.084		0.12	0.08
P069	835594.45	820812.51		0.150	0.179	0.156	0.206	0.186	0.103	0.074	0.034	0.035	0.032	0.069		0.15	0.09
P070	835596.44	820802.71		0.174	0.196	0.088	0.256	0.227	0.098	0.041	0.019	0.021	0.027	0.061		0.16	0.09
P071	835598.42	820792.91		0.199	0.222	0.036	0.296	0.256	0.121	0.037	0.008	0.020	0.025	0.060		0.17	0.09
P072	835600.41	820783.11		0.217	0.235	0.050	0.331	0.281	0.140	0.046	0.017	0.018	0.022	0.059		0.19	0.10
P073	835602.40	820773.31		0.229	0.236	0.156	0.348	0.296	0.148	0.063	0.026	0.015	0.019	0.062		0.21	0.11
P074	835604.39	820763.51		0.238	0.241	0.249	0.339	0.288	0.143	0.066	0.034	0.013	0.021	0.077		0.22	0.11
P075	835606.37	820753.71		0.245	0.249	0.316	0.311	0.251	0.124	0.044	0.038	0.009	0.041	0.069		0.22	0.10
P076	835608.36	820743.90		0.253	0.245	0.347	0.290	0.218	0.115	0.040	0.041	0.012	0.009	0.045		0.21	0.09
P077	835610.35	820734.10		0.257	0.220	0.300	0.254	0.187	0.160	0.115	0.034	0.046	0.038	0.091		0.20	0.11
P078	835612.34	820724.30		0.214	0.119	0.227	0.157	0.108	0.103	0.074	0.023	0.069	0.065	0.125		0.14	0.09
P079	835614.32	820714.50		0.043	0.017	0.231	0.195	0.142	0.155	0.106	0.014	0.078	0.067	0.114		0.13	0.10
P080	835616.31	820704.70		0.027	0.016	0.095	0.080	0.058	0.161	0.115	0.010	0.109	0.085	0.154		0.07	0.09
P081	835618.30	820694.90		0.028	0.071	0.175	0.147	0.157	0.141	0.106	0.048	0.067	0.045	0.098		0.12	0.09
P082	835620.29	820685.10		0.059	0.116	0.152	0.165	0.179	0.173	0.114	0.037	0.040	0.054	0.092		0.13	0.10
P083	835622.27	820675.30		0.114	0.131	0.145	0.180	0.192	0.190	0.108	0.050	0.042	0.049	0.105		0.14	0.11
P084	835623.91	820665.52		0.165	0.146	0.164	0.201	0.203	0.196	0.091	0.055	0.090	0.054	0.067		0.16	0.11
P085	835633.75	820667.32		0.184	0.198	0.218	0.236	0.223	0.216	0.060	0.024	0.137	0.080	0.077		0.19	0.13
P086	835643.58	820669.13		0.197	0.231	0.252	0.258	0.236	0.209	0.037	0.025	0.139	0.094	0.071		0.21	0.13
P087	835653.42	820670.94		0.210	0.241	0.256	0.256	0.231	0.190	0.071	0.043	0.116	0.095	0.056		0.21	0.13
P088	835663.25	820672.74		0.220	0.236	0.242	0.237	0.213	0.100	0.102	0.059	0.047	0.091	0.055		0.19	0.11
P089	835673.09	820674.55		0.228	0.226	0.222	0.225	0.204	0.033	0.127	0.074	0.021	0.083	0.068		0.18	0.10
P090	835682.92	820676.36		0.231	0.215	0.199	0.215	0.199	0.023	0.147	0.088	0.014	0.079	0.082		0.17	0.10
P091	835692.76	820678.16		0.226	0.193	0.154	0.197	0.202	0.043	0.170	0.106	0.024	0.077	0.095		0.16	0.11
P092	835702.59	820679.97		0.204	0.167	0.062	0.050	0.145	0.109	0.159	0.100	0.051	0.083	0.126		0.10	0.10
P093	835712.43	820681.78		0.190	0.178	0.050	0.022	0.023	0.028	0.018	0.023	0.024	0.057	0.087		0.06	0.04
P094	835722.26	820683.58		0.142	0.154	0.030	0.032	0.055	0.018	0.024	0.006	0.031	0.047	0.095		0.05	0.04
P095	835732.10	820685.39		0.097	0.132	0.043	0.051	0.072	0.018	0.034	0.012	0.029	0.042	0.105		0.06	0.05
P096	835741.94	820687.19		0.086	0.133	0.035	0.034	0.066	0.024	0.028	0.007	0.024	0.033	0.109		0.05	0.04
P097	835743.86	820697.30		0.113	0.095	0.125	0.103	0.071	0.021	0.074	0.035	0.004	0.030	0.048		0.08	0.04
P098	835742.22	820708.00		0.176	0.136	0.145	0.151	0.140	0.140	0.175	0.112	0.045	0.043	0.097		0.13	0.10
P099	835752.24	820709.23		0.119	0.092	0.099	0.106	0.108	0.141	0.159	0.101	0.053	0.038	0.118		0.10	0.09
P100	835756.16	820718.79		0.216	0.162	0.162	0.161	0.137	0.188	0.209	0.144	0.065	0.062	0.169		0.15	0.13
P101	835754.52	820728.66		0.240	0.197	0.177	0.165	0.138	0.196	0.201	0.148	0.062	0.063	0.181		0.16	0.13
P102	835752.66	820738.55		0.258	0.217	0.182	0.161	0.135	0.196	0.188	0.140	0.059	0.061	0.191		0.16	0.13
P103	835745.72	820746.06		0.281	0.238	0.191	0.155	0.136	0.191	0.174	0.127	0.059	0.059	0.204		0.16	0.13
P104	835739.75	820752.51		0.306	0.244	0.196	0.143	0.130	0.171	0.162	0.110	0.057	0.054	0.204		0.16	0.12
P105	835746.64	820759.76		0.298	0.233	0.179	0.129	0.120	0.170	0.167	0.099	0.061	0.054	0.200		0.15	0.12
P106	835753.52	820767.01		0.288	0.227	0.170	0.123	0.115	0.164	0.172	0.092	0.064	0.053	0.191		0.14	0.11
P107	835760.41	820774.26		0.274	0.228	0.174	0.125	0.109	0.153	0.175	0.086	0.067	0.053	0.186		0.14	0.11
P108	835767.30	820781.51		0.271	0.226	0.186	0.132	0.105	0.142	0.189	0.089	0.078	0.055	0.186		0.14	0.11
P109	835774.18	820788.76		0.235	0.178	0.168	0.118	0.119	0.157	0.233	0.116	0.104	0.033	0.114		0.14	0.11
P110	835781.07	820796.01		0.237	0.140	0.130	0.100	0.128	0.161	0.247	0.133	0.118	0.019	0.029		0.12	0.11
P111	835787.96	820803.26		0.251	0.116	0.090	0.086	0.136	0.156	0.246	0.138	0.123	0.029	0.025		0.11	0.11
P112	835794.85	820810.51		0.234	0.095	0.077	0.085	0.124	0.124	0.211	0.123	0.108	0.034	0.042		0.10	0.10
P113	835801.73	820817.76		0.084	0.084	0.100	0.118	0.130	0.141	0.263	0.148	0.123	0.017	0.074		0.11	0.11
P114	835808.62	820825.01		0.105	0.100	0.133	0.158	0.094	0.119	0.266	0.143	0.116	0.030	0.073		0.12	0.11
P115	835815.51	820832.26		0.114	0.120	0.165	0.193	0.042	0.082	0.252	0.132	0.108	0.034	0.064		0.12	0.10
O001	835962.11	820860.15		0.303	0.329	0.245	0.219	0.143	0.063	0.079	0.093	0.047	0.075	0.033		0.19	0.09
O002	835937.14	820859.00		0.141	0.250	0.239	0.224	0.130	0.072	0.107	0.130	0.037	0.031	0.041		0.17	0.09
O003	835912.16	820857.85		0.074	0.195	0.256	0.237	0.127	0.068	0.170	0.159	0.061	0.031	0.079		0.16	0.11
O004	835887.19	820856.69		0.105	0.073	0.226	0.222	0.118	0.123	0.218	0.173	0.103	0.037	0.046		0.15	0.12
O005	835862.22	820855.54		0.051	0.088	0.208	0.228	0.110	0.051	0.248	0.180	0.137	0.024	0.019		0.14	0.11
O006	835837.24	820854.39		0.066	0.146	0.207	0.264	0.111	0.066	0.238	0.132	0.118	0.033	0.030		0.16	0.11
O007	835812.27	820853.24		0.149	0.062	0.141	0.214	0.099	0.083	0.233	0.129	0.125	0.028	0.100		0.13	0.12
O008	835787.30	820852.08		0.191	0.096	0.129	0.203	0.174	0.129	0.267	0.196	0.206	0.067	0.071		0.16	0.16
O009	835762.32	820850.93		0.192	0.102	0.186	0.258	0.185	0.120	0.214	0.200	0.161	0.025	0.172		0.18	0.16
O010	835737.35	820849.78		0.149	0.156	0.159	0.227	0.067	0.044	0.050	0.044	0.050	0.035	0.204		0.13	0.09
O011	835712.38	820848.63		0.127	0.171	0.175	0.222	0.248	0.190	0.327	0.209	0.171	0.051	0.190		0.19	0.19
O012	835687.40	820847.47		0.164	0.243	0.332	0.240	0.137	0.080	0.093	0.056	0.071	0.072	0.186		0.19	0.11
O013	835662.43	820846.32		0.200	0.207	0.061	0.099	0.065	0.056	0.101	0.041	0.114	0.048	0.102		0.12	0.08
O014	835637.46	820845.17		0.296	0.286	0.145	0.097	0.088	0.047	0.050	0.044	0.104	0.037	0.052		0.13	0.06
O015	835613.05	820837.83		0.339	0.324	0.165	0.033	0.049	0.023	0.027	0.063	0.105	0.034	0.058		0.11	0.05
O016	835588.08	820836.60		0.219	0.248	0.195	0.121	0.071	0.112	0.047	0.024	0.072	0.036	0.096		0.13	0.07
O017	835563.11	820835.37		0.166	0.285	0.202	0.043	0.012	0.086	0.046	0.043	0.067	0.029	0.077		0.10	0.05
O018	835538.14	820834.13		0.238	0.292	0.247	0.078	0.072	0.037	0.062	0.024	0.062	0.031	0.074		0.13	0.05
O019	835513.17	820832.90		0.183	0.178	0.184	0.080	0.083	0.048	0.012	0.041	0.046	0.021	0.133		0.10	0.06
O020	835488.20	820831.67		0.232	0.186	0.218	0.132	0.086	0.113	0.034	0.055	0.094	0.059	0.049		0.14	0.08

Wind Velocity Ratio, Proposed Scheme

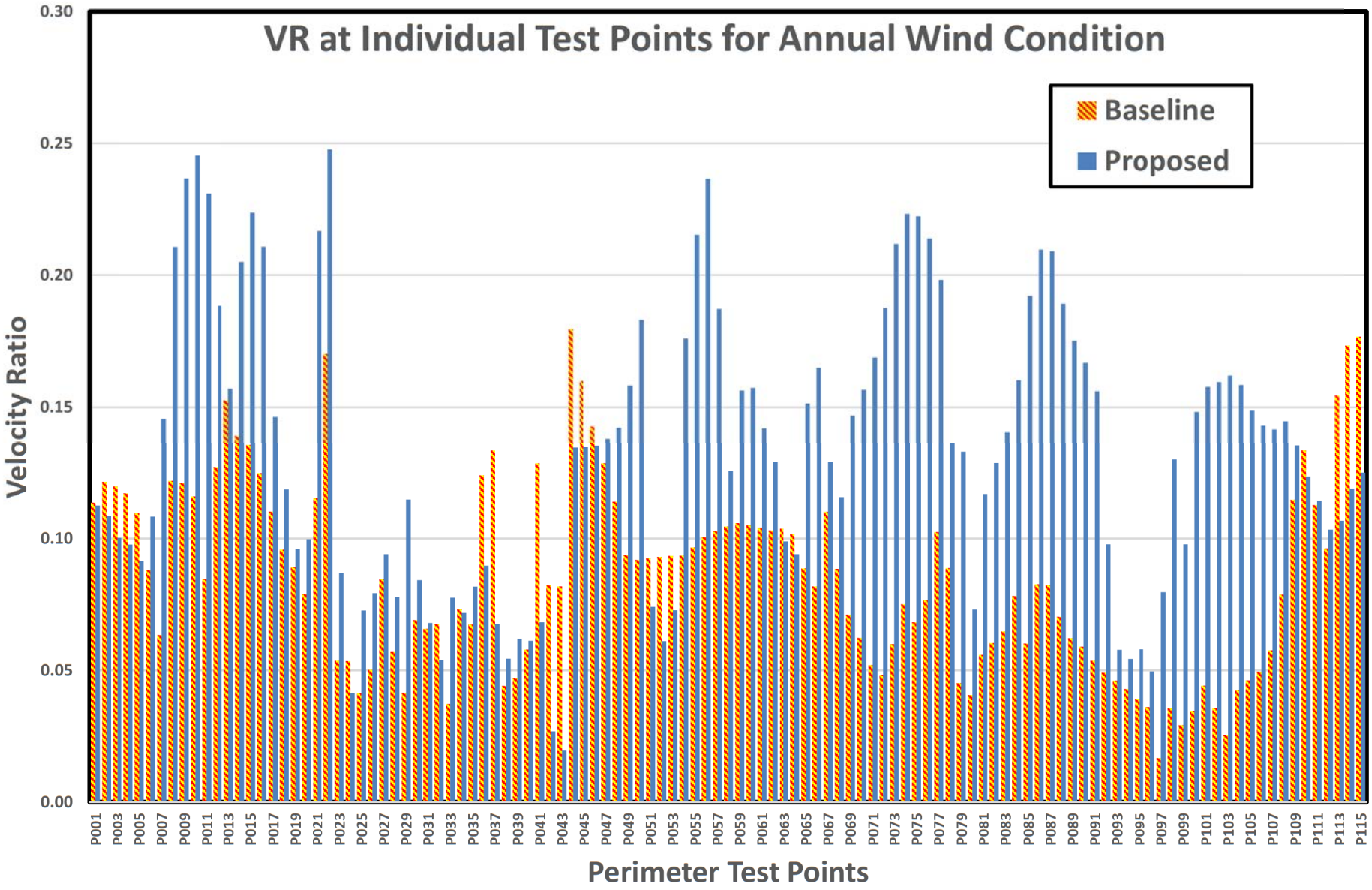
Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
O021	835463.23	820830.43		0.168	0.141	0.131	0.103	0.081	0.090	0.047	0.065	0.099	0.039	0.065		0.10	0.07
O022	835617.25	820853.67		0.268	0.307	0.327	0.064	0.039	0.047	0.041	0.053	0.066	0.013	0.011		0.13	0.04
O023	835592.28	820852.56		0.145	0.197	0.068	0.158	0.095	0.126	0.071	0.032	0.087	0.010	0.081		0.11	0.08
O024	835567.30	820851.46		0.115	0.211	0.142	0.087	0.040	0.015	0.044	0.037	0.046	0.048	0.063		0.09	0.05
O025	835542.33	820850.35		0.165	0.225	0.201	0.030	0.063	0.044	0.062	0.017	0.011	0.094	0.064		0.09	0.05
O026	835517.35	820849.25		0.175	0.203	0.198	0.079	0.046	0.051	0.042	0.012	0.061	0.153	0.070		0.11	0.07
O027	835492.38	820848.14		0.176	0.173	0.179	0.146	0.055	0.063	0.042	0.041	0.098	0.160	0.061		0.13	0.09
O028	835467.40	820847.03		0.182	0.154	0.209	0.080	0.036	0.053	0.008	0.057	0.107	0.151	0.074		0.11	0.08
O029	836038.71	820681.43		0.184	0.204	0.216	0.043	0.014	0.071	0.048	0.025	0.130	0.112	0.113		0.10	0.08
O030	836013.19	820677.78		0.070	0.172	0.203	0.067	0.069	0.048	0.040	0.030	0.117	0.112	0.138		0.10	0.08
O031	835990.50	820674.34		0.095	0.144	0.200	0.069	0.055	0.053	0.035	0.039	0.072	0.068	0.160		0.09	0.07
O032	836037.50	820669.89		0.091	0.178	0.212	0.025	0.023	0.069	0.043	0.021	0.128	0.071	0.075		0.09	0.06
O033	836014.40	820665.64		0.077	0.153	0.198	0.062	0.044	0.043	0.037	0.028	0.124	0.092	0.094		0.09	0.07
O034	835992.67	820664.80		0.125	0.137	0.191	0.037	0.056	0.070	0.048	0.040	0.087	0.093	0.126		0.09	0.07
O035	835968.00	820660.74		0.091	0.116	0.167	0.016	0.051	0.099	0.073	0.074	0.051	0.046	0.167		0.07	0.07
O036	835943.34	820656.68		0.112	0.092	0.127	0.066	0.045	0.103	0.083	0.097	0.022	0.090	0.213		0.08	0.09
O037	835904.47	820657.45		0.293	0.212	0.172	0.116	0.126	0.109	0.098	0.108	0.025	0.116	0.215		0.14	0.11
O038	835879.88	820652.98		0.283	0.211	0.134	0.111	0.128	0.116	0.116	0.124	0.027	0.092	0.209		0.13	0.11
O039	835855.28	820648.52		0.249	0.168	0.050	0.046	0.131	0.121	0.131	0.130	0.014	0.077	0.204		0.09	0.10
O040	835830.68	820644.05		0.231	0.149	0.046	0.058	0.102	0.122	0.140	0.125	0.019	0.098	0.220		0.09	0.11
O041	835806.08	820639.58		0.220	0.150	0.056	0.057	0.070	0.138	0.152	0.123	0.031	0.127	0.243		0.09	0.11
O042	835781.48	820635.12		0.242	0.201	0.126	0.126	0.031	0.155	0.155	0.121	0.052	0.160	0.259		0.13	0.13
O043	835756.89	820630.65		0.235	0.219	0.052	0.066	0.065	0.165	0.140	0.092	0.059	0.177	0.262		0.11	0.13
O044	835732.29	820626.18		0.260	0.236	0.059	0.070	0.085	0.153	0.115	0.063	0.070	0.194	0.243		0.12	0.13
O045	835707.69	820621.72		0.234	0.194	0.053	0.053	0.096	0.124	0.045	0.036	0.073	0.215	0.213		0.10	0.12
O046	835683.09	820617.25		0.203	0.176	0.033	0.027	0.090	0.061	0.048	0.047	0.105	0.229	0.156		0.09	0.11
O047	835658.50	820612.78		0.185	0.094	0.030	0.017	0.085	0.064	0.109	0.071	0.131	0.205	0.126		0.08	0.11
O048	835633.90	820608.32		0.164	0.034	0.025	0.043	0.075	0.063	0.114	0.074	0.103	0.155	0.102		0.07	0.10
O049	835609.30	820603.85		0.170	0.227	0.319	0.279	0.113	0.081	0.095	0.054	0.116	0.191	0.138		0.20	0.14
O050	835584.70	820599.38		0.170	0.299	0.362	0.324	0.226	0.140	0.068	0.017	0.124	0.158	0.171		0.25	0.15
O051	835560.11	820594.92		0.085	0.243	0.319	0.278	0.192	0.183	0.086	0.046	0.105	0.065	0.103		0.21	0.13
O052	835535.51	820590.45		0.058	0.134	0.260	0.240	0.140	0.120	0.096	0.036	0.072	0.081	0.165		0.16	0.11
O053	835510.91	820585.98		0.052	0.093	0.251	0.230	0.094	0.123	0.120	0.048	0.031	0.137	0.176		0.15	0.12
O054	835486.31	820581.52		0.023	0.094	0.263	0.243	0.020	0.101	0.103	0.038	0.057	0.126	0.161		0.14	0.10
O055	835461.71	820577.05		0.016	0.071	0.279	0.259	0.079	0.093	0.066	0.038	0.071	0.083	0.142		0.15	0.10
O056	835437.12	820572.58		0.030	0.054	0.287	0.301	0.107	0.128	0.087	0.051	0.130	0.022	0.100		0.17	0.11
O057	835907.49	820642.99		0.196	0.157	0.198	0.150	0.114	0.120	0.101	0.106	0.019	0.102	0.199		0.14	0.11
O058	835882.91	820638.42		0.327	0.236	0.204	0.156	0.141	0.139	0.124	0.124	0.021	0.087	0.208		0.16	0.12
O059	835858.33	820633.85		0.326	0.235	0.110	0.076	0.108	0.153	0.145	0.129	0.014	0.054	0.210		0.12	0.10
O060	835833.75	820629.28		0.290	0.208	0.116	0.091	0.116	0.161	0.158	0.127	0.010	0.066	0.232		0.12	0.11
O061	835809.18	820624.71		0.269	0.197	0.129	0.106	0.106	0.152	0.156	0.121	0.033	0.093	0.250		0.13	0.12
O062	835784.60	820620.14		0.296	0.239	0.122	0.137	0.059	0.174	0.162	0.123	0.060	0.109	0.264		0.14	0.13
O063	835760.02	820615.57		0.280	0.256	0.138	0.044	0.023	0.190	0.157	0.108	0.064	0.117	0.269		0.11	0.12
O064	835735.44	820611.00		0.190	0.200	0.107	0.038	0.038	0.173	0.133	0.082	0.055	0.127	0.254		0.10	0.11
O065	835710.86	820606.43		0.138	0.153	0.092	0.026	0.053	0.126	0.096	0.058	0.076	0.140	0.222		0.08	0.10
O066	835686.28	820601.86		0.106	0.113	0.080	0.029	0.058	0.079	0.066	0.042	0.109	0.046	0.203		0.07	0.08
O067	835661.70	820597.29		0.092	0.108	0.068	0.033	0.061	0.059	0.075	0.046	0.061	0.020	0.182		0.06	0.06
O068	835637.12	820592.72		0.046	0.082	0.043	0.009	0.094	0.042	0.065	0.044	0.127	0.074	0.167		0.05	0.08
O069	835612.55	820588.15		0.099	0.107	0.205	0.120	0.068	0.108	0.080	0.008	0.072	0.094	0.205		0.11	0.09
O070	835587.97	820583.58		0.152	0.246	0.339	0.285	0.108	0.121	0.072	0.018	0.103	0.149	0.221		0.21	0.14
O071	835563.39	820579.01		0.192	0.278	0.349	0.310	0.136	0.161	0.085	0.048	0.066	0.116	0.122		0.22	0.13
O072	835538.81	820574.44		0.041	0.266	0.334	0.299	0.135	0.182	0.087	0.054	0.121	0.038	0.110		0.20	0.12
O073	835514.23	820569.87		0.039	0.207	0.282	0.237	0.075	0.153	0.072	0.018	0.050	0.061	0.149		0.16	0.10
O074	835489.65	820565.30		0.022	0.223	0.245	0.199	0.047	0.149	0.025	0.036	0.040	0.105	0.195		0.14	0.10
O075	835465.07	820560.73		0.033	0.204	0.193	0.127	0.115	0.098	0.034	0.054	0.059	0.140	0.229		0.13	0.11
O076	835440.49	820556.16		0.034	0.163	0.202	0.146	0.037	0.135	0.019	0.034	0.067	0.166	0.247		0.12	0.11
O077	835781.19	820982.75		0.072	0.096	0.049	0.031	0.073	0.018	0.095	0.094	0.052	0.059	0.130		0.06	0.07
O078	835782.12	820957.77		0.092	0.061	0.018	0.036	0.033	0.053	0.089	0.069	0.050	0.080	0.159		0.05	0.07
O079	835783.05	820932.79		0.068	0.052	0.096	0.137	0.122	0.063	0.091	0.062	0.060	0.124	0.189		0.10	0.11
O080	835783.98	820907.80		0.045	0.017	0.139	0.162	0.063	0.042	0.236	0.122	0.034	0.058	0.069		0.09	0.09
O081	835784.90	820882.82		0.118	0.069	0.156	0.173	0.155	0.122	0.254	0.201	0.204	0.042	0.116		0.14	0.15
O082	835785.83	820857.84		0.179	0.100	0.138	0.209	0.175	0.125	0.262	0.198	0.212	0.065	0.037		0.16	0.15
O083	835769.31	820933.57		0.084	0.048	0.154	0.174	0.100	0.049	0.257	0.171	0.030	0.113	0.186		0.12	0.13
O084	835769.73	820908.57		0.049	0.046	0.195	0.232	0.142	0.101	0.264	0.218	0.151	0.054	0.107		0.15	0.15
O085	835770.15	820883.58		0.073	0.067	0.178	0.164	0.159	0.098	0.231	0.194	0.168	0.042	0.096		0.14	0.14
O086	835769.52	820858.34		0.180	0.104	0.163	0.233	0.183	0.123	0.251	0.216	0.209	0.061	0.132		0.17	0.17
O087	835894.43	820959.20		0.065	0.117	0.166	0.023	0.063	0.046	0.031	0.134	0.061	0.037	0.212		0.07	0.07
O088	835877.50	820940.81		0.063	0.110	0.131	0.010	0.083	0.060	0.033	0.105	0.041	0.032	0.175		0.07	0.07
O089	835856.06	820928.90		0.024	0.068	0.106	0.023	0.047	0.059	0.028	0.065	0.045	0.048	0.188		0.05	0.06
O090	835831.15	820924.79		0.045	0.034	0.050	0.129	0.091	0.098	0.076	0.072	0.070	0.077	0.215		0.08	0.10
O091	835806.24	820922.67		0.042	0.055	0.023	0.112	0.086	0.056	0.051	0.070	0.048	0.098	0.209		0.07	0.09
O092	836018.16	820784.92		0.300	0.255	0.158	0.047	0.036	0.030	0.109	0.054	0.052	0.069	0.026		0.10	0.05
O093	836006.31	820759.98		0.290	0.222	0.117	0.017	0.017	0.079	0.113	0.052	0.027	0.035	0.065		0.08	0.05
O094	835996.26	820740.08		0.237	0.176	0.062	0.035	0.037	0.101	0.112	0.047	0.076	0.037	0.085		0.08	0.06
O095	835984.32	820715.87		0.239	0.122	0.039	0.040	0.027	0.141	0.127	0.066	0.038	0.060	0.109		0.07	0.07
O096	835973.26	820693.44		0.236	0.058	0.030	0.078	0.054	0.125	0.103	0.062	0.024	0.077	0.109		0.08	0.08
O097	835968.43	820672.16		0.199	0.105	0.179	0.034	0.041	0.101	0.078	0.078	0.039	0.078	0.189		0.09	0.08
O098	835587.35	820830.50		0.219	0.183	0.119	0.110	0.068	0.106	0.039	0.021	0.064	0.049	0.102		0.11	0.07
O099	835591.82	820805.90		0.180	0.152	0.102	0.184	0.165	0.060	0.053	0.024	0.025	0.023	0.050		0.12	0.07
O100	835596.30	820781.31		0.216	0.200	0.026	0.304	0.253	0.100	0.030	0.008	0.020	0.020	0.049		0.17	0.09
O101	835600.78	820756.71		0.223	0.248	0.250	0.316	0.262	0.155	0.089	0.027	0.010	0.057	0.095		0.22	0.12
O102	835605.25	820732.11		0.267	0.241	0.346	0.241	0.163	0.158	0.126	0.047	0.064	0.057	0.100		0.20	0.11
O103	835609.73	820707.52		0.191	0.030	0.238	0.143	0.104	0.166	0.141	0.044	0.081	0.063	0.122		0.13	0.10
O104	835614.20	820682.92		0.062	0.103	0.108	0.139	0.159	0.152	0.126	0.061	0.048	0.071	0.112		0.11	0.10
O105	835618.68	820658.33		0.177	0.139	0.177	0.202	0.260	0.177	0.092	0.068	0.086	0.069	0.041		0.16	0.11
O106	835623.16	820633.73		0.184	0.211	0.278	0.285	0.222	0.115	0.054	0.043	0.133	0.105	0.063		0.21	0.13
O107	835627.13	820611.30		0.138	0.056	0.166	0.117	0.048	0.036	0.091	0.069	0.094	0.163	0.079		0.10	0.09
O108	835902.92	820665.14		0.250	0.208	0.128	0.089	0.109	0.071	0.071	0.068	0.029	0.101	0.141		0.12	0.08
O109	835913.26	820687.90		0.148	0.102	0.038	0.008	0.068	0.030	0.022	0.029	0.034	0.074	0.049		0.05	0.04
O110	835923.22	820709.80		0.149	0.119	0.082	0.015	0.141	0.038	0.032	0.024	0.022	0.092	0.056		0.07	0.06
O111	835902.34	820712.96		0.074	0.074	0.067	0.062	0.057	0.067	0.068	0.044	0.024	0.010	0.039		0.06	0.04
O112	835877.77	820708.33		0.106	0.063	0.050	0.096	0.035	0.107	0.095	0.093	0.016	0.047	0.064		0.07	0.06
O113	835853.21	820703.70		0.130	0.082	0.051	0.114	0.076	0.113	0.114	0.107	0.035	0.053	0.094		0.09	0.08
O114	835828.64	820699.07		0.192	0.162	0.055	0.128	0.097	0.120	0.126	0.095	0.032	0.046	0.092		0.11	0.08
O115	835804.07	820694.44		0.156	0.147	0.070	0.122	0.088	0.126	0.151	0.086	0.030	0.012	0.076		0.10	0.08
O116	835779.50	820689.81		0.169	0.195	0.132	0.146	0.111	0.094	0.137	0.086	0.032	0.011	0.089		0.12	0.08
O117	835754.94	820685.17		0.106	0.174	0.025	0.019	0.044	0.022	0.032	0.015	0.018	0.027	0.116		0.05	0.04
O118	835730.37	820680.54		0.132	0.174	0.038	0.036	0.073	0.024	0.050	0.027	0.030	0.064	0.126		0.06	0.05
O119	835705.80	820675.91		0.216	0.190	0.092	0.032	0.036	0.027	0.042	0.024	0.034	0.080	0.122		0.07	0.05
O120	835681.24	820671.28		0.235	0.204	0.160	0.181	0.162	0.060	0.123	0.074	0.035	0.063	0.065		0.15	0.09
O121	835656.67	820666.65		0.220	0.233	0.228	0.243	0.236	0.156	0.069	0.041	0.071	0.087	0.042		0.19	0.11
O122	835632.10	820662.02		0.199	0.196	0.216	0.239	0.223	0.210	0.061	0.031	0.145	0.095	0.058		0.19	0.13
O123	835776.57	820682.27		0.221	0.171	0.150	0.172	0.121	0.065	0.085	0.076	0.037	0.021	0.054		0.13	0.07
O124	835779.34	820663.85		0.209	0.125	0.118	0.155	0.068	0.042	0.040	0.046	0.037	0.022	0.028		0.11	0.05
O125	835782.33	820646.36		0.134	0.101	0.117	0.134	0.075	0.042	0.061	0.070	0.031	0.079	0.088		0.09	0.07
O126	835635.39	820582.98		0.030	0.113	0.054	0.013	0.131	0.047	0.070	0.046	0.159	0.103	0.073		0.07	0.08
O127	835639.82	820558.38		0.065	0.167	0.039	0.062	0.112	0.063	0.090	0.067	0.196	0.136	0.112		0.09	0.11
O128	835644.25	820533.77		0.071	0.163	0.080	0.097	0.134	0.086	0.126	0.095	0.238	0.165	0.134		0.12	0.14
O129	835648.68	820509.17		0.066	0.189	0.137	0.136	0.140	0.108	0.156	0.122	0.261	0.168	0.151		0.15	0.16
O130	835653.11	820484.56		0.080	0.211	0.171	0.109	0.139	0.115	0.150	0.124	0.280	0.144	0.127		0.14	0.15
O131	835524.64	820828.60		0.204	0.232	0.194	0.112	0.045	0.084	0.050	0.023	0.058	0.067	0.155		0.12	0.07
O132	835529.26	820804.03		0.261	0.192	0.213	0.068	0.088	0.043	0.036	0.035	0.059	0.058	0.098		0.11	0.06
O133	835533.88	820779.47		0.288	0.216	0.241	0.081	0.100	0.044	0.004	0.038	0.068	0.071	0.088		0.13	0.06
O134	835538.49	820754.90		0.227	0.112	0.208	0.110	0.121	0.039	0.007	0.022	0.088	0.091	0.114		0.12	0.08
O135	835543.11	820730.33		0.107	0.036	0.148	0.046	0.055	0.072	0.039	0.034	0.094	0.111	0.140		0.08	0.08
O136	835547.73	820705.76		0.102	0.120	0.235	0.098	0.099	0.147	0.093	0.057	0.107	0.134	0.178		0.13	0.12
O137	835552.35	820681.19		0.050	0.101	0.139	0.170	0.115	0.212	0.127	0.079	0.090	0.117	0.154		0.13	0.13
O138	835556.97	820656.62		0.143	0.164	0.228	0.131	0.113	0.244	0.146	0.087	0.048	0.062	0.072		0.14	0.10
O139	835561.59	820632.05		0.160	0.123	0.202	0.152	0.161	0.218	0.137	0.081	0.039	0.101	0.145		0.15	0.12
O140	835566.20	820607.48		0.112	0.122	0.139	0.142	0.151	0.096	0.054	0.066	0.044	0.095	0.185		0.12	0.10
O141	835575.50	820560.22		0.018	0.041	0.060	0.061	0.029	0.045	0.074	0.079	0.037	0.102	0.042		0.05	0.06
O142	835580.39	820535.70		0.040	0.036	0.091	0.082	0.015	0.084	0.084	0.087	0.050	0.112	0.018		0.07	0.07
O143	835585.27	820511.18		0.044	0.048	0.098	0.106	0.016	0.081	0.087	0.091	0.065	0.119	0.032		0.08	0.08
O144	835590.16	820486.66		0.023	0.078	0.046	0.096	0.014	0.077	0.083	0.094	0.084	0.122	0.040		0.07	0.08
O145	835595.04	820462.15		0.027	0.039	0.022	0.092	0.021	0.059	0.069	0.096	0.109	0.135	0.045		0.06	0.08
O146	835467.66	820823.97		0.182	0.148	0.130	0.139	0.056	0.067	0.052	0.043	0.041	0.037	0.112		0.10	0.06
O147	835472.26	820799.39		0.143	0.136	0.191	0.140	0.042	0.018	0.044	0.004	0.026	0.045	0.095		0.10	0.05
O148	835476.87	820774.82		0.271	0.265	0.273	0.147	0.024	0.022	0.050	0.002	0.031	0.032	0.078		0.14	0.06
O149	835481.47	820750.25		0.276	0.279	0.280	0.151	0.050	0.026	0.043	0.006	0.030	0.020	0.030		0.14	0.04
O150	835486.08	820725.68		0.266	0.268	0.280	0.134	0.052	0.040	0.035	0.019	0.028	0.002	0.017		0.14	0.04
O151	835490.68	820701.10		0.240	0.253	0.265	0.215	0.204	0.047	0.025	0.058	0.065	0.032	0.075		0.18	0.09
O152	835495.29	820676.53		0.203	0.223	0.250	0.033	0.041	0.031	0.018	0.049	0.057	0.040	0.027		0.10	0.04
O153	835499.89	820651.96		0.135	0.162	0.153	0.082	0.058	0.073	0.066	0.041	0.053	0.067	0.051		0.10	0.06
O154	835504.49	820627.39		0.092	0.111	0.052	0.030	0.085	0.098	0.095	0.016	0.036	0.091	0.082		0.06	0.07
O155	835509.10	820602.81		0.088	0.066	0.051	0.042	0.117	0.102	0.088	0.074	0.014	0.046	0.043		0.06	0.06

Wind Velocity Ratio, Proposed Scheme

Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
O156	835598.00	820724.28		0.122	0.205	0.291	0.236	0.165	0.147	0.125	0.051	0.088	0.071	0.113		0.18	0.12
O157	835573.46	820719.48		0.115	0.202	0.307	0.328	0.277	0.188	0.074	0.026	0.089	0.060	0.086		0.23	0.13
O158	835548.93	820714.68		0.127	0.165	0.313	0.300	0.262	0.122	0.060	0.049	0.099	0.121	0.157		0.22	0.14
O159	835524.37	820710.00		0.077	0.146	0.196	0.272	0.248	0.047	0.019	0.036	0.037	0.011	0.016		0.17	0.08
O160	835499.81	820705.31		0.098	0.092	0.096	0.203	0.214	0.037	0.017	0.054	0.058	0.022	0.070		0.13	0.08
O161	835475.22	820700.80		0.044	0.045	0.043	0.069	0.200	0.017	0.011	0.064	0.069	0.045	0.080		0.07	0.07
O162	835450.63	820696.29		0.021	0.022	0.043	0.034	0.138	0.038	0.014	0.070	0.040	0.057	0.090		0.05	0.06
O163	835426.04	820691.78		0.097	0.097	0.075	0.092	0.088	0.048	0.039	0.071	0.023	0.103	0.072		0.08	0.07
O164	835427.60	820718.18		0.124	0.125	0.061	0.167	0.090	0.050	0.044	0.021	0.030	0.104	0.074		0.10	0.07
O165	835430.53	820700.46		0.131	0.130	0.088	0.162	0.073	0.054	0.032	0.056	0.021	0.095	0.063		0.10	0.07
O166	835461.76	820554.59		0.046	0.157	0.097	0.106	0.140	0.071	0.053	0.090	0.066	0.082	0.137		0.10	0.09
O167	835465.61	820529.89		0.093	0.057	0.142	0.188	0.135	0.008	0.092	0.058	0.041	0.055	0.040		0.11	0.07
O168	835469.45	820505.18		0.087	0.090	0.183	0.209	0.133	0.029	0.110	0.085	0.067	0.042	0.105		0.13	0.09
O169	835514.76	820564.17		0.040	0.184	0.224	0.169	0.047	0.141	0.061	0.016	0.040	0.027	0.068		0.12	0.06
O170	835518.53	820542.95		0.120	0.172	0.111	0.085	0.095	0.097	0.060	0.085	0.186	0.161	0.133		0.12	0.12
O171	835525.88	820510.82		0.117	0.051	0.096	0.015	0.048	0.049	0.109	0.072	0.083	0.073	0.076		0.06	0.07
O172	835530.80	820486.31		0.055	0.100	0.107	0.022	0.033	0.018	0.112	0.082	0.097	0.130	0.119		0.06	0.08
O173	835535.35	820463.62		0.048	0.103	0.092	0.009	0.027	0.024	0.114	0.094	0.128	0.160	0.145		0.06	0.10
O174	835516.38	820536.88		0.144	0.202	0.107	0.089	0.095	0.087	0.028	0.046	0.154	0.144	0.128		0.11	0.10
O175	835499.10	820518.81		0.057	0.158	0.090	0.088	0.070	0.042	0.023	0.052	0.185	0.160	0.104		0.10	0.10
O176	835481.82	820500.74		0.028	0.085	0.061	0.128	0.092	0.061	0.017	0.088	0.248	0.215	0.135		0.11	0.14
O177	835564.72	820560.87		0.079	0.073	0.104	0.054	0.021	0.075	0.030	0.021	0.018	0.057	0.098		0.06	0.05
O178	835547.24	820542.99		0.077	0.076	0.043	0.033	0.055	0.025	0.021	0.014	0.025	0.094	0.095		0.05	0.05
O179	835529.77	820525.11		0.145	0.035	0.073	0.061	0.076	0.039	0.099	0.081	0.097	0.125	0.131		0.08	0.09
O180	835512.30	820507.23		0.128	0.063	0.026	0.031	0.010	0.053	0.025	0.011	0.033	0.111	0.122		0.04	0.05
O181	835494.83	820489.35		0.101	0.041	0.016	0.021	0.027	0.012	0.018	0.029	0.056	0.148	0.118		0.04	0.06
O182	835834.84	820974.30		0.028	0.040	0.065	0.053	0.062	0.042	0.019	0.076	0.035	0.035	0.092		0.05	0.05
O183	835837.51	820953.89		0.025	0.026	0.035	0.074	0.092	0.058	0.032	0.047	0.018	0.049	0.159		0.05	0.06
O184	835934.73	820901.21		0.065	0.138	0.125	0.148	0.068	0.041	0.132	0.125	0.053	0.011	0.065		0.10	0.07
O185	835910.56	820894.81		0.033	0.081	0.102	0.173	0.094	0.077	0.154	0.139	0.071	0.027	0.054		0.10	0.09
O186	835886.39	820888.41		0.060	0.059	0.101	0.178	0.104	0.103	0.079	0.080	0.052	0.044	0.020		0.11	0.08
O187	835935.87	820882.85		0.015	0.041	0.191	0.221	0.103	0.058	0.144	0.149	0.053	0.018	0.056		0.12	0.09
O188	835911.02	820880.17		0.040	0.052	0.179	0.231	0.121	0.082	0.191	0.164	0.084	0.032	0.033		0.14	0.11
O189	835886.16	820877.50		0.078	0.064	0.148	0.200	0.113	0.117	0.188	0.144	0.103	0.044	0.028		0.13	0.11
O190	835818.76	820894.65		0.025	0.027	0.059	0.095	0.038	0.071	0.103	0.068	0.062	0.021	0.048		0.06	0.06
O191	835801.28	820893.31		0.078	0.024	0.083	0.111	0.050	0.060	0.099	0.071	0.089	0.019	0.033		0.07	0.06
O192	835819.33	820876.41		0.060	0.051	0.042	0.069	0.038	0.069	0.158	0.114	0.104	0.012	0.112		0.06	0.08
O193	835802.62	820876.22		0.124	0.098	0.099	0.139	0.125	0.153	0.217	0.147	0.155	0.026	0.090		0.12	0.12
O194	835752.64	820975.62		0.038	0.075	0.062	0.094	0.059	0.086	0.195	0.138	0.131	0.082	0.147		0.08	0.11
O195	835727.67	820974.37		0.035	0.089	0.092	0.130	0.096	0.080	0.089	0.100	0.174	0.090	0.141		0.10	0.11
O196	835702.70	820973.13		0.074	0.103	0.095	0.138	0.121	0.073	0.163	0.102	0.188	0.105	0.128		0.12	0.13
O197	835677.73	820971.88		0.088	0.122	0.103	0.144	0.133	0.076	0.183	0.023	0.183	0.131	0.109		0.12	0.13
O198	835652.76	820970.63		0.088	0.149	0.123	0.156	0.140	0.071	0.169	0.019	0.152	0.162	0.088		0.13	0.12
O199	835627.79	820969.38		0.100	0.183	0.147	0.170	0.148	0.060	0.131	0.023	0.103	0.177	0.071		0.14	0.12
O200	835592.71	820968.38		0.153	0.253	0.204	0.219	0.188	0.070	0.075	0.028	0.043	0.167	0.058		0.17	0.11
O201	835753.26	820946.33		0.067	0.032	0.149	0.178	0.117	0.061	0.153	0.123	0.075	0.120	0.202		0.12	0.13
O202	835728.29	820945.16		0.028	0.046	0.122	0.132	0.127	0.051	0.083	0.111	0.155	0.120	0.196		0.11	0.13
O203	835703.31	820943.99		0.056	0.066	0.132	0.135	0.121	0.064	0.206	0.125	0.189	0.106	0.174		0.12	0.14
O204	835678.34	820942.82		0.086	0.093	0.154	0.169	0.117	0.082	0.208	0.040	0.190	0.097	0.147		0.13	0.13
O205	835653.37	820941.65		0.105	0.118	0.177	0.204	0.120	0.074	0.174	0.010	0.166	0.109	0.116		0.14	0.12
O206	835628.40	820940.48		0.115	0.143	0.194	0.228	0.124	0.061	0.126	0.007	0.120	0.143	0.090		0.15	0.11
O207	835604.84	820940.10		0.125	0.176	0.199	0.243	0.133	0.069	0.080	0.018	0.061	0.162	0.069		0.16	0.11
O208	835754.49	820919.92		0.071	0.079	0.091	0.122	0.113	0.045	0.057	0.054	0.057	0.135	0.230		0.10	0.10
O209	835729.53	820918.57		0.067	0.074	0.084	0.072	0.055	0.036	0.102	0.125	0.116	0.146	0.249		0.08	0.12
O210	835704.56	820917.21		0.075	0.097	0.167	0.179	0.094	0.087	0.245	0.148	0.180	0.136	0.223		0.14	0.16
O211	835679.60	820915.86		0.107	0.121	0.219	0.247	0.128	0.107	0.221	0.052	0.190	0.110	0.191		0.17	0.15
O212	835654.64	820914.51		0.130	0.138	0.250	0.283	0.145	0.073	0.169	0.010	0.168	0.075	0.148		0.18	0.13
O213	835629.67	820913.15		0.140	0.148	0.263	0.300	0.140	0.057	0.112	0.014	0.124	0.074	0.104		0.18	0.11
O214	835606.66	820913.23		0.145	0.157	0.268	0.304	0.123	0.060	0.064	0.022	0.084	0.121	0.089		0.18	0.11
O215	835736.05	820892.28		0.101	0.093	0.114	0.063	0.031	0.038	0.039	0.102	0.058	0.085	0.165		0.07	0.07
O216	835711.08	820891.22		0.099	0.135	0.240	0.222	0.127	0.112	0.279	0.176	0.142	0.141	0.254		0.17	0.18
O217	835686.10	820890.15		0.129	0.173	0.286	0.301	0.196	0.140	0.228	0.088	0.176	0.128	0.233		0.21	0.18
O218	835661.12	820889.09		0.156	0.197	0.305	0.324	0.166	0.057	0.149	0.014	0.155	0.098	0.190		0.21	0.14
O219	835636.15	820888.03		0.164	0.203	0.305	0.313	0.091	0.053	0.105	0.009	0.110	0.054	0.133		0.19	0.10
O220	835608.89	820886.97		0.181	0.225	0.323	0.299	0.098	0.040	0.043	0.048	0.096	0.038	0.083		0.19	0.09
O221	835735.44	820866.18		0.143	0.145	0.246	0.297	0.138	0.059	0.082	0.081	0.098	0.089	0.256		0.18	0.13
O222	835710.46	820865.21		0.134	0.173	0.256	0.268	0.191	0.161	0.303	0.191	0.135	0.112	0.247		0.20	0.19
O223	835685.48	820864.24		0.174	0.223	0.309	0.327	0.210	0.109	0.130	0.067	0.124	0.100	0.197		0.23	0.15
O224	835660.50	820863.27		0.219	0.255	0.321	0.211	0.042	0.041	0.106	0.031	0.097	0.061	0.133		0.17	0.09
O225	835635.52	820862.30		0.195	0.221	0.255	0.142	0.049	0.060	0.066	0.041	0.067	0.033	0.101		0.13	0.07
O226	835570.08	820965.06		0.135	0.207	0.168	0.209	0.159	0.096	0.084	0.039	0.054	0.122	0.021		0.16	0.10
O227	835544.58	820963.83		0.134	0.193	0.147	0.183	0.120	0.109	0.081	0.039	0.066	0.054	0.036		0.13	0.08
O228	835587.29	820936.81		0.133	0.190	0.207	0.257	0.141	0.080	0.074	0.031	0.026	0.164	0.053		0.17	0.11
O229	835562.30	820936.02		0.141	0.200	0.202	0.260	0.150	0.109	0.074	0.047	0.048	0.159	0.044		0.18	0.11
O230	835537.31	820935.23		0.146	0.200	0.187	0.249	0.152	0.077	0.057	0.038	0.067	0.125	0.067		0.17	0.11
O231	835512.32	820934.45		0.145	0.197	0.166	0.227	0.145	0.038	0.063	0.029	0.067	0.070	0.087		0.15	0.09
O232	835588.51	820905.49		0.154	0.172	0.281	0.317	0.115	0.095	0.077	0.026	0.048	0.132	0.084		0.19	0.11
O233	835563.52	820904.94		0.154	0.172	0.269	0.314	0.109	0.107	0.046	0.051	0.024	0.152	0.068		0.19	0.11
O234	835538.53	820904.38		0.155	0.172	0.249	0.300	0.097	0.046	0.028	0.042	0.056	0.158	0.084		0.18	0.11
O235	835513.53	820903.83		0.149	0.165	0.221	0.268	0.100	0.056	0.047	0.030	0.064	0.134	0.105		0.17	0.10
O236	835488.54	820903.27		0.114	0.125	0.158	0.176	0.098	0.070	0.074	0.022	0.034	0.051	0.087		0.12	0.07
O237	835590.66	820874.17		0.118	0.092	0.142	0.156	0.104	0.125	0.075	0.013	0.078	0.048	0.088		0.11	0.08
O238	835565.69	820873.15		0.145	0.136	0.188	0.181	0.033	0.064	0.016	0.049	0.023	0.119	0.068		0.12	0.07
O239	835540.71	820872.14		0.169	0.160	0.216	0.192	0.017	0.024	0.044	0.037	0.052	0.159	0.101		0.13	0.08
O240	835515.73	820871.12		0.171	0.158	0.219	0.211	0.024	0.014	0.045	0.025	0.059	0.160	0.086		0.14	0.08
O241	835490.75	820870.10		0.144	0.127	0.177	0.196	0.061	0.058	0.063	0.015	0.022	0.090	0.107		0.12	0.08
O242	835961.01	820840.14		0.322	0.290	0.210	0.170	0.125	0.081	0.065	0.018	0.039	0.087	0.015		0.16	0.07
O243	835938.13	820834.27		0.149	0.139	0.096	0.101	0.068	0.074	0.011	0.016	0.020	0.046	0.019		0.09	0.04
O244	835957.30	820813.86		0.283	0.237	0.169	0.123	0.084	0.088	0.058	0.009	0.020	0.090	0.017		0.13	0.06
O245	835949.26	820790.37		0.284	0.256	0.200	0.137	0.062	0.070	0.042	0.033	0.028	0.054	0.007		0.13	0.05
O246	835903.50	820834.27		0.146	0.237	0.171	0.140	0.073	0.114	0.142	0.124	0.026	0.027	0.089		0.13	0.08
O247	835879.99	820825.76		0.164	0.228	0.217	0.175	0.074	0.086	0.198	0.152	0.048	0.032	0.107		0.14	0.10
O248	835856.48	820817.26		0.084	0.090	0.206	0.176	0.058	0.046	0.220	0.152	0.072	0.028	0.094		0.12	0.10
O249	835832.97	820808.76		0.056	0.041	0.164	0.147	0.085	0.027	0.232	0.144	0.090	0.025	0.074		0.10	0.09
O250	835809.46	820800.25		0.039	0.022	0.129	0.110	0.103	0.128	0.245	0.136	0.103	0.020	0.033		0.09	0.10
O251	835902.26	820814.48		0.113	0.128	0.067	0.040	0.016	0.095	0.119	0.105	0.012	0.020	0.085		0.06	0.05
O252	835878.53	820806.62		0.154	0.233	0.133	0.113	0.053	0.065	0.165	0.129	0.030	0.024	0.111		0.11	0.08
O253	835854.80	820798.76		0.139	0.187	0.167	0.139	0.028	0.033	0.184	0.134	0.048	0.021	0.111		0.11	0.08
O254	835831.07	820790.90		0.091	0.105	0.161	0.137	0.037	0.062	0.181	0.128	0.059	0.018	0.089		0.10	0.08
O255	835807.33	820783.04		0.133	0.060	0.120	0.109	0.040	0.058	0.114	0.096	0.040	0.020	0.034		0.08	0.06
O256	835921.43	820799.95		0.054	0.062	0.046	0.023	0.017	0.058	0.054	0.047	0.008	0.028	0.032		0.03	0.03
O257	835897.70	820792.09		0.125	0.161	0.035	0.043	0.026	0.055	0.097	0.093	0.008	0.018	0.089		0.06	0.05
O258	835873.97	820784.22		0.149	0.221	0.089	0.085	0.031	0.033	0.124	0.103	0.016	0.010	0.106		0.08	0.06
O259	835850.24	820776.36		0.154	0.214	0.132	0.107	0.031	0.040	0.133	0.106	0.021	0.015	0.104		0.09	0.06
O260	835826.51	820768.49		0.114	0.161	0.132	0.114	0.022	0.052	0.107	0.095	0.018	0.014	0.070		0.09	0.05
O261	835913.08	820777.08		0.086	0.079	0.056	0.018	0.009	0.024	0.037	0.062	0.007	0.011	0.055		0.03	0.03
O262	835889.49	820768.81		0.116	0.145	0.030	0.035	0.012	0.021	0.067	0.075	0.010	0.013	0.081		0.05	0.04
O263	835865.89	820760.55		0.138	0.185	0.068	0.058	0.023	0.019	0.086	0.075	0.013	0.008	0.091		0.06	0.04
O264	835842.30	820752.29		0.155	0.201	0.106	0.078	0.030	0.048	0.086	0.070	0.011	0.018	0.081		0.08	0.05
O265	835818.70	820744.02		0.114	0.157	0.117	0.101	0.020	0.025	0.035	0.057	0.005	0.008	0.051		0.08	0.03
O266	835772.04	820771.18		0.275	0.198	0.148	0.116	0.073	0.097	0.109	0.067	0.030	0.055	0.188		0.12	0.09
O267	835776.37	820746.55		0.225	0.141	0.171	0.146	0.114	0.169	0.178	0.142	0.057	0.029	0.107		0.14	0.11
O268	835780.70	820721.93		0.191	0.055	0.141	0.153	0.119	0.169	0.211	0.140	0.051	0.034	0.123		0.12	0.11
O269	835757.50	820752.32		0.270	0.219	0.172	0.144	0.122	0.186	0.175	0.120	0.058	0.056	0.194		0.15	0.12
O270	835761.24	820727.60		0.237	0.170	0.165	0.163	0.129	0.191	0.206	0.146	0.060	0.059	0.171		0.15	0.13
O271	835765.50	820702.96		0.205	0.083	0.153	0.163	0.131	0.139	0.188	0.123	0.032	0.019	0.045		0.13	0.09
O272	835726.39	820564.90		0.053	0.020	0.065	0.032	0.007	0.084	0.045	0.066	0.028	0.009	0.015		0.04	0.03
O273	835729.39	820549.15		0.116	0.020	0.028	0.026	0.015	0.071	0.056	0.070	0.031	0.012	0.034		0.04	0.04
O274	835733.27	820531.40		0.073	0.028	0.020	0.056	0.006	0.048	0.038	0.042	0.021	0.023	0.051		0.04	0.03
O275	835707.75	820561.78		0.036	0.036	0.051	0.047	0.003	0.039	0.029	0.037	0.026	0.030	0.023		0.04	0.03
O276	835710.88	820543.27		0.070	0.043	0.042	0.036	0.005	0.050	0.048	0.054	0.027	0.016	0.031		0.04	0.03
O277	835714.13	820526.65		0.026	0.026	0.021	0.047	0.013	0.040	0.024	0.027	0.012	0.014	0.029		0.03	0.02
O278	835555.86	820565.80		0.166	0.179	0.259	0.172	0.023	0.142	0.023	0.019	0.050	0.113	0.115		0.14	0.08
O279	835531.66	820561.11		0.092	0.202	0.238	0.164	0.040	0.157	0.029	0.078	0.147	0.107	0.082		0.15	0.10
O280	835545.56	820554.42		0.145	0.135	0.152	0.094	0.058	0.099	0.027	0.027	0.070	0.124	0.119		0.10	0.08
O281	835526.27	820549.50		0.119	0.151	0.130	0.074	0.082	0.122	0.086	0.083	0.153	0.147	0.120		0.11	0.11
O282	835788.14	820554.39		0.145	0.054	0.078	0.029	0.015	0.048	0.012	0.011	0.038	0.020	0.025		0.05	0.02
O283	835803.15	820556.97		0.125	0.085	0.110	0.050	0.020	0.025	0.038	0.041	0.052	0.057	0.077		0.06	0.06
O284	835785.42	820567.46		0.167	0.075	0.084	0.026	0.010	0.038	0.010	0.009	0.031	0.015	0.036		0.05	0.02
O285	835801.52	820569.80		0.094	0.037	0.063	0.047	0.016	0.034	0.037	0.031	0.030	0.060	0.087		0.05	0.04
O286	835927.74	820723.96		0.109	0.081	0.112	0.034	0.128	0.062	0.035	0.013	0.006	0.084	0.059		0.07	0.05
O287	835935.66	820739.36		0.181	0.119	0.152	0.072	0.110	0.085	0.024	0.014	0.013	0.073	0.060		0.10	0.06
O288	835949.53	820753.35		0.322	0.265	0.190	0.114	0.103	0.117	0.048	0.018	0.022	0.097	0.038		0.14	0.07
O289	835955.72	820767.01		0.343	0.287	0.206	0.130	0.075	0.126	0.063	0.026	0.028	0.104	0.025		0.15	0.07
O290	835961.91	820780.68		0.324	0.266	0.194	0.127	0.074	0.130	0.080	0.031	0.034	0.111	0.016		0.14	0.07

Wind Velocity Ratio, Proposed Scheme

Tes Point			Wind direction (Degree)	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	Sum	Average	Average
			Wind direction	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW		(Annual)	(Summer)
ID	Easting (m)	Northing (m)	Probability (Annual)	6.0%	8.6%	12.5%	21.9%	11.9%	5.7%		4.5%	5.9%	6.5%		83.5%		
			Probability (Summer)				9.0%	10.1%	7.9%	7.5%	9.5%	12.7%	15.8%	9.6%	82.1%		
O291	835968.11	820794.33		0.316	0.256	0.186	0.130	0.056	0.123	0.094	0.033	0.043	0.113	0.017		0.14	0.08
O292	835974.50	820807.91		0.316	0.256	0.191	0.132	0.084	0.113	0.106	0.032	0.048	0.114	0.021		0.15	0.08
O293	835980.44	820821.68		0.323	0.266	0.208	0.135	0.105	0.102	0.116	0.030	0.056	0.116	0.023		0.15	0.09
O294	835942.26	820573.32		0.095	0.033	0.035	0.059	0.077	0.021	0.056	0.068	0.086	0.099	0.099		0.06	0.07
O295	835957.25	820573.88		0.065	0.021	0.025	0.036	0.055	0.041	0.062	0.052	0.060	0.058	0.061		0.04	0.05
O296	835972.24	820574.44		0.062	0.084	0.022	0.059	0.038	0.055	0.063	0.040	0.044	0.085	0.026		0.05	0.05
O297	835929.95	820562.78		0.102	0.058	0.063	0.090	0.113	0.089	0.080	0.045	0.063	0.080	0.099		0.08	0.08
O298	835941.39	820563.61		0.138	0.069	0.055	0.071	0.086	0.045	0.052	0.066	0.082	0.094	0.099		0.08	0.08
O299	835953.18	820564.90		0.132	0.045	0.039	0.042	0.053	0.041	0.040	0.071	0.084	0.084	0.082		0.06	0.07
O300	835966.97	820565.51		0.042	0.013	0.015	0.035	0.017	0.039	0.023	0.078	0.085	0.067	0.035		0.04	0.05
O301	835933.48	820551.78		0.146	0.088	0.073	0.086	0.102	0.078	0.052	0.047	0.059	0.078	0.089		0.09	0.07
O302	835948.15	820554.94		0.146	0.084	0.053	0.060	0.064	0.039	0.026	0.063	0.081	0.093	0.080		0.07	0.07
O303	835924.86	820922.28		0.091	0.143	0.079	0.076	0.096	0.078	0.083	0.099	0.047	0.011	0.071		0.08	0.06
O304	835901.97	820909.97		0.028	0.066	0.049	0.137	0.085	0.100	0.073	0.108	0.043	0.031	0.115		0.08	0.08
O305	835879.04	820903.08		0.015	0.031	0.042	0.170	0.106	0.123	0.033	0.077	0.034	0.050	0.122		0.09	0.08
O306	835853.85	820899.08		0.025	0.043	0.057	0.149	0.106	0.133	0.063	0.070	0.059	0.046	0.045		0.09	0.08
O307	835908.99	820940.90		0.258	0.289	0.382	0.376	0.255	0.089	0.116	0.180	0.118	0.078	0.302		0.27	0.18
O308	835889.06	820925.00		0.045	0.043	0.087	0.032	0.039	0.028	0.024	0.034	0.012	0.016	0.075		0.04	0.03
O309	835866.01	820914.35		0.018	0.033	0.053	0.185	0.106	0.150	0.036	0.093	0.056	0.049	0.183		0.10	0.10
D001	835643.58	820677.74		0.168	0.221	0.255	0.251	0.234	0.217	0.055	0.037	0.128	0.079	0.071		0.20	0.13
D002	835658.33	820680.47		0.189	0.244	0.275	0.263	0.239	0.191	0.114	0.067	0.115	0.090	0.067		0.21	0.14
D003	835673.08	820683.19		0.204	0.252	0.265	0.258	0.238	0.092	0.155	0.091	0.073	0.088	0.087		0.21	0.13
D004	835687.83	820685.91		0.215	0.247	0.247	0.247	0.239	0.028	0.189	0.117	0.064	0.083	0.107		0.20	0.13
D005	835702.77	820688.98		0.225	0.221	0.217	0.228	0.243	0.146	0.228	0.144	0.042	0.046	0.073		0.19	0.13
D006	835642.58	820690.97		0.130	0.172	0.268	0.238	0.225	0.217	0.076	0.058	0.082	0.057	0.057		0.19	0.12
D007	835657.40	820693.26		0.141	0.202	0.300	0.267	0.243	0.200	0.140	0.084	0.100	0.069	0.067		0.21	0.14
D008	835672.23	820695.56		0.145	0.227	0.305	0.283	0.258	0.164	0.180	0.107	0.101	0.077	0.088		0.22	0.15
D009	835687.05	820697.85		0.139	0.254	0.287	0.278	0.264	0.098	0.209	0.131	0.094	0.081	0.109		0.22	0.15
D010	835701.87	820700.14		0.187	0.274	0.266	0.251	0.246	0.148	0.219	0.142	0.080	0.073	0.110		0.21	0.15
D011	835624.60	820697.71		0.055	0.062	0.194	0.181	0.190	0.162	0.067	0.058	0.017	0.038	0.058		0.13	0.09
D012	835637.33	820706.20		0.108	0.077	0.222	0.164	0.167	0.197	0.067	0.073	0.021	0.023	0.023		0.14	0.08
D013	835652.25	820707.81		0.109	0.101	0.299	0.214	0.202	0.188	0.146	0.090	0.058	0.044	0.035		0.17	0.11
D014	835667.16	820709.41		0.096	0.115	0.335	0.268	0.241	0.164	0.180	0.107	0.083	0.059	0.061		0.20	0.13
D015	835682.07	820711.10		0.068	0.136	0.339	0.302	0.277	0.119	0.211	0.133	0.095	0.069	0.089		0.22	0.15
D016	835696.97	820712.78		0.034	0.216	0.302	0.277	0.265	0.167	0.227	0.154	0.095	0.073	0.108		0.21	0.16
D017	835711.88	820714.47		0.101	0.279	0.267	0.234	0.228	0.189	0.214	0.152	0.088	0.076	0.137		0.20	0.15
D018	835726.78	820716.15		0.272	0.251	0.214	0.174	0.172	0.173	0.185	0.133	0.082	0.079	0.169		0.18	0.14
D019	835741.69	820717.83		0.219	0.202	0.172	0.152	0.149	0.182	0.193	0.137	0.074	0.074	0.179		0.15	0.13
D020	835749.23	820731.16		0.250	0.218	0.187	0.167	0.145	0.198	0.194	0.147	0.063	0.065	0.188		0.16	0.13
D021	835712.04	820723.49		0.067	0.250	0.270	0.232	0.226	0.196	0.205	0.156	0.082	0.066	0.143		0.20	0.15
D022	835715.99	820737.96		0.097	0.222	0.263	0.201	0.189	0.169	0.166	0.136	0.059	0.056	0.180		0.18	0.13
D023	835726.24	820748.91		0.326	0.276	0.231	0.157	0.140	0.147	0.149	0.111	0.050	0.050	0.198		0.17	0.12
D024	835736.49	820759.86		0.319	0.241	0.192	0.123	0.109	0.136	0.150	0.085	0.056	0.046	0.191		0.15	0.10
D025	835746.74	820770.81		0.310	0.220	0.168	0.110	0.107	0.144	0.168	0.079	0.066	0.048	0.180		0.14	0.10
D026	835757.00	820781.76		0.264	0.208	0.167	0.117	0.108	0.147	0.185	0.084	0.076	0.049	0.171		0.14	0.11
D027	835767.25	820792.70		0.234	0.199	0.172	0.130	0.119	0.150	0.222	0.112	0.107	0.040	0.157		0.14	0.12
D028	835777.50	820803.65		0.268	0.163	0.140	0.116	0.141	0.156	0.255	0.144	0.138	0.029	0.045		0.14	0.12
D029	835787.75	820814.60		0.245	0.110	0.105	0.104	0.156	0.154	0.264	0.161	0.150	0.043	0.053		0.13	0.13
D030	835801.88	820828.76		0.161	0.061	0.129	0.159	0.137	0.135	0.279	0.167	0.148	0.020	0.062		0.13	0.13
D031	835761.49	820805.60		0.114	0.155	0.181	0.156	0.117	0.127	0.233	0.125	0.125	0.017	0.108		0.13	0.11
D032	835772.10	820816.21		0.292	0.172	0.125	0.106	0.172	0.151	0.295	0.193	0.193	0.065	0.063		0.15	0.15
D033	835782.71	820826.81		0.242	0.103	0.060	0.097	0.177	0.156	0.286	0.192	0.187	0.069	0.044		0.13	0.14
D034	835769.24	820833.56		0.241	0.081	0.077	0.096	0.173	0.127	0.232	0.201	0.195	0.070	0.059		0.13	0.14
D035	835695.55	820724.48		0.115	0.044	0.320	0.279	0.265	0.171	0.216	0.153	0.091	0.068	0.148		0.20	0.16
D036	835701.33	820738.33		0.161	0.161	0.283	0.220	0.207	0.147	0.160	0.123	0.072	0.073	0.173		0.19	0.14
D037	835707.54	820747.95		0.118	0.125	0.265	0.172	0.148	0.098	0.112	0.087	0.044	0.058	0.159		0.15	0.10
D038	835717.88	820758.81		0.312	0.294	0.246	0.120	0.067	0.051	0.115	0.050	0.053	0.029	0.143		0.14	0.07
D039	835728.22	820769.68		0.342	0.233	0.178	0.090	0.066	0.075	0.143	0.056	0.071	0.027	0.142		0.12	0.08
D040	835738.01	820782.14		0.336	0.202	0.144	0.092	0.090	0.100	0.165	0.071	0.078	0.039	0.141		0.12	0.09
D041	835734.02	820795.49		0.348	0.182	0.132	0.143	0.143	0.120	0.191	0.107	0.096	0.063	0.126		0.15	0.12
D042	835727.78	820809.14		0.338	0.182	0.154	0.228	0.220	0.156	0.264	0.177	0.161	0.078	0.172		0.19	0.17
D043	835722.25	820821.63		0.322	0.146	0.157	0.266	0.271	0.195	0.339	0.225	0.202	0.062	0.172		0.21	0.20
D044	835715.31	820833.92		0.257	0.165	0.170	0.269	0.278	0.207	0.347	0.228	0.196	0.052	0.094		0.22	0.19
D045	835700.42	820782.60		0.221	0.175	0.021	0.086	0.176	0.124	0.154	0.083	0.016	0.024	0.059		0.10	0.08
D046	835699.51	820797.58		0.294	0.215	0.067	0.132	0.198	0.146	0.162	0.097	0.040	0.020	0.065		0.14	0.10
D047	835698.61	820812.55		0.315	0.209	0.140	0.200	0.237	0.179	0.203	0.128	0.070	0.030	0.039		0.18	0.12
D048	835697.54	820827.51		0.275	0.154	0.237	0.280	0.280	0.213	0.262	0.164	0.103	0.046	0.031		0.22	0.16
D049	835710.73	820767.39		0.333	0.290	0.110	0.060	0.175	0.146	0.196	0.105	0.055	0.022	0.037		0.13	0.09
D050	835715.40	820783.58		0.326	0.203	0.118	0.111	0.215	0.182	0.277	0.138	0.103	0.012	0.031		0.15	0.12
D051	835712.51	820795.03		0.348	0.212	0.123	0.134	0.197	0.164	0.252	0.126	0.096	0.030	0.020		0.16	0.12
D052	835709.26	820813.04		0.380	0.243	0.164	0.211	0.221	0.175	0.255	0.152	0.120	0.051	0.048		0.20	0.14
D053	835706.56	820829.76		0.287	0.196	0.227	0.282	0.270	0.207	0.307	0.193	0.155	0.054	0.045		0.23	0.17
D054	835724.24	820790.70		0.359	0.212	0.148	0.142	0.188	0.159	0.253	0.132	0.110	0.037	0.063		0.16	0.12
D055	835721.29	820805.67		0.380	0.222	0.163	0.205	0.212	0.160	0.258	0.157	0.135	0.068	0.108		0.19	0.15
D056	835681.76	820731.36		0.207	0.190	0.344	0.326	0.304	0.065	0.263	0.168	0.117	0.109	0.207		0.25	0.19
D057	835666.77	820730.62		0.145	0.176	0.095	0.079	0.064	0.110	0.185	0.077	0.097	0.093	0.179		0.10	0.11
D058	835651.79	820729.89		0.092	0.144	0.108	0.047	0.032	0.090	0.165	0.038	0.084	0.085	0.170		0.08	0.09
D059	835636.81	820729.15		0.046	0.091	0.098	0.092	0.074	0.038	0.133	0.007	0.084	0.084	0.170		0.08	0.08
D060	835621.83	820728.42		0.033	0.023	0.110	0.173	0.138	0.101	0.121	0.007	0.093	0.094	0.182		0.11	0.11
D061	835580.02	820607.28		0.080	0.229	0.285	0.251	0.227	0.136	0.078	0.031	0.118	0.111	0.166		0.20	0.14
D062	835589.87	820608.98		0.178	0.277	0.338	0.302	0.253	0.118	0.059	0.029	0.132	0.102	0.127		0.23	0.14
D063	835599.73	820610.69		0.184	0.288	0.355	0.326	0.252	0.095	0.045	0.037	0.142	0.107	0.117		0.24	0.14
D064	835609.58	820612.39		0.149	0.255	0.331	0.305	0.205	0.074	0.037	0.048	0.133	0.119	0.099		0.22	0.13
D065	835577.54	820614.56		0.043	0.059	0.075	0.137	0.157	0.145	0.106	0.046	0.043	0.101	0.138		0.10	0.11
D066	835587.15	820616.10		0.027	0.094	0.123	0.131	0.121	0.082	0.061	0.028	0.068	0.067	0.079		0.10	0.08
D067	835598.45	820617.65		0.199	0.269	0.333	0.305	0.253	0.074	0.040	0.017	0.135	0.068	0.070		0.23	0.12
D068	835608.37	820619.51		0.190	0.275	0.352	0.327	0.249	0.074	0.045	0.039	0.141	0.074	0.058		0.24	0.13
D069	835606.97	820628.49		0.204	0.255	0.329	0.304	0.244	0.072	0.066	0.044	0.116	0.051	0.031		0.22	0.11
D070	835605.11	820638.40		0.217	0.245	0.332	0.300	0.246	0.097	0.071	0.057	0.042	0.028	0.082		0.22	0.11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Proposed
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0.05
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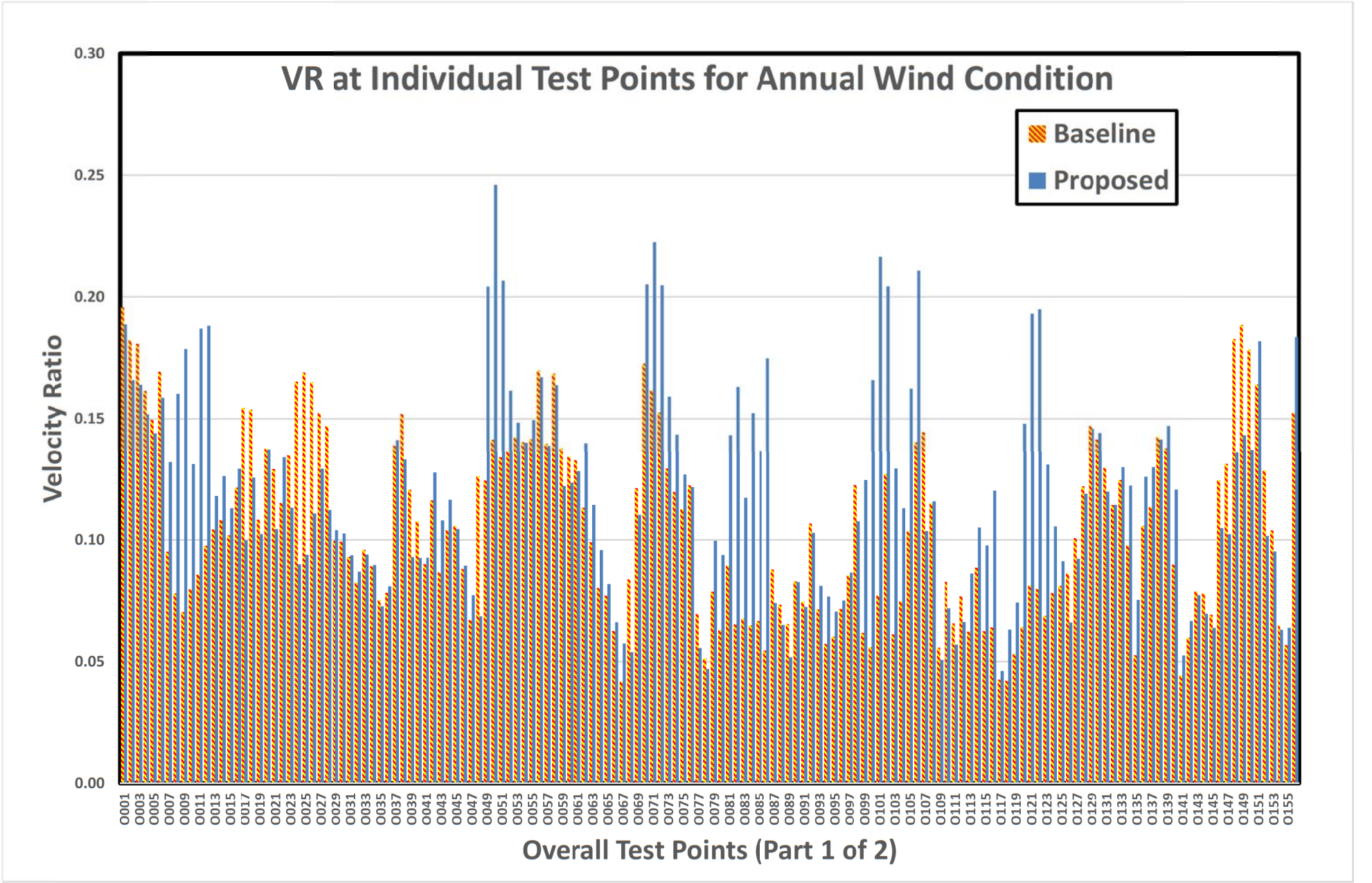
Perimeter Test Points


VR at Individual Test Points for Annual Wind Condition
Baseline
Proposed
Velocity Ratio
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0.25
0.20
0.15
0.10
0.05
0.00
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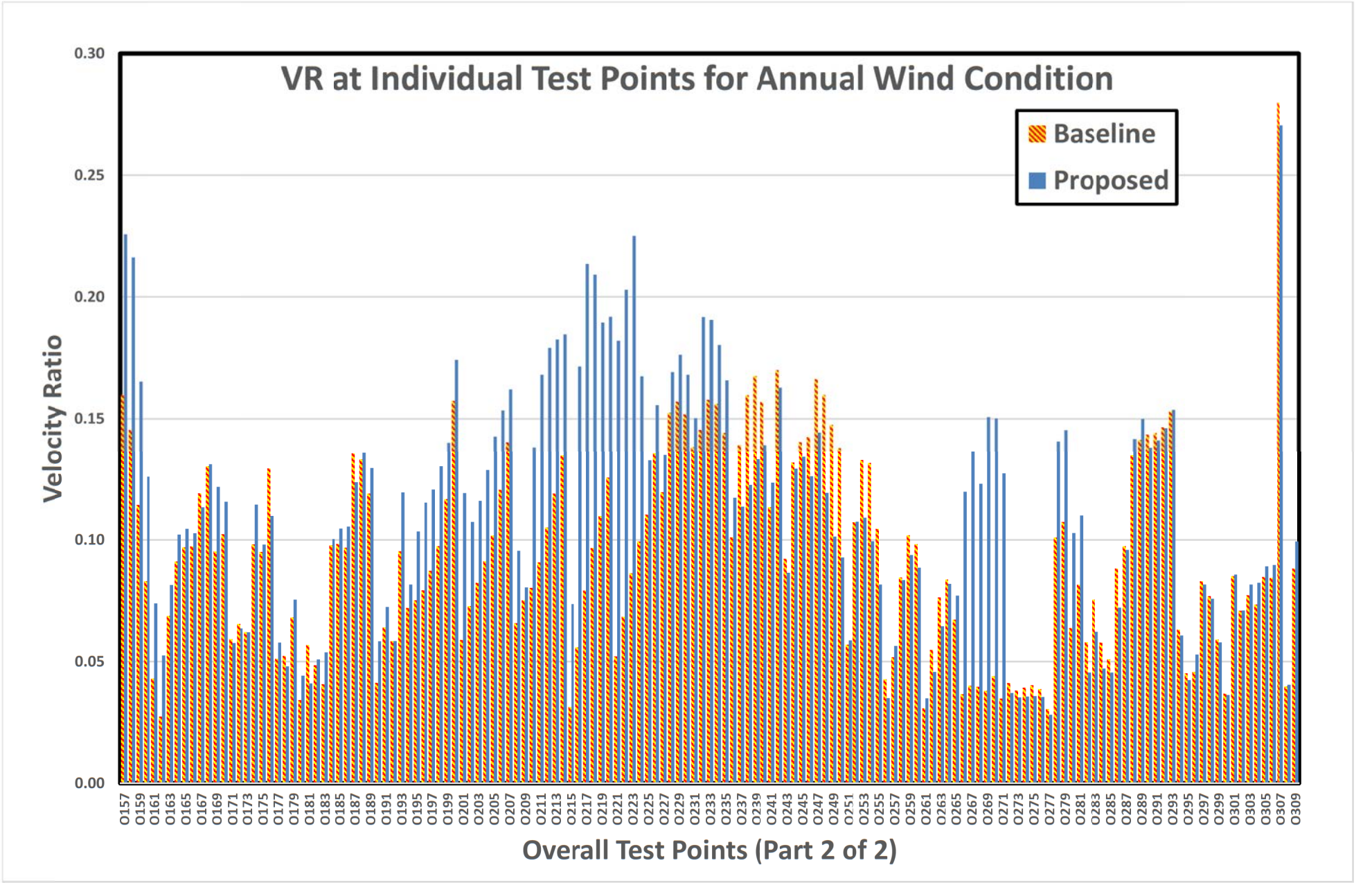
Overall Test Points (Part 1 of 2)


VR at Individual Test Points for Annual Wind Condition
Baseline
Proposed
Velocity Ratio
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0.10
0.05
0.00
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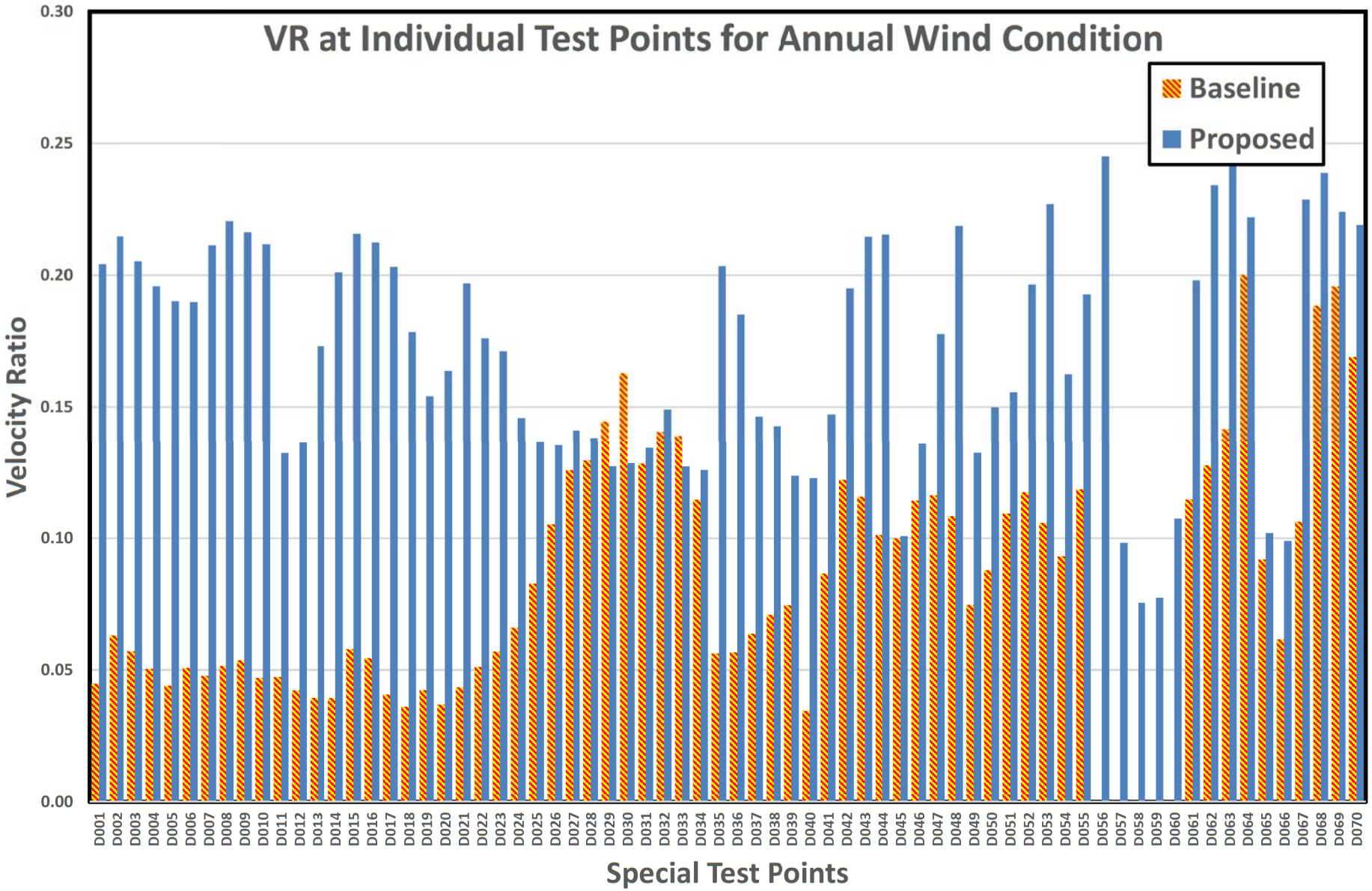
Overall Test Points (Part 2 of 2)


VR at Individual Test Points for Annual Wind Condition
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Proposed
Velocity Ratio
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0.05
0.00
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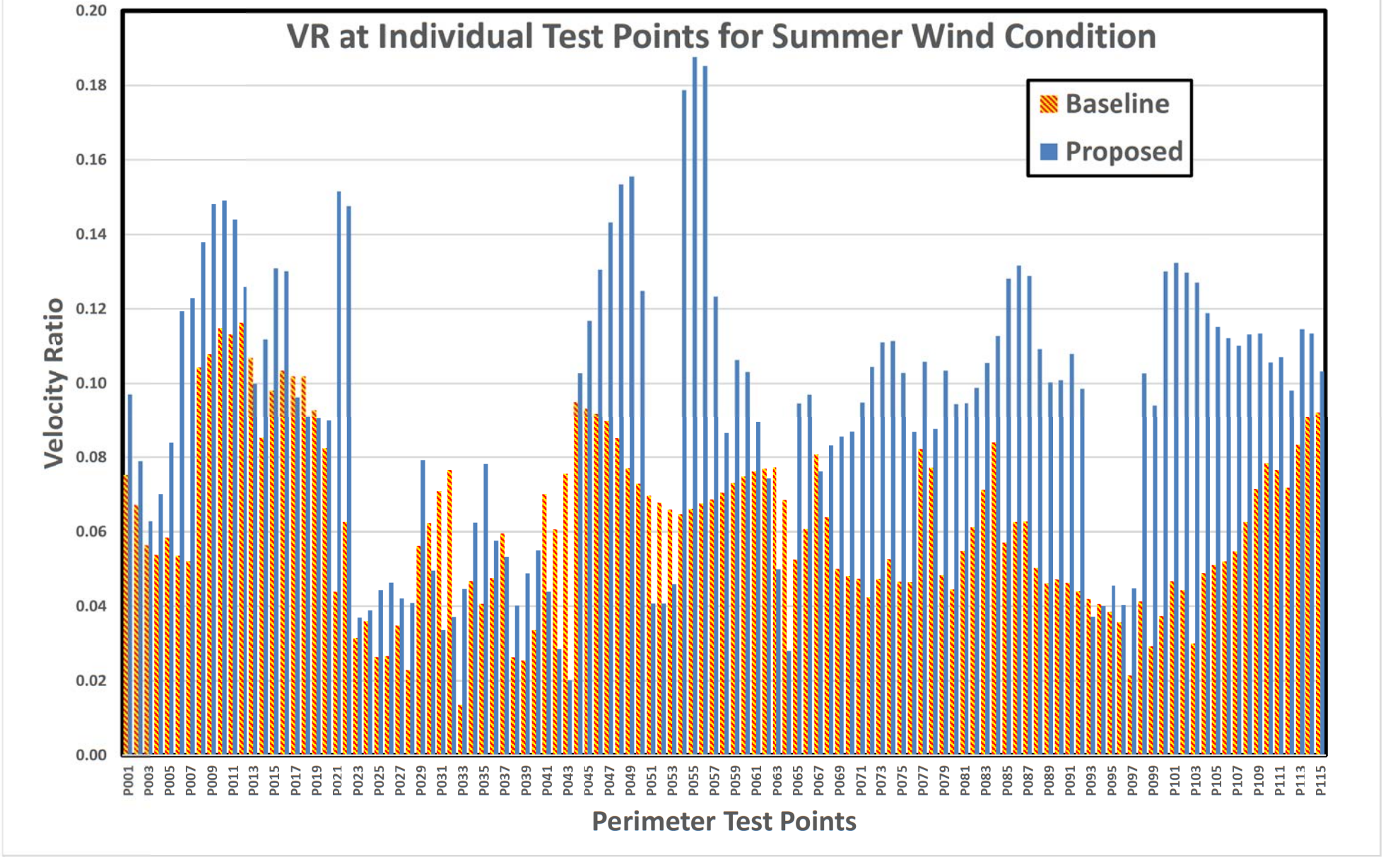
Special Test Points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Proposed
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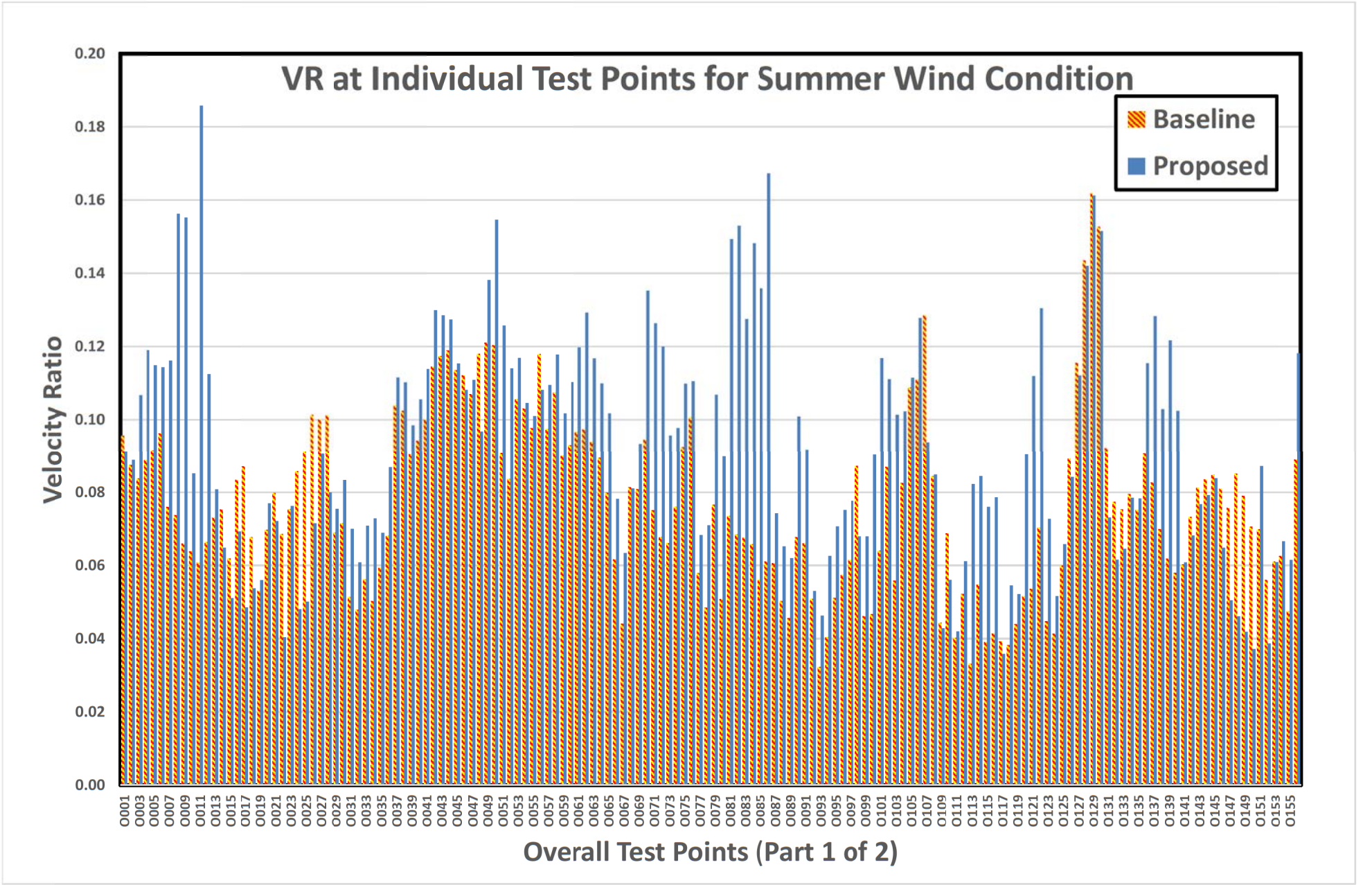
Perimeter Test Points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Proposed
Velocity Ratio
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0.12
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0.06
0.04
0.02
0.00
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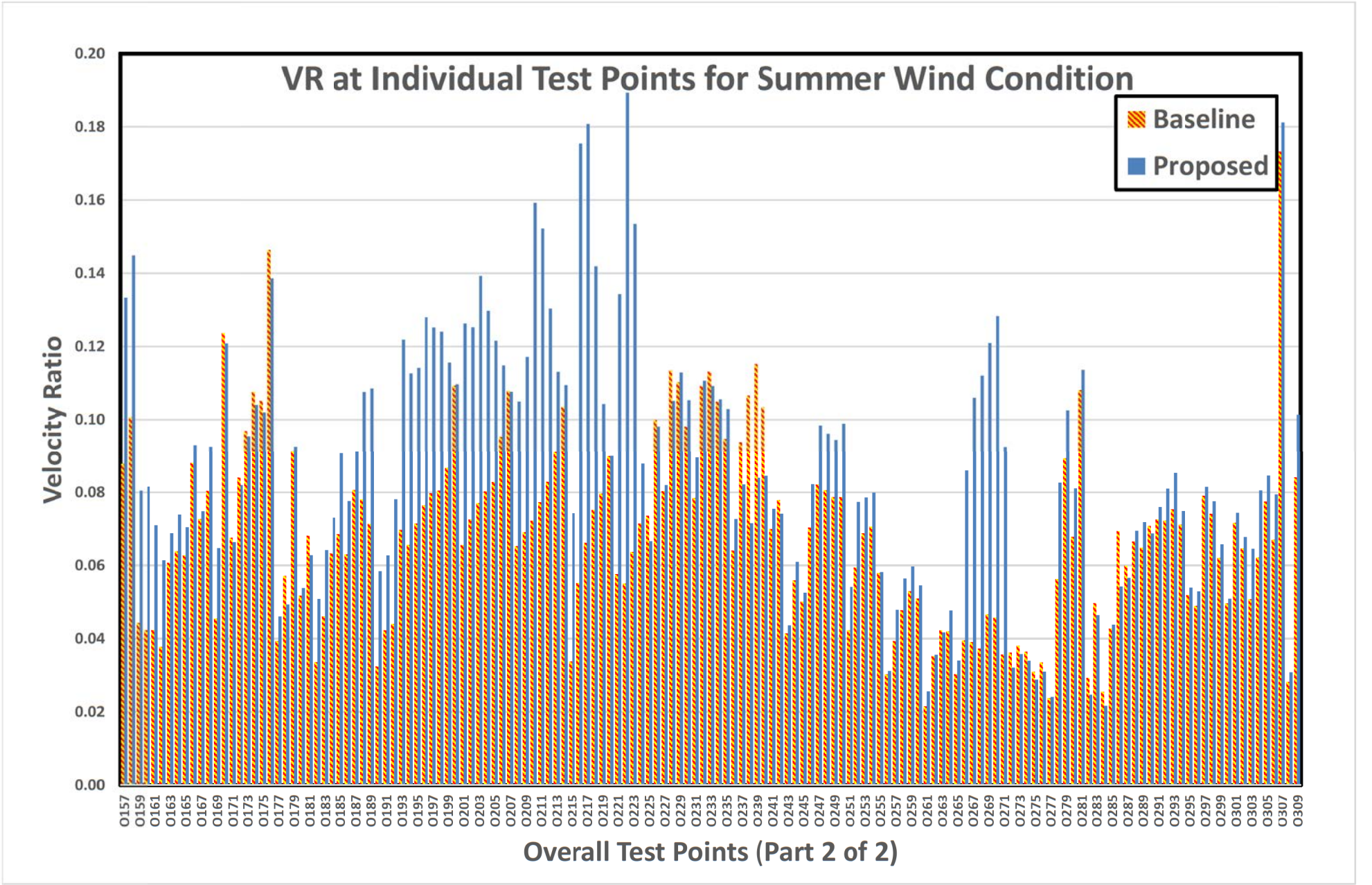
Overall Test Points (Part 1 of 2)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Proposed
Velocity Ratio
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0.18
0.16
0.14
0.12
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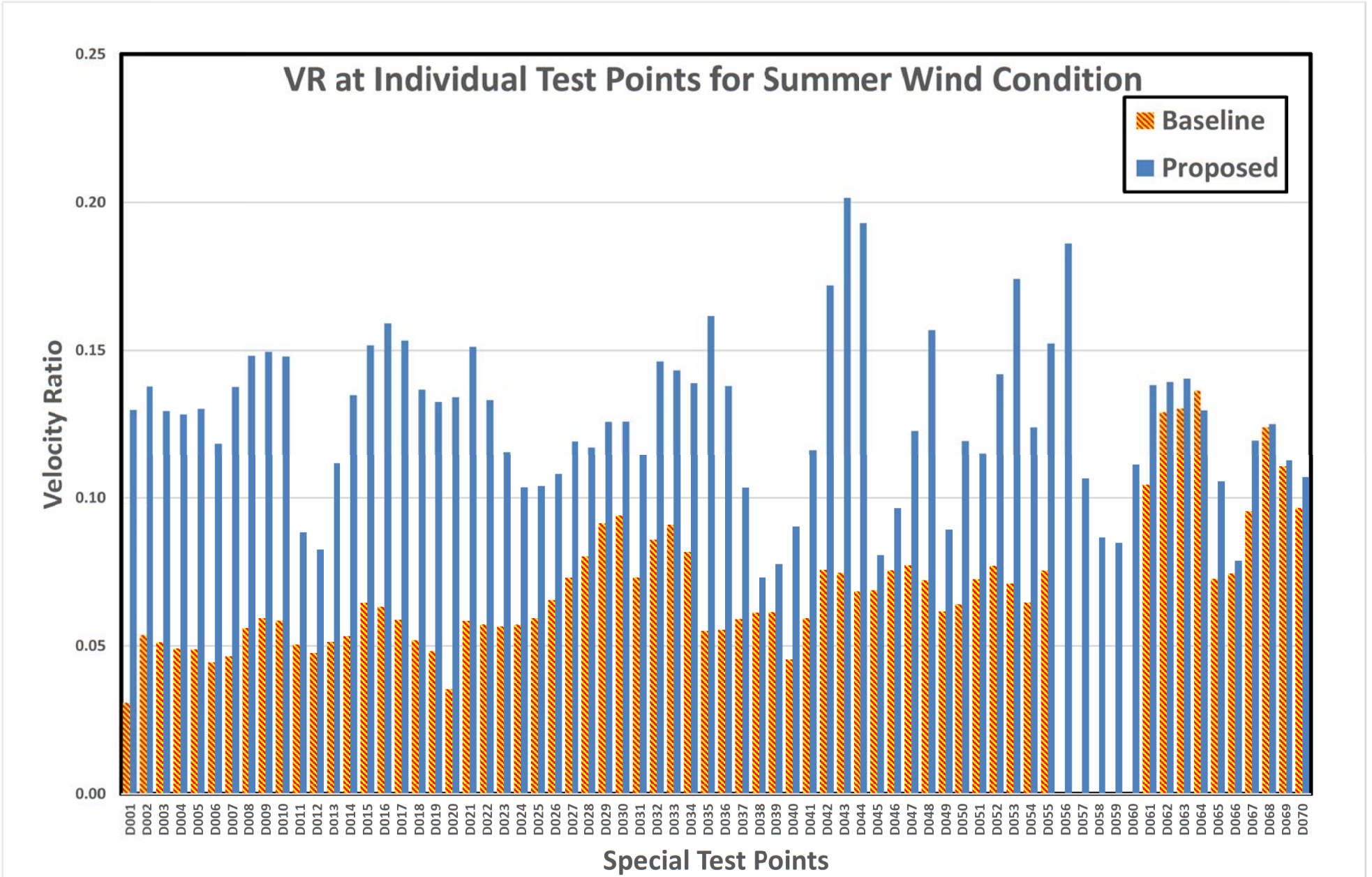
0.08
0.06
0.04
0.02
0.00
O157 O159 O161 O163 O165 O167 O169 O171 O173 O175 O177 O179 O181 O183 O185 O187 O189 O191 O193 O195 O197 O199 O201 O203 O205 O207 O209 O211 O213 O215 O217 O219 O221 O223 O225 O227 O229 O231 O233 O235 O237 O239 O241 O243 O245 O247 O249 O251 O253 O255 O257 O259 O261 O263 O265 O267 O269 O271 O273 O275 O277 O279 O281 O283 O285 O287 O289 O291 O293 O295 O297 O299 O301 O303 O305 O307 O309
Overall Test Points (Part 2 of 2)


VR at Individual Test Points for Summer Wind Condition
Baseline
Proposed
Velocity Ratio
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0.20
0.15
0.10
0.05
0.00
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Special Test Points

Appendix 7

Environmental Assessment

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Environmental Assessment Report

(V2.0)

Mar 2024

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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1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority ("URA") has proposed Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance ("URAO"). The Scheme is the first implementation of a project proposed under the Master Urban Renewal Concept Plan ("MRCP") as devised from the URA's District Study for Yau Ma Tei and Mong Kok ("YMDS"), and is part of the proposed "Mong Kok East – Nullah Road Urban Waterway Development Node" ("Nullah Road DN").

1.1.2 Cinotech Consultants Limited is commissioned by the URA to conduct a Environmental Assessment (EA) to support the submission of a draft Development Scheme Plan ("DSP") of the Scheme with its planning proposal to the Town Planning Board ("TPB") for consideration.

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 the northeastern part of Mong Kok. With a total gross site area of 29,315m^2, the Scheme is divided into Site A (about 4,445m^2) and Site B (about 24,870m^2). The location of the Scheme is shown on **Figure 2-1**.

2.1.2 Site A of the Scheme comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

2.1.3 Site B of the Scheme is currently occupied by various leisure, recreation and GIC facilities, including Boundary Street Recreation Ground, Sai Yee Street Children's Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department ("LCSD") Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath.

2.1.4 On the approved Mong Kok Outline Zoning Plan ("OZP") no. S/K3/36, Site A1 of the Scheme area is zoned "Residential (Group A)" ("R(A)"). Sites A2 to A5 are zoned "Other Specified Uses" annotated "Mixed Use" ("OU(MU)"). Sites A1 to A5 also covers pavement area shown as "Road". Site B covers area zoned "Government, Institution or Community" ("G/IC") and "Open Space" ("O"), and the Flower Market Path which is shown as "Road". An extract of the prevailing OZP is shown on **Figure 2-2a**.

2.1.5 The existing developments in the vicinity are residential, commercial, and recreational uses. There are a few open recreational areas in the vicinity such as Police Sports and Recreation Club, Tai Hang Tung Recreation Ground, and Mong Kok Stadium.

2.1.6 There are several major roads in the vicinity of the Scheme according to the Annual Traffic Census by Transport Department. Boundary Street (Station 3435), which is a primary distributor with AADT of 33,460 in year 2022, is located at the immediately north of Site B. Another primary distributor Prince Edward Road West (Station 4203), is located at the immediately south of Sites A1 to A5 with AADT of 42,480 in year 2022. Nathan Road (Station 3424), which is around 170m in the west of Site A1, is also a primary distributor with AADT of 27,230 in year 2022. Another two primary distributors within 500m from Scheme boundary, Lai Chi Kok Road (station 3629) and Cheung Sha Wan Road (Station 3224), are having AADT of 35,000 & 28,400 in year 2022, respectively. Due to the heavy traffic flow in the vicinity, potential air quality impact and traffic noise impact are to be assessed in the early stage of the Project.

2.2 Overview of Potential Environmental Impact to the Sites

Potential Air Pollution Sources

2.2.1 Site inspections has been conducted on Aug 2023 and revisited on Nov 2023. It is founded that the residential, commercial, and recreational areas in the vicinity are not considered as air pollution source. There is no active industrial chimney identified within the 500m assessment area during the site inspection. Instead, heavy traffic has been identified, thus the road traffic emissions are identified as the major air pollution source in the surroundings.

Potential Noise Sources

2.2.2 Due to the heavy traffic, the road traffic noise is the major noise source in the surroundings.

2.2.3 The residential developments in the vicinity are not considered as fixed noise source.

2.2.4 There is no exposed large chiller plant is identified in the nearby non-residential developments. However, the Boundary Street Sports Ground Substation is situated within Site B. As per the current notional design, the Electricity Substation may need to be relocated to create the Waterway Park. The necessity of in-situ reprovisioning for the Electricity Substation will be assessed in a later stage of the project. If it is indeed required, the Electricity Substation will be constructed as a fully enclosed structure, and no potential noise impact is anticipated as a result. Measures will be implemented to ensure that the operation of the reprovisioned Electricity Substation does not result in any adverse noise effects on the surrounding environment.

2.2.5 The surrounding area is closely packed with residential flats, combined with high traffic noise level, the fixed noise sources of the non-domestic developments shall fulfill the noise criteria thus no adverse impact arising from the existing fixed noise sources is anticipated.

2.2.6 On the other hand, the fixed noise sources in the Scheme may induce potential noise impact to the proposed residential flats of the Scheme and to the surrounding if not properly designed.

2.3 THE PROPOSED DEVELOPMENT

Draft DSP

2.3.1 Under the draft DSP, the Scheme is proposed to be rezoned to "OU(MU)" and areas shown as "Road" for the surrounding pavement. The planning intention of the "OU(MU)" zone is primarily for comprehensive residential/ mixed-use developments with the provision of public vehicle park, at-grade open space and GIC facilities.

2.3.2 Site A ("OU(MU)1") consists of Sub-areas Sites A1 to A5. Site A1 will be developed for residential development cum commercial podium, with a building height restriction ("BHR") of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5. Site B ("OU(MU)2") is divided into Sub-areas (1) and (2). Sub-area 1 of "OU(MU)2" zone will be for high-rise composite development, including residential, commercial, hotel/office & GI/C uses, with a BHR of 150mPD adopting a stepped height profile. Sub-area (2) of "OU(MU)2" zone comprises the Waterway Park and ancillary retail/commercial uses and LCSD's sports/ GIC facilities with a BHR of 30mPD. The proposed zonings are shown on **Figure 2-2b**.

Notional Design

2.3.3 A notional design, which is illustrated in **Appendix 2-1** and **Figure 2-3**, is prepared based on the development parameters allowed in the draft DSP to demonstrate the proposed planning intention and development concepts of the Scheme. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2 to A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.

2.3.4 Under the current notional design, at Sub-area (2) of Site B (i.e. north-east corner of Site B), a comprehensive mixed-use development with high-rise residential and hotel/office towers

with recreation and GIC facilities at the podia is proposed. Ancillary parking and public vehicle park are proposed at the basement levels at Site B. An at-grade open space, named as "Waterway Park", is proposed within Site B. Ancillary retail facilities are proposed at ground level, basement and the Waterway Park to bring retail activities and vibrancy.

2.3.5 To enhance walkability and connectivity, four pedestrian connections are proposed:

- Footbridge to connect between Site B and Tai Hang Tung Recreation Ground;
- Subway to connect between Site A1 and Site B;
- Potential subway connection from Site A1 across Prince Edward Road West towards the Prince Edward MTR Station and/or the commercial spine along Nathan Road; and
- Subway to connect between proposed underground PVP at Site B and southern part of proposed Waterway Park.

2.3.6 All these pedestrian footbridges/ subways shall be subject to technical feasibility, detailed design and agreement with relevant Government departments. For footbridge/ subways outside DSP boundaries shall be under separate public works/ revitalization initiatives not forming part of the Scheme.

2.3.7 The proposed development of the Scheme will be redeveloped in phases and the tentative completion year of the whole project is in 2035.

Development Parameters

2.3.8 This assessment is prepared based on the following development parameters in **Table 2-1, Table 2-2** and notional design, which are subject to DSP approval and changes at detailed design stage:

Table 2-1 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m^2	About 268m^2	About 123m^2	About 233m^2	About 251m^2
	About 4,445m^2				
Net Site Area (subject to survey)	About 2,640m^2	About 239m^2	About 109m^2	About 202m^2	About 198m^2
	About 3,388m^2				
Zoning	OU(MU)1				
Domestic GFA [1]	23,716m^2	-	-	-	-
Non-Domestic GFA [1]	6,576m^2	-	-	100m^2	100m^2
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m^2	-	-	-	-
At-grade Open Space	About 800m^2				

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-2 Development Parameters of the Notion Design (Site B)

Site B			
Gross Site Area	About 24,870m^2		
Zoning	OU(MU)2		
	Sub-area (1)	**Sub-area (2)**	**Total**
Net Site Area (subject to survey)	7,170m^2	17,700m^2	24,870m^2
Domestic GFA [1]	44,030m^2	-	44,030m^2
Non-Domestic GFA [1] - Retail - Hotel/Office	20,500m^2 (2,150m^2) (18,350m^2)	8,850m^2 (8,850m^2) -	29,350m^2 (11,000m^2) (18,350m^2)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m^2		
No. of building blocks [2]	2 residential towers and 1 hotel/office tower on top of a GIC/recreation podium + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (hotel/office tower) 1 storey (retail block)		
No. of Flats [2]	880	-	880
Average Flat Size [2]	50m^2	-	50m^2
At-grade Open Space	About 8,800m^2		
Public Vehicle Park [4]	About 235		

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
[3] The actual GIC GFA is not yet confirmed and subject to liaison with Government departments. As a conservative approach, 30,000m^2 GIC GFA is assumed in this assessment.
[4] Subject to liaison with Transport Department.

3 AIR QUALITY IMPACT ASSESSMENT

3.1 Introduction

3.1.1 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 affecting the proposed developments in the Scheme. It also recommends appropriate mitigation measures to the potential impacts, if any.

3.2 Legislation, Standards & Guidelines

3.2.1 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).

Minimum Buffer Distances

3.2.2 HKPSG recommends minimum buffer distances from the various road emission sources and industrial chimney by the for planning purpose, which are summarized **Table 3-1**.

Table 3-1 Guidelines on Usage of Open Space Site

Pollution Source	Parameter	Buffer Distance [i]	Permitted Uses
Road and Highways	*Type of Road*		
	Trunk Road and Primary Distributor	>20m	Active and passive recreation uses
		3-20m	Passive recreational uses
	District Distributor	>10m	Active and passive recreation uses
		<10m	Passive recreational uses
	Local Distributor	>5m	Active and passive recreation uses
		<5m	Passive recreational uses
Industrial Area	*Difference in Height between Industrial Chimney Exit and the Site*		
	<20m	>200m	Active and passive recreation uses
		5-200m	Passive recreational uses
	20-30m	>100m	Active and passive recreation uses
		5-100m	Passive recreational uses
	30-40m	>50m	Active and passive recreation uses
		5-50m	Passive recreational uses
	>40m	>10m	Active and passive recreation uses

Note:
(i) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.

Air Quality Objectives (AQO)

3.2.3 The Air Pollution 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 (**Table 3-2**).

Table 3-2 Hong Kong Air Quality Objectives

Pollutant	Averaging time	Concentration limit [i] ($\mu g/m^3$)	Number of exceedances allowed
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	50	3
Respirable Suspended Particulates (RSP) [ii]	24-hour	100	9
	Annual	50	Not applicable
Fine Suspended Particulates (FSP) [iii]	24-hour	50	35
	Annual	25	Not applicable
Nitrogen Dioxide (NO_2)	1-hour	200	18
	Annual	40	Not applicable
Ozone (O_3)	8-hour	160	9
Carbon Monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Lead (Pb)	Annual	0.5	Not applicable

Note:
[i] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
[ii] Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.
[iii] Fine suspended particulates

Sulphur Dioxide (SO_2)

3.2.4 In Hong Kong, Sulphur Dioxide (SO_2) is primarily from the combustion of Sulphur-containing fossil fuels in power stations and marine vessels.

3.2.5 The Air Pollution Control (Fuel Restriction) Regulations provide a statutory minimum requirement to restrict vehicles to use ULSD (Ultra Low Sulphur Diesel) with a sulphur content of only 0.005%. In December 2007, the EPD (Environmental Protection Department) further tightened the diesel fuel standards, mandating that all petrol filling stations in Hong Kong provide only Euro V diesel, which has a sulphur content of 0.001%. Moreover, according to the Air Pollution Control (Fuel for Vessels) Regulation, starting from 1 January 2019, all marine vessels, except for specified vessel types as outlined in the Regulation, are obligated to use compliant fuel within Hong Kong waters. As a result, the emission of vehicular SO_2 (sulfur dioxide) is not considered a significant source.

Particulates (RSP & FSP)

3.2.6 The air pollutants of concern during the construction phase are construction dust, which includes Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) generated from the construction activities of the Proposed Development.

3.2.7 In accordance with the Air Pollution Control (Construction Dust) Regulation, contractors and site agents are obligated to inform the EPD and implement dust reduction measures to minimize dust emissions before commencing construction activities such as demolition, site formation, foundation construction, and superstructure construction.

3.2.8 The emission source during the operational phase of the Project would be the vehicular emission on the roads, considering that there is no active industrial chimney within the 500m assessment area.

Ozone

3.2.9 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.

Carbon Monoxide

3.2.10 It is understood that road transportation is the dominant source of CO emissions; nevertheless, the air quality impact due to CO is still relatively minor. Therefore, the emission of CO from road transportation is unlikely to have an impact on air quality.

Lead

3.2.11 Leaded petrol has been banned in Hong Kong since 1999. It is not considered concerned pollutants for vehicular emission.

Non-road Mobile Machinery

3.2.12 According to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, Non-road Mobile Machinery (NRMMs) must adhere to the prescribed emission standards. Only NRMMs that have been approved or exempted and bear the appropriate label are permitted for use in specified activities and locations. These include construction sites, container terminals and backup facilities, restricted areas of the airport, designated waste disposal facilities, and specified processes.

3.2.13 In public works projects, as per the DEVB's Technical Circular No. 1/2015 titled "Emissions Control of Non-road Mobile Machinery (NRMM) in Capital Works Contracts of Public Works," the use of exempted NRMM has been prohibited since 1st June 2019.

Recommended Pollution Control Clauses for Construction Contracts

3.2.14 This guideline include a list of relevant regulations/guidelines for contractors and general engineering practices aimed at minimizing inconvenience and environmental nuisance to nearby residents and other sensitive receivers.

Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts

3.2.15 This Circular disseminates the policy regarding the prompt provision of temporary electricity and water supply for public works contracts, as well as the increased utilization of electric vehicles (EVs) in such contracts. The objective is to mitigate pollution resulting from the operation of diesel equipment and facilitate the availability of water for pollution suppression during construction works.

3.3 Background Air Quality and Key Criteria Pollutants

Background Air Quality

3.3.1 EPD has been closely monitoring the air quality in Hong Kong through their air quality monitoring stations (AQMS). The Monk Kok Roadside Station is the closest AQMS to the scheme. It should be noted that the measurement results at the Roadside Station are generally higher than those at regular sensitive receivers, such as residential flats, due to its proximity to road traffic. Therefore, the measurements at the Roadside Station should only be

considered as a worst-case scenario, and the measurements at the closest general AQMS, namely the Sham Shui Po Monitoring Station, should be taken into consideration.

3.3.2 The monitoring result of Monk Kok Roadside Station and Sham Shui Po Monitoring Station during year 2018-2022 are summarized in **Table 3-3 & Table 3-4**, respectively. For both stations, the measured concentrations of NO_2/RSP/FSP/SO_2 show a decreasing trend from 2018 to 2022.

3.3.3 The parameters of particular concern during the past few years have been the annual averaged and hourly NO_2 concentrations, which have consistently exceeded the AQO's criteria from 2018 to 2022 for the Monk Kok Roadside Station. The NO_2 concentrations at Sham Shui Po Monitoring Station is much lower than that of Monk Kok Roadside Station, however, the annual average still consistently exceeded the AQO's criteria from 2018 to 2022. Additionally, the O_3 concentrations at the Sham Shui Po Monitoring Station exceeded the AQO's criteria in 2019 and 2022.

Table 3-3 Average Concentrations of Pollutants in the Recent Five Years (Year 2018 - 2022) at Mong Kok Air Quality Monitoring Station

Pollutant	Averaging Time	AQO [i]	Pollutant Concentration (µg/m³) [ii]				
			2018	2019	2020	2021	2022
Sulphur Dioxide (SO_2)	10-minute (4th Max)	100 (9)	88	39	45	30	28
	24-hour (4th Max)	50	19	10	10	10	7
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	100 (9)	73	74	63	69	56
	Annual	50	36	35	29	30	26
Fine Suspended Particulates (FSP)	24-hour (36th Max)	50 (35)	38	38	32	32	30
	Annual	25	24	24	18	18	-
Nitrogen Dioxide (NO_2)	1-hour (19th Max)	200 (18)	240	248	214	201	224
	Annual	40	79	78	74	70	64
Ozone (O_3)	8-hour (10th Max)	160	97	125	96	97	101
Carbon Monoxide (CO)	1-hour (1st Max)	30,000	2340	2280	1810	2130	1670
	8-hour (1st Max)	10,000	2041	2103	1580	1719	1493

Note:
[i] The numbers in brackets () refer to number of exceedance allowed per year.
[ii] The pollution concentrations are obtained from the Smart Air Modelling Platform.
[iii] Exceedances has been highlighted in orange.

Table 3-4 Average Concentrations of Pollutants in the Recent Five Years (Year 2018 - 2022) at Sham Shui Po Air Quality Monitoring Station

Pollutant	Averaging Time	AQO [i]	Pollutant Concentration (μg/m³) [ii]				
			2018	2019	2020	2021	2022
Sulphur Dioxide (SO_2)	10-minute (4th Max)	100 (9)	98	41	40	38	48
	24-hour (4th Max)	50	21	14	12	12	13
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	100 (9)	59	65	59	67	49
	Annual	50	33	33	28	28	25
Fine Suspended Particulates (FSP)	24-hour (36th Max)	50 (35)	33	29	25	23	23
	Annual	25	21	18	14	14	12
Nitrogen Dioxide (NO_2)	1-hour (19th Max)	200 (18)	152	176	151	171	158
	Annual	40	49	48	45	47	43
Ozone (O_3)	8-hour (10th Max)	160	147	164	134	136	162
Carbon Monoxide (CO)	1-hour (1st Max)	30,000	-	-	-	-	-
	8-hour (1st Max)	10,000	-	-	-	-	-

Note:
[i] The numbers in brackets () refer to number of exceedance allowed per year.
[ii] The pollution concentrations are obtained from the Smart Air Modelling Platform.
[iii] Exceedances has been highlighted in orange.

PATH Background

3.3.4 PATH 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. The PATH grids corresponding to the Scheme is [40,34] as shown in **Figure 3-1**. **Table 3-5** gives the predicted background air quality of the assessment area (Grids [40,33], [40,34], [39,33] & [39,34]) on Year 2025 and **Table 3-6** shows the vertical variations of the pollutant concentration at Grid [40,34] on Year 2025 where the Scheme is located.

3.3.5 Generally, the PATH background in the assessment area on year 2025 meets the relevant Air Quality Objectives (AQOs) with a significant margin, except for Ozone concentration. The pollutant concentration also tends to decrease with increasing elevation in general, besides Ozone.

Table 3-5 Background Ground Level Air Quality of PATH on Year 2025

Pollutant	Averaging Time	AQOs [µg/m³] [i]	PATH Model Concentration [µg/m³] on Year 2025			
			[40,33] L1 (0-17m)	[40,34] L1 (0-17m)	[39,33] L1 (0-17m)	[39,34] L1 (0-17m)
Sulphur Dioxide (SO_2)	10-minute (4th Max)	100 (9)	59.5	58.8	52.4	48.3
	24-hour (4th Max)	50	9.8	9.7	9.8	9.9
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	100 (9)	63.8	62.1	64.3	63.9
	Annual	50	28.4	27.6	28.2	28.2
Fine Suspended Particulates (FSP)	24-hour (36th Max)	50 (35)	24.7	24.0	25.4	24.7
	Annual	25	15.5	15.0	15.5	15.4
Nitrogen Dioxide (NO_2)	1-hour (19th Max)	200 (18)	130.6	123.9	131.9	133.5
	Annual	40	23.9	22.0	25.3	23.6
Ozone (O_3)	8-hour (10th Max)	160	191.5	188.6	202.6	196.1
Carbon Monoxide (CO)	1-hour (1st Max)	30,000	1015.8	945.5	961.3	920.4
	8-hour (1st Max)	10,000	777.1	766.9	774.9	765.3

Note:
[i] The numbers in brackets () refer to number of exceedances allowed per year.
[ii] The pollution concentrations are obtained from the Smart Air Modelling Platform.
[iii] Exceedance has been highlighted in orange.

3.3.6 It should be noted that PATH also provides predicted pollutant concentrations for the years 2030, 2035, and 2040. However, the assumptions used for those years are not based on policy commitments by the Government, as stated in the PATH Download Center[1]. Furthermore, the predicted concentrations for most pollutants in 2030, 2035, and 2040 are significantly lower than those for the year 2025, as shown in **Table 3-7**. Therefore, the predicted pollutant concentrations for the years 2030, 2035, and 2040 are not considered in the current assessment.

3.3.7 For the purpose of this assessment, the predicted pollutant concentrations from PATH on year 2025 are adopted as the background air quality for conservative assessment.

[1] Hong Kong Emission and Air Quality Scenario Projections beyond 2030- https://path.epd.gov.hk/download_scenario_v30.html

Table 3-6 Background Air Quality of Grid [40, 34] of PATH on Year 2025

Pollutant	Averaging Time	AQOs [µg/m³] [i]	PATH Model Concentration [µg/m³] at Grid [40,34] on Year 2025		
			L1 (0-17m)	L2 (17-35m)	L3 (35-55m)
Sulphur Dioxide (SO_2)	10-minute (4th Max)	100 (9)	58.8	58.8	58.7
	24-hour (4th Max)	50	9.7	9.7	9.6
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	100 (9)	62.1	61.4	60.9
	Annual	50	27.6	27.2	27.0
Fine Suspended Particulates (FSP)	24-hour (36th Max)	50 (35)	24.0	23.7	23.1
	Annual	25	15.0	14.6	14.3
Nitrogen Dioxide (NO_2)	1-hour (19th Max)	200 (18)	123.9	118.5	113.3
	Annual	40	22.0	19.2	17.5
Ozone (O_3)	8-hour (10th Max)	160	188.6	192.5	194.3
Carbon Monoxide (CO)	1-hour (1st Max)	30,000	945.5	866.9	840.0
	8-hour (1st Max)	10,000	766.9	739.4	736.8

Note:
[i] The numbers in brackets () refer to number of exceedances allowed per year.
[ii] The pollution concentrations are obtained from the Smart Air Modelling Platform.
[iii] Exceedance has been highlighted in orange.

Table 3-7 Background Air Quality of PATH at Grid [40, 34] on Years 2025 - 2040

Pollutant	Averaging Time	AQOs [µg/m³] [i]	PATH Model Concentration [µg/m³] at Grid [40,34]			
			Year 2025 L1 (0-17m)	Year 2030 L1 (0-17m)	Year 2035 L1 (0-17m)	Year 2040 L1 (0-17m)
Sulphur Dioxide (SO_2)	10-minute (4th Max)	100 (9)	58.8	23.0	22.9	22.9
	24-hour (4th Max)	50	9.7	6.6	6.5	6.5
Respirable Suspended Particulates (RSP)	24-hour (10th Max)	100 (9)	62.1	50.6	49.7	49.4
	Annual	50	27.6	20.1	19.9	19.7
Fine Suspended Particulates (FSP)	24-hour (36th Max)	50 (35)	24.0	25.5	24.8	24.3
	Annual	25	15.0	12.5	12.3	12.1
Nitrogen Dioxide (NO_2)	1-hour (19th Max)	200 (18)	123.9	95.9	85.0	81.3
	Annual	40	22.0	19.6	15.6	14.5
Ozone (O_3)	8-hour (10th Max)	160	188.6	166.7	170.2	170.7
Carbon Monoxide (CO)	1-hour (1st Max)	30,000	945.5	537.5	521.8	518.7
	8-hour (1st Max)	10,000	766.9	507.8	492.5	486.2

Note:
[i] The numbers in brackets () refer to number of exceedances allowed per year.
[ii] The pollution concentrations are obtained from the Smart Air Modelling Platform.
[iii] Exceedance has been highlighted in orange.

Identification of Key Criteria Pollutants

3.3.8 During the construction phase, the major pollutant source shall be the construction dust. The emission from the Non-road Mobile Machinery are regulated by relevant regulation thus their emission shall be far lower than that of the nearby traffic emission.

3.3.9 During the operation phase, the major pollutant source shall be the traffic emission (i.e.: RSP/FSP/NOx) in the vicinity, as there is no industrial chimney within the 500m assessment area.

3.3.10 To sum up, the construction dust during construction phase; as well as the Nitrogen Dioxide (NO_2), Respirable Suspended Particulates (RSP), and Fine Suspended Particulates (FSP) from vehicular emission are the key criteria pollutants for the assessment of the air quality impact in this project.

3.3.11 Although ozone (O_3) is not considered a key criteria pollutant for the project, as mentioned in **Section 3.2.9**, its concentration will be used as a parameter to estimate the conversion of nitrogen oxides (NO_x) to nitrogen dioxide (NO_2). The details regarding this conversion will be provided in a subsequent section.

3.4 Construction Phase Air Quality Impact Assessment

3.4.1 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).

Air Sensitive Receivers

3.4.2 The representative ASRs for construction phase of the proposed development are illustrated in **Figure 3-2** and listed in **Table 3-8**. It should be noted that the Sites are closely packed with existing developments for residential and recreational uses thus mitigation measures shall be necessary to minimised the potential air pollution impact to the nearby ASRs.

3.4.3 For Sites A1 to A5, certain existing tenement buildings and/or podiums of the residential tower have facades along the Site Boundary. However, none of these developments have openable windows for ventilation or fresh air intake along the facades facing the Site Boundary. As a result, the actual distances between the openable windows of the Air Sensitive Receivers (ASRs) and the Site are greater than the distances listed in **Table 3-8**.

Table 3-8 Representative Air Sensitive Receivers (Construction Phase)

ID	Building/Location	Type	Building Height (mAG) [1]	Horizontal Distance from Site Boundary (m) [1]
ASR01	Chan's Creative School	Educational	32	33
ASR02	Tai Hang Tung Recreation Ground – Football field	Recreational	N/A	32
ASR03	High Park Grand	Residential	112	12
ASR04	Heung To College of Professional Studies	Educational	32	12
ASR05	Circle Garden	Residential	45	0
ASR06	Prince Commercial Building	Commercial	45	15
ASR07	Merlin Building	Residential	36	28
ASR08	Mong Kok City Building	Residential	45	17
ASR09	Vogue Court	Residential	44	12
ASR10	Mandarin Court	Residential	44	0
ASR11	Ashfield House Stage 2	Residential	40	0
ASR12	Yee On Building	Residential	38	1
ASR13	Ashfield House	Residential	38	0
ASR14	190 & 192 Prince Edward Road West	Residential	16	1
ASR15	38 & 40 Flower Market Road	Residential	15	0
ASR16	Springfield Court	Residential	44	0
ASR17	Pobjoy Court	Residential	45	2
ASR18	Ka Hing Court	Residential	45	0
ASR19	Kingly House	Residential	44	1

ID	Building/Location	Type	Building Height (mAG) [1]	Horizontal Distance from Site Boundary (m) [1]
ASR20	1-7 Yuen Po Street	Residential	31	2
ASR21	Mong Kok Stadium	Recreational	N/A	5 (Field) 1 (Stand)

Note:
[1] Estimated values.

Identification of the Major Pollutant Sources and of Potential Impacts

3.4.4 Fugitive dust would be generated and the concerned air pollutants during the construction phase are the Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) arising from the construction work of the Project.

3.4.5 In addition, the operation of Powered Mechanical Equipment (PME) during demolition/construction work may emit gaseous air pollutants such as nitrogen dioxide (NO_2) through fuel burning.

3.4.6 The net site areas and the construction work to be conducted in each Site are listed in **Table 3-9**.

Table 3-9 Summary of the Construction Works

Site	Net Site Area (subject to survey) (m^2)	Structures to be demolished	Excavating for Basement	Construction of Superstructure	Number of Concurrent PME [1]
Site A1	**2,640**	**Closely packed low-rise residential buildings and a composite building**	Yes	Yes	6 – 10
Site A2	**239**	**Low-rise residential building**	No	No	2 – 4
Site A3	**109**		No	No	1 – 3
Site A4	**202**		No	Yes (Single storey structure only)	2 – 4
Site A5	**198**		No	Yes (Single storey structure only)	2 – 4
Site B	**24,870**	**Sparse low-rise Structure**	Yes	Yes	10 – 40

Note:
[1] Excluding small plant such as water pump and fan. Estimated numbers based on projects in similar scales.

Emission from Non-road Mobile Machinery

3.4.7 A number of Powered Mobile Equipment (PME), such as excavators, can be utilized concurrently for Site A1 and Site B. While only a small amount of PME can be utilized concurrently or Sites A2-A5. However, the number of PME expected to be used on-site will be limited compared to the volume of vehicles traveling on surrounding roads, such as Prince Edward Road West.

3.4.8 According to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, only approved or exempted Non-Road Mobile Machinery (NRMM) with proper labeling are allowed to be utilized in the construction sites. Supportive information and documents, such as third-party emission certificates, model and serial numbers of machines and engines, will be provided to the EPD to demonstrate that the concerned NRMM complies with the prescribed emission standards. As a result, no significant impact is anticipated from the operation of PME.

Construction Dust

3.4.9 One of the major dust sources during the construction phase is the demolition of existing structures. All of the existing structures within the Sites will be demolished and C&D material of approximate 13,000 m^3 will be generated.

3.4.10 For Site A1, consider the scale of demolition works and distance to the ASRs, mitigation measures shall be necessary to eliminate the potential impact arising from the demolition works. For Site B, the structures to be demolished are fewer and further away to the ASRs. For Site A2 to A5, the Sites and its scale of demolition works are small.

3.4.11 Another major dust sources during the construction phase are the excavation for basement. According to the current design, only Site A1 and Site B will be excavated for basement. C&D material of approximate 213,600 m^3 will be generated from the excavation.

3.4.12 Movement of dump trucks is also considered a potential dust source if not mitigated properly. A rough estimation of 20 trip per days shall be required during the demolition and excavation period.

Mitigation Measures

3.4.13 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

3.4.14 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.

3.5 Operation Phase Air Quality Impact Assessment

Buffer Distance recommend by HKPSG

3.5.1 The suggested buffer distance of HKPSG (**Table 3-1**) cannot be fulfilled according to the current notional layout. Therefore, quantitative assessment approach has been adopted for this assessment.

General Flow of the Quantitative Assessment

3.5.2 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.

3.5.3 Then, the cumulative pollutant concentration will be computed. Besides the PATH 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

3.5.4 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

3.5.5 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, hotels, and G/IC areas of the Scheme are ASRs which should be assessed.

3.5.6 The residential flats in the Scheme rely on openable windows for ventilation; the shops and G/IC in the podium as well as the hotel tower 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 podiums and the hotel tower should be assessed. The locations of the assessment points are descripted in the following paragraphs, illustrated in **Figures 3-3a to 3-3i** and listed in **Table 3-10**.

3.5.7 For Podiums of Sites A1 & B, where centralized ventilation will be provided but the details of fresh air intake are not available in the current stage, representative assessment points have

been provided to each façade on each floor in order to estimate the air quality of each potential air intake locations (**Figures 3-3a, 3-3e & 3-3g**).

3.5.8 Similarly, for the hotel/office tower of Site B, where centralized ventilation will be provided, considering the major source is the vehicular emission at-grade and better air quality is anticipated at higher elevation, representative assessment points have been provided to each façade on the lowest two floors in order to demonstrate compliance (**Figure 3-3h**).

3.5.9 For residential towers of Sites A1 & B, representative assessment points have been provided at the major openable windows of each residential flats for the lowest two residential floors based on the notional layout to demonstrate compliance (**Figures 3-3b & 3-3f**).

3.5.10 For the single storey retails block at Site B, representative assessment points have been provided to each façade in order to estimate the air quality of each potential air intake locations (**Figure 3-3i**). However, as the fresh air intake could be located on roof level, assessment points have been provided on both ground level and roof level.

3.5.11 For the planned open space at Sites A2 & A3, representative assessment points have been provided to the corners of the Site (exclude the walkway) to demonstrate compliance (**Figure 3-3c**).

3.5.12 For the single storey retails blocks at Sites A4 & A5, as outdoor facilities may be provided, representative assessment points have been provided to the corners of the Site (exclude the walk way) to demonstrate compliance (**Figure 3-3d**). Similar to the single storey retail block at Site B, as the fresh air intake could be located on roof level, assessment points have been provided on both ground level and roof level.

3.5.13 All the potential fresh air intake locations and openable windows for ventilation of the proposed development have been identified and assessment points have been provided.

Table 3-10 Summary of the Assessment Points (Air Quality)

Locations	ID	Ground (mPD)	Assessment Height (mAG)
Site A1 - Podium	A1-PP-01 to A1-PP-10	6.0	G/F – 01.5 1/F – 07.5 2/F – 12.0 3/F – 16.5 4/F – 21.5
Site A1 - Residential Towers	A1-T1-01 to A1-T1-07 A1-T2-01 to A1-T2-06	6.0	1/F – 25.0 2/F – 28.15
Sites A2 & A3 - Open Space	A2-OA-01 to A2-OA-04 A3-OA-01 to A3-OA-04	6.8	1.5
Sites A4 & A5 - Single storey Retails Block	A4-SR-01 to A4-SR-04 A5-SR-01 to A5-SR-04	7.1	G/F – 01.5 Roof – 05.5 (for potential fresh air intake)
Site B - Podium (Western Portion)	BR-PP-01 to BR-PP-5	6.4	G/F – 01.5 1/F – 10.0 2/F – 16.5
	BR-PP-6 to BR-PP-10	6.4	G/F – 01.5 1/F – 10.0 2/F – 16.5 3/F – 23.5 4/F – 30.5 5/F – 37.5
Site B - Residential Towers	BR-T3-01 to BR-T3-16 BR-T4-01 to BR-T4-13	6.4	1/F – 47.0 2/F – 50.15
Site B - Podium (Eastern Portion)	BH-PP-01 to BH-PP-06	6.9	G/F – 01.5 1/F to 3/F – 09.0, 11.0, 19.0
Site B - Hotel/Office Tower	BH-TT-01 to BH-TT-06	6.9	1/F – 28.0 2/F – 32.2
Site B - Single storey Retails Block	BB-SR-01 to BB-SR-05	6.9	G/F – 01.5 Roof – 05.5 (for potential fresh air intake)

[1] The Assessment Height is 1.5m above slab level.
[2] The notional design including the elevation is subject to change.
[3] The residential/hotel towers have its own floor number.

Meteorological Data

For AERMOD, AERMET, & CALINE4

3.5.14 The hourly meteorological data including hourly stability classes from PATH v2.1 model has been adopted. 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.

3.5.15 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 1,667m, 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°.

3.5.16 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

3.5.17 Hong Kong Observatory's hourly temperature and relative humidity at King's Park during Year 2022 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

3.5.18 The proposed development is planned to be completed by Year 2035, the assessment year for traffic air quality impact shall be predicted based on the worst scenario in the next 15 years after the completion of the proposed development.

3.5.19 The traffic flow forecast for Years 2035, 2041 & 2050, with additional 5% traffic generation induced by the Scheme as a sensitivity test, 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 3-1** when available.

3.5.20 Sensitivity test for traffic emission has been conducted using traffic data of Years 2035, 2041 & 2050. The NOx emission of Year 2050 and the RSP/FSP emission of Year 2035 are found to be the highest, thus the RSP/FSP emission of Year 2035 and NOx/NO_2 emission of Year 2050 have been adopted. The result of sensitivity test is enclosed in **Appendix 3-2**. The methodology of the sensitivity test is explained in the following paragraphs.

<u>Methodology – Road Traffic Emission Factors & Sensitivity Test</u>

3.5.21 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 of the corresponding year and VKT ratio of

Minor Road from The Annual traffic Census -2021- (**Table 3-11**) and combine with the RUN emission. Therefore, a set of emission factors (NOx, NO_2, RSP & FSP) for vehicles emission with START emission and another set of emission factors for vehicles emission without START emission has been obtained.

Table 3-11 Average Daily Vehicle-kilometre on Roads in Hong Kong (2021)

Road Network	Hong Kong Island	Kowloon	New Territories	Total
Major Road	4,985,988	7,526,046	20,916,379	33,428,413
Minor Road	1,049,363	1,075,236	3,194,152	5,318,751
Sub-total	6,035,351	8,601,282	24,110,531	38,747,164
Ratio (Minor : Sub-Total)	17.39%	12.50%	13.25%	**13.73%**

Note:
[1] Data extracted from Section 3.4 of The Annual traffic Census -2021- by Transport Department.
[2] VKT Ratio for Hong Kong (including Hong Kong Island, Kowloon & New Territories) has been adopted for this Project

3.5.22 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 many uncertainties about the projected ratio of electric vehicles during assessment year (2035-2050). Therefore, for conservative assessment, the electric vehicle is not considered in the calculation of road traffic emission.

3.5.23 In this assessment, the road has been categorized into 2 road types as summarized in **Table 3-12**. 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 in general. However, broad-brush START emission for FBSD & FBDD has been adopted in the assessment, which will be explained later sections.

3.5.24 The list of roads for the air quality impact assessment including the cold start availability has been included in **Appendix 3-1**.

Table 3-12 Road Types within the Study Area

Road Type	Description
Type 1	Roads with START Emission
Type 2	Roads without START Emission

Emission from Bus Terminus and start emission from FBSD & FBDD

3.5.25 The only bus terminus within the 500m assessment area is the Mong Kok East Station Bus Terminus, which is more than 200m away from the Scheme to the south (**Figure 3-4**).

3.5.26 The emission within the bus terminus is expected to be small, when compare with the major roads within the assessment area. With the Grand Century Place Towers located to the immediate north of the bus terminus, and consider the major prevailing wind direction in Hong Kong is easterly in general and south-westerly in summer, the emission within the bus

[2] Hong Kong Roadmap on Popularisation of Electric Vehicles, https://www.evhomecharging.gov.hk/downloads/ev_booklet_en.pdf

terminus is unlikely directly affect the proposed development. In addition, Kowloon Motor Bus Co. (KMB) is currently upgrading its bus fleet to electric buses. According to KMB web-page[3], KMB planned to adopt 500 electric buses by 2027, and completely upgrade the whole fleet to new energy buses by 2040. Therefore, no additional impact to the ASRs of the Scheme from the emission within the bus terminus during assessment year (2035-2050), on top of the predicted air quality from PATH (of year 2025), is anticipated.

3.5.27 The START emission of the buses with diesel engine are expected to be spread along the first 700m routes after engine started. Due to the configuration of the bus terminus, all buses leaving the bus terminus must go southwardly via Luen Wan Street before reaching Bute Street as marked in **Figure 3-4**. Therefore, most of the START emission are far away from the Scheme and not directly affecting the Scheme. The current broad-brush approach assumed the start emission from FBSD & FBDD happens in all the roads with cold start (Type 1 road) within 500m study area without consideration of electric vehicle, which would be more conservative.

Adopted Diurnal Temperature and Relative Humidity Profile

3.5.28 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 3-13**) 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.

3.5.29 Finally, sensitivity testing has been conducted by comparing the daily road traffic emissions under 4 seasons of different years (i.e.: years 2035, 2041 and 2050). The year with the highest daily emission has been be adopted as the assessment year for the respective pollutant.

[3] KMB – News on 25 Oct 2022, https://kmb.hk/news_detail.html?id=480&year=2022

Table 3-13 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	7	20	14	46	23	74	19	33
2	7	16	14	49	24	79	19	33
3	7	22	14	50	24	77	19	35
4	7	20	14	48	24	79	19	35
5	7	19	14	43	24	78	19	38
6	7	19	14	47	24	80	18	38
7	7	20	14	45	24	79	18	37
8	7	17	14	42	24	72	18	36
9	7	18	14	33	24	65	19	35
10	7	17	14	29	24	60	20	36
11	7	16	13	29	24	58	19	36
12	8	19	14	28	24	54	20	36
13	8	17	14	21	24	48	19	37
14	7	16	14	27	25	47	18	34
15	7	15	14	33	25	55	17	38
16	7	16	13	36	24	53	17	34
17	8	21	13	35	24	54	17	33
18	7	24	13	37	24	61	17	35
19	7	21	13	43	24	68	17	39
20	7	22	13	45	24	69	17	34
21	7	21	13	38	23	70	17	29
22	7	22	14	39	23	72	16	37
23	7	22	14	40	23	76	17	33
24	7	20	14	43	23	78	17	36

[1] The hourly temperature and relative humidity at King's Park during year 2022 (rounded-down to the nearest integer) have been adopted.

Methodology – CALINE4

3.5.30 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).

3.5.31 The hourly fleet-averaged emission factors for each season, along with the hourly traffic flow data for each link (road section), were utilized in CALINE4 to simulate the dispersion of vehicle exhaust pollutants from the surrounding open road network. The adopted traffic flow and the hourly fleet-averaged emission factors are provided in **Appendix 3-3**. It should be noted that the diurnal traffic flow is assumed to be the same throughout the year, and only the traffic flow for Q1 has been provided in **Appendix 3-3**.

3.5.32 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.

Industrial Chimney within 500m assessment area

3.5.33 As stated in **Section 2.2.1**, no active industrial chimneys identified within the 500m assessment area.

Major emission sources within 4 km

3.5.34 The locations of the major emission source within 4 km are illustrated in **Figure 3-5a**. The major emission source within 4 km include: the hotelling marine vessels of Ocean Terminal ~3km in south direction, and To Kwa Wan Gas Plant ~2km in east Direction.

3.5.35 It should be noted that the Kai Tak Cruise Terminal and Diamond Hill Crematorium are major emission sources located farther than 4km from the project boundary. Considering the significant distance, the PATH background should already adequately account for these types of emission sources. Additionally, the emission points of Kai Tak Cruise Terminal[4] and Diamond Hill Crematorium[5] are situated at elevations of 48mPD and 101mPD, respectively. These elevations differ greatly from the major emission source near the project sites, which primarily consists of vehicular emissions at ground level. As a result, the emissions from the Kai Tak Cruise Terminal and Diamond Hill Crematorium are not expected to impact the worst ASR thus not included in the current assessment.

3.5.36 The details of the adopted sources are descripted in the following paragraphs.

Ocean Terminal

3.5.37 For the Ocean Terminal, there are two berths for hotelling of ocean vessels. According to the latest schedule of Ocean Terminal[6], the 90000-ton cruise Queen Victoria is the largest vessel using the berth. The second largest vessel using the berth is Arcadia, which is an 85000-ton cruise. As there are rare occasional for two vessels berthing overnight concurrently, operation schedule of 24 hours per day have been be applied to both of the berths. For conservative assessment, the emission factor for the largest vessel (Queen Victoria) form past EIA report[7] have been applied to both berths. The size of particulate emissions for Ocean Terminal are assumed to in the range of FSP (diameter < 2.5 μm) with average particular size of 1.25μm.

3.5.38 The adopted emission inventories of Ocean Terminal are listed in **Table 3-14** and detailed in **Appendix 3-4**. The locations of the major marine emission sources are illustrated in **Figures 3-5a & 3-5b**.

Table 3-14 Emission Inventory for Ocean Terminal

Source	ID	Source Strength (g/s)			Emission Height, mPD	Temp, K	Exhaust Velocity, m/s	Diameter, m	Operation hour
		NOx	RSP	FSP					
Ocean Terminal Berth 1	Ship1_1	6.75	0.18	0.18	50	448.2	21.12	0.6	24 hours / day
	Ship1_2								
	Ship1_3								
	Ship1_4								
Ocean Terminal Berth 2	Ship2_1	6.75	0.18	0.18			21.12		24 hours / day
	Ship2_2								
	Ship2_3								
	Ship2_4								

Noted: The reference ship has 4 emission sources (operating engine during hoteling) per vessel

To Kwa Wan Gas Plant

3.5.39 The emission inventory of To Kwa Wan Gas Plant is reference to Appendix 3.5 from the Approached EIA Report - Kai Tak Multi-purpose Sports Complex (AEIAR-204/2017), summarised in **Table 3-15** and detailed in **Appendix 3-4**. The latest SP Licence of the plant (SP Licence No: L-8-004(6)) has been checked on 15th Feb 2024 and no update of the emission limit has been identified.

4 Appendix 3.6 of the Approved EIA Report - Kai Tak Multi-purpose Sports Complex (AEIAR-204/2017)
5 Table 4.7 & Table 4.9 from the Approved EIA Report - Reprovisioning of Diamond Hill Crematorium (AEIAR-076/2004)
6 Cruise schedule - http://www.oceanterminal.com.hk/en/schedule.php?f=t (Checked on 5 Feb 2024)
7 Table 4.3 & 4.4 in Appendix 3.7 of Revised Austin Road Flyover EIA Report (EIA-267/2020) – withdrawn by applicant on 27 Jul 2023.

Table 3-15 Emission Inventory for the To Kwa Wan Gas Plant

ID	Source Strength (g/s)			Emission Height, mPD	Temp, K	Exhaust Velocity,m/s	Diameter, m	Operation hour	Remark
	NOx	RSP	FSP						
1049	0.17	0.00	0.00	44.5	450	20.4	0.5	24 hours / day	Load Factor 07:00-19:00 - 41% 19:00-07:00 - 23%
1054	0.35	0.00	0.00	34	473	5.5	1		
1055	0.35	0.00	0.00	34	473	5.5	1		
1056	0.35	0.00	0.00	34	473	5.5	1		
1057	0.35	0.00	0.00	34	473	5.5	1		

Noted:
The corresponding Emission Point in the of the SP Licence No: L-8-004(6) are:
- ID 1049 - Emission Point No. 16
- ID 1054 to 1057 - Emission Points No. 1 to 4

3.5.40 Dispersion modelling has been be undertaken using USEPA approved AMS/EPA Regulatory Model (AERMOD) to assess the Major Sources within 4 km.

Cumulative Pollutant Concentration

3.5.41 The cumulative pollutant concentration at each of the assessment point has been calculated by summing the background concentration (from PATH)[8], the road traffic emission (from CALINE4), and other emissions (from AERMOD).

3.5.42 It should be noted that predicted background concentration of Year 2025 from PATH has been adopted in this assessment. Considering the vehicular emissions in PATH within the assessment area is doubled counted and the reduction of traffic emission in later years has not been considered, adding the emissions from CALINE4 and AERMOD will result in conservative results.

3.5.43 The Ozone Limiting Method (OLM) has been adopted for the conversion of NO_x to NO_2 based on the hourly O_3 concentrations predicted by PATH in the corresponding grid. The NO_2/NO_x conversion has been calculated as follows:

Vehicular Source

$$[NO_2]_{pred} = [NO_2] + MIN\ \{[NO_x] - [NO_2], (46/48) \times [O_3]_{PATH}\}$$

where,

$[NO_2]_{pred}$	is the predicted cumulative NO_2 concentration after the NO_x to NO_2 conversion
$[NO_2]$	is the predicted vehicular NO_2 concentration based on vehicular tailpipe emission (i.e.: initial vehicular NO_2 emission) from CALINE4 and AERMOD
$[NO_x]$	is the predicted vehicular NO_x concentration from CALINE4 and AERMOD
$[O_3]_{PATH}$	is the O_3 concentration from PATH

Non-Vehicular Source

$$[NO_2]_{pred} = 0.1 \times [NO_x] + MIN\ \{0.9 \times [NO_x], (46/48) \times [O_3]_{PATH}\}$$

where,

$[NO_2]_{pred}$	is the predicted cumulative NO_2 concentration after the NO_x to NO_2 conversion
$[NO_x]$	is the predicted non-vehicular NO_x concentration from CALINE4 and AERMOD Inial
$[O_3]_{PATH}$	is the O_3 concentration from PATH

3.5.44 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%.

[8] Different background concentration from PATH 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.

3.5.45 As the vehicular emission on conservative side due to the conservative temperatures/humidity/ soak time consideration (**Sections 3.5.21 & 3.5.28**), thus the cumulative NO_2 concentration is also considered reasonably conservative for both long-term and short-term impact .

Results and Discussion

3.5.46 The detailed results are listed in **Appendix 3-5**. The overall summary of pollutant concentration is presented in **Table 3-16**. The pollutant concentration by block and elevation is provided in **Appendix 3-6**.

Results of Assessment Point

3.5.47 Under current notional design, the assessment result shows that all assessment points fully comply with AQO's NO_2/RSP/FSP criteria. Apart from Annual Averaged NO_2 concentration, the rest of the predicted pollution concentrations are well below the criteria (<75% of criteria). For Annual Averaged NO_2 concentration, the ground level concentration near the major roads (i.e.: Prince Edward Road West), the predicted concertation is up to ~37 $\mu g/m^3$ (Criteria = 40 $\mu g/m^3$) at the south-west corner of the Site A1 at 1.5mAG (assessment point A1-PP-01; **Figure 3-2a**).

3.5.48 Since the predicted air quality at all assessment points in residential flats and external facades of non-residential areas complies with the AQOs, there are no restrictions on the locations of openable windows for residential flats and fresh air intake locations for non-residential areas based on air quality considerations.

Contour plot

3.5.49 Contour plots depicting the concentrations of the concerned pollutants at the worst affected level (1.5m above ground) are presented in **Figures 3-6a to 3-6f**. Apart from the Annual Averaged NO_2 concentration, the concentrations of the other pollutants of concern meet the respective AQOs.

3.5.50 The Annual Averaged NO_2 concentration exhibits an exceedance zone in the building setback area near the southern boundary of Site A1. The concentrations at Sites A2 to A5 and Site B are fully compliant with the AQOs.

3.5.51 Consequently, there are no air quality restrictions on potential outdoor facilities in Sites A2 to A5 and Site B.

3.5.52 For Site A1, there is a small exceedance zone at the southwestern corner within the site which is basically at the pavement area. No active activity is anticipated at that area in the future.

Table 3-16 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 NO_2	Annual NO_2
Criteria / Locations	100	50	50	25	200	40
Site A1 - Podium	61.5 - 62.4	27.3 - 28.0	23.8 - 24.2	14.7 - 15.4	121.7 - 139.4	23.7 - 36.8
Site A1 - Residential Towers	61.5 - 61.5	27.3 - 27.3	23.7 - 23.8	14.7 - 14.7	121.3 - 122.5	22.7 - 23.3
Sites A2 & A3 - Open Space	62.3 - 62.4	27.9 - 27.9	24.2 - 24.2	15.3 - 15.3	134.6 - 136.7	31.5 - 32.6
Sites A4 & A5 - Single Storey Retail Block	62.3 - 62.4	27.8 - 27.9	24.1 - 24.2	15.3 - 15.3	133.7 - 137.9	30.3 - 32.7
Site B - Podium (Western Portion)	60.9 - 62.6	27.0 - 27.9	23.2 - 24.4	14.4 - 15.4	118.7 - 145.0	20.3 - 34.4
Site B - Residential Towers	60.9 - 60.9	27.0 - 27.0	23.2 - 23.2	14.4 - 14.4	120.4 - 129.0	19.7 - 19.8
Site B - Podium (Eastern Portion)	61.5 - 62.7	27.3 - 27.9	23.8 - 24.5	14.7 - 15.4	120.9 - 144.7	23.7 - 35.4
Site B - Hotel / Office Tower	61.5 - 61.5	27.3 - 27.3	23.7 - 23.8	14.7 - 14.7	119.8 - 120.7	22.3 - 22.7
Site B -Single Storey Retails Block	62.3 - 62.3	27.8 - 27.9	24.1 - 24.2	15.2 - 15.3	133.2 - 134.4	29.4 - 32.0

3.6 Conclusion

3.6.1 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.

3.6.2 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.

3.6.3 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.

3.6.4 The model results show that the predicted air quality at all proposed residential flats and external facades of non-residential area comply with the AQOs. Therefore, no adverse air quality impact due to openable windows for residential flats and fresh air intake for non-residential areas of the Scheme is anticipated.

4 NOISE IMPACT ASSESSMENT

4.1 Introduction

4.1.1 The purpose of this chapter is to assess whether 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).

4.1.2 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; (iv) Railway noise - the potential noise impact generated from the East Rail Line to the proposed development.

4.1.3 Effective mitigation measures and recommendations are proposed to mitigate the excessive noise level to achieve an acceptable compliance level under the current notional design.

4.2 Standards and Guidelines

Road Traffic Noise

4.2.1 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 4-1**.

Table 4-1 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.

4.2.2 The following Practise Notes provide guideline to facilitate the project planning and design against road traffic noise impact.

- "ProPECC PN3/23 Application of Sound Insulation in Residential Buildings to Reduce Noise Transmission Between Units" provides technical information on the design and application of sound insulation on partition walls and floors between residential units for better privacy protection and indoor sound environment.
- "ProPECC PN4/23 Practice Note for the Planning of Residential Developments against Road Traffic Noise" recommends mitigation measures against road traffic noise in planning stage and promulgates self-assessment procedures to facilitate the planning approval
- "ProPECC PN5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact" provides

guidance on technical information for innovative mitigation measures (Acoustic Window and Enhanced Acoustic Balcony) against road traffic noise.

Fixed Noise Sources

4.2.3 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 4-2**.

Table 4-2 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

4.2.4 The Scheme is located in the urban area of Mong Kok. According to TD's Annual Traffic Census (ATC2022), Boundary Street (Station 3435), which is a primary distributor with AADT of 33,460 in year 2022, is located at the immediately north of Site B. Another primary distributor Prince Edward Road West (Station 4203), is located at the immediately south of Sites A1 to A5 with AADT of 42,480 in year 2022. Therefore, the Scheme and its surroundings are considered either directly affected or indirectly affected by Influencing Factor (IF); the ASR of the site would be classified "C".

4.2.5 As the site is subject to traffic noise impact from the nearby primary distributor roads, 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.

Railway Noise

4.2.6 Railway noise is controlled by the Noise Control Ordinance (NCO). The ANLs stipulated in the TM (**Table 4-2**) shall be complied. Moreover, HKPSG provide guidance on acceptable railway noise levels at the openable windows of various types of noise sensitive buildings. An averaged 24 hours noise level of 65 dB(A) and a L_{max} of 85 dB(A) are recommended. The railway noise criteria are summarised in **Table 4-3**.

Table 4-3 Railway Noise Criteria

Time Period	Criteria, dB(A)	
Day (0700 to 1900 hours)	70 [1]	L_{eq}, 30min
Evening (1900 to 2300 hours)		
Night (2300 to 0700 hours)	60 [1]	
24 hours	65 [2]	L_{eq}, 24 hours
	85 [2]	L_{max}

Noted
[1] Criteria for Fixed Noise Sources stipulated in the IND-TM.
[2] Recommendations from HKPSG

4.2.7 HKPSG also provides guidance on the necessary horizontal distance from the railway to noise sensitive buildings for avoiding potential noise impact. The relevant horizontal distances are shown in **Table 4-4**.

Table 4-4 HKPSG Recommended Horizontal Distance for Railway Noise

Railway	Required Horizontal Distance
MTR Mass Transit Railway	150m (open form construction) 25m (the side parapets break the line of sight of the bogie)
KCR Kowloon-Canton Railway	85m
LRT Light Rail Route	25m

Note: The above guidance apply to noise sensitive uses which rely on opened window for ventilation.

4.3 Construction Noise Impact Assessment

4.3.1 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.

4.3.2 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.

4.3.3 ProPECC PN1/24 "Minimizing Noise from Construction Activities" provides construction noise requirements and recommendations on practices such as quieter construction methods and equipment to minimize construction noise.

4.3.4 To minimize noise generation, subject to detailed site works arrangement, the contractor shall consider the following mitigation measures, if necessary and applicable:

- Use non-percussive equipment such as hydraulic crusher, sawing, coring machines for demolishing existing building and structure
- Use non-percussive piling diving method such as hydraulic press-in method, vibration or jacking method for foundation work
- Use Quality Powered Mechanical Equipment (QPME) recognized by the Environmental Protection Department (EPD). The QPME shall be registered with EPD, and valid label issued by EPD shall be affixed on the QPME all times.

- Use Quieter Construction Methods[9] as far as practicable
- Schedule work to minimize concurrent activity and duration of impact
- Regular maintenance of equipment to prevent noise emission due to impairment
- Adopt good site practice, such as throttle down or switch off equipment unused or intermittently used between works
- 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 mobile noise barriers/enclosures along the path of noise propagation

4.3.5 Construction activities under the current Scheme involves concrete removal works, demolition works, site formation/excavation works and superstructure works. Subject to detailed site works arrangement, the contractor shall consider the following mitigation measures, if necessary and applicable:

Concrete Removal Works / Demolition Works:

- Use of high pressure water jetting instead of traditional jackhammers and drill hammers;
- Use of quieter type wire saws or diamond wire saws for cutting large areas and heavily reinforced concrete;
- Use of quieter type blade saws utilizing diamond blades with higher speeds and smoother blades reduces excitation of vibration;
- Use of hydraulic crushers for concrete breaking instead of traditional excavator-mounted breakers;
- Use of handheld concrete crushers instead of traditional jackhammers;
- Use of hydraulic splitters instead of traditional jackhammers and breakers.

Site Formation / Excavation Works:

- Use of silent piling by press-in method instead of traditional massive augering and piling machines or drop hammer for sheet piling / channel planking installation work;
- Use of a sheet piling noise reducer such as a suitable shock absorber to reduce collisions between sheet pile / channel planking and holding parts;
- Use of pile driving impact cushions to reduce noise generated by piling impact;
- Pre-augering/pre-trench/boring pile holes to remove underground obstruction for avoiding hard driving / soften the ground;
- Use of crack inducers instead of traditional percussive breakers.

Superstructure Works:

- Use of prefabricated structure / sections to replace in-situ construction to reduce the amount of mechanical equipment used on site;
- Use of self-compacting concrete (without the aid of a vibrator e.g. poker for compaction) for in-situ concreting;

[9] Quieter Construction Methods: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

- Use of crack inducers instead of traditional percussive breakers.

4.3.6 With proper noise mitigation measures implemented during the construction phase, no adverse noise impact arising from the construction activities is expected.

4.4 Operation Noise Impact Assessment

Representative Noise Sensitive Receivers during Operation Phase

Road Traffic Noise

4.4.1 All living rooms and bedrooms of the residential flats were identified as NSRs according to the nature of use. 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.

4.4.2 Commercial, hotel, clubhouse and GIC facilities are assumed to be equipped with air-conditioning system and will not rely on openable windows for ventilation, and thus the noise standard is not applicable.

4.4.3 There are (Tower 1: 36 floors x 7 flats + Tower 2: 37 floors x 6 flats + Tower 3: 31 floors x 16 flats + Low Zone of Tower 4: 12 floors x 13 flats + High Zone of Tower 4: 19 floors x 12 flats) 1,354 residential flats based on the notional layout of typical floor. Tower 4 consists of high zone and low zone and thus, high zone and low zone of Tower 4 are using different assessment points IDs.

4.4.4 For assessment purpose, the traffic noise level at all 1,354 flats have been assessed. The assessment points are summarized in **Table 4-5** and their locations are illustrated in **Figures 4-2a** to **4-2e**. It should be noted that the notional layout of the Scheme is for assessment purpose only and subject to change in detailed design stage.

Table 4-5 Summary of Representative Noise Sensitive Receivers and Assessment Points for Traffic Noise Impact Assessment

Location	NSR ID [1,2]	Number of Flat	Total Number of Flat	Elevation of the Assessment Point [3]
Tower 1	T1-01-W1 to T1-07-W4	7 flats per floor (1/F to 38/F, 20/F and 21/F are refuge floors)	252	30.7mPD for 1/F, +3.15 for each floor
Tower 2	T2-01-W1 to T2-06-LB	6 flats per floor (1/F to 38/F, 20/F is refuge floor)	222	30.7mPD for 1/F, +3.15 for each floor
Tower 3	T3-01-W1 to T3-16-W2	16 flats per floor (1/F to 31/F)	496	53.10mPD for 1/F, +3.15 for each floor
Tower 4 (Low Zone)	T4L-01-W1 to T4L-13-W2	13 flats per floor (1/F to 12/F)	156	53.10mPD for 1/F, +3.15 for each floor
Tower 4 (High Zone)	T4H-01-W1 to T4H-12-W2	12 flats per floor (13/F to 31/F)	228	90.9mPD for 13/F, +3.15 for each floor
Total			**1,354**	

[1] NSR ID for Tower 1, 2 & 3 is in the form of TT-YY-ZZ for Tower 1, 2 & 3, where "TT" is tower identity = T1/T2/T3, "YY" is the number of flat; ZZ is the location of the openable window for ventilation (Balcony at living room = LB; Window at the same flat= W1/W2/W3/W4).

[2] NSR ID for Tower 4 is in the form of TTX-YY-ZZ for Tower 4, where "TT" is tower identity = T4, "X" is the zone of tower 4 (Low Zone = L and High Zone = H) "YY" is the number of flat; ZZ is the location of the openable window for ventilation (Balcony at living room = LB; Window at the same flat= W1/W2).

[3] The notional design including the elevation is subject to change.

Planned Fixed Noise Sources

4.4.5 Large building service equipment for Podium of Site A1, Podium of Site B (Residential Portion) & Hotel/Office of Site B are the potential fixed noise sources during operation phase of the Scheme. Due to the nature and scale of Sites A2, A3, A4 & A5, no large building service equipment thus potential planned fixed noise sources are anticipated. It should be noted that the NSRs in the north and east of the Site B are relatively far thus those NSRs are not considered as representative NSRs. In addition, the potential fixed noise sources are not expected to be visible to the same building (e.g.: the noise sources of podium of Site A1 shall not be visible from Towers 1 & 2). The representative NSRs have been identified, listed in **Table 4-6** and illustrated in **Figures 4-3a**.

4.4.6 Since Podium of Site A1 is close proximity to the surrounding residential building, no fixed noise sources or ventilation exhausts shall be provided at north façade of the Podium as marked in **Figure 4-3b**.

Table 4-6 Representative Noise Sensitive Receivers for Fixed Noise Impact Assessment

NSR ID	Description	Horizontal Distance (m)		
		Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B
NSR01	Fa Yuen Mansion	19	97	247
NSR02 [2]	Oscar Court	13	66	216
NSR03 [2]	Circle Garden	**12**	46	193
NSR04	Mongkok City Building	26	85	201
NSR05	Merlin Building	46	146	268
NSR06	Flower Villa	49	66	176
NSR07	Heung To College of Professional Studies	52	**17**	161
NSR08	Jenny's Court	104	25	147
NSR09	Residential flat of the Scheme (Tower 4)	178	N/A	**15**

Note:
[1] The nearest Representative Noise Sensitive Receivers for each corresponding source are **bold underlined**.
[2] Restricted locations has been provided in Site A1.

Road Traffic Noise

Assessment Methodology

4.4.7 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)].

4.4.8 The assessment was based on the projected peak hour flows for the worst year within 15 years after completion of the Project in Year 2035. Based on the traffic forecast provided by the traffic consultant, the AM peak hour flows in Year 2050 will generate the highest road traffic noise 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 4-1**.

4.4.9 The peak hour traffic flow of individual roads in the assessment year (Year 2050) is listed in **Appendix 4-1**. The traffic forecast, with additional 5% traffic generation including by the Scheme as a sensitivity test, has been submitted to the Transport Department for their endorsement. Although hourly traffic flow of AM Peak are lower than that of PM Peak, AM Peak has higher ratio of heavy vehicle, traffic forecast of AM Peak will eventually result in higher traffic noise level and therefore, traffic forecast of AM Peak hours in Year 2050 were adopted.

4.4.10 To minimize the traffic noise impact to the Scheme, the following architectural design consideration has been adopted:

- The orientations of towers have been designed in a way such that most of the NSRs will not be severely affected by the major noise source.
- The orientation of the Tower 4 has been designed to block the view of the road traffic for Tower 3.
- The podium of Site B has been designed to block the view of the road traffic for lower floor (Flat 1 to 4) of Tower 4.

4.4.11 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, Acoustic Balcony and Fixed Glazing.

Impact Identification and Assessment

a) Base Scenario: Careful Design on Buildings Disposition & Windows Locations

4.4.12 In the Base Scenario, the residential towers have been carefully designed to avoid adverse traffic noise impact. View angle of the major road has been minimized by the architectural design like building disposition, building orientation and window locations. Without the design, the traffic noise level in Base Scenario is expected to be much higher.

4.4.13 The detail results of Base Scenario are presented in **Appendix 4-2**. The results show that about 82.5% of flats complying with the noise criteria of 70dB(A). The maximum predicted traffic noise level, ~78dB(A), is found at 1/F to 4/F of Flat T1-07 of Tower 1 which has direct line-of-sight to Prince Edward Road West.

b) Mitigated Scenario: With Acoustic Windows, Acoustic Balcony and Fixed Glazing

4.4.14 With reference to ProPECC PN5/23, practicable mitigation measures such as acoustic window and acoustic balcony shall be adopted to provide at-receiver mitigation measures to further minimize the traffic noise impact on the noise exceedance of the proposed development. Fixed Glazing shall be adopted to ensure the performance of the acoustic windows.

4.4.15 Subject to detailed design, mitigation measures are proposed in this mitigated scenario:

- Baffle Type Acoustic Window[10] (Noise Reduction: -4.0 dB(A))

  The baffle type acoustic windows consist of two layers, i.e. an openable window with fixed side (the fixed glazing / maintenance window) at the outer layer and a sliding window at the inner side. The two-window-layer design can create an air gap for the supply of fresh air with noise mitigation effect. Under normal operation, the fixed glazing / maintenance window shall be locked with allen key and shall not be opened for ventilation in order to reduce noise entering into the flat. The fixed glazing locked with allen key will be opened for cleansing and maintenance purpose only. This type of acoustic windows has been proven that both traffic noise mitigation and air ventilation could be achieved. The design of the proposed acoustic window can meet the relevant ventilation requirement under the Building (Planning) Regulations. According to the Practice Note on Lighting and Ventilation Requirements - Performance-based Approach (APP-130) issued by Buildings Department, for optimum performance with the inner sliding glass panel in a closed position, the air gap should have a length of not less than 100mm and a width between 100mm and 175mm. The length and width of the air gap of the proposed acoustic window also meet these conditions.

- Acoustic Balcony (Noise Reduction: 2.0 dB(A))

  Acoustic Balcony with 1.2m high of solid parapet and ceiling lined with sound absorptive for shielding noise and absorbing noise respectively, can effectively reduce the traffic noise entering the premises. The depth of the balcony should be more than 1m and noise reduction of noise 2.0 dB(A)[11] has been adopted in the calculation.

- Fixed Glazing (Noise Criteria not applicable)

  To ensure the performance of the acoustic windows in rooms with planned acoustic windows (e.g., NSR T1-01-W2), Fixed Glazing should be used for the side windows. Fixed glazing refers to windows that are not intended for ventilation purposes, and therefore, the traffic noise criteria are not applicable to them. During the operation phase, the fixed glazing should only be opened using an Allen key for cleansing and maintenance purposes. According to the Hong Kong Planning Standards and Guidelines (HKPSG), a 6mm window pane is considered sufficient to insulate traffic noise by 10 dB(A). Therefore, a minimum of 6mm window pane should be adopted for the proposed fixed glazing from a noise perspective.

4.4.16 The Baffle Type Acoustic Windows, which can typically provide 4 – 8 dB of traffic noise attenuation, have been broadly adopted in residential developments in recent years. According to the ProPECC PN5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact", a reference

[10] Baffle Type Acoustic Window: https://www.epd.gov.hk/epd/Innovative/greeny/eng/innovation/baffle-type.html
[11] Acoustic Balcony - https://www.epd.gov.hk/epd/Innovative/greeny/eng/balcony_soild.html

design can provide 6 dB(A) of traffic noise attenuation. Another 1.5 dB(A) of reduction can be achieved by providing Sound Absorptive Material (SAM) at top and both side of window frame. Further noise reduction can be achieved by orientation (1 dB(A)) and effective acoustic fin (1 dB(A)). It should be noted that the noise reduction effectiveness and ventilation performance of baffle type acoustic windows are highly dependent on the detailed design. As the flat design may change significantly in the later stage, it is hard to estimate whether any combination of windows design can provide sufficient natural daylight and natural ventilation while providing the maximized acoustic performance. Therefore, as a conservative approach, 4 dB(A) noise reduction has been assumed for the Baffle Type Acoustic Window in the current assessment.

4.4.17 Typical design of Baffle Type Acoustic Windows is illustrated in **Figures 4-5**. Mitigation measures have been proposed to all locations with traffic noise exceedance. The locations with predicted noise exceedance and proposed mitigation measures to be adopted are illustrated in **Figures 4-4a to 4-4d** and listed in **Appendix 4-3**.

4.4.18 The detailed predicted noise levels with mitigation measures are presented in **Appendix 4-3**. Given specific noise reduction measures at different assessment points, the compliance rate by flat has been increased to 97.3%. The maximum exceedance is found at 1/F to 4/F of Flat T1-07 of Tower 1, which exceeding the criteria of 70 dB(A) with ~ 4 dB(A). Flat T1-07 of Tower 1 is expected to experience adverse traffic noise impact. Except for Flat T1-07 of Tower 1, the highest traffic noise for the rest of the noise exceedances is ~72dB(A). Detailed result of each assessment points of the flat under mitigated scenario is shown in **Appendix 4-3** and summarized in **Table 4-7**.

Table 4-7 Summary of Traffic Noise Impact Assessment

	Number of Flat	Base Scenario		Mitigated Scenario	
		Complied Flat	Compliance Rate	Complied Flat	Compliance Rate
Tower 1 (Site A1)	252	179	71.0%	215	85.3%
Tower 2 (Site A1)	222	170	76.6%	222	100%
Tower 3 (Site B)	496	496	100%	496	100%
Tower 4 (Site B)	384	272	70.8%	384	100%
Total	**1,354**	**1,117**	**82.5%**	**1,317**	**97.3%**

Existing Fixed Noise Sources in the Surroundings

4.4.19 Site A1 is currently surrounded by residential developments. For the near-by non-residential developments, no exposed large chiller plant is identified thus the potential noise impact shall be limited. Compared with the traffic noise from the Prince Edward Road West, which is directly or indirectly affecting the Site A1, the potential fixed noise in the surrounding shall be insignificant. Therefore, no adverse impact from existing fixed noise source to NSRs of Site A1 (the residential flats) is anticipated.

4.4.20 Since no NSRs have been identified in Site A2 to A5, no noise assessment point is assigned to Site A2 to A5 for further assessment.

4.4.21 Site B is currently occupied by public open space. Similar to that of Site A1, Site B is close to residential developments thus no major fixed noise source in the vicinity is anticipated. Comparing with the traffic noise from the Boundary Street, which is directly or indirectly affecting the Site B, the potential fixed noise in the surrounding shall be insignificant. Therefore, no adverse impact from existing fixed noise source to NSRs of Site B (the residential flats) is anticipated.

4.4.22 The hotel in Site B do not rely on openable windows for ventilation thus fixed noise criterion is not applicable.

Planned Fixed Noise Sources of the Scheme

4.4.23 The Scheme will provide central air ventilation for commercial & retail area, clubhouse, GIC facilities, hotel, 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 A1

4.4.24 For Site A1, the facilities in the podium 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 A1 and the residential flats of Site A1, no adverse noise impact from the fixed noise sources of Site A1 to the residential flats of Site A1 is anticipated. As the fixed noise source of Site A1, including the louvers serving the fixed noise sources, may visible from the NSRs in the surrounding, maximum allowable sound power levels will be recommended.

4.4.25 It should be noted that, since existing residential buildings are in close proximity to the Site A1, no fixed noise source or ventilation exhausts shall be provided at the north facing facades of the podium of Site A1, as marked in **Figure 4-3b**.

Site B (Podium of Residential Portion)

4.4.26 For Podium of Residential Portion of 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. Same as Site A1, there is no direct line of sight between the fixed noise sources of Podium (Western Portion) of Site B and the residential flats of Site B, no adverse noise impact from the fixed noise sources of Podium (Western Portion) of Site B to the residential flats of Site B is anticipated. As the fixed noise source, or the louvers connected to the fixed noise sources, of Podium (Western

Portion) of Site B may visible from the NSRs in the surrounding, maximum allowable sound power levels will be recommended.

Site B (Hotel Portion)

4.4.27 For the Hotel in 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 the Hotel may visible from the NSRs in the surrounding, including the residential flat in Site B. Maximum allowable sound power levels will be recommended.

Maximum Allowable Sound Power Levels (SWL)

4.4.28 The maximum allowable SWL for the planned fixed noise sources are present in **Table 4-8** and detailed in **Appendix 4-4**.

4.4.29 According to the calculation based on the horizontal distance of the nearest NSRs for each corresponding source, the cumulative SWL of the building service equipment at podium of Site Aa should not exceed 86 dB(A) during day and evening time, and should not exceed 76 dB(A) during night time. For the podium of residential portion of Site B, the limits of the cumulative SWL are 89 dB(A) during day and evening time, and 79 dB(A) during night time. For the hotel of Site B, the limits of the cumulative SWL are 88 dB(A) during day and evening time, and 78 dB(A) during night time.

4.4.30 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.

Maximum Sound Pressure Levels (SWL) at Receivers

4.4.31 Based on the maximum allowable SWLs, the cumulative noise levels at NSRs from the planned fixed noise sources of the Scheme has been calculated and the results show that cumulative noise levels will comply with the criteria when the maximum allowable SWLs has been implemented properly. The results are present in **Table 4-9** and detailed in **Appendix 4-4**.

4.4.32 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.

Table 4-8 Allowable Sound Power Level for the Building Service Equipment of the Proposed Development

Time Period	Maximum Allowable SPL at NSR, dB(A)	Maximum Allowable Sound Power Level at Source, dB(A) [1][2]
Site A1		
Day and Evening Time (07:00-23:00)	65	86
Night Time (23:00 – 07:00)	55	76
Site B (Podium of Residential Portion)		
Day and Evening Time (07:00-23:00)	65	89
Night Time (23:00 – 07:00)	55	79
Site B (Hotel Portion)		
Day and Evening Time (07:00-23:00)	65	88
Night Time (23:00 – 07:00)	55	78

[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.

Table 4-9 Cumulative Noise level form the Planned the Building Service Equipment of the Proposed Development

NSR ID	Description	SPL at NSR, dB(A)			
		Day and Evening Time (07:00-23:00)		Night Time (23:00 – 07:00)	
		Cumulative	Criteria	Cumulative	Criteria
NSR01	Fa Yuen Mansion	61	65	51	55
NSR02	Oscar Court	60	65	50	55
NSR03	Circle Garden	62	65	52	55
NSR04	Mongkok City Building	59	65	49	55
NSR05	Merlin Building	54	65	44	55
NSR06	Flower Villa	56	65	46	55
NSR07	Heung To College of Professional Studies	65	65	55	55
NSR08	Jenny's Court	62	65	52	55
NSR09	Residential flat of the Scheme (Tower 4)	65	65	55	55

Railway Noise

4.4.33 The East Rail Mong Kok East Station is situated to the south of the Project Site (**Figure 4-7**). Railway within the Mong Kok East Station and in the immediately north of the station are enclosed. However, the railway section located ~200m from the residential portion of the Site B (sub-area 1) to the north of Grand Century Place remains uncovered.

4.4.34 Although the recommended 85m buffer distance, as per HKPSG (**Table 4-4**), is met (**Figure 4-7**), the residential flats in Sites A1 & B (sub-area 1), which rely on openable windows for ventilation, have direct line of sight to the railway. Therefore, the railway is considered as a potential noise source to the residential flats.

4.4.35 A simplified railway noise calculation based on the methodology of approved EIA report (Shatin to Central Link - Mong Kok East to Hung Hom Section - AEIAR-165/2012) and conservative assumptions has been performed at the nearest point of the proposed development to the railway. The key information and assumptions of the railway noise calculation are as follows:

- The methodology of railway noise calculation of the approved EIA Report (AEIAR-165/2012);
- The Reference L_{max} and Reference SEL of a single train event have been made reference to the approved EIA report (AEIAR-165/2012);
- Ultimate train frequency of East Rail Line (ERL) has been referenced to approved EIA Report (AEIAR-165/2012) & Environmental Permit EP-437/2012/A;
    - 0700 to 2300: 30 trains / hour / direction
    - 2300 to 0700: 24 trains / hour / direction
    - 850 trains / hour / both directions
- Train frequency of Intercity trains has been made reference to approved EIA Report (AEIAR-165/2012)
    - 1 train / 30 min / both directions
        - Assume all intercity trains are northbound (the nearer track) for conservative assessment
        - Assume 48 intercity trains per day
- No barrier correction has been adopted;
- No view angle correction has been adopted (i.e. assume 180 degree view);
- Horizontal distance has been used instead of slant distance;
- Train Speed
    - Based on an on-site observation during Jan 2024, the average velocity of ERL trains within the 300m assessment area are seldom over 70 km/h. The train speed of ERL is assumed to be 80 km/h for conservative assessment.
    - The intercity train is currently suspended. Based on the on-site observation near Macpherson Playground conducted in year 2019, the train speed of intercity train was around 75-80 km/h. The train speed of intercity train is assumed to be 80 km/h in the assessment.

Table 4-10 Summary of Predicted Railway Noise

Time Period	Criteria, dB(A)	Predicted Noise Level, dB(A)	
Day (0700 to 1900 hours)	70 [1]	58.9	L_{eq}, 30min
Evening (1900 to 2300 hours)			
Night (2300 to 0700 hours)	60 [1]	57.9	
24 hours	65 [2]	56.7	L_{eq}, 24 hours
	85 [2]	72.0	L_{max}

Noted
[1] Criteria for Fixed Noise Sources stipulated in the IND-TM.
[2] Recommendations from HKPSG

4.4.36 The railway noise level is summarised in **Table 4-10** and detailed in **Appendix 4-5**. The calculation results show that, with conservative assumptions, the railway noise levels are lower than the relevant criteria. Therefore, the railway noise should not have adverse impact on the proposed development.

4.5 Conclusion

4.5.1 The overall noise impact during the construction phase is considered insignificant. Subject to detailed site works arrangement, mitigation measures shall be implemented if necessary and applicable in accordance with ProPECC PN 1/24 during construction to minimize construction noise impact on the nearby NSRs.

4.5.2 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 disposition, buildings orientation and windows locations. In the base scenario, ~83% of flats comply with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic window, acoustic balcony and fixed glazing are incorporated into the proposed development, the compliance rate by flat has been increased to ~97%. 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 its anticipated result, of which baffle type acoustic window, acoustic balcony and fixed glazing have been adopted to achieve the noise compliance level. It should be noted that the actual layout in the future proposed development will be subject to detailed design, site constraints and feasibility.

4.5.3 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. The planned fixed noise source from the proposed Scheme should not induce any adverse noise impact when the maximum allowable SWLs has been implemented properly.

4.5.4 Based on a simplified railway noise calculation, it is expected that the railway noise level at the noise sensitive receivers of the Site will comply with the relevant criteria. Therefore, no adverse noise impact is anticipated from the East Rail Line.

5 WASTE MANAGEMENT CONSIDERATION

5.1 Introduction

Background

5.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover materials value from waste stream. This section identifies the quality and quantity of waste generated from construction and operation phase of the Project, and evaluates the potential waste management implications that may result from waste generated during these phases.

Legislations, Standards, and Criteria

5.1.2 The assessment has been conducted with reference to the following legislations/guidelines that are related to the handling, treatment and disposal of waste in Hong Kong, and applicable to the Project:

- 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)
- Air Pollution Control Ordinance (Control of Asbestos (sections 51 to 84))
- ADV-19 – Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – Construction and Demolition Waste
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste
- Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes
- DEVB TCW No. 9/2011, Enhanced Control Measures for Management of Public Fill
- Guide to the Chemical Waste Control Scheme
- Monitoring of Solid Waste in Hong Kong - Waste Statistics for 2022
- ProPECC PN2/97 Handling of Asbestos Containing Materials in Buildings
- Project Administrative Handbook (PAH) for Civil Engineering Works (2022 Edition)
- Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK)

5.1.3 The following legislations/ guidelines are considered as not applicable to the Project:

- CEDD TC No. 11/2019, Management of Construction and Demolition Materials
- ETWB TCW No. 19/2005, Environmental Management on Construction Sites
- 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

5.1.4 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.

5.1.5 Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) outlines the requirement for chemical waste handling and disposal.

5.1.6 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.

5.1.7 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.

5.1.8 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.

5.1.9 According to URA, as the Project is not considered as public works, *CEDD TC No. 11/2019*, *ETWB TCW No. 19/2005* and *PAH* are not applicable for the Project.

5.1.10 With reference to Hong Kong Coastline Map, no record of land reclamation is found within the Site boundary. Thus, *ADV-21* and *ETWB TCW No. 34/2002* are not applicable for the Project as land-based sediment is not expected.

5.2 Assessment Methodology for Waste Management Implications

5.2.1 The waste management implications during the construction and operational phases shall be assessed. The objectives and methods shall include, but not limited to, the following:

(i) Identification/estimation of the types and quantities of waste arising from the Project;

(ii) addressing impacts caused by handling (including stockpiling, labelling, packaging and storage), collection, transportation and reuse/disposal of wastes in detail and propose appropriate mitigation measures;

(iii) adoption of waste management hierarchy with priorities towards waste reduction, on-site or off-site reuse and recycling;

(iv) estimation of the types and quantities of wastes required to be disposed of and their disposal method; and

(v) assessment of the impacts on the capacity of waste collection, transfer and disposal facilities.

5.3 Waste Management for Construction Phase

Waste Types

5.3.1 The site clearance, demolition of existing buildings, excavation, and superstructure 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;
- Chemical waste from any maintenance of construction plant and equipment; and
- General refuse from the workforce

Inert and non-inert C&D Materials

5.3.2 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 fill reception facilities. Non-inert C&D Material (or C&D waste) includes metal from the existing structures, wood from formwork, timber and woody materials from existing trees, equipment parts, and materials and equipment wrappings, etc., should be re-used or recycled as far as possible.

5.3.3 Under the current notional design, as the Scheme involves demolition of existing buildings and construction of 4 and 3 floors of basement for Site A1 and Site B respectively, there will be generation of inert C&D materials during construction. Furthermore, excavation works shall not encroach into the nullah and its surrounding vicinity. Since no excavation work is carried out in nullah, no excavation materials will be generated from nullah and thus disposal of sediments is not required. For other area, it is estimated that about 213,600 m^3 excavated materials would be generated and about 53,400 m^3 would be suitable for backfilling during site formation stage. It is also estimated that about 13,000 m^3 C&D materials will be generated during the demolition work.

5.3.4 In order to account for the quantity of C&D materials to be generated from construction of the new building, C&D materials generation rate of 0.18 m^3 per m^2 of GFA constructed is adopted, with reference to the actual volume of C&D waste generated from the superstructure stage of projects of similar scale. The total GFA of the proposed development from the Scheme will be around 133,900 m^2 (30,492 + 73,380 + 30,000 = 133,872 ≈ 133,900 m^2). The C&D materials generated from superstructure construction is approximately 24,102 m^3. Hence, the total amount of inert C&D materials generated by the Project is projected at 246,992m^3 (259,341m^3 with 5% sensitivity test).

5.3.5 The volume of non-inert C&D material, such as building materials, maintenance and packaging waste; generated during site clearance, demolition of existing buildings, and construction of superstructure works is projected at 3,710m^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.

5.3.6 The estimated quantities of inert and non-inert C&D material generated from the construction of the Scheme are presented in **Table 5-1**.

Table 5-1 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		
		Reused / Recycled On-Site	Reused Off-Site (a)	Reused / Recycled On-Site	Reused / Recycled Off-Site (b)	Disposed Off-Site
Excavation	213,600	53,400	160,200	0	0	0
Site Clearance / Demolition of Existing Buildings	13,000	0	11,700	0	130	1170
Superstructure Construction	24,102	0	21,692	0	241	2169
All	**250,702**	53,400	193,592	0	371	3,339
		246,992		3,710		
All (with 5% sensitivity test)	**263,237**	259,341		3,896		

Note
(a) The surplus inert C&D materials shall be delivered to Public Fill Reception Facilities for beneficial reuse in other projects, the destination of the surplus inert C&D materials is subject to the designation by the Public Fill Committee according to DEVB TC(W) No.6/2010.
(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.

5.3.7 It is estimated that about 22% of inert C&D material to be reused on-site. The destination of the surplus inert C&D materials is subject to the designation by the Public Fill Committee according to DEVB TC(W) No.6/2010. The remaining non-recyclable C&D materials are not suitable for public fill and hence require disposal to licensed landfill facilities (the closest landfill is the South East New Territories (SENT) Landfill). The disposal of non-inert C&D materials at designated landfill shall be subject to agreement with the relevant section of the EPD.

Chemical Waste

5.3.8 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 chemical waste 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.

5.3.9 Since some of the existing structures to be demolished were built before the ban of asbestos building material, asbestos containing materials may be present at the concerned structures. Hence, asbestos investigation may be required to be carried out before the commencement of demolition works, in accordance with the 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. 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.

5.3.10 Asbestos Wastes are divided into three types, namely, Type 1 Waste, Type 2 Waste, and Type 3 Waste. The packaging, labelling, handling and storage and transportation of the wastes should also be carried out accordingly.

5.3.11 Disposal of Asbestos Wastes must be carried out at designated or licenses facilities. Prior to disposal, 10 working days for notice of intention to EPD is required for site preparation. Specific instructions and directions for disposal of Asbestos Wastes will be issued by EPD. Contractor should strictly follow the direction. At the disposal site, the process of disposal operation must be ensured by waste producer or collection contractor to follow instructions of landfill site staff.

5.3.12 With the implementation of proper chemical waste management measures listed in **Section 5.3.25**, the impact is anticipated to be insignificant.

5.3.13 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

5.3.14 General refuse such as food scraps, waste paper, empty containers, etc., would be generated from construction workforce during construction phase.

5.3.15 The maximum number of construction workers to be employed will be approximately 120 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 78kg (= 120 workers x 0.65kg/worker/day).

5.3.16 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 food scraps, 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. As food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns.

5.3.17 With the implementation of good waste management practices as suggested in **Section 5.3.24** 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

5.3.18 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

5.3.19 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. Good Site Practices and Waste Reduction Measures should be adopted during construction phase, measures may include:

- On-site sorting of C&D materials;
- Recycling and reuse of excavated materials for on-site filling materials;
- 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, recycling, public cleanliness and obstruction offences.

5.3.20 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 is expected to produce more than 300,000 m^3 of construction and demolition material, it is necessary to seek advice from the Director of Environmental Protection before accepting the Plan, as specified in Section 4 of ADV-19. This ensures that appropriate measures are in place to effectively manage the significant amount of C&D material generated by the project.

5.3.21 Waste storage should be performed by contractor 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.

5.3.22 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.

5.3.23 Excavated C&D materials should be reused as far as possible. If possible and applicable, excavated materials will firstly be backfilled on-site during site formation. The remaining surplus excavated materials are improbable to be reused and hence disposed to fill banks.

General Refuse

5.3.24 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

5.3.25 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*
- mitigation measures and good practices would be properly implemented for the handling and disposal of asbestos-containing materials according to the *Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes.*

5.3.26 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

5.4 Waste Management for Operation Phase

5.4.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic, metal products, paper, etc.. No chemical or hazardous waste is anticipated, including waste generated during the operation and maintenance of the equipment and facilities. 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.

5.4.2 The domestic waste will be collected (at the refuse collection point) and regularly disposed of at landfill or regularly collected by recyclers, waste recycling would be carried out during operation phase. To minimize waste generation and promote recycling, it is recommended to implement source separation of domestic waste in the proposed development.

5.4.3 It should be noted that a Refuse Collection Point (RCP) will be provided within Site B, to seamlessly replace the existing Sai Yee Street (Flower Market Road) Refuse Collection Point. The operation of RCP is managed by Food and Environmental Hygiene Department (FEHD).

5.4.4 Based on the anticipated population intake for the Proposed Development, which is projected to be about 3,385 and will be further refined during the detailed design stage, it is estimated that approximately 3,148 kg per day (= 120 persons x 0.93kg/person/day[12]) of general refuse will be generated during the operation phase. With the proper implementation of the control measures, adverse impacts due to waste management will not be anticipated.

5.5 Hierarchy of Waste Management

5.5.1 Waste management options would be adopted and exercised in accordance with a hierarchy in order to reduce and manage waste. The hierarchy of waste management and relevant recommendations provided for the construction and operation phases of the Scheme are summarized in **Table 5-2**.

[12] The domestic waste disposal rate of 0.93 kg/person/day is adopted according to the latest Monitoring of Solid Waste in Hong Kong (i.e. waste statistics 2022)

Table 5-2 Hierarchy of Waste Management

Order of Preference	Waste Management	Construction Phase	Operation Phase
1	Avoidance and Minimization	• The potential quantity of C&D materials, general refuse and chemical waste generated, should be reduced and minimized.	• Promote waste reduction in the community.
2	Reuse	• Inert C&D Material, including construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fill reception facilities.	N/A
3	Recovery and Recycle	• Non-inert C&D Material, including metal from the existing structures, wood from formwork, equipment parts, and materials and equipment wrappings, should be re-used or recycled; • General refuse, such as paper, plastics and aluminum materials, should be re-used or recycled. 3-color recycle bins and a reputable waste collector are provided and employed respectively to enhance recycling.	• Implement source separation of domestic waste to facilitate recycling.
4	Treatment and Disposal	• Non-inert C&D waste • Chemical waste should be treated and disposed at licensed facilities. "Trip-ticket" must be provided throughout all movements for records; • General refuse is collected by a reputable waste collector.	• General refuse is collected by a reputable waste collector.

5.6 Conclusion

5.6.1 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, 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.

6 POTENTIAL LAND CONTAMINATION

6.1 Introduction

6.1.1 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.

6.2 Legislations, Standards & Guidelines

6.2.1 Legislations and guidelines related to land contamination are given below:

- 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

6.2.2 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

6.3 Assessment Methodology

6.3.1 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

- Site inspection at Site B for identifying industrial activities listed under the Guidance Notes, supplemented by non-intrusive site inspection conducted at Sites A1 to A5 considering that these sites are still occupied and inaccessible during this assessment period
- The Sites shall be re-appraised and site walkover(s) shall be carried out upon land resumption. The findings shall be reported in the detailed Land Contamination Assessment and Remediation (if needed), which should be completed with reference to the prevailing guidelines on land contamination assessment prior to the development of the Sites.

6.4 Site Appraisal

Aerial Photos

6.4.1 Aerial photos between 1949, the first available year, and 2022, 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 6-1**. The land use history of the Sites is summarised in **Table 6-1** as below:

Table 6-1 Historical Land Use

Year	Photo No./ Reference	Observations	Assumed Major Land Use
1949	81A_117-6055	The majority of the Sites and their surrounding areas were open spaces. There was an uncovered nullah from the north-east to south-west of the of the Site. The north-west of the nullah was mostly open area. The south-east of the nullah was mostly agricultural land. Tenement buildings along Prince Edward Road West, including those erected at Sites A2 – A5, were found.	Open Space / Agricultural Land / Open Channel / Residential Buildings
1956	F22_554-0102	Constructions of the sports ground at Site B and Mong Kok Stadium were found. The agricultural use of the area had become obsolete.	Open Space / Open Channel / Residential Buildings
1963	1963_1963-5922	The building near Prince Edward Road West (Prince Edward Building) was completed, and the south-east area was used as carpark. No significant change is identified for the remaining area.	Open Space / Open Channel / Residential Buildings / Sports ground
1969	1969_1969-2270	The area in the south-east of the nullah was used as plant nursery and the refuse collection point in south-west corner had been built. No significant change is identified for the remaining area.	Open Space / Open Channel / Residential Buildings / Sports ground
1976	1976_14725	The Boundary Street Sports Centre No. 1 and Sai Yee Street Children's Playground was commissioned. No significant change is identified for the remaining area.	Open Space / Open Channel / Residential Buildings / Sports ground
1981	1981_39892	No major change in the Site is observed.	Open Space / Open Channel / Residential Buildings / Sports ground
1986	1986_A04336	The Boundary Street Sports Ground Substation and Boundary Street Sports Centre No. 2 was under construction. No significant change is identified for the remaining area.	Open Space / Open Channel / Residential Buildings / Sports ground
2020	2020_E099358C	The nullah was completely covered. No significant change is identified for the remaining area.	Open Space / Open Channel / Residential Buildings / Sports ground

Year	Photo No./ Reference	Observations	Assumed Major Land Use
2022	2022_E165407C	No major change in the Site is observed.	Open Space / Open Channel / Residential Buildings / Sports ground

6.4.2 The review of historical land use from aerial photos has indicated that the major land use of the Sites from 1949 – 2022, are residential buildings and carpark for Site A1; residential buildings for Sites A2 to A5; and open space, plant nursery, refuse collection point, indoor sports centre for Site B.

6.4.3 Based on findings from the historical land use, potential land contamination issue may arise from the carpark (Site A1) and electrical sub-station(ESS) (Site B) thus further investigation shall be conducted during later stage.

Site Visit

6.4.4 Site A1 to A5 are currently in use and thus only peripheral inspection can be conducted. On the other hand, site inspections at Site B were conducted in August 2023 and February 2024, which covered the Boundary Street Plant Nursery, Flower Market Path, Sai Yee Street Children's Playground, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Boundary Street Recreation Ground, Boundary Street Amenity Plot as well as Boundary Street Sports Centres No.1 & No.2. Site visit to Mong Kok Stadium, where is to the immediate east of Site B, was also conducted in February 2024.

Site A1

6.4.5 Site A1 comprises Prince Edward Building, as well as two rows of low-rise residential buildings. The ground floors of all the buildings in Site A1 are designated for commercial use, such as retail and/or restaurants. Considering their current uses, it is unlikely that potential land contamination will arise from the activities of the commercial establishments on the ground floor, as well as the residential flats above them.

6.4.6 It should be noted that the open space immediately east of Prince Edward Building has been used as a parking area or temporary retail booths. During the site visit, no car was identified and various temporary retail booths were set for the sales of flower. No cracks or fissures were identified on the fully paved ground. No oil marks or stains were identified. Hence, no potential land contamination is anticipated in this area.

6.4.7 Site A1 is surrounded by composite buildings, i.e. retail use at the ground floor with residential units in the upper floor, or commercial buildings. Since similar land use in the surrounding area was identified with Site A1, off-site land contamination potential is not expected.

Sites A2 – A5

6.4.8 Sites A2 - A5 are currently occupied by low-rise residential buildings with retails/shops on the ground floor. Considering their current uses, it is unlikely that potential land contamination will arise from the activities of the commercial establishments on the ground floor, as well as the residential flats above them.

6.4.9 Sites A2 - A5 are surrounded by Mong Kok Stadium (North), residential Buildings (West and South), and Yuen Po Street Bird Garden (East). No potentially contaminated activities were recorded in the stated areas except the Dangerous Goods Storage in Mong Kok Stadium. However, a fully paved ground was observed in DG storage during site visit. Hence, off-site land contamination potential could be neglected.

Site B

6.4.10 Judging from their current uses, it is unlikely that potential land contamination will arise from the activities at Sai Yee Street Children's Playground, Boundary Street Sports Ground, and Boundary Street Sports Centres No.1 & No.2. As for the Boundary Street Plant Nursery, its fertilizers, as well as other organic material, are stored in enclosed containers, thus no leakage is anticipated. There is no trace of land contamination identified for Sai Yee Street (Flower Market Road) Refuse Collection Point which is located at the southwest corner of Site B. During the site visit, good hygienic condition, i.e. no stagnant water and enclosed waste bins, was observed. Hence, no leakage of liquid was identified. In addition, no sign of oil stains was identified. Therefore, the land contamination potential is not anticipated.

6.4.11 The site visit included an inspection of the ESS located in the southwest area of Site B. The ground in this area was observed to be fully paved, and the only items present were equipment such as switchgear, LV board, cables, metering, and panels. No transformer was identified in the ESS, indicating that it does not pose any potential land contamination issues. Additionally, there are no anticipated hazardous materials or chemicals associated with the operation and maintenance of the ESS.

6.4.12 Site B is surrounded by Tai Hand Tung Recreational Ground (North), Mong Kok Stadium (East), and residential buildings (South and West). No potentially contaminated activities were recorded in stated areas except the Dangerous Goods Storage in Mong Kok Stadium. However, as described in section 6.4.9, a fully paved ground was observed in DG storage during site visit. Hence, off-site land contamination potential is not expected.

6.4.13 In conclusion, no industrial activities listed under the Guidance Notes have been identified at the Scheme area during the site inspections. The photo records of Site B are provided in **Appendix 6-3**.

6.5 Site Geology & Hydrogeology

6.5.1 According to Hong Kong Geological Survey (HKGS) Sheet 11 Solid and Superficial Geology (Hong Kong and Kowloon) Series HGM20 (2012 Edition II, Scale 1:20,000), the area within which the Sites are located is predominantly overlain by superficial deposits and Alluvium (Qfa) of Fanling Formation.

6.6 Inquiry with EPD & FSD

6.6.1 Information was requested from FSD and EPD's Regional Office (East) 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 (GD) license(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 6-2**.

6.6.2 **Table 6-2** below shows the summary of the responses from Government Departments.

Table 6-2 Summary of Response from Government Departments

Government Department	Response
Environmental Protection Department Regional Office (East)	No record of reported accidents of spillage / leakage of chemicals at or near the concerned sites. For chemical waste producer (CWP), the records were checked on August 2023. No CWP within the sites and only one CWP near the sites has been identified. • Best Living Elderly Home Limited o 3/F & Unit C and Unit D,4/F, Prince Commercial Building, 150 &152 Prince Edward Road West, Mong Koks, Kowloon o Homes for the Aged o The License is currently valid (August 2023)
Fire Services Department	No record of reported accidents of spillage / leakage of dangerous goods at or near the concerned sites. For dangerous goods (DG) license, the records were check on August 2023. No DG license within the sites and storages with DG license near the sites has been identified. • Mong Kok Stadium o Unleaded motor spirit o Light Diesel o Paint o Thinner

6.6.3 Base on the CWP records, there is no CWP within the Scheme area. A CWP record is identified at 3/F of Prince Commercial Building, and it is unlikely that a CWP on 3/F will pollutant the land during its operation.

6.6.4 Base on the records of DG license, there is no DG license within the Sites. However, a DG Storage with DG license has been identified at Mong Kok Stadium, which is 25.5 metre from the closest point of scheme boundary. According to the site walkover conducted in February 2024, the DG storage at Mong Kok Stadium was fully paved with concrete. No crack or fissure was observed. In addition, no sign of oil stain or chemical leakage was identified. Although close distance (min. ~40m) between scheme boundary and DG Storage is recorded, good paving condition (i.e. no cracks on pavement and no sign of oil stains) in DG storage is observed. Hence, offsite land contamination potential from DG storage at Mong Kok Stadium is not expected. The photo record of DG storage is provided in **Appendix 6-3**.

6.7 Conclusion

6.7.1 The available information from aerial photos, site inspections, and records from authorities suggests that potential land contamination activities were recorded for the Scheme area and its surroundings. Based on findings from historical land use and existing uses and site conditions identified during site visits, potential land contamination is unlikely to arise from the activities of the Scheme area. The necessity of conducting re-appraisal and further site walkovers will be determined after land resumption.

7 CONCLUSION

7.1.1 An Environmental Assessment has been carried out to evaluate the potential environmental benefits and impacts likely to arise from the 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.

Air Quality

7.1.2 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 and external facades of non-residential area comply with the AQOs. Therefore, no adverse air quality impact due to openable windows for residential flats and fresh air intake for non-residential areas of the Scheme is anticipated.

7.1.3 For Site A1, there is a small exceedance zone at the southwestern corner within the site which is basically at the pavement area. No active activity is anticipated at that area in the future.

Noise

7.1.4 The overall noise impact during the construction phase is considered insignificant. Subject to detailed site works arrangement, mitigation measures shall be implemented in accordance with ProPECC PN 1/24 during construction to minimize construction noise impact on the nearby NSRs.

7.1.5 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 minimized by buildings disposition, buildings orientation and windows locations. In the base scenario, ~83% of flats comply with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic window, acoustic balcony and fixed glazing are incorporated into the proposed development, the compliance rate by flat has been increased to ~97%. 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 its anticipated result, of which baffle type acoustic window, acoustic balcony and fixed glazing have been adopted to achieve the noise compliance level. It should be noted that the actual layout in the future proposed development will be subject to detailed design, site constraints and feasibility.

7.1.6 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 planned fixed noise source from the proposed Scheme should not induce any adverse noise impact when the maximum allowable SWLs has been implemented properly.

7.1.7 For railway noise, the HKPSG recommended 85m buffer distance is met for all residential flats at Sites A1 & B. Based on a simplified railway noise calculation, it is expected that the railway noise level at the noise sensitive receivers of the Site will comply with the relevant criteria. Therefore, no adverse noise impact is anticipated from the East Rail Line.

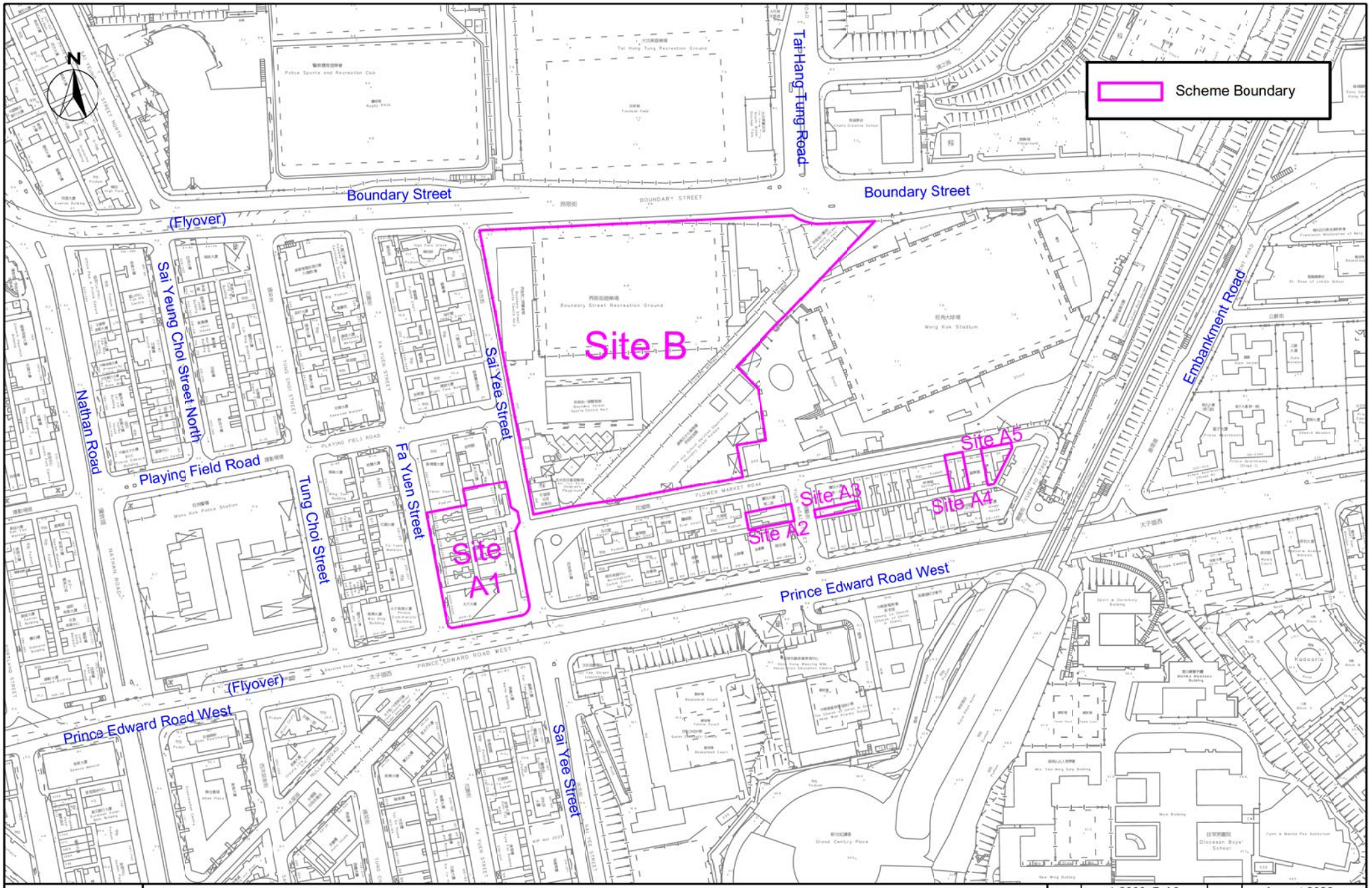
Waste Management

7.1.8 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, 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.

Land Contamination

7.1.9 The available information from aerial photos, site inspections, and records from authorities suggests that potential land contamination activities were recorded for the Scheme area and its surroundings. Based on findings from historical land use, potential land contamination issues may arise from the electrical sub-station (Site B), and further investigation will be conducted during a later stage. Based on the existing uses identified during site visits, potential land contamination is unlikely to arise from the activities of the Scheme area. The necessity of conducting re-appraisal and further site walkovers will be determined after land resumption.

FIGURES



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location Plan

SCALE	1:2000 @ A3	DATE	August 2023
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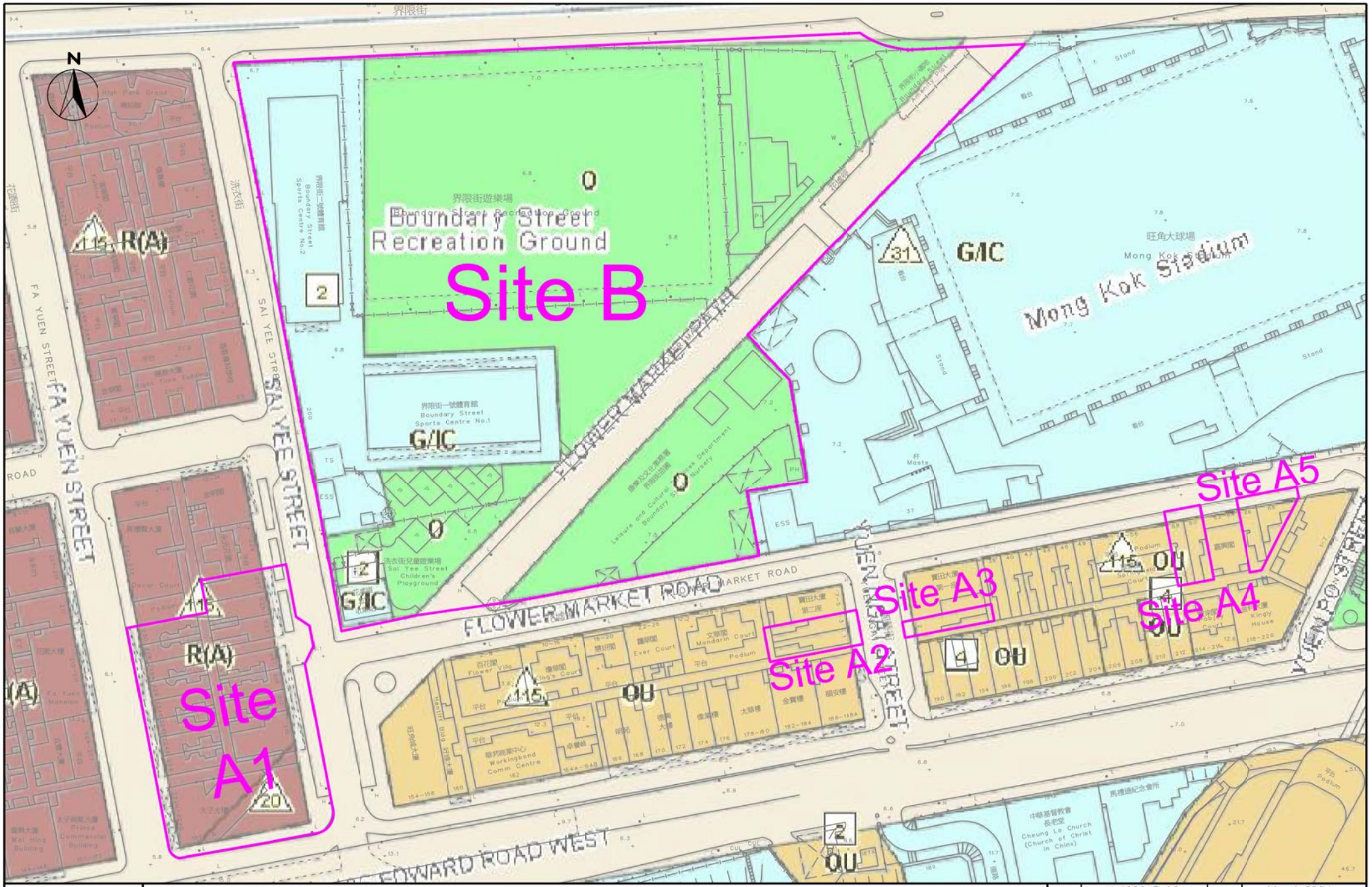
JOB No.		DRAWING No.	REV
	IA19021-YMAA101P1	Fig. 2-1	-



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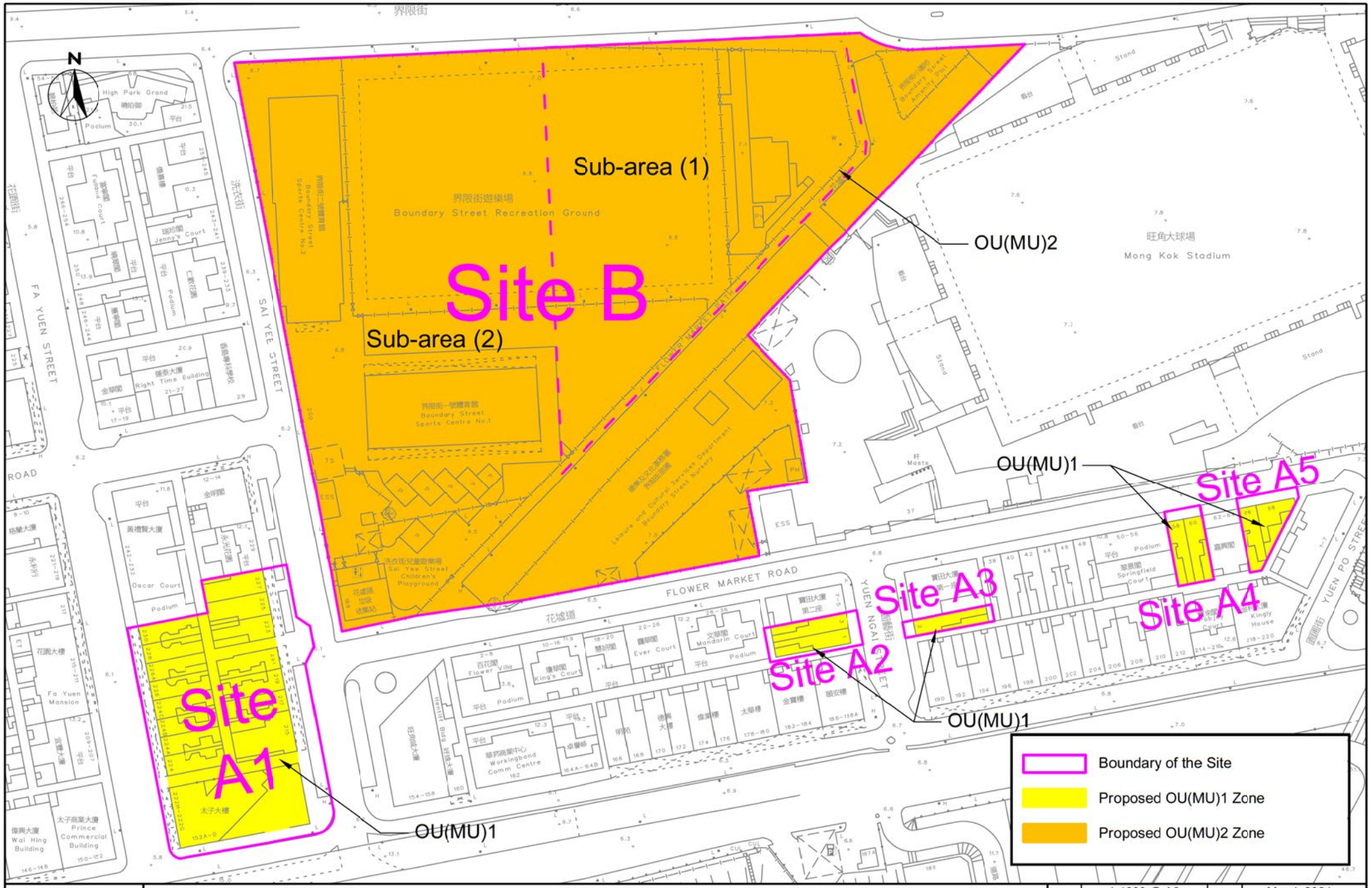
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Outline Zoning Plan (Existing)

SCALE	1:1000 @ A3	DATE	March 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 2-2a
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Zoning of the Sites

SCALE	1:1000 @ A3	DATE	March 2024
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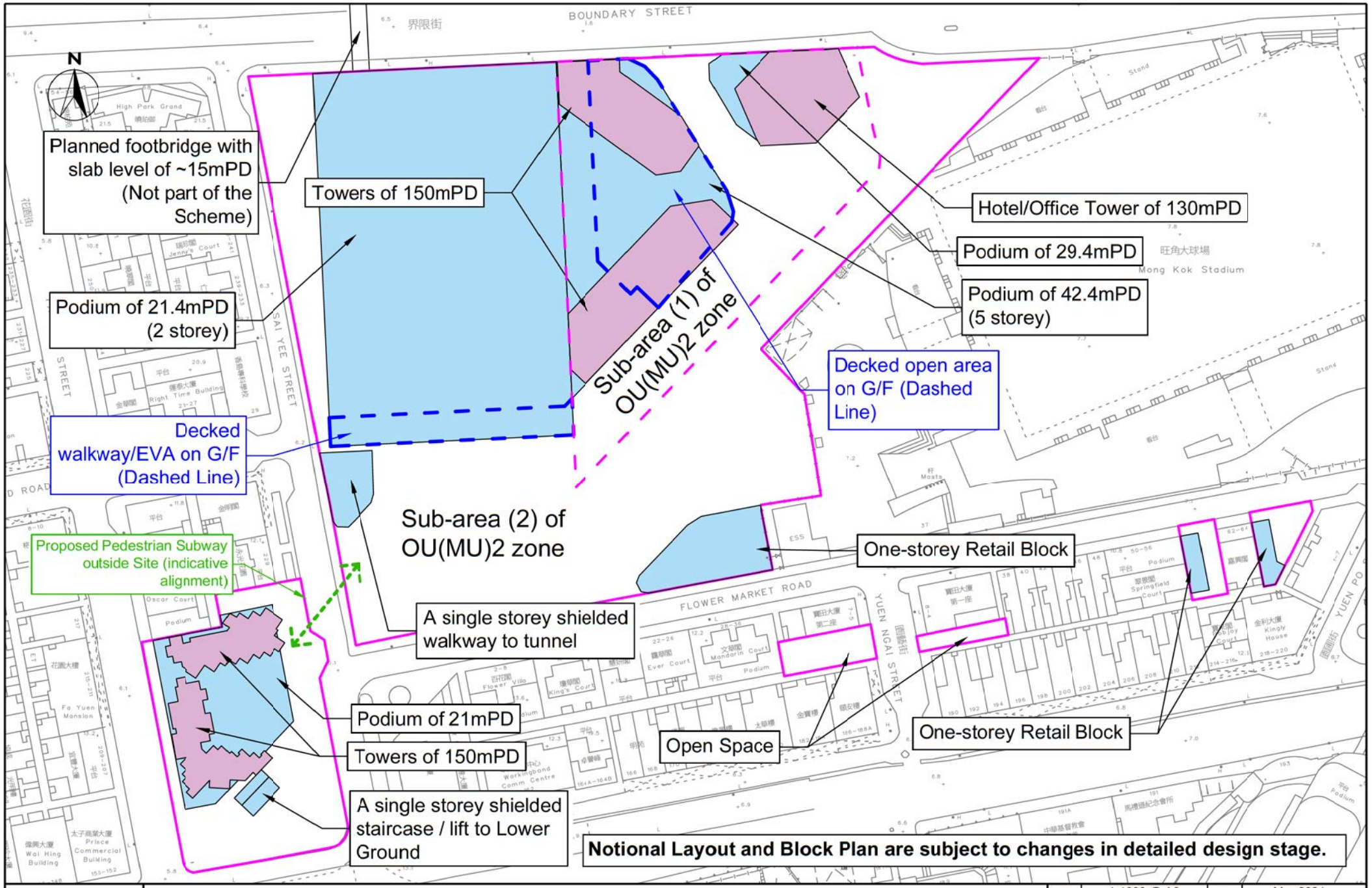
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 2-2b
		REV	-



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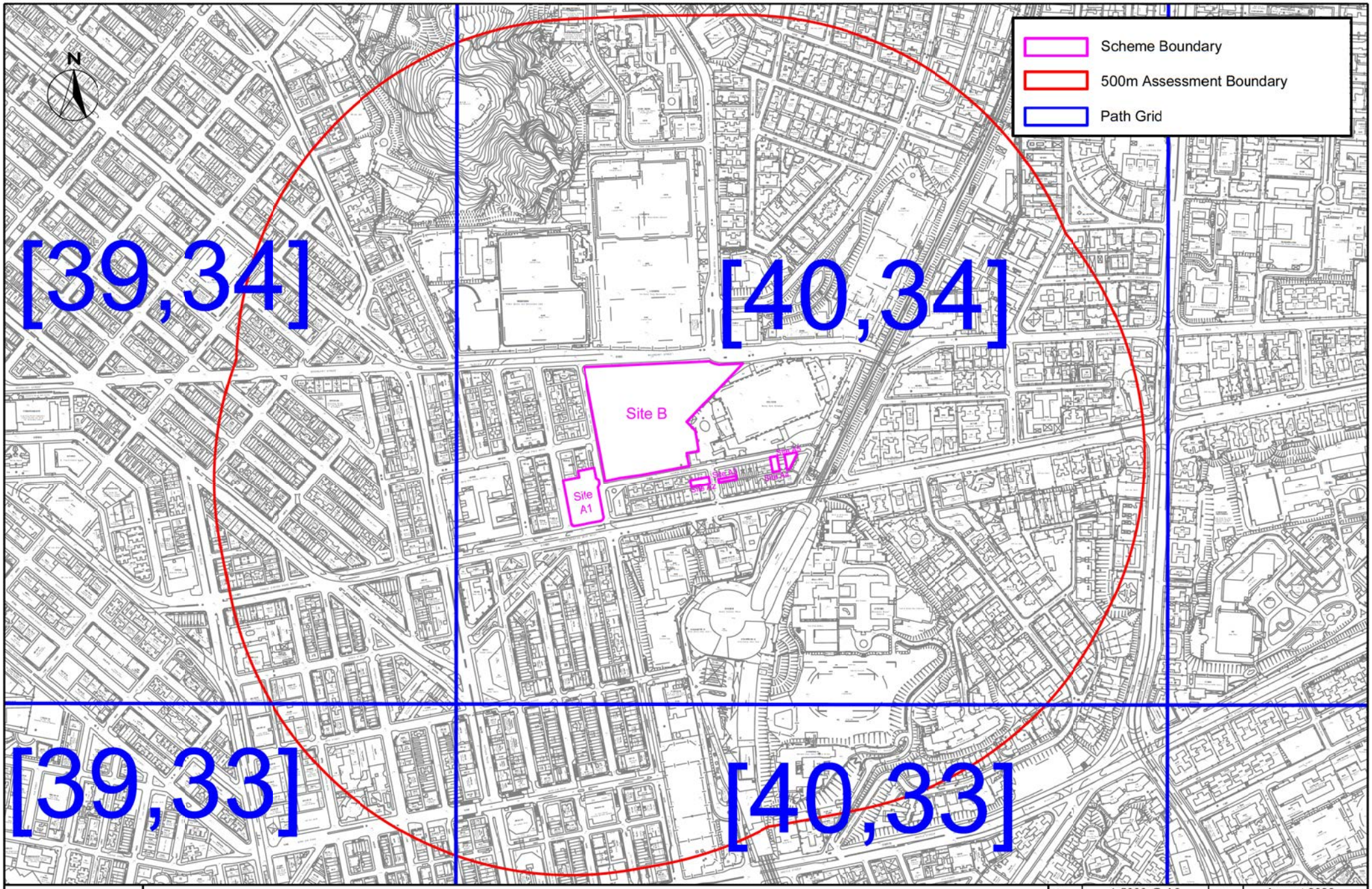
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Notional Plan of the Proposed Scheme

SCALE	1:1000 @ A3	DATE	Mar 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 2-3
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Boundary (Air Quality)

SCALE	1:5000 @ A3	DATE	August 2023
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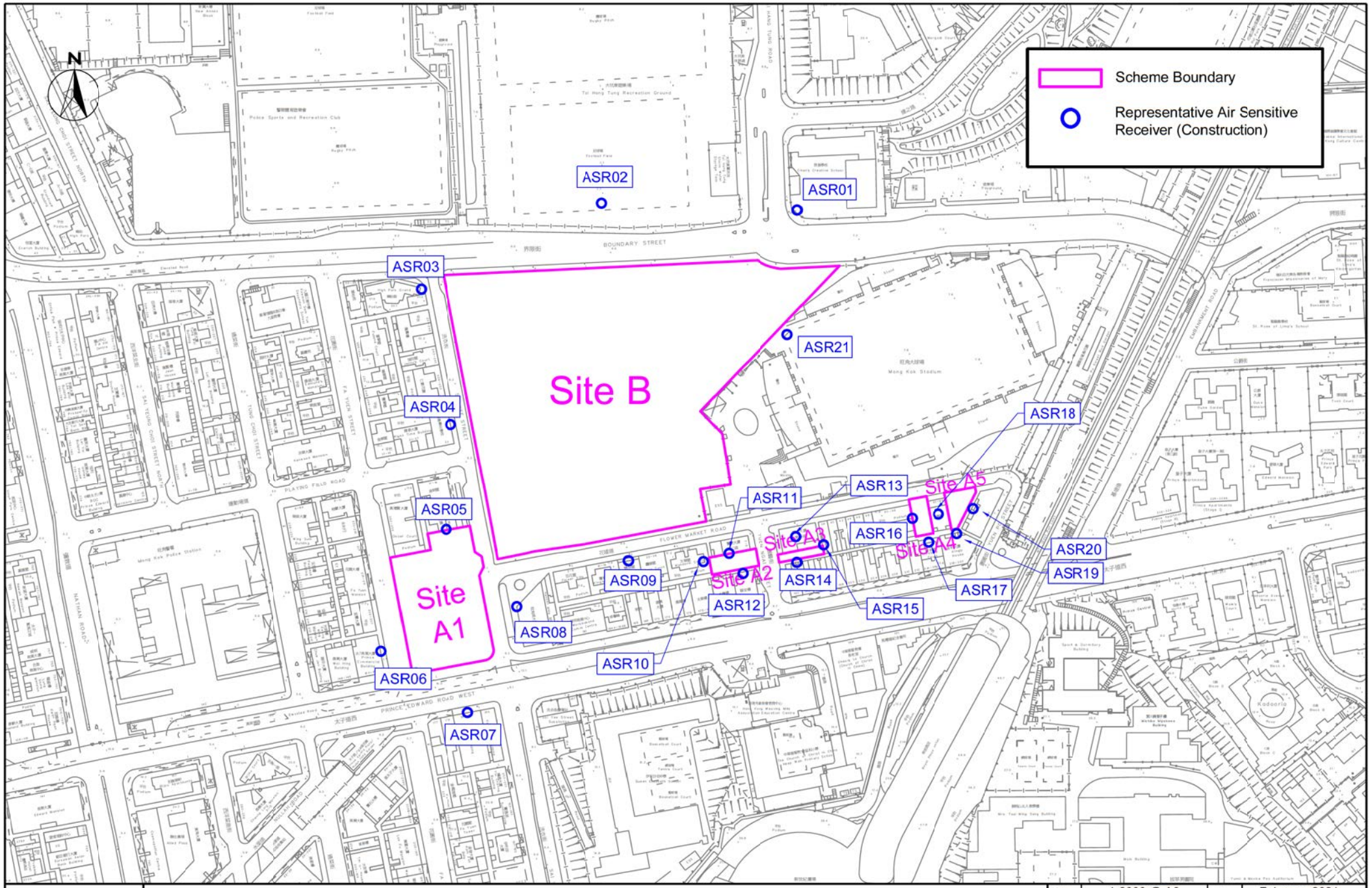
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-1
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Representative Air Sensitive Receiver (Construction Phase)

SCALE	1:2000 @ A3	DATE	February 2024
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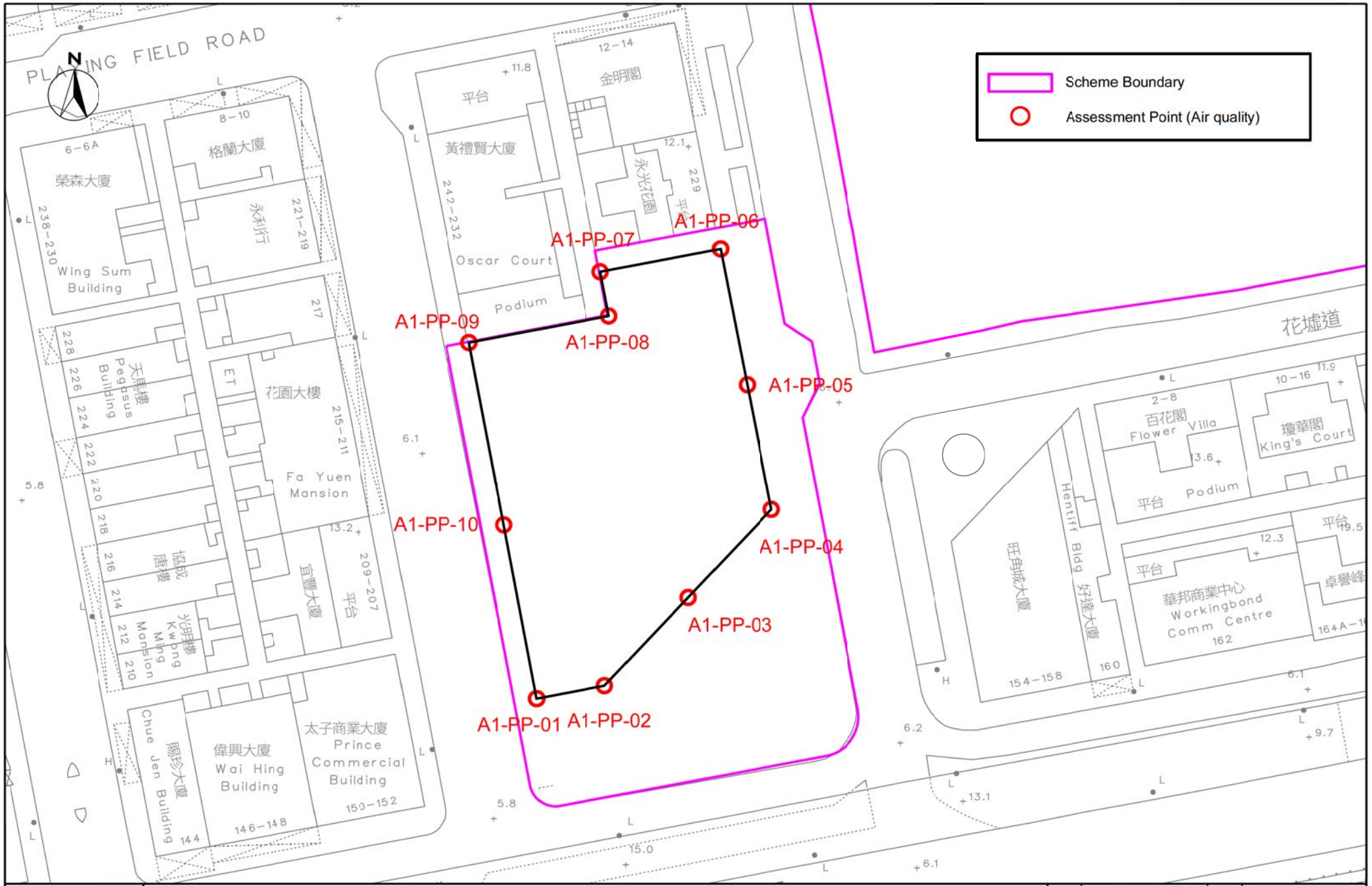
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-2
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Site A1 - Podium

SCALE	1:500 @ A3	DATE	August 2023
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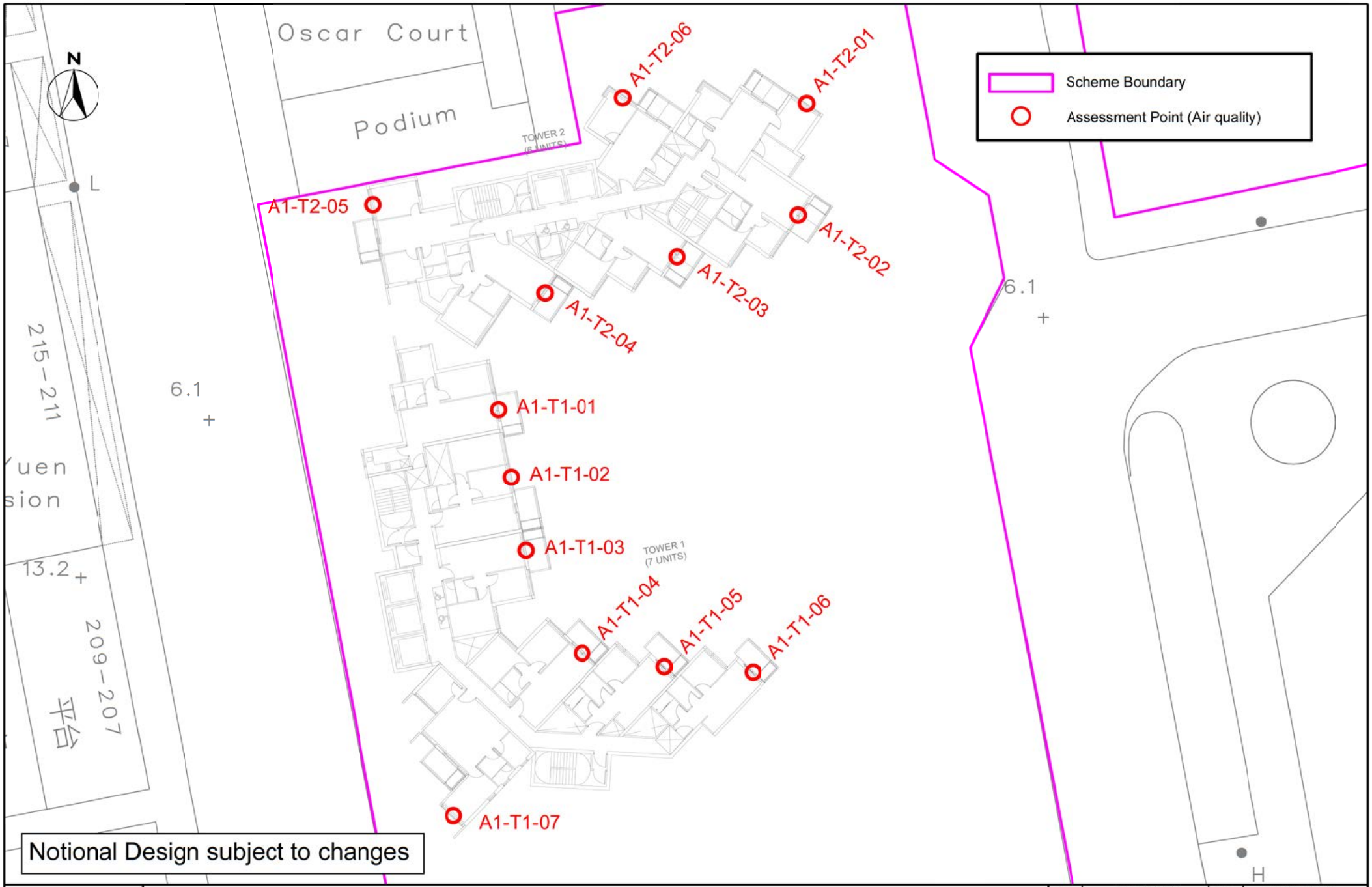
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Site A1 - Residential Towers

SCALE	1:250 @ A3	DATE	August 2023
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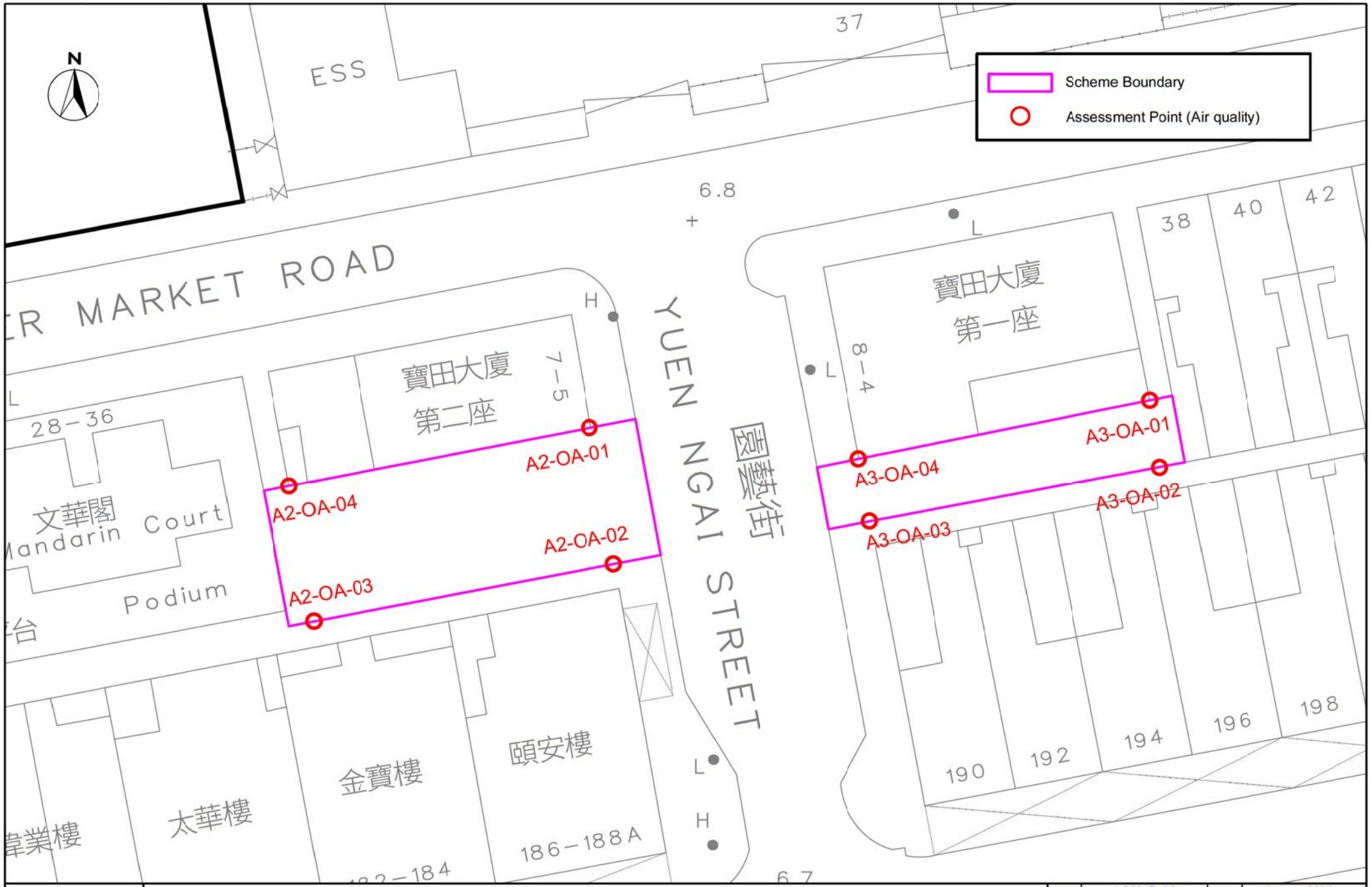
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-3b
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Sites A2 & A3 - Open Space

SCALE	1:250 @ A3	DATE	August 2023
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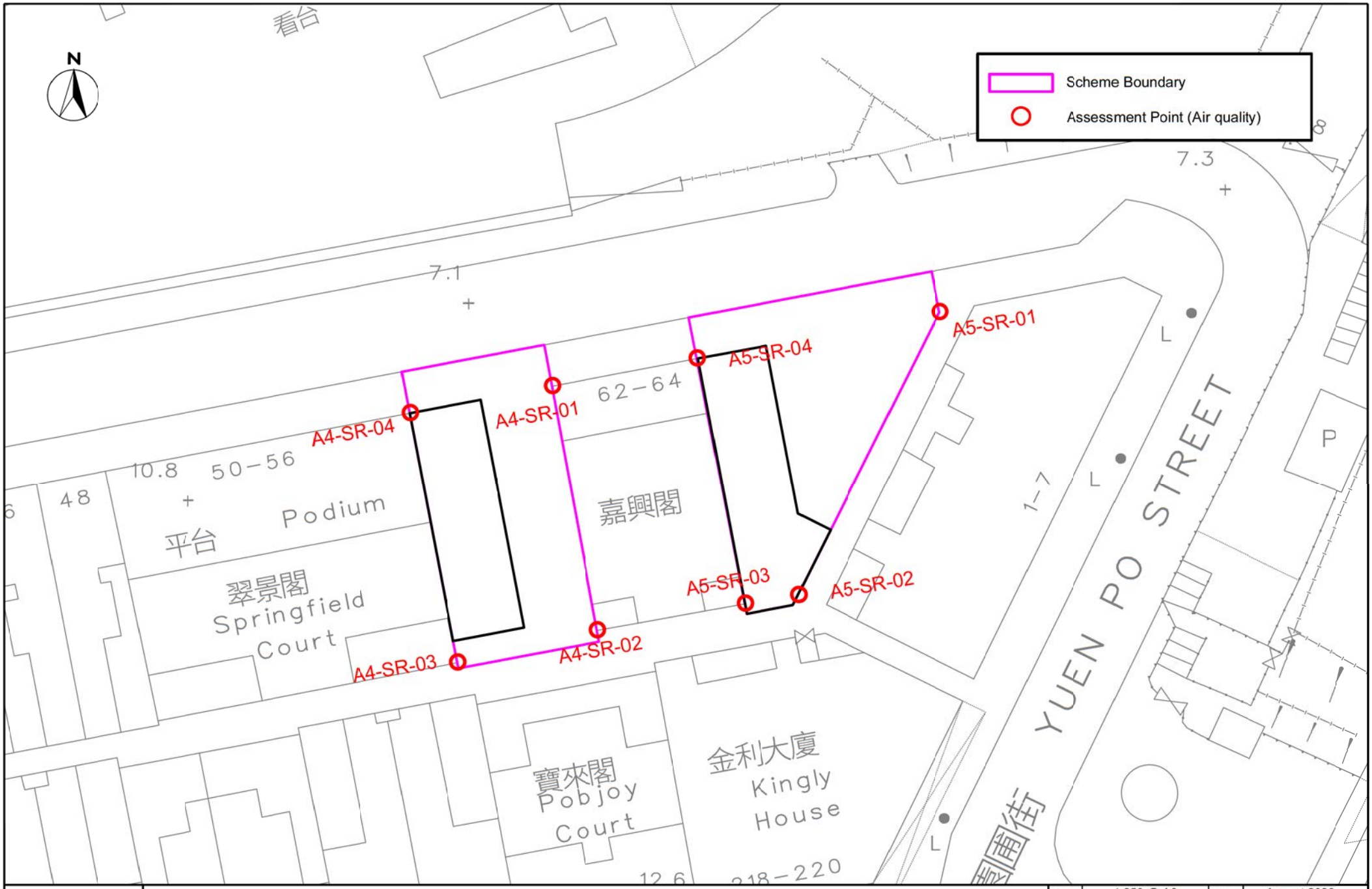
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-3c
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Sites A4 & A5 - Single Storey Retail Block

SCALE	1:250 @ A3	DATE	August 2023
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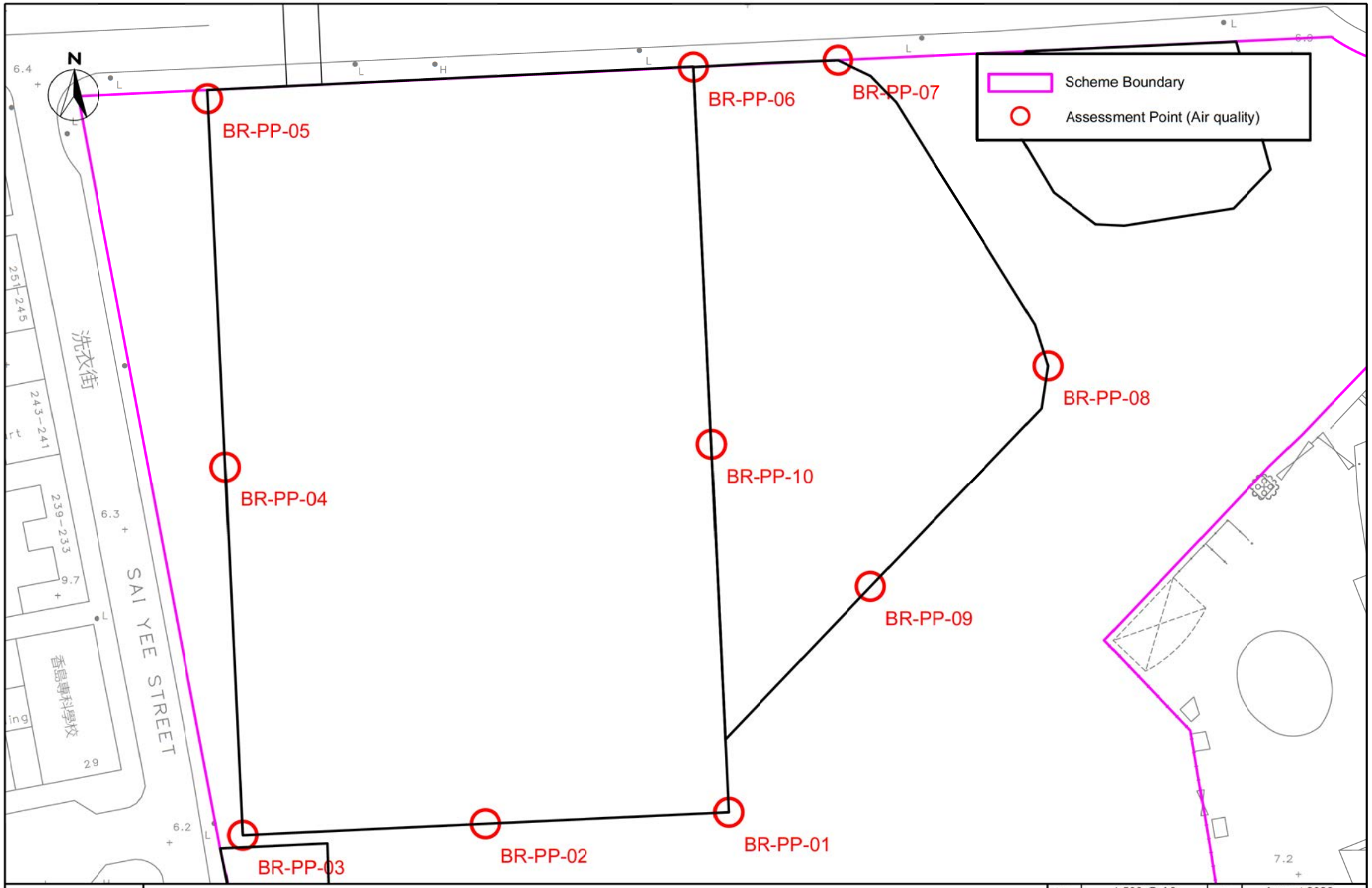
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Site B - Podium (Western Portion)

SCALE	1:500 @ A3	DATE	August 2023
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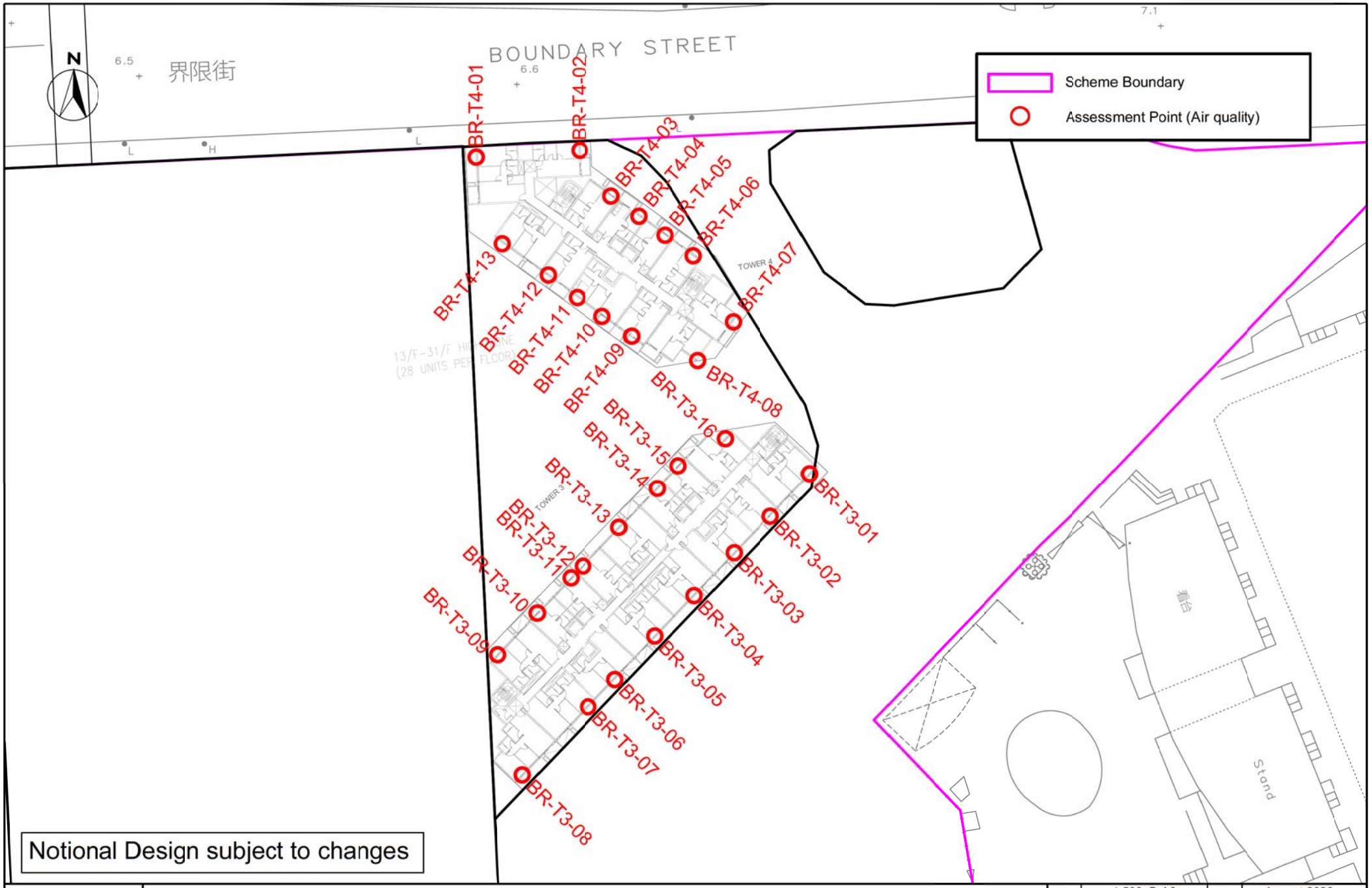
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-3e
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Site B - Residential Towers

SCALE	1:500 @ A3	DATE	August 2023
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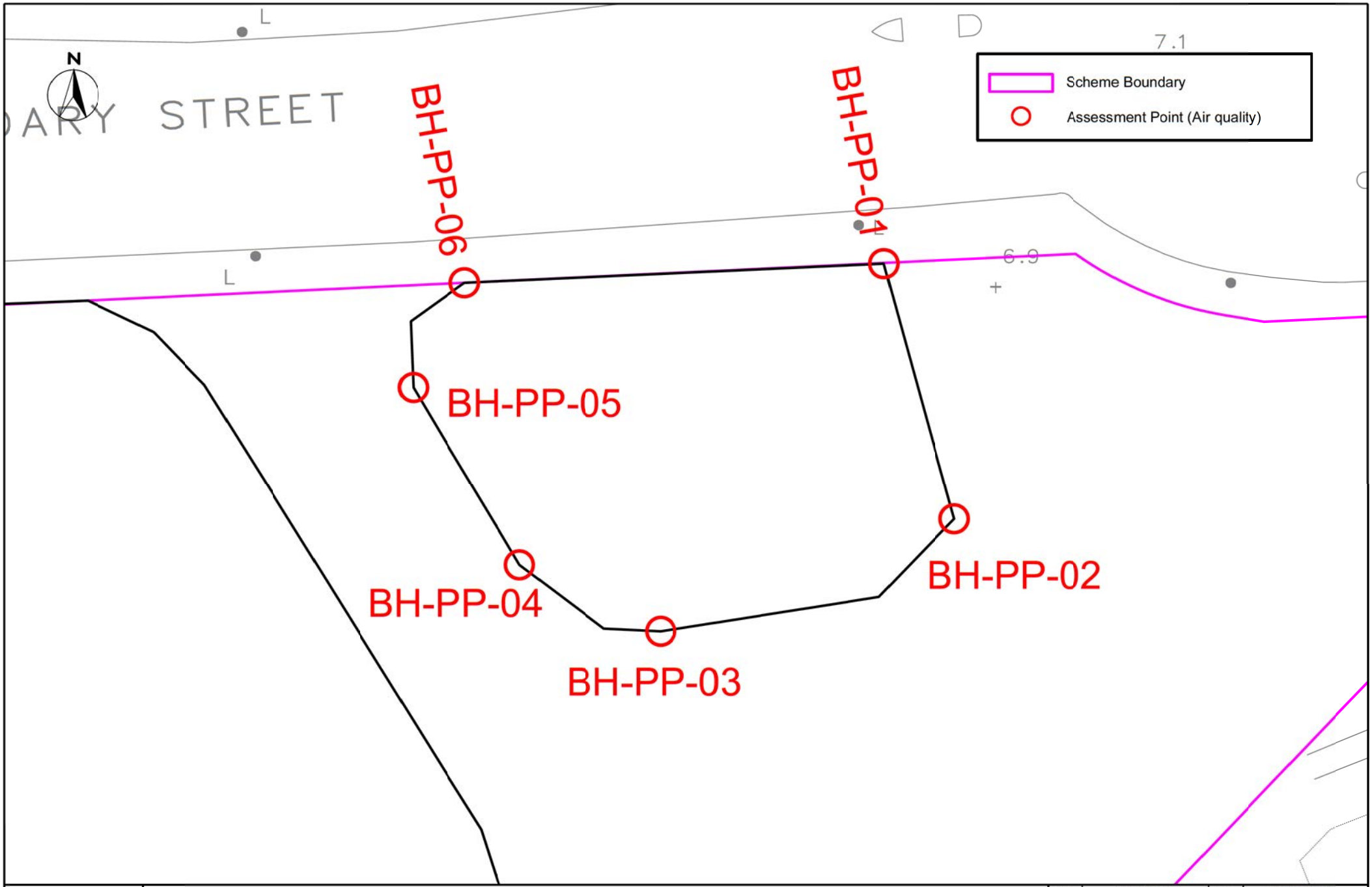
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Site B - Podium (Eastern Portion)

SCALE	1:250 @ A3	DATE	August 2023
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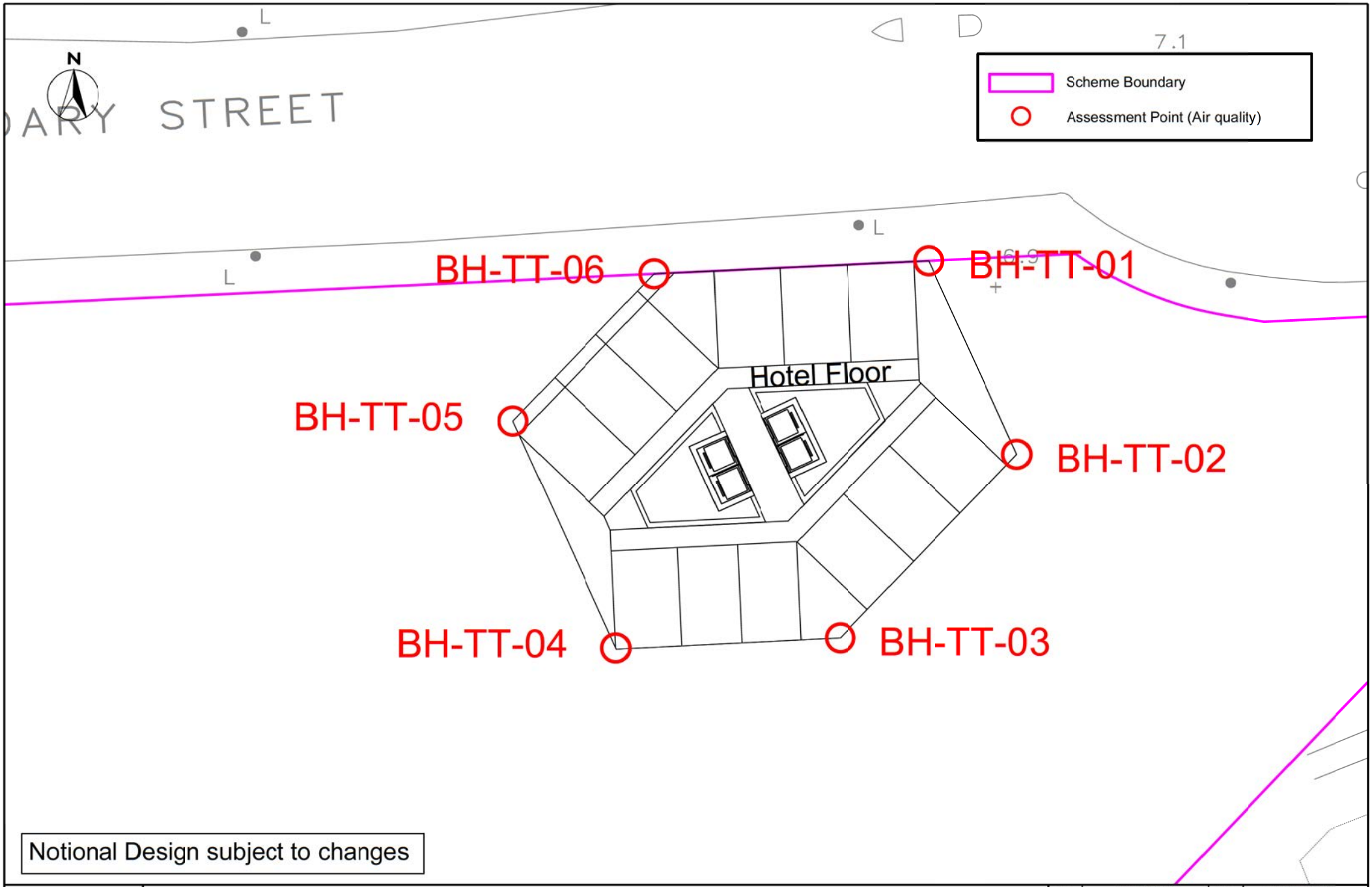
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-3g
		REV	-



Notional Design subject to changes

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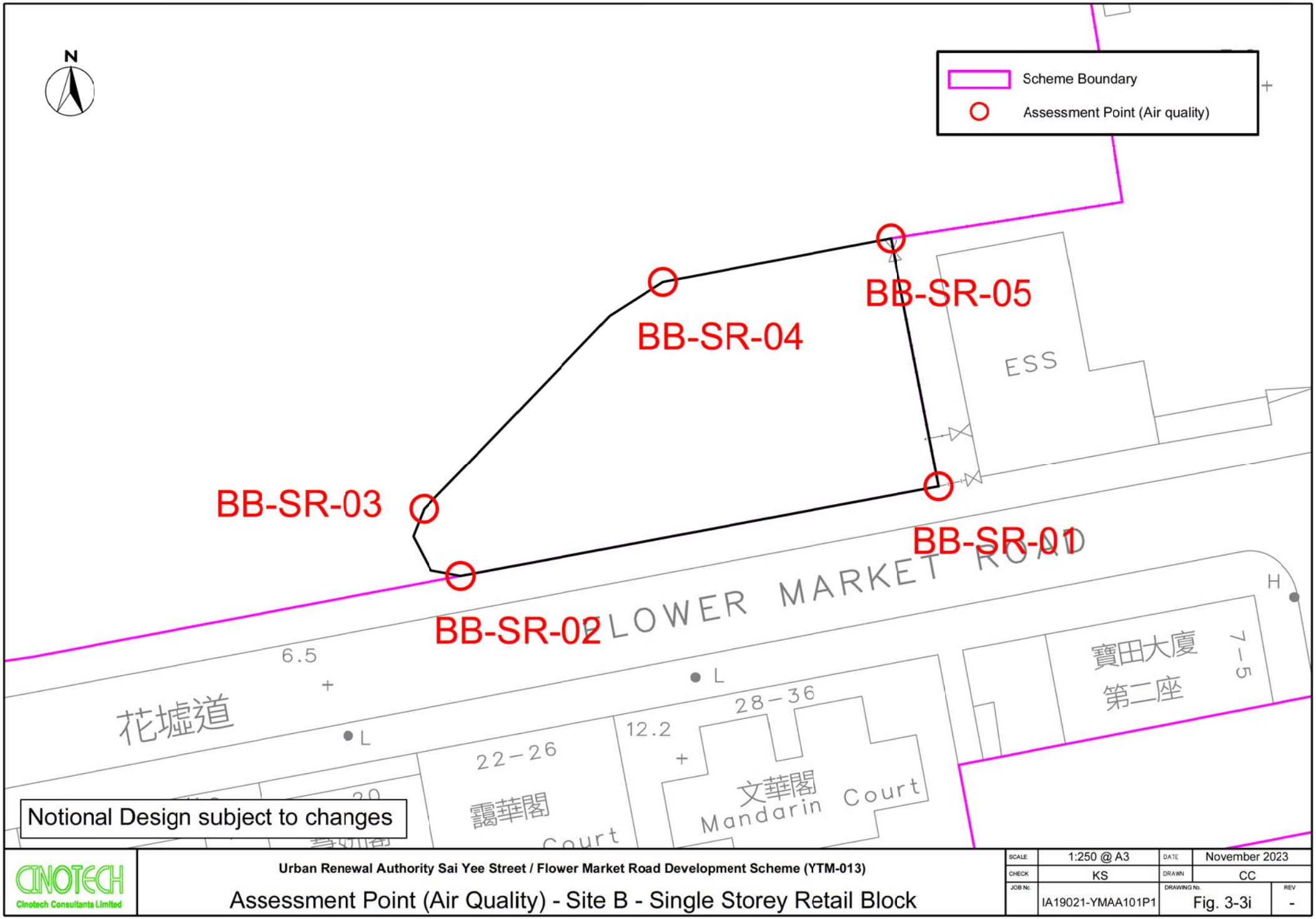
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Site B - Hotel/Office Tower

SCALE	1:250 @ A3	DATE	August 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-3h
		REV	-



CINOTECH
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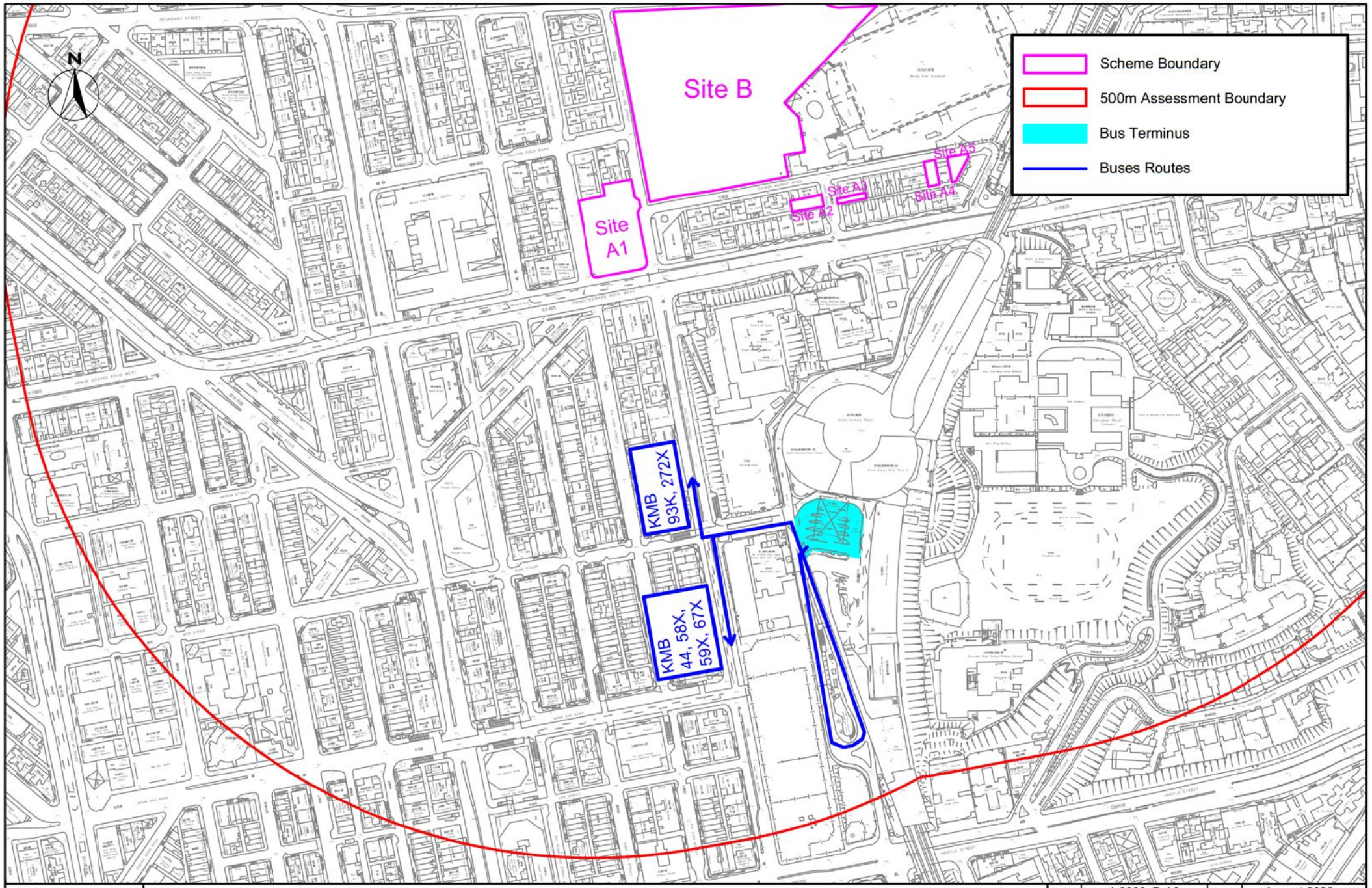
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Assessment Point (Air Quality) - Site B - Single Storey Retail Block

SCALE	1:250 @ A3	DATE	November 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-3i
		REV	-

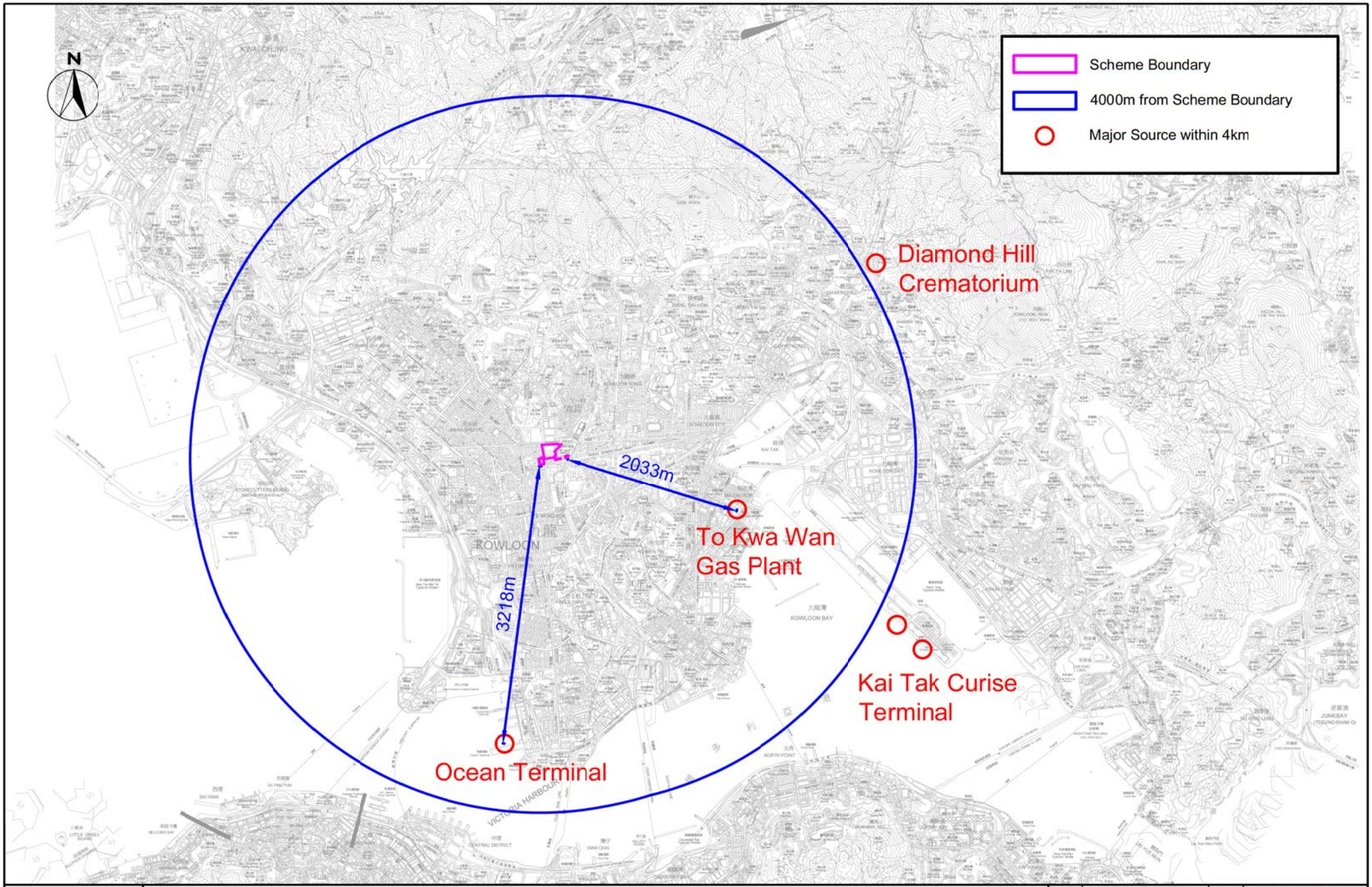


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Mong Kok East Station Bus Terminus

SCALE	1:3000 @ A3	DATE	August 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-4
		REV	-

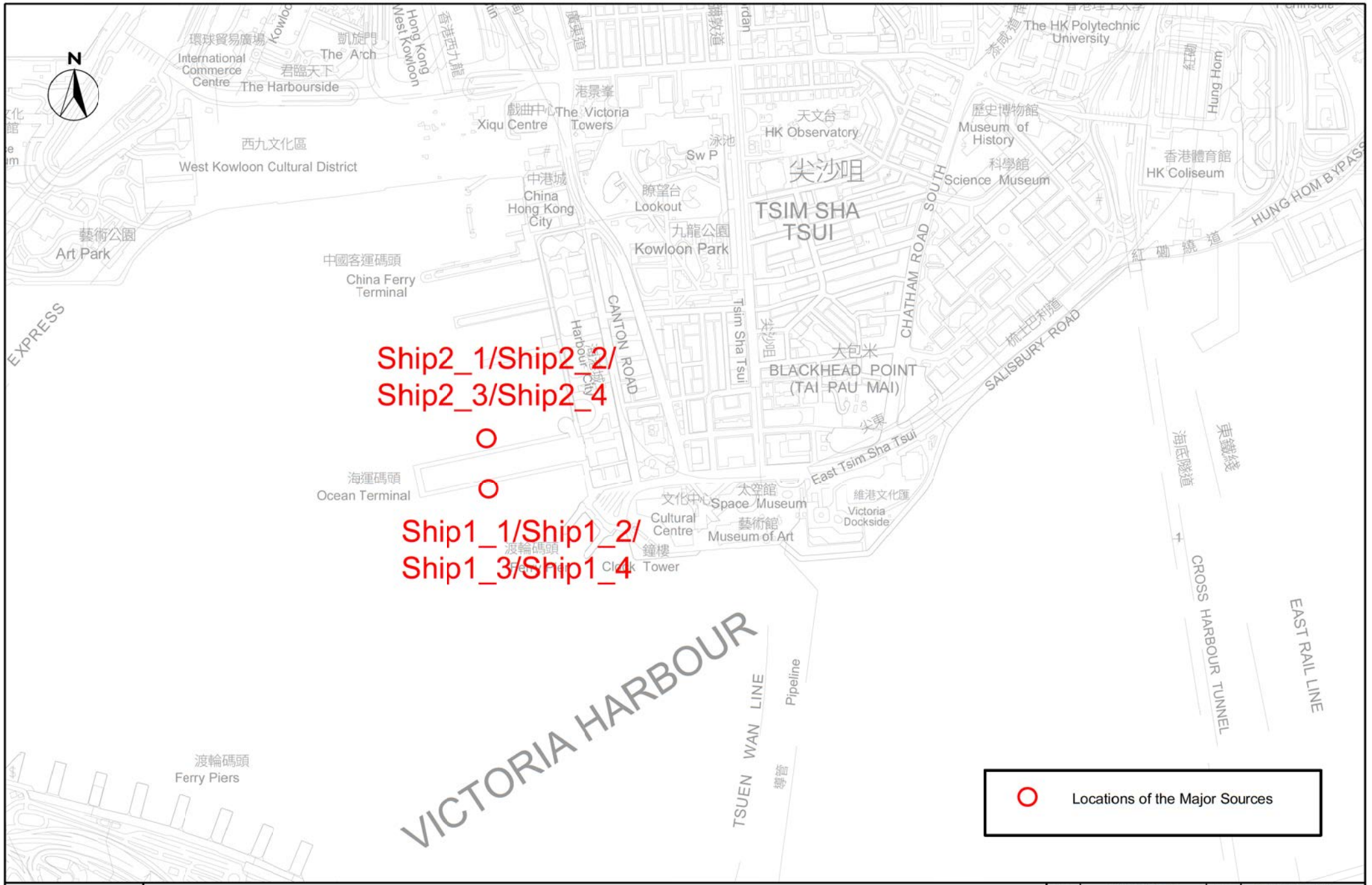


CINOTECH
Cinotech Consultants Limited

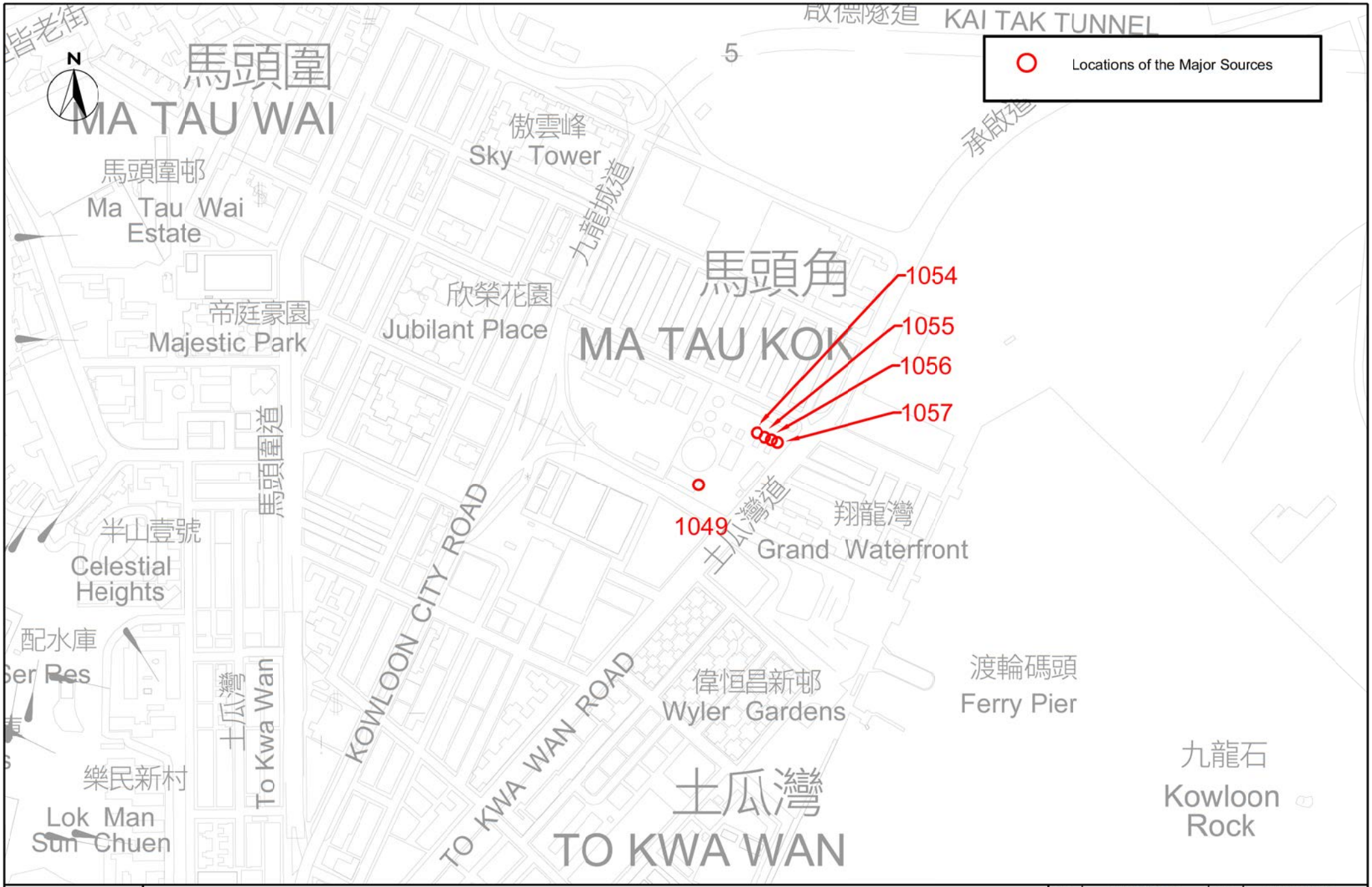
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Major Air Pollutant Sources within 4km

SCALE	1:40000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-5a
		REV	-



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)		
	Major Air Pollutant Source - Ocean Terminal		
SCALE	1:8000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-5b
		REV	-

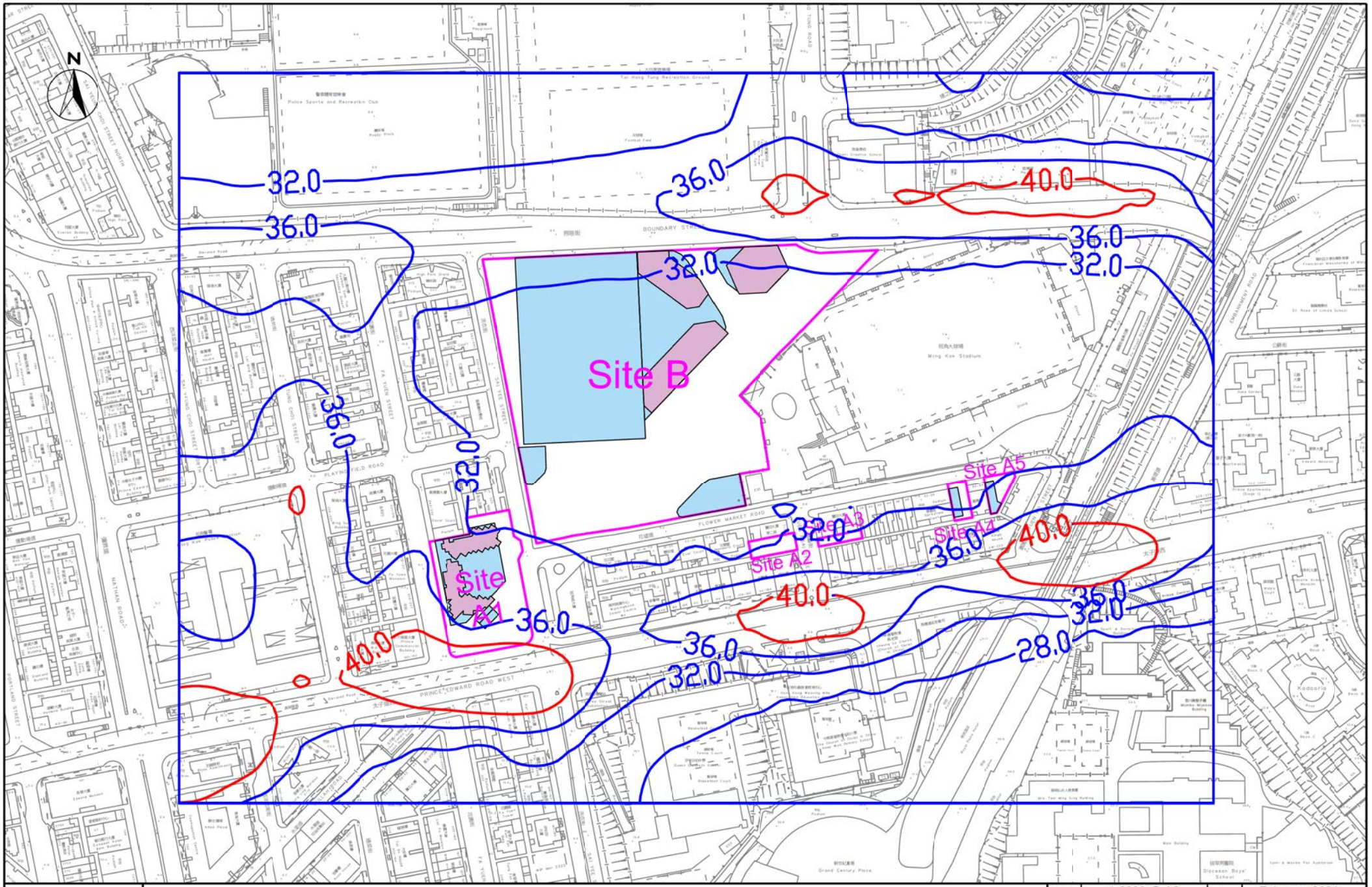


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Major Air Pollutant Source - To Kwa Wan Gas Plant

SCALE	1:4000 @ A3	DATE	August 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-5c
		REV	-

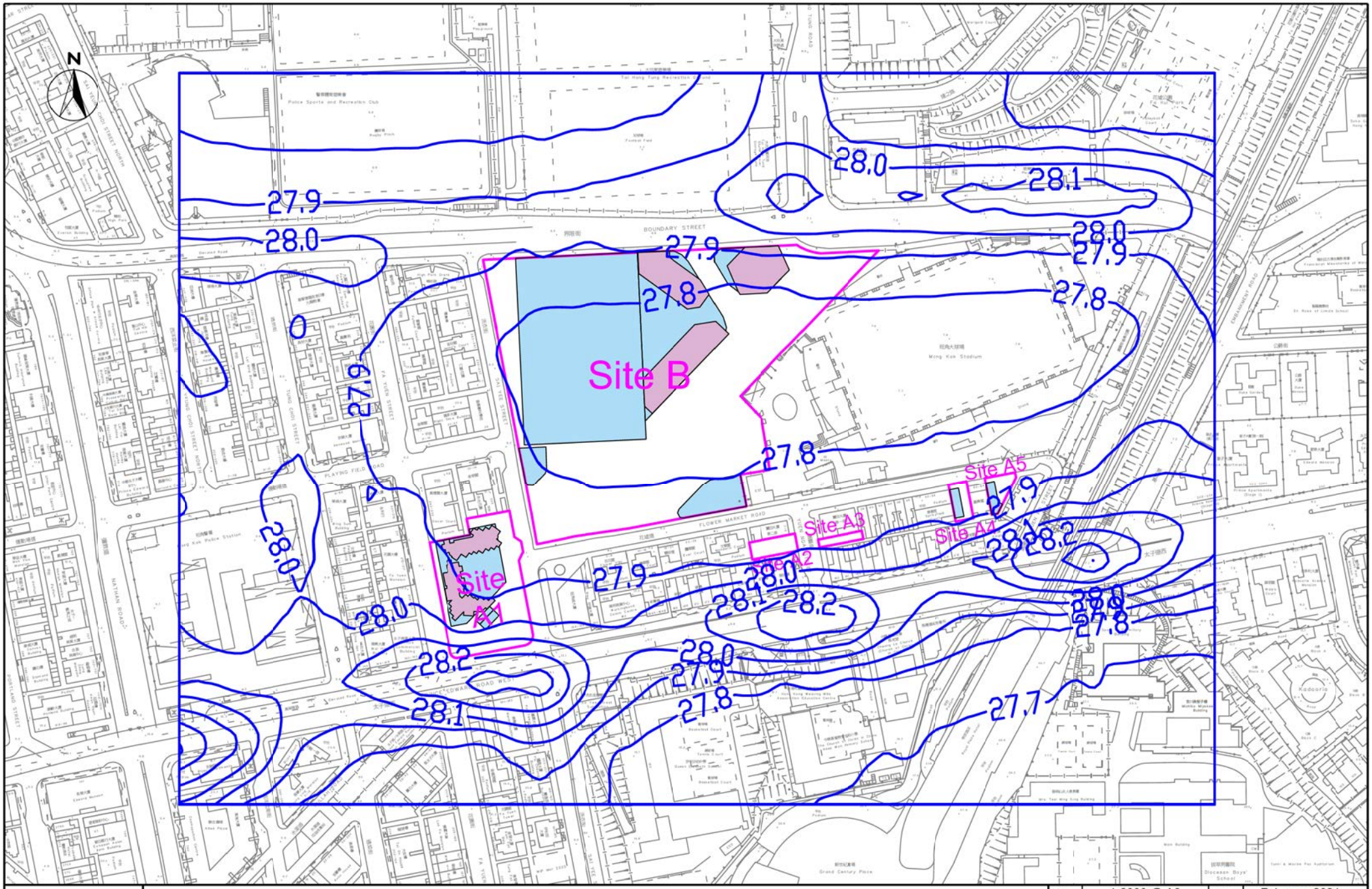


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Annual Averaged NO_2 concentration at 1.5mAG ($\mu g/m^3$)

SCALE	1:2000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-6a
		REV	-

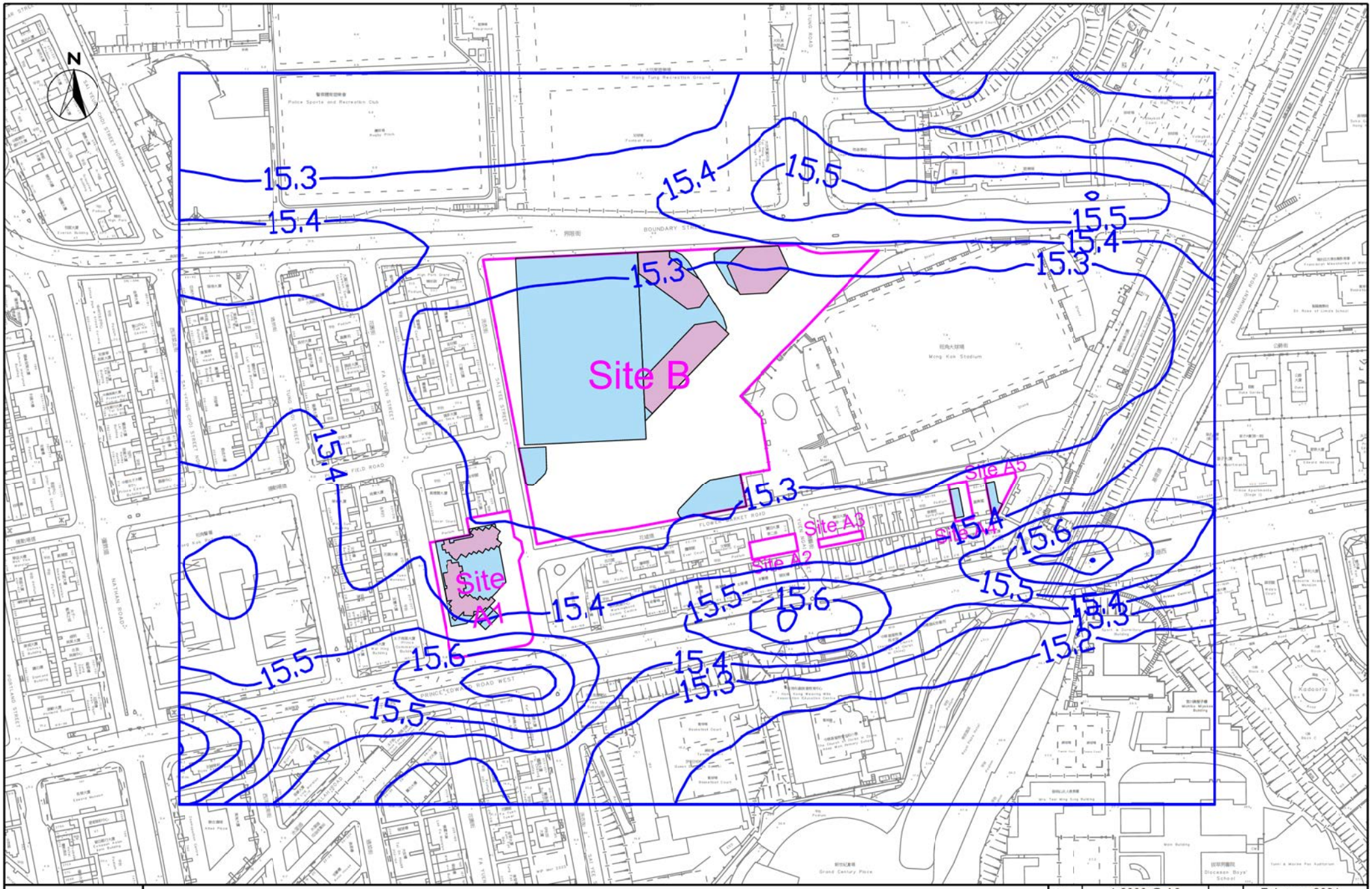


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Annual Averaged RSP concentration at 1.5mAG (μg/m^3)

SCALE	1:2000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-6b
		REV	-



CINOTECH
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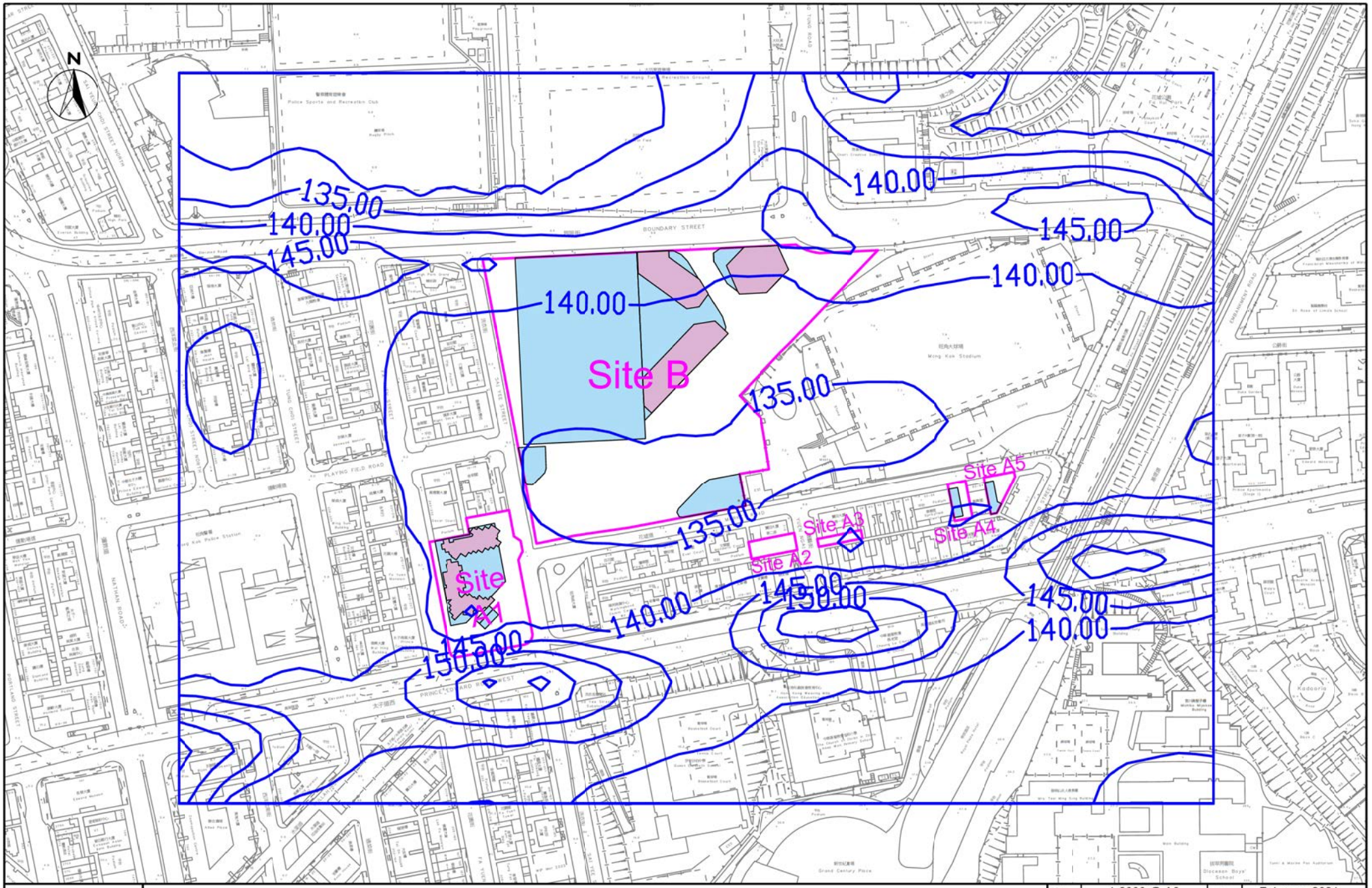
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Annual Averaged FSP concentration at 1.5mAG (μg/m^3)

SCALE	1:2000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-6c
		REV	-



CINOTECH
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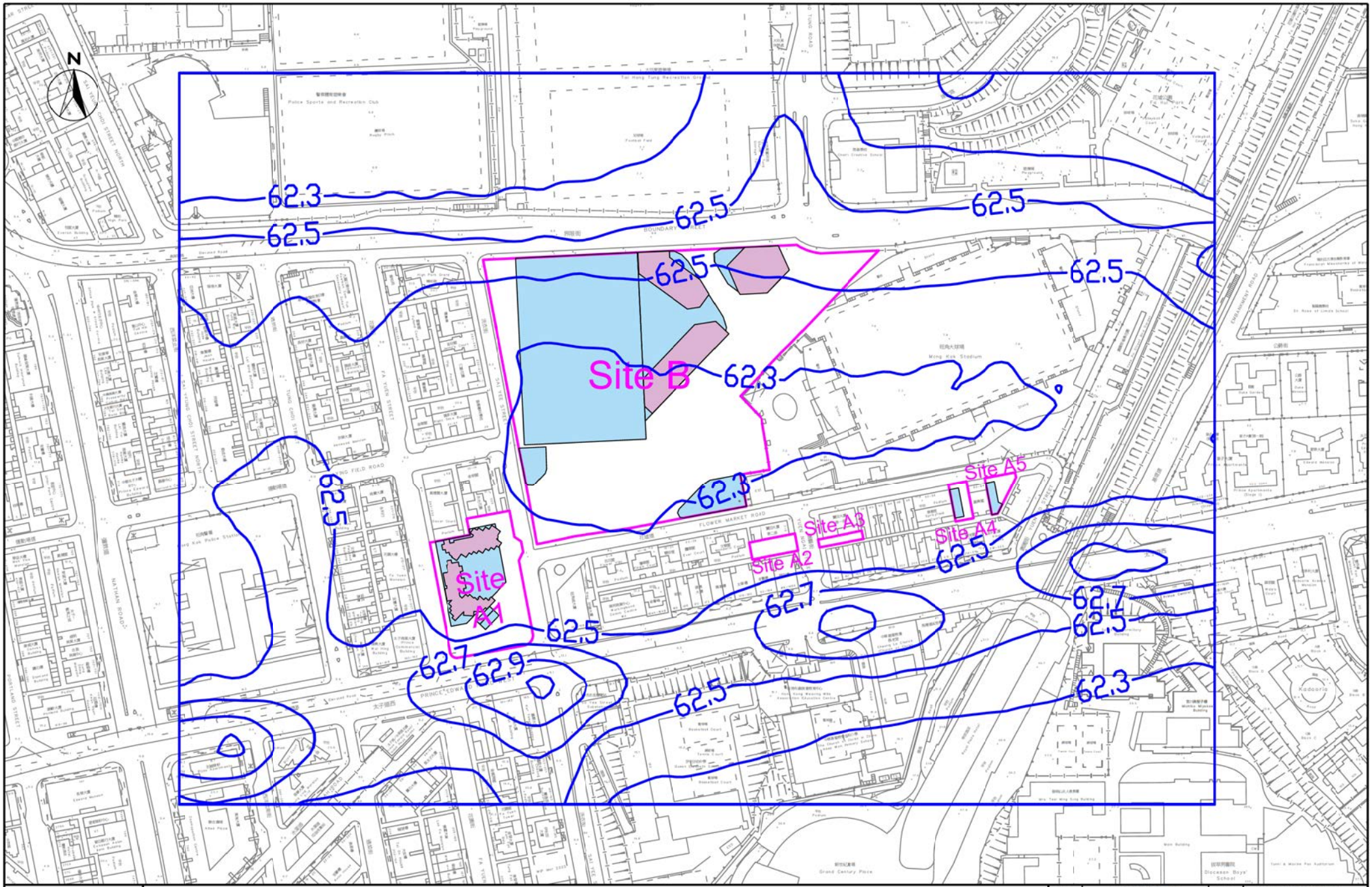
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Hourly 19th Maximum Averaged NO_2 concentration at 1.5mAG ($\mu g/m^3$)

SCALE	1:2000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-6d
		REV	-

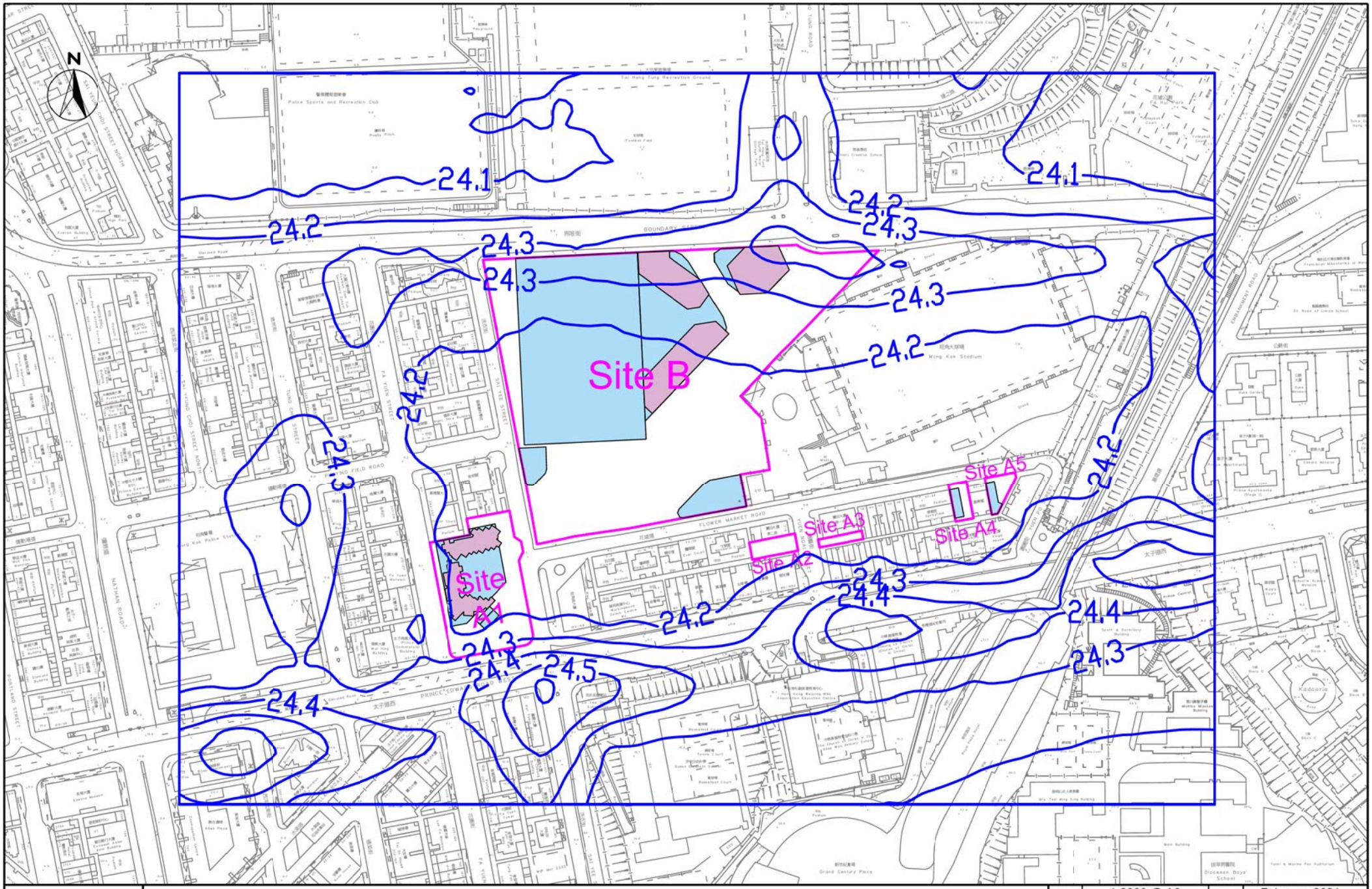


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Daily 10th Maximum RSP concentration at 1.5mAG (μg/m^3)

SCALE	1:2000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-6e
		REV	-

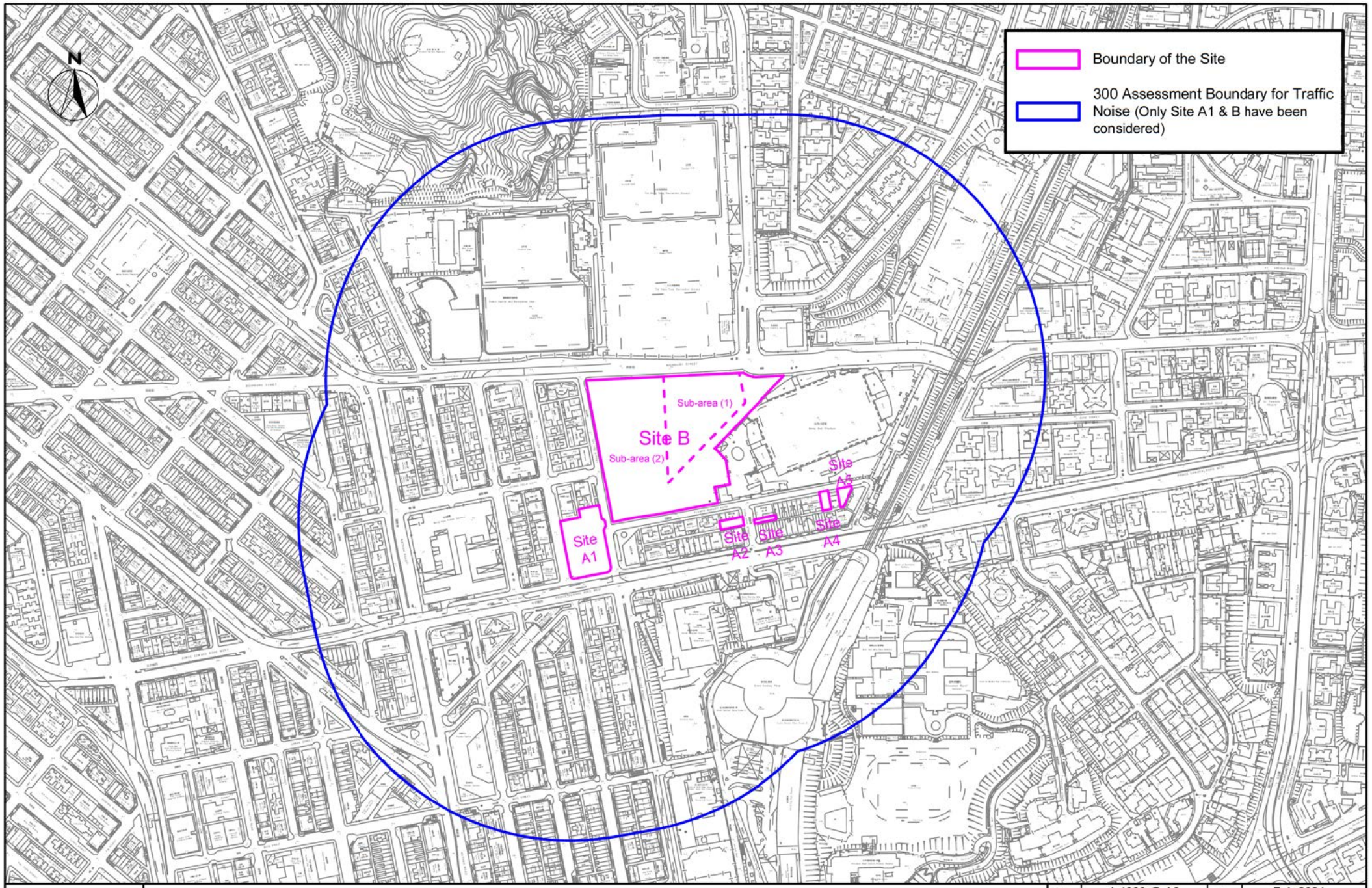


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Daily 10th Maximum FSP concentration at 1.5mAG (μg/m^3)

SCALE	1:2000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 3-6f
		REV	-

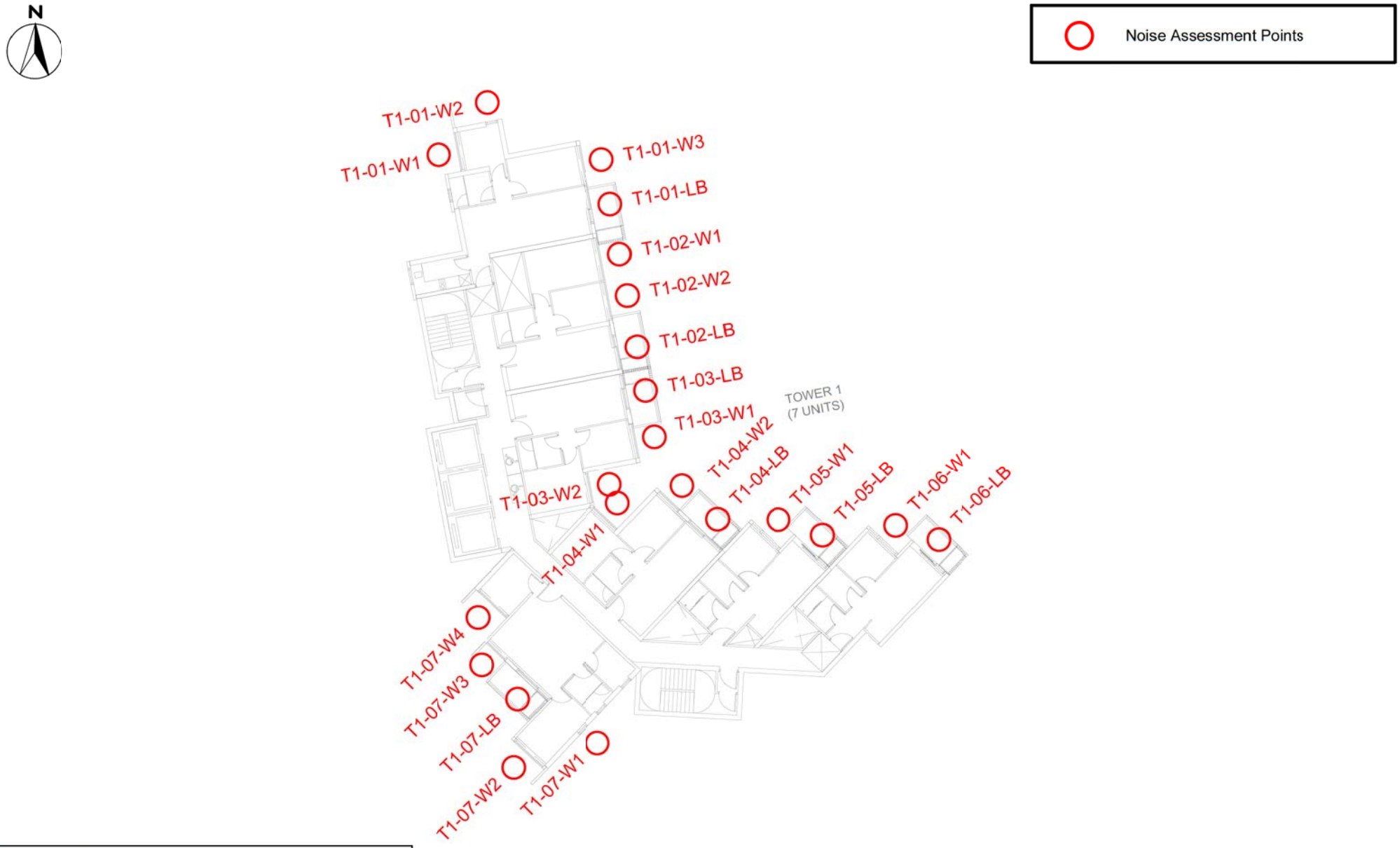


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

300m Assessment Boundary for Traffic Noise

SCALE	1:4000 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-1
		REV	-

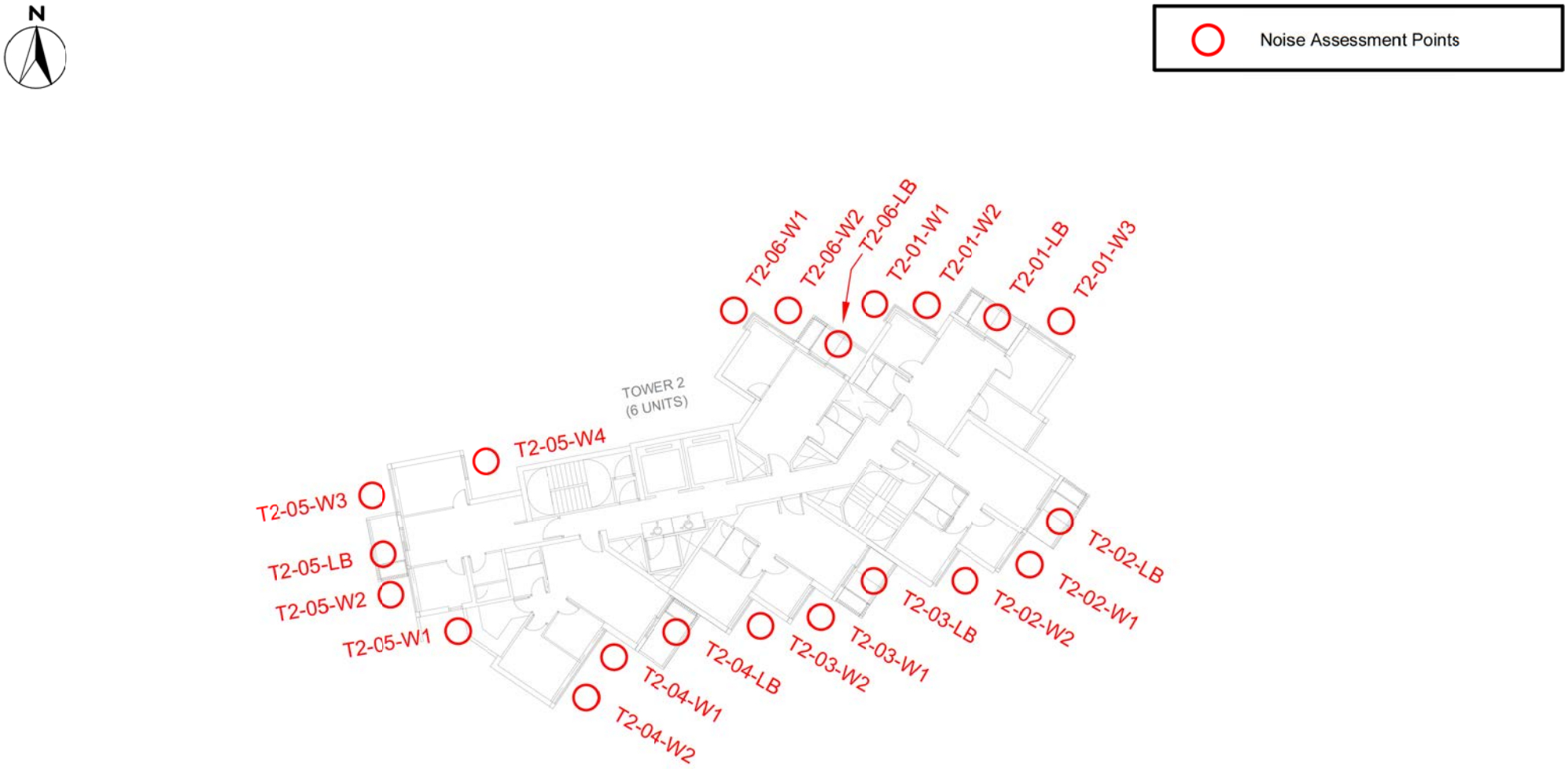


Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Noise Assessment Points for Traffic Noise (Tower 1)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-2a
		REV	-



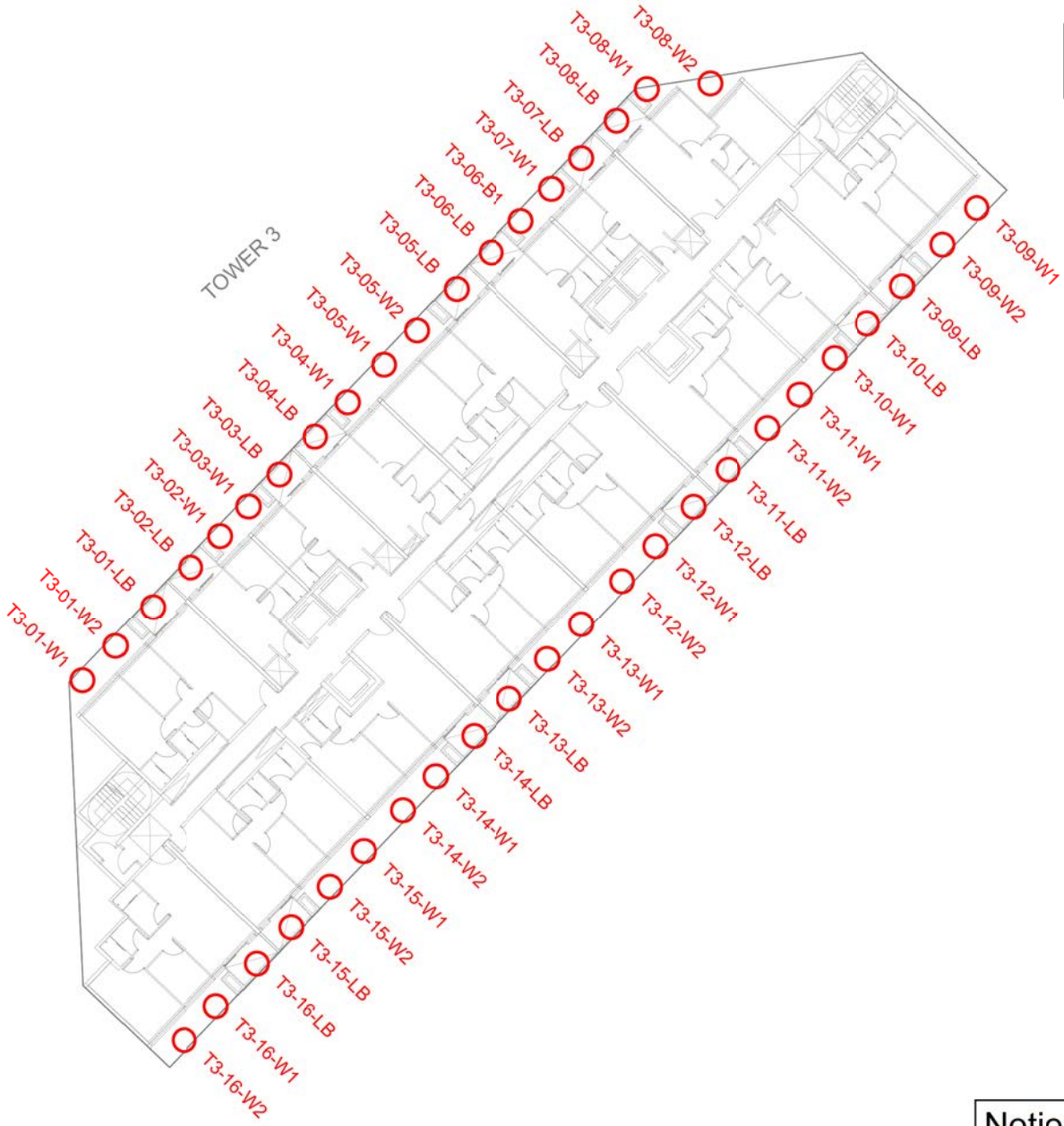
Notional Design subject to changes

Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Noise Assessment Points (Tower 2)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-2b
		REV	-

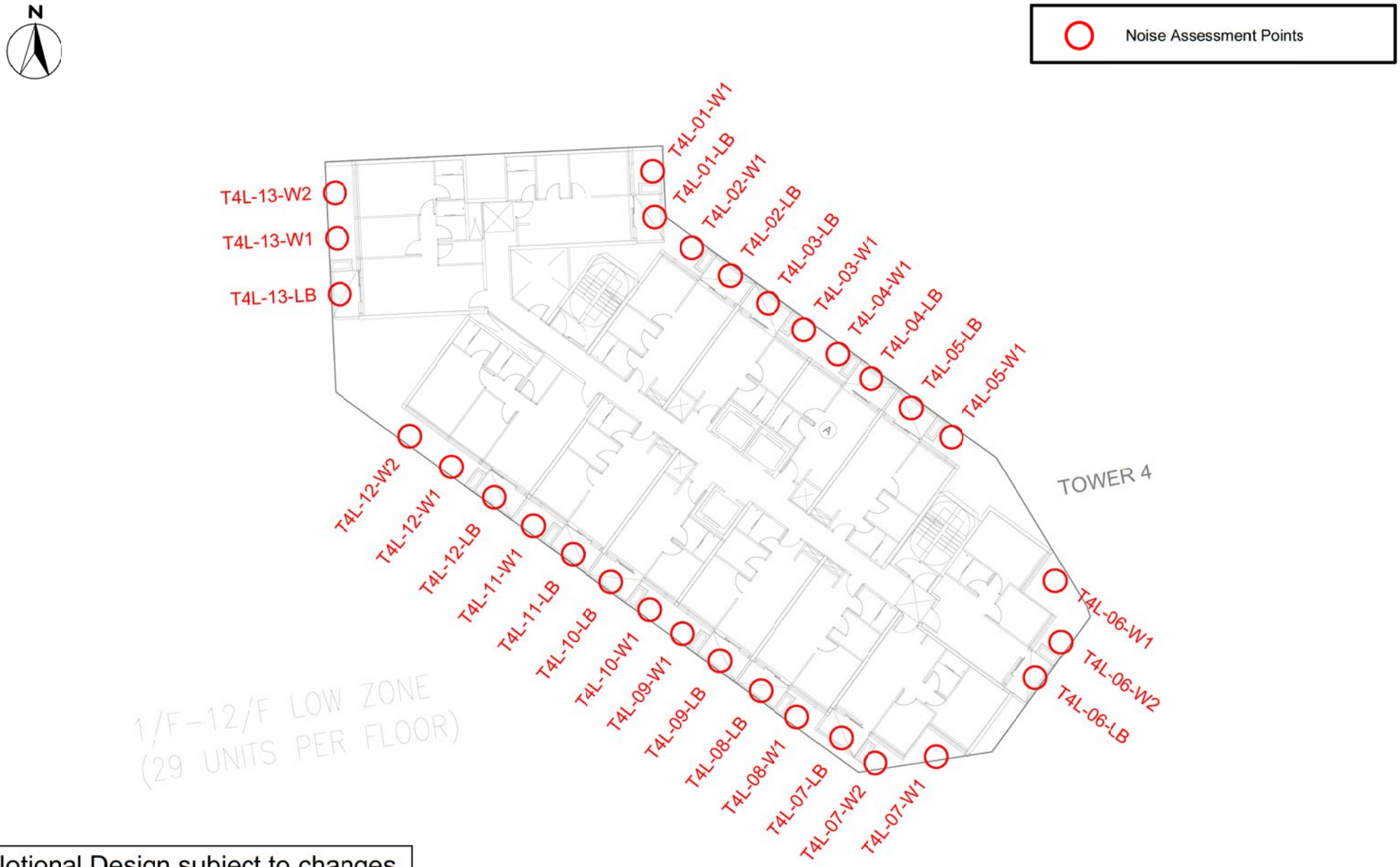


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Noise Assessment Points for Traffic Noise (Tower 3)

SCALE	1:250 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-2c
		REV	-



CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Noise Assessment Points for Traffic Noise (Low Zone of Tower 4)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-2d
		REV	-

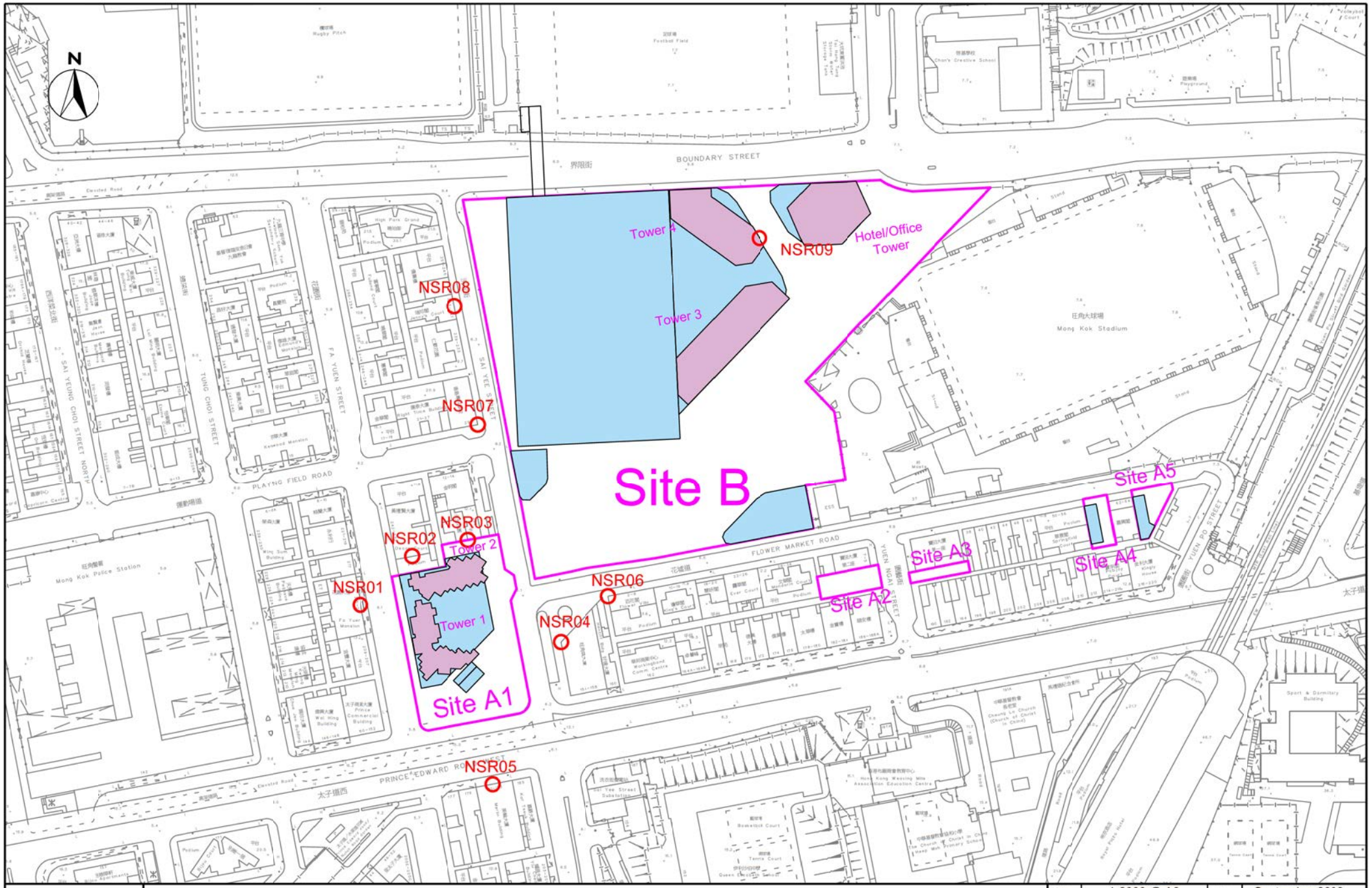
Notional Design subject to changes

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Noise Assessment Points for Traffic Noise (High Zone of Tower 4)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-2e
		REV	-

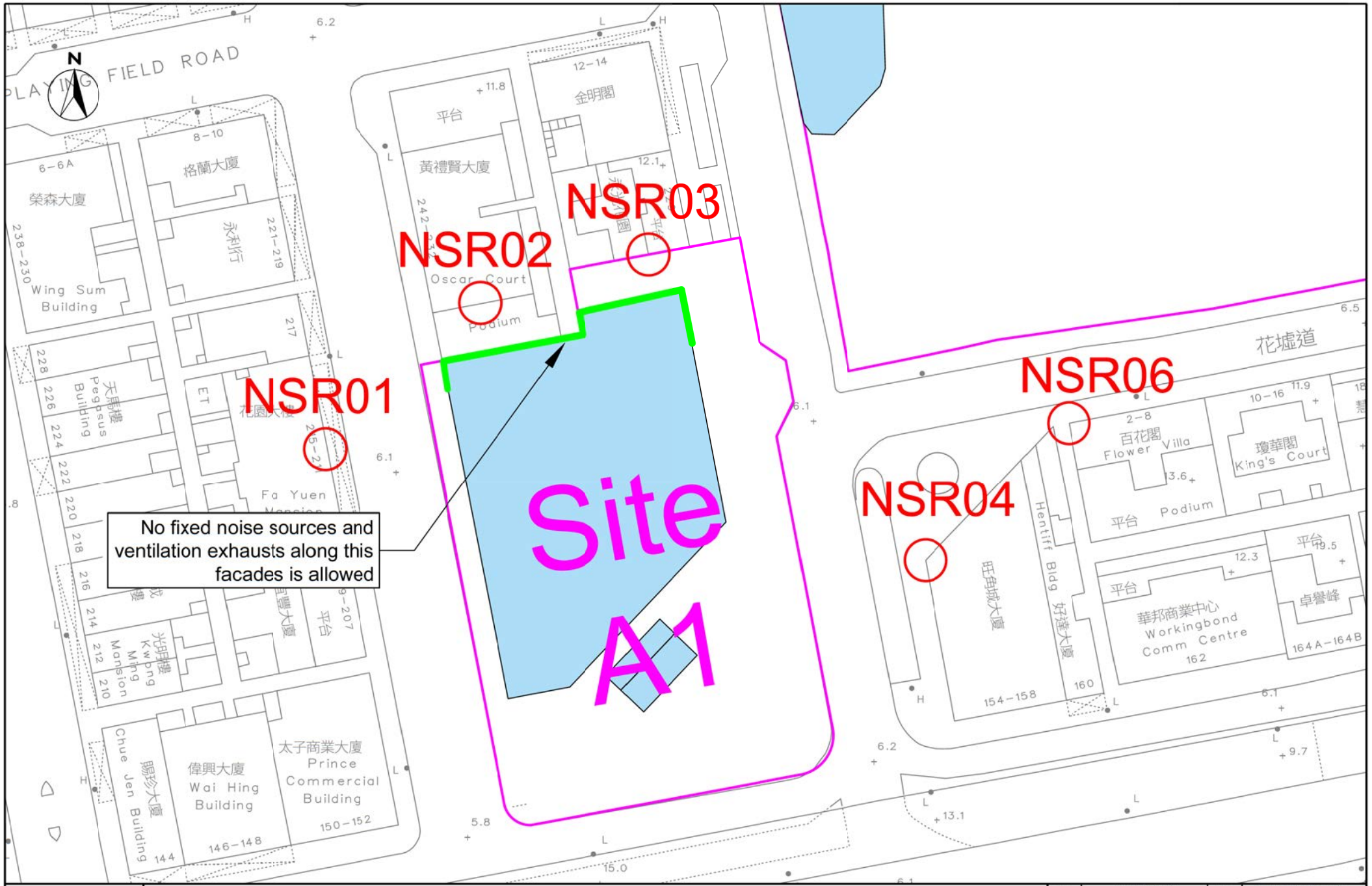


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Representative Assessment Point (Planned Fixed Noise Source)

SCALE	1:2000 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-3a
		REV	-

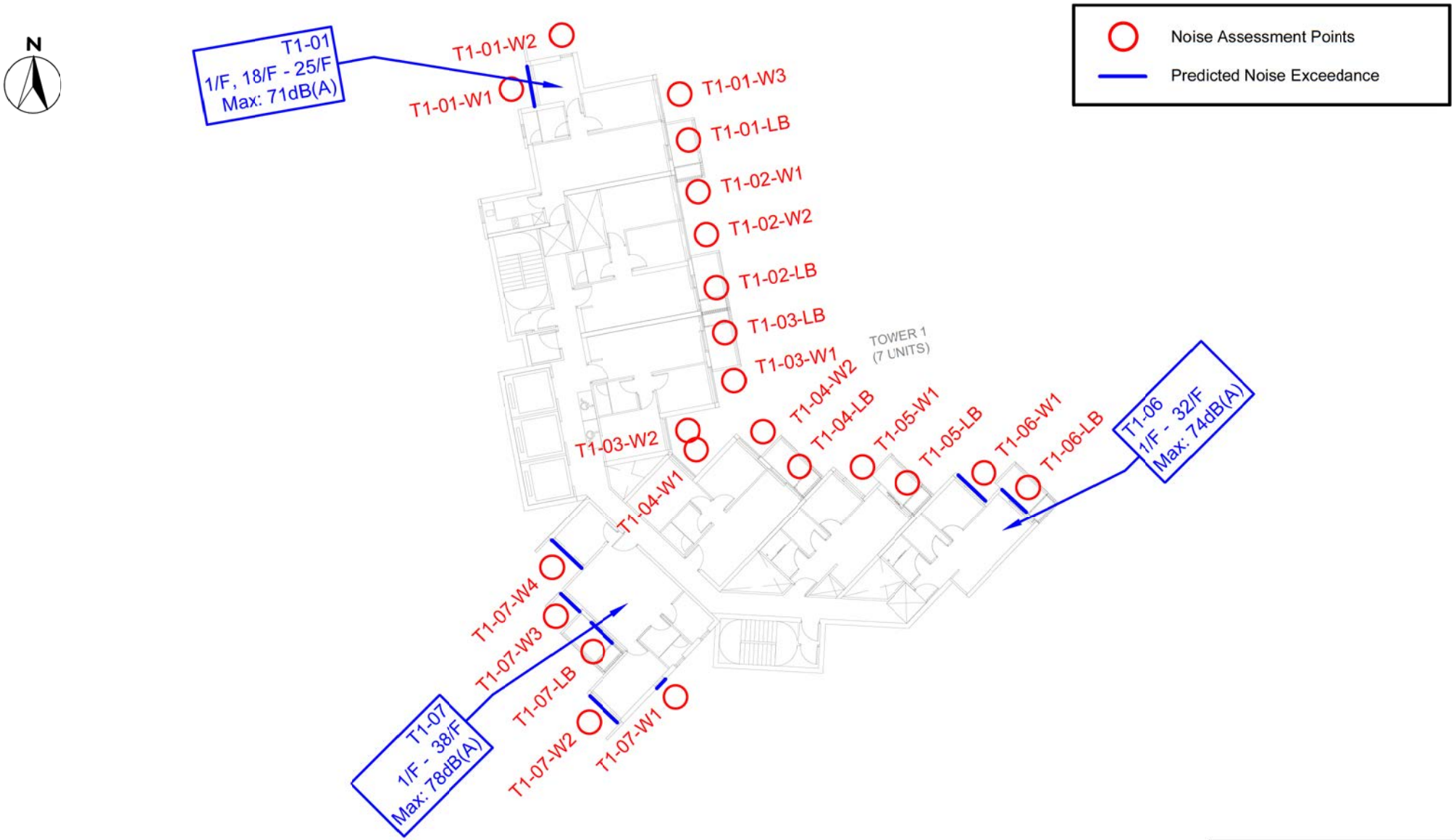


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Facades with no Planned Fixed Noise Source Allowed

SCALE	1:500 @ A3	DATE	September 2023
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-3b
		REV	-



Notional Design subject to changes

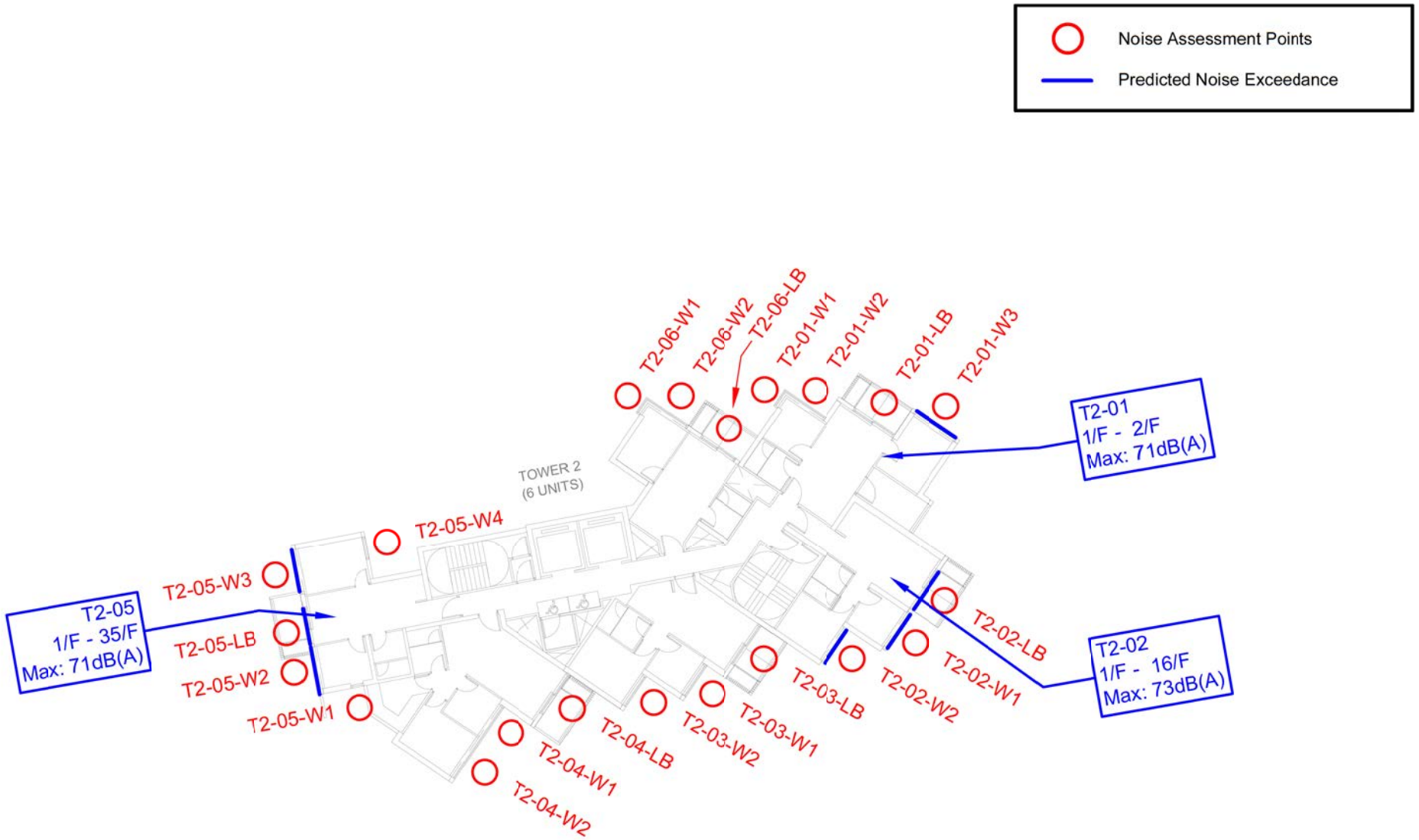
Note:
20/F, 21/F are refuge floor and no noise exceedance is identified.

Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Predicted Noise Exceedance for Traffic Noise (Tower 1)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-4a
		REV	-



Notional Design subject to changes

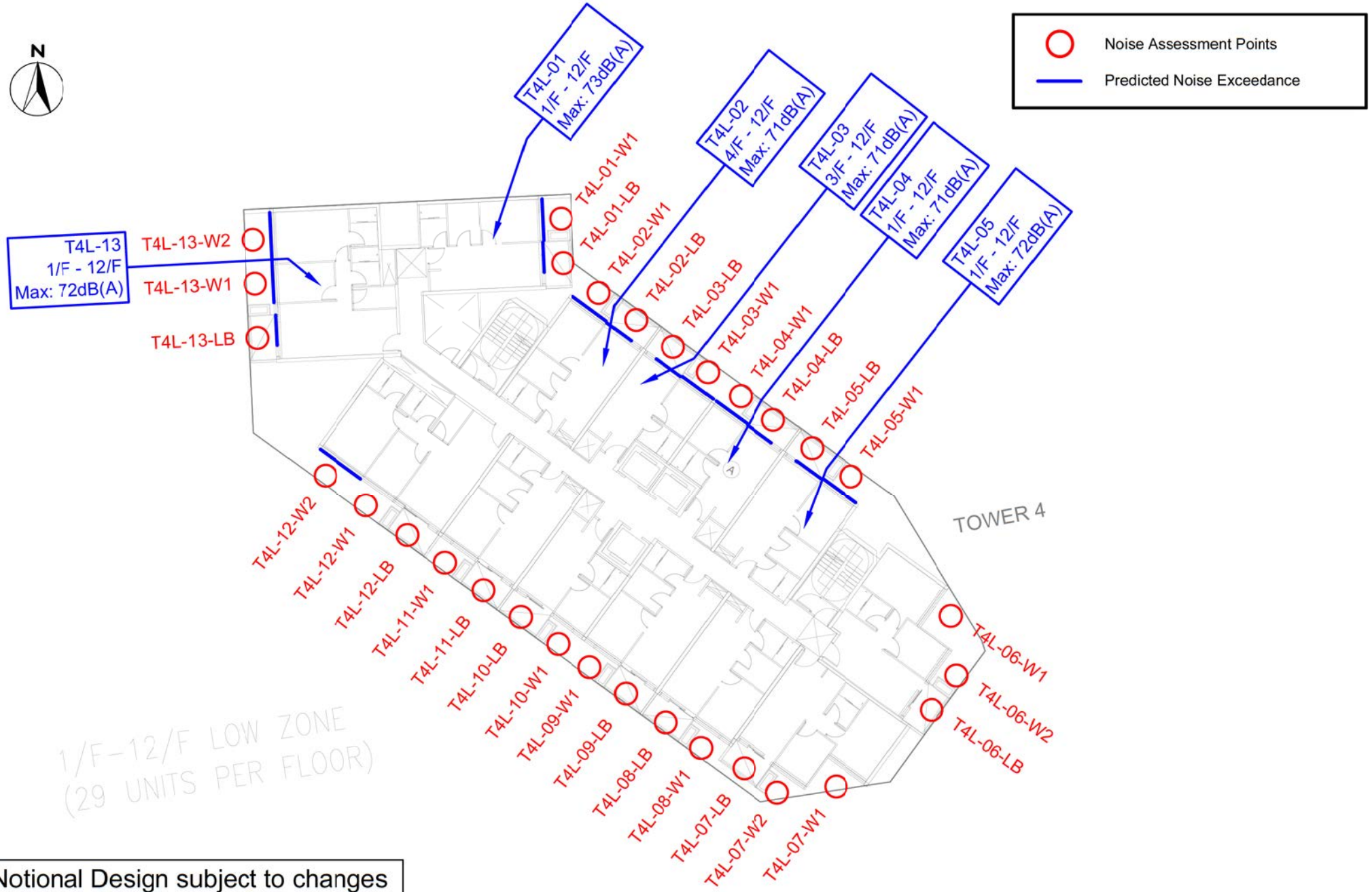
Note:
20/F, 21/F are refuge floor and no noise exceedance is identified.

Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Predicted Noise Exceedance for Traffic Noise (Tower 2)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-4b
		REV	-



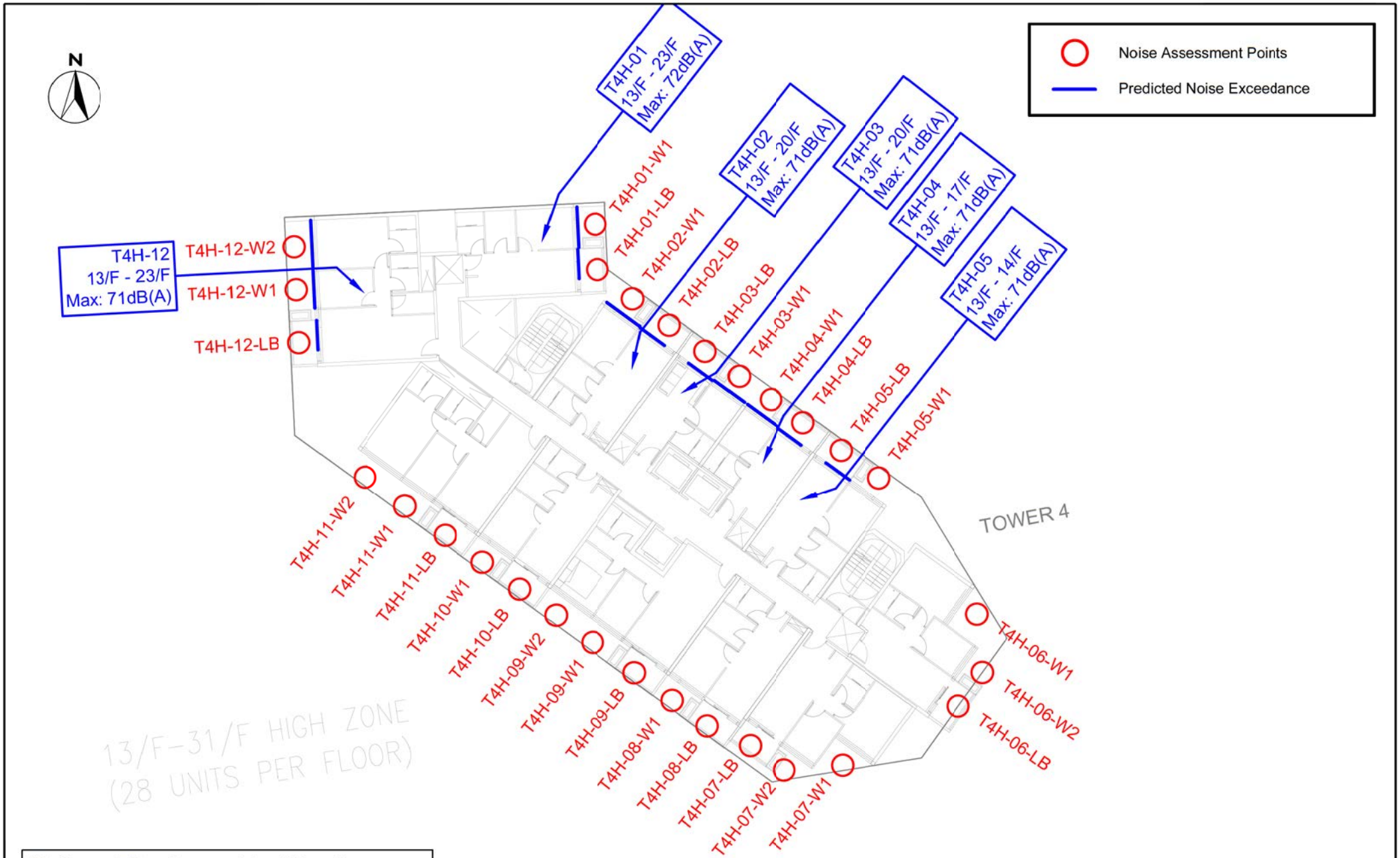
Notional Design subject to changes

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Predicted Noise Exceedance for Traffic Noise (Low Zone of Tower 4)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-4c
REV	-		



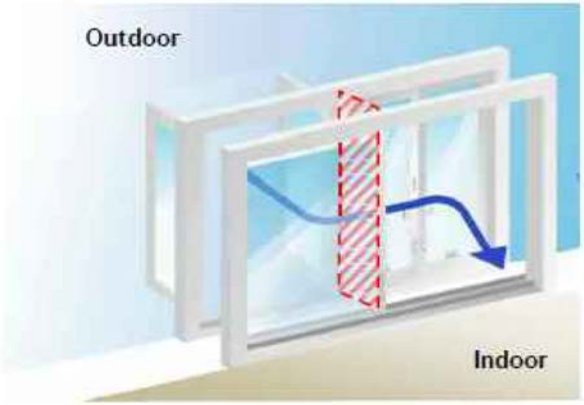
Notional Design subject to changes

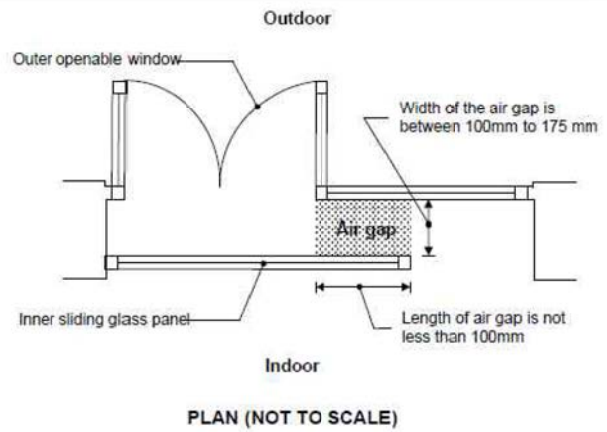
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location of Predicted Noise Exceedance for Traffic Noise (High Zone of Tower 4)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-4d
		REV	-



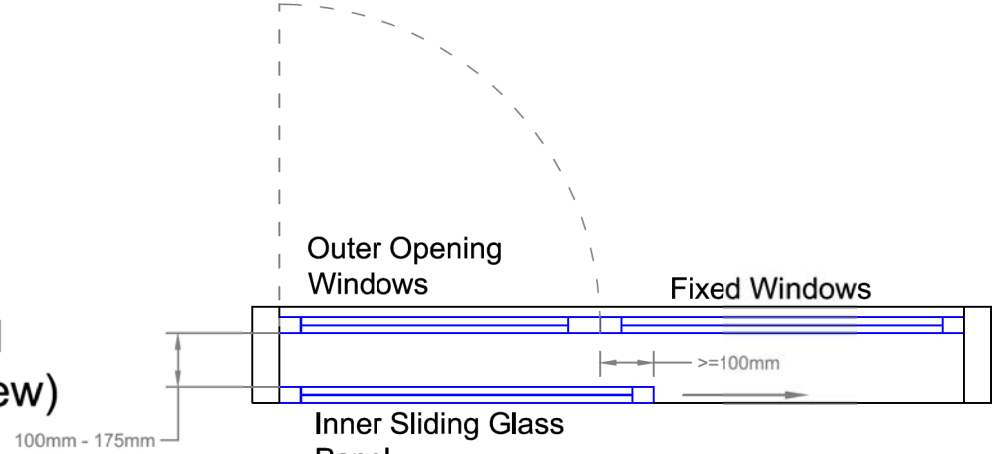


Extracted from Appendix A of Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (APP-130) by Building Department

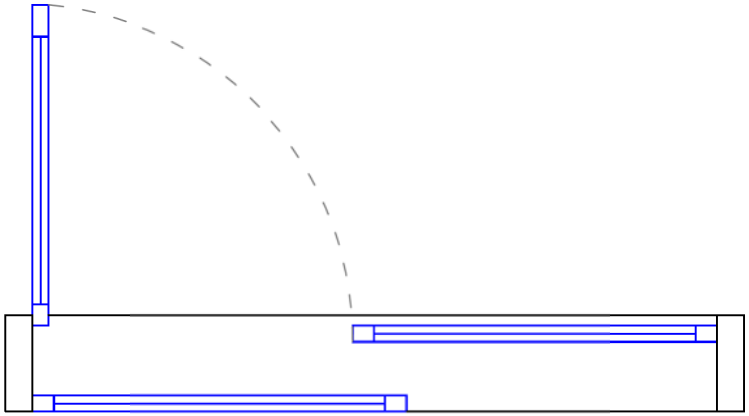
Typical Design

Reference to Practice Note on Application of ACOUSTIC WINDOWS (BAFFLE TYPE) in Planning Residential Developments against Road Traffic Noise Impact

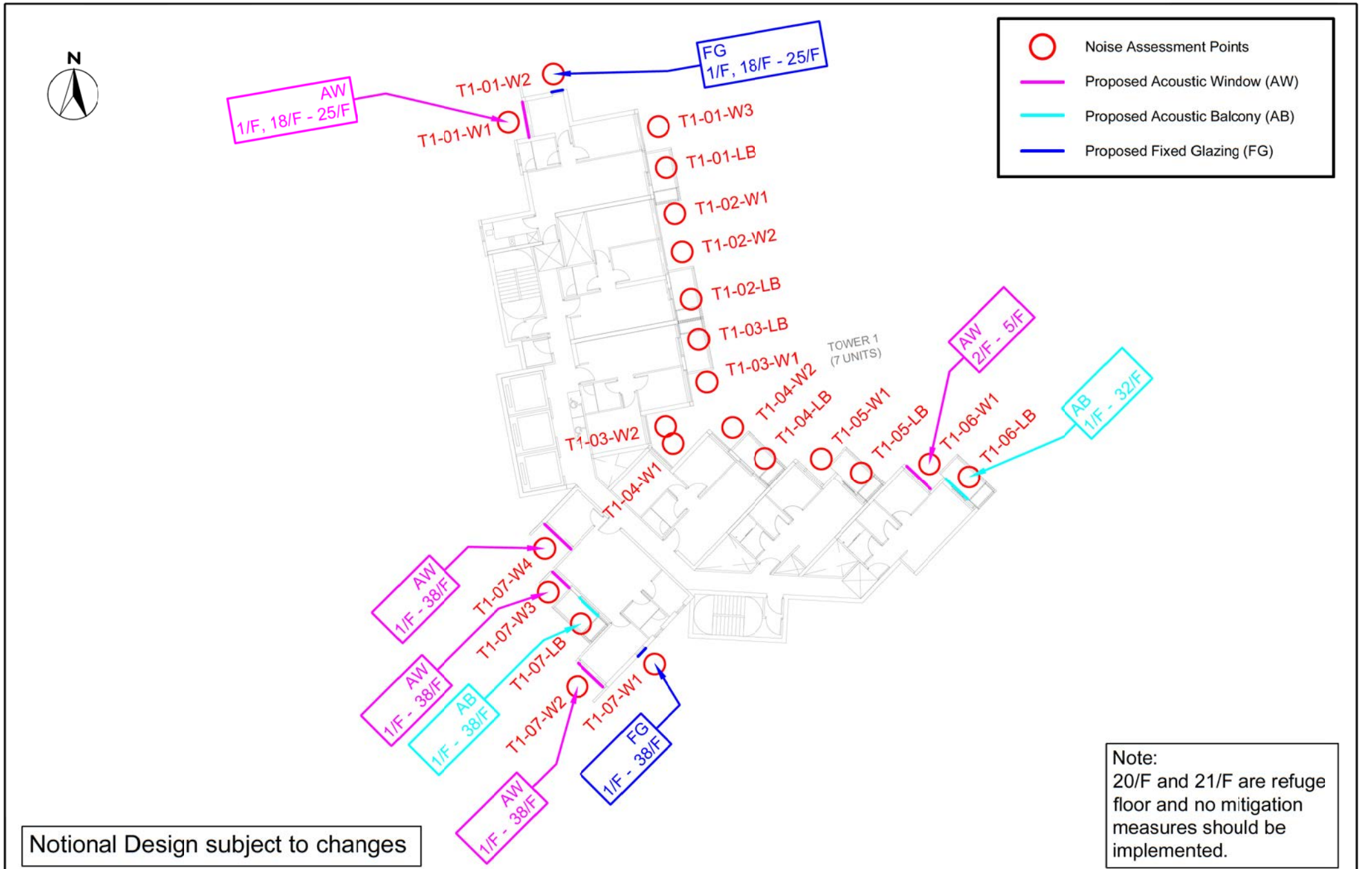
Closed (top view)



Fully Opened (top view)



CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)		
	Typical Design for Acoustic Windows (Baffle Type)		
SCALE	N.T.S	DATE	Feb 2024
CHECK	KC	DRAWN	CC
JOB No.	IA 19021-SSPAA1	DRAWING No.	4-5
		REV	-



Notional Design subject to changes

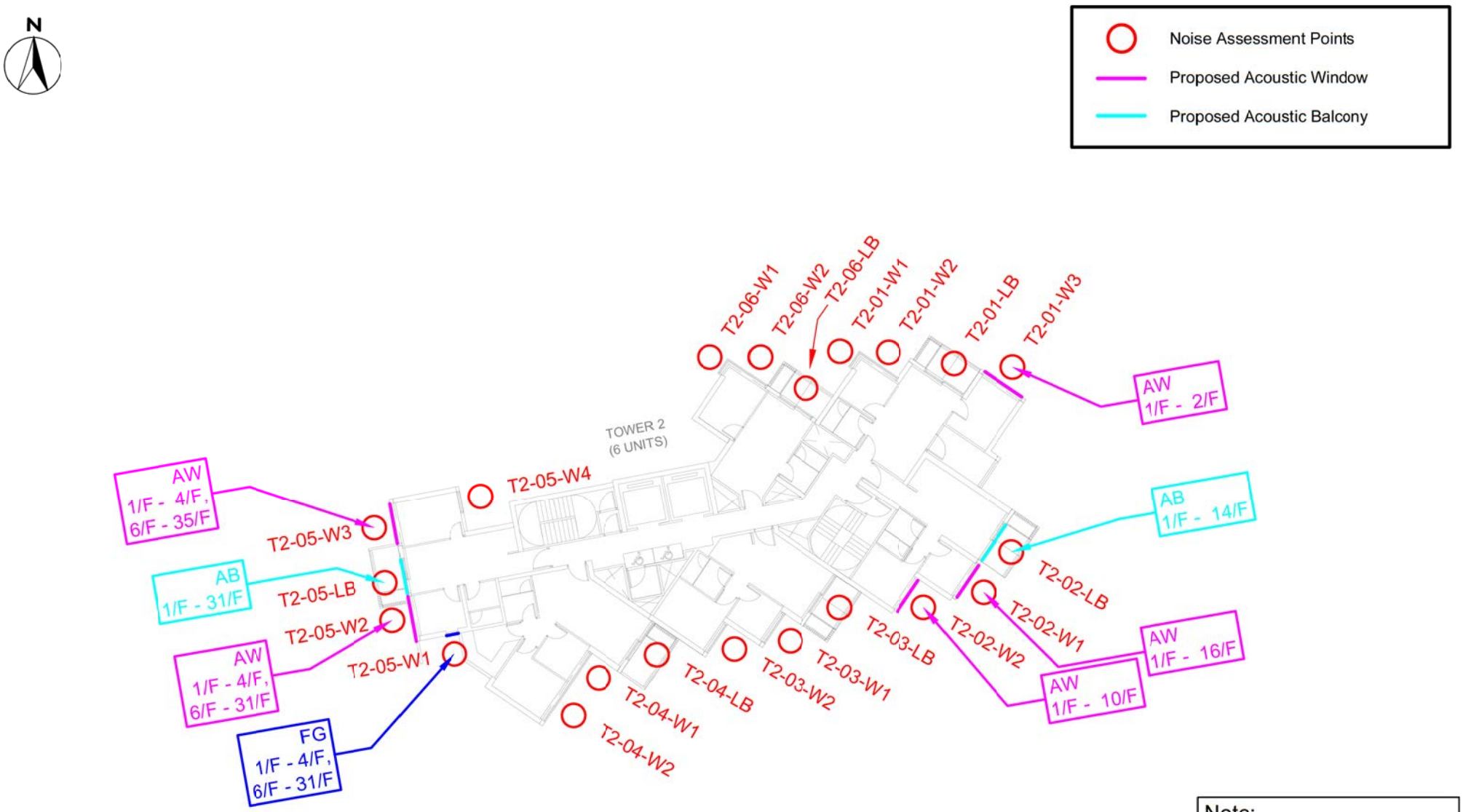
Note:
20/F and 21/F are refuge floor and no mitigation measures should be implemented.

Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Mitigation Measures (Tower 1)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-6a
		REV	-



Notional Design subject to changes

Note:
20/F and 21/F are refuge floor and no mitigation measures should be implemented.

Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Mitigation Measures (Tower 2)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-6b
		REV	-

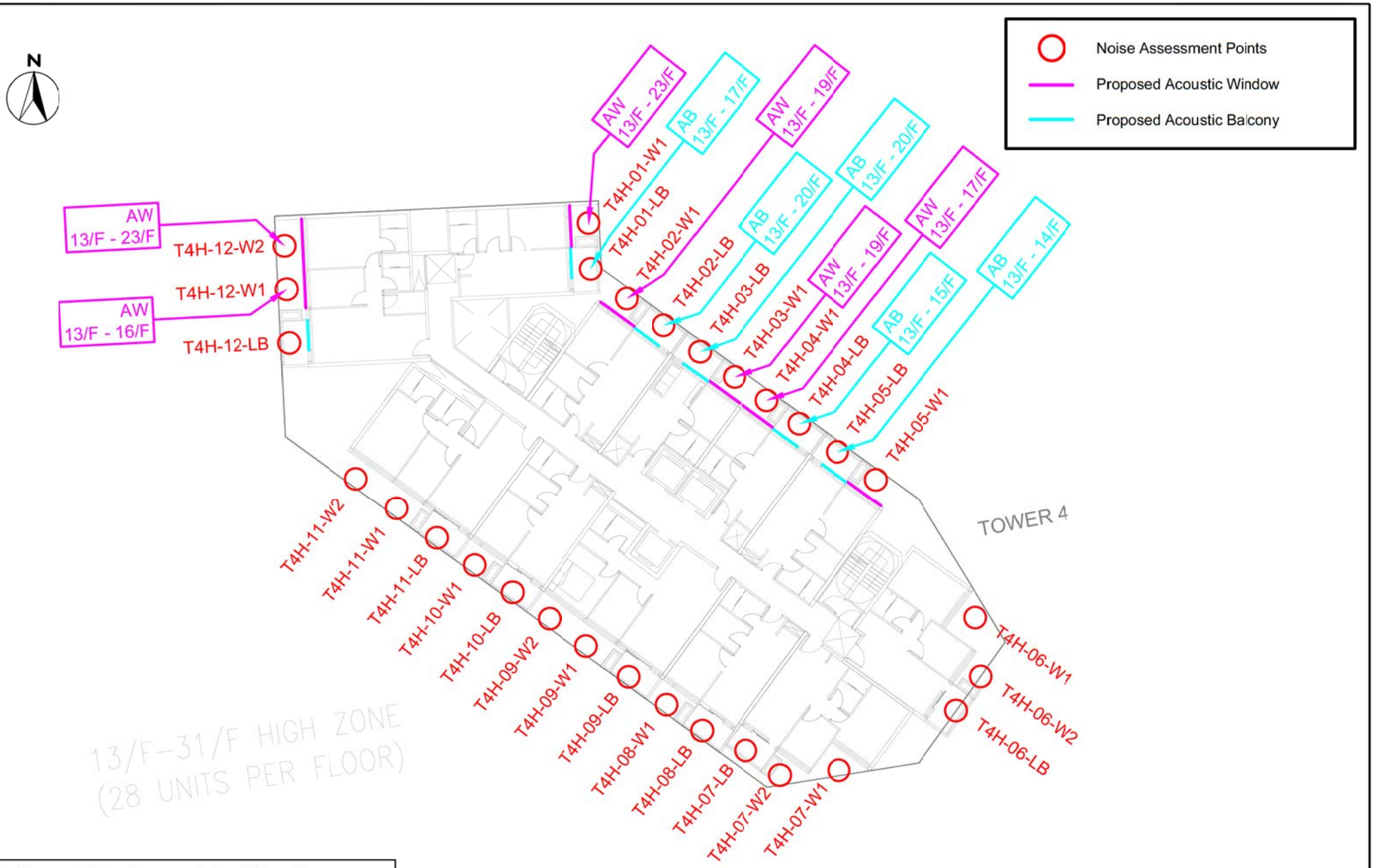
Notional Design subject to changes

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Mitigation Measures (Low Zone of Tower 4)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-6c
		REV	-



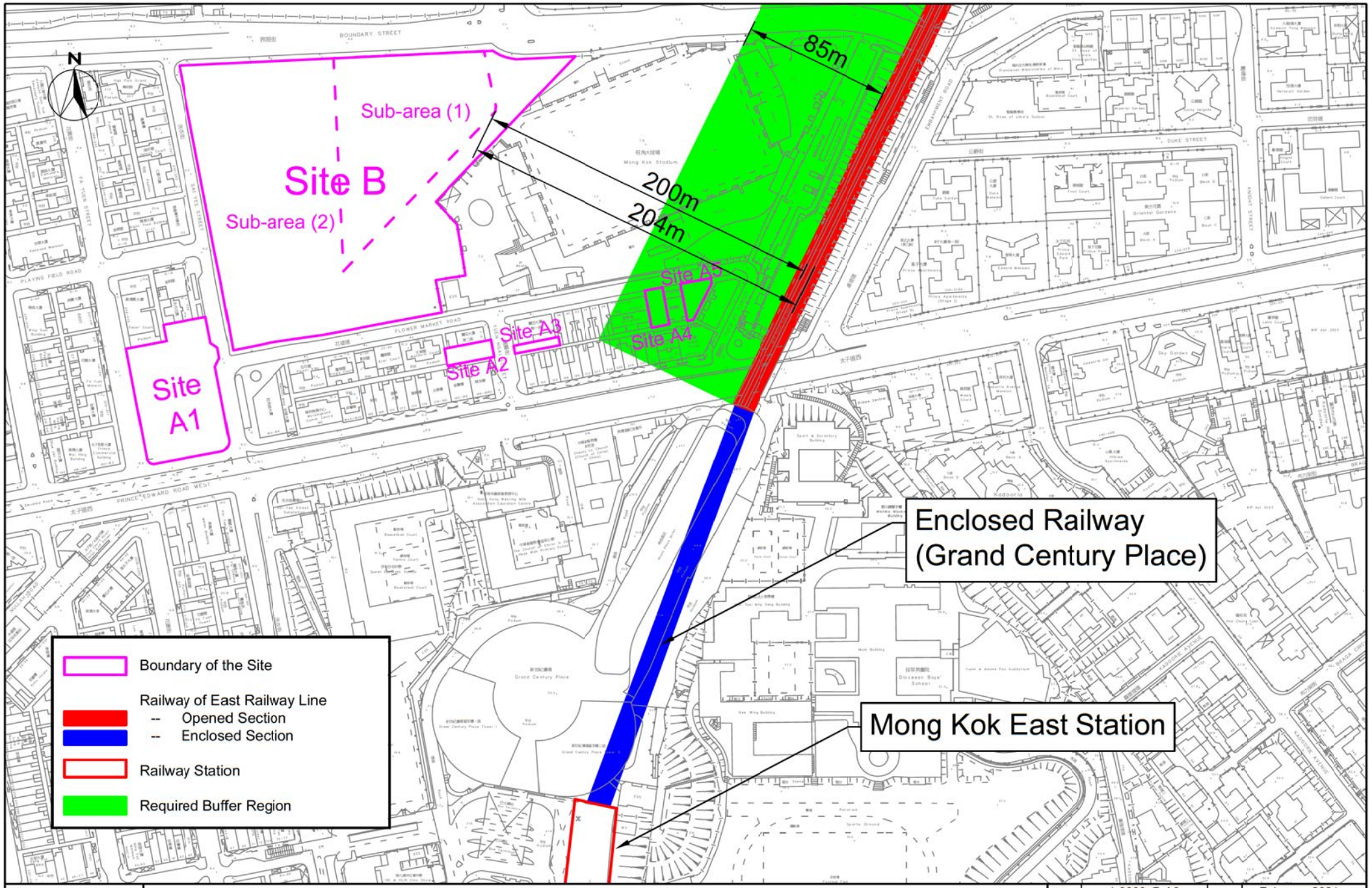
Notional Design subject to changes

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Mitigation Measures (High Zone of Tower 4)

SCALE	1:200 @ A3	DATE	Feb 2024
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-6d
		REV	-



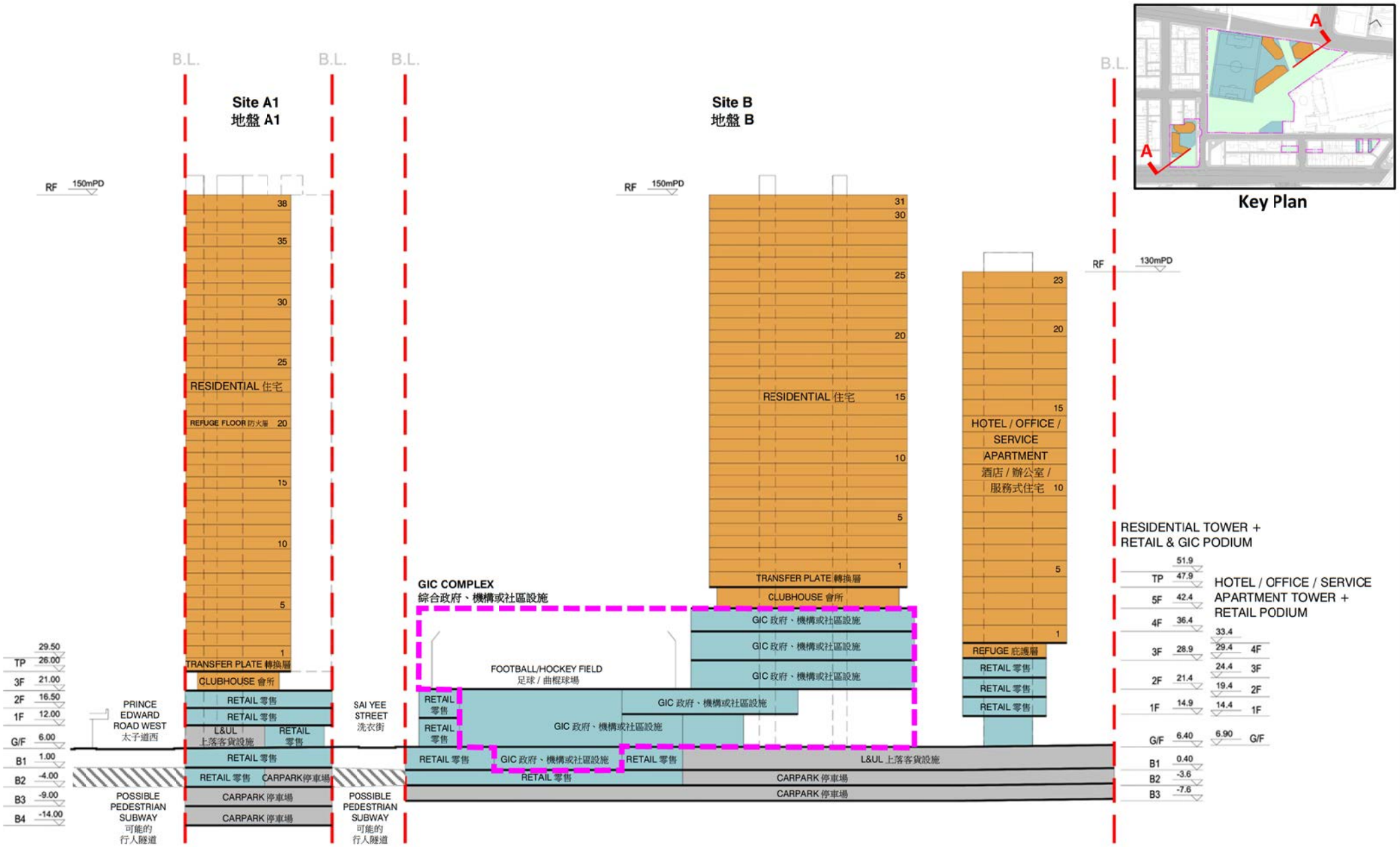
CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Buffer Region for Railway Noise

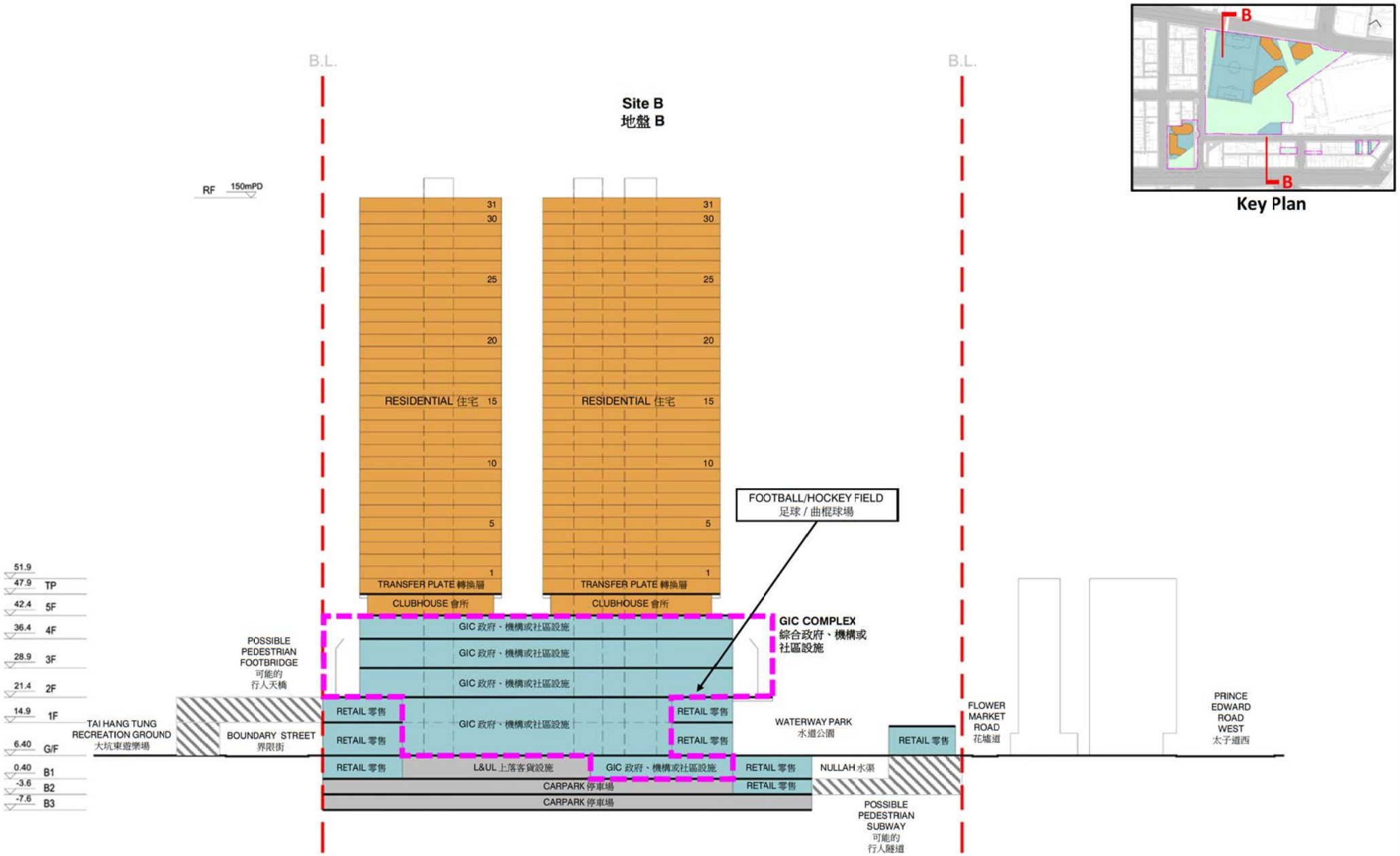
SCALE	1:3000 @ A3	DATE	February 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	Fig. 4-7
		REV	-

APPENDIX 2-1
NOTIONAL SECTION PLAN



(Notional layout subject to detailed design upon DSP approval.)

市區重建局 URBAN RENEWAL AUTHORITY	URA Sai Yee Street / Flower Market Road Development Scheme (YTM-013)	**Figure 1**	**Notional Scheme – Schematic Section A-A**	Not drawn to scale March 2024



(Notional layout subject to detailed design upon DSP approval.)

市區重建局 URBAN RENEWAL AUTHORITY	URA Sai Yee Street / Flower Market Road Development Scheme (YTM-013)	**Figure 2**	**Notional Scheme – Schematic Section B-B**	Not drawn to scale March 2024

APPENDIX 3-1
LIST OF ROAD SECTIONS AND ENDORSEMENT FROM TRANSPORT DEPARTMENT (PENDING)

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	At grade / Flyover	Speed Limit (km/hr)	Cold Start*
1	Boundary Street (FO)	EB	FO	50	0
2	Boundary Street	EB	At grade	50	0
3	Boundary Street	EB	At grade	50	0
4	Tai Hang Tung Road	NB	At grade	50	0
5	Tai Hang Tung Road	SB	At grade	50	0
6	Boundary Street	EB	At grade	50	0
7	Boundary Street	WB	At grade	50	0
8	Prince Edward Road West (FO)	WB	FO	50	0
9	Prince Edward Road West	WB	At grade	50	0
10	Prince Edward Road West	WB	At grade	50	0
11	Prince Edward Road West	WB	At grade	50	0
12	Prince Edward Road West	EB	At grade	50	0
13	Prince Edward Road West	WB	At grade	50	0
14	Playing Field Road	EB	At grade	50	1
15	Playing Field Road	WB	At grade	50	0
16	Playing Field Road	EB	At grade	50	1
17	Playing Field Road	WB	At grade	50	1
18	Flower Market Road	EB	At grade	50	0
19	Nullah Road	EB	At grade	50	1
20	Nullah Road	WB	At grade	50	0
21	Bute Street	WB	At grade	50	1
22	Nathan Road	NB	At grade	50	0
23	Nathan Road	SB	At grade	50	0
24	Nathan Road	SB	At grade	50	0
25	Sai Yeung Choi Street North	SB	At grade	50	1
26	Sai Yeung Choi Street South	SB	At grade	50	1
27	Tung Choi Street	SB	At grade	50	1
28	Tung Choi Street	NB	At grade	50	1
29	Fa Yuen Street	SB	At grade	50	1
30	Fa Yuen Street	NB	At grade	50	0
31	Sai Yee Street	NB	At grade	50	0
32	Sai Yee Street	NB	At grade	50	0
33	Sai Yee Street	SB	At grade	50	0
34	Yuen Ngai Street	SB	At grade	50	0
35	Embankment Road	NB	At grade	50	0
36	Sai Yeung Choi Street North	SB	At grade	50	1
37	Sai Yeung Choi Street North	NB	At grade	50	1
38	Cheung Sha Wan Road	SB	At grade	50	0
39	Cheung Sha Wan Road	NB	At grade	50	0
40	Boundary Street	EB	At grade	50	0
41	Yu Chau Street	NB	At grade	50	0
42	Ki Lung Street	NB	At grade	50	1
43	Portland Street	NB	At grade	50	0
44	Tai Nan Street	NB	At grade	50	1
45	Prince Edward Road West	EB	At grade	50	0
46	Lai Chi Kok Road	SB	At grade	50	0
47	Lai Chi Kok Road	NB	At grade	50	0
48	Arran Street	EB	At grade	50	0
49	Fa Yuen Street	SB	At grade	50	0
50	Sai Yee Street	NB	At grade	50	0
51	Sai Yee Street	SB	At grade	50	0
52	Tat Chee Avenue	NB	At grade	50	0
53	Tat Chee Avenue	SB	At grade	50	0
54	Boundary Street	EB	At grade	50	0

Road Section List

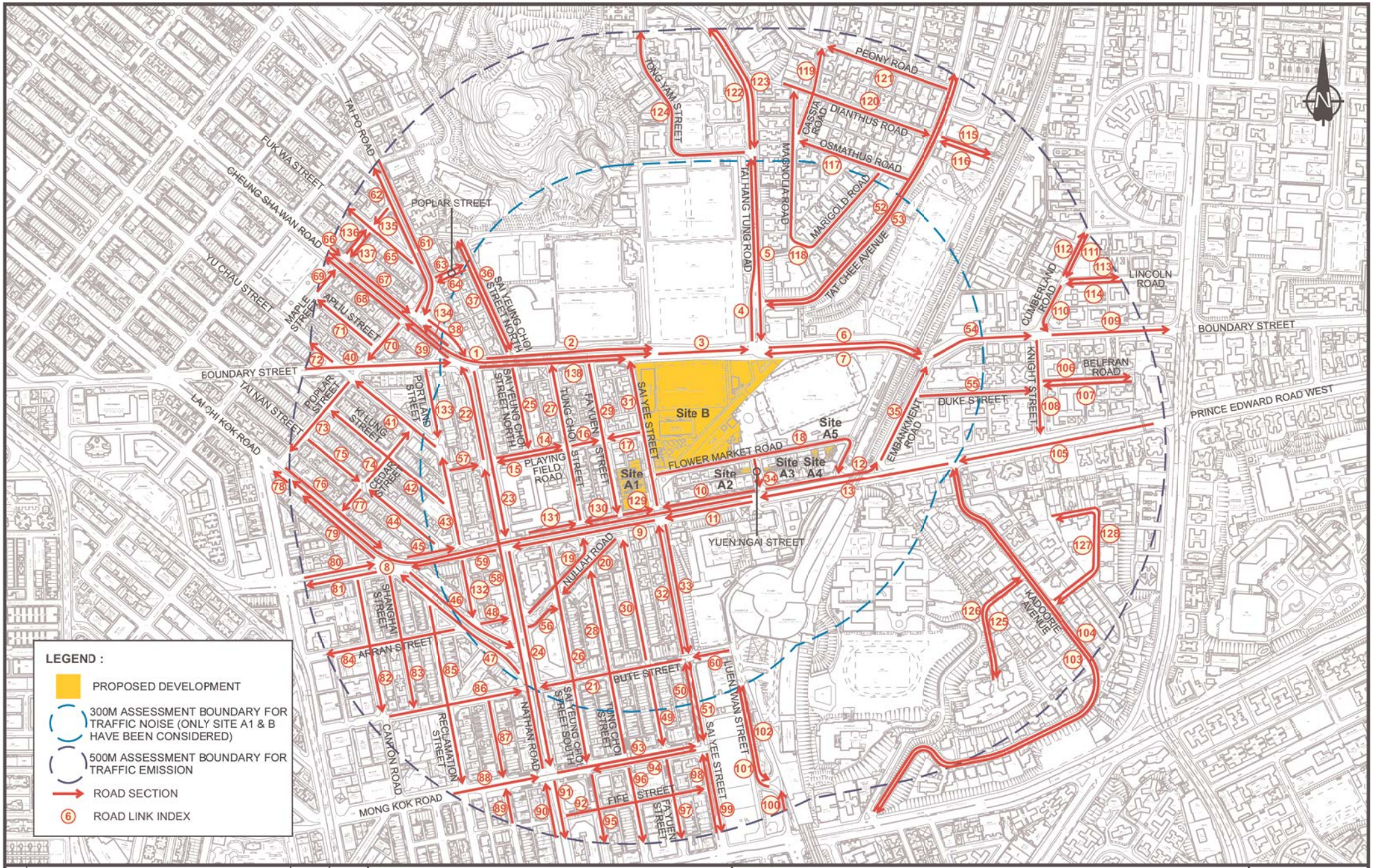
* Road sections with cold start are indicated as 1
Road sections without cold start are indicated as 0

Road ID	Road Name	Travel Direction	At grade / Flyover	Speed Limit (km/hr)	Cold Start*
55	Duke Street	EB	At grade	50	1
56	Nullah Road	EB	At grade	50	0
57	Playing Field Road	EB	At grade	50	0
58	Nathan Road	NB	At grade	50	0
59	Prince Edward Road West	WB	At grade	50	0
60	Bute Street	WB	At grade	50	1
61	Tai Po Road	SB	At grade	50	0
62	Tai Po Road	NB	At grade	50	0
63	Poplar Street	EB	At grade	50	1
64	Poplar Street	WB	At grade	50	1
65	Fuk Wa Street	NWB	At grade	50	1
66	Cheung Sha Wan Road	SEB	At grade	50	0
67	Cheung Sha Wan Road	SEB	At grade	50	0
68	Cheung Sha Wan Road	NWB	At grade	50	0
69	Maple Street	NEB	At grade	50	1
70	Poplar Street	SWB	At grade	50	1
71	Apliu Street	NWB	At grade	50	1
72	Yu Chau Street	NWB	At grade	50	0
73	Poplar Street	SWB	At grade	50	0
74	Cedar Street	NEB	At grade	50	1
75	Tai Nan Street	SEB	At grade	50	1
76	Lai Chi Kok Road	SEB	At grade	50	0
77	Cedar Street	SWB	At grade	50	1
78	Lai Chi Kok Road	NEB	At grade	50	0
79	Lai Chi Kok Road	NEB	At grade	50	1
80	Prince Edward Road West	EB	At grade	50	0
81	Prince Edward Road West	WB	At grade	50	0
82	Canton Road	NB	At grade	50	1
83	Reclamation Street	SB	At grade	50	1
84	Arran Street	WB	At grade	50	1
85	Shanghai Street	SB	At grade	50	0
86	Bute Street	EB	At grade	50	1
87	Portland Street	SB	At grade	50	0
88	Mong Kok Road	EB	At grade	50	0
89	Portland Street	NB	At grade	50	0
90	Nathan Road	NB	At grade	50	0
91	Nathan Road	SB	At grade	50	0
92	Fife Street	EB	At grade	50	0
93	Mong Kok Road	EB	At grade	50	0
94	Mong Kok Road	WB	At grade	50	0
95	Sai Yeung Choi Street South	SB	At grade	50	0
96	Tung Choi Street	SB	At grade	50	0
97	Fa Yuen Street	SB	At grade	50	1
98	Sai Yee Street	NB	At grade	50	0
99	Sai Yee Street	SB	At grade	50	0
100	Luen Wan Street	NB	At grade	50	0
101	Luen Wan Street	NB	At grade	50	0
102	Luen Wan Street	SB	At grade	50	0
103	Kadoorie Avenue	NB	At grade	50	0
104	Kadoorie Avenue	SB	At grade	50	0
105	Prince Edward Road West	WB	At grade	50	0
106	Belfran Road	EB	At grade	50	1
107	Belfran Road	WB	At grade	50	0
108	Knight Street	SB	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	At grade / Flyover	Speed Limit (km/hr)	Cold Start*
109	Boundary Street	EB	At grade	50	0
110	Cumberland Road	SB	At grade	50	0
111	Cumberland Road	SB	At grade	50	0
112	Cumberland Road	NB	At grade	50	0
113	Lincoln Road	EB	At grade	50	0
114	Lincoln Road	WB	At grade	50	1
115	Dianthus Road	EB	At grade	50	0
116	Dianthus Road	WB	At grade	50	0
117	Osmanthus Road	WB	At grade	50	1
118	Marigold Road & Magnolia Road	NB	At grade	50	1
119	Cassia Road	NB	At grade	50	1
120	Dianthus Road	EB	At grade	50	1
121	Peony Road	WB	At grade	50	1
122	Tai Hang Tung Road	NB	At grade	50	0
123	Tai Hang Tung Road	SB	At grade	50	0
124	Tong Yam Street	NB	At grade	30	1
125	Kadoorie Avenue	SB	At grade	50	0
126	Kadoorie Avenue	NB	At grade	50	0
127	Braga Circuit	NB	At grade	50	0
128	Braga Circuit	SB	At grade	50	0
129	Prince Edward Road West	EB	At grade	50	1
130	Prince Edward Road West	WB	At grade	50	1
131	Prince Edward Road West	EB	At grade	50	0
132	Portland Street	SB	At grade	50	1
133	Portland Street	SB	At grade	50	1
134	Cheung Sha Wan Road	NB	At grade	50	0
135	Maple Street	SB	At grade	50	1
136	Maple Street	NB	At grade	50	1
137	Maple Street	SB	At grade	50	1
138	Boundary Street	EB	At grade	50	0



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

URBAN RENEWAL AUTHORITY
DEVELOPMENT SCHEME AT MONG KOK
(YMAA1-01-P1)

Drawing Title

ENVIRONMENTAL ASSESSMENT STUDY AREA AND ROAD LINKS

Designed	Checked	Scale	Date	Drawing No.	Rev.
CHM	HWL	NTS	AUG 2023	1	-

SYSTRA MVA

CHK50755110/EIA/F1.CDR/LLH/29AUG23

Original Size : A3

APPENDIX 3-2
SENSITIVITY TEST FOR TRAFFIC EMISSION

Result of Sensitively Test (Traffic Emission)

Scenario	Year 2035	Year 2041	Year 2050
Quarter	**NOx Emission (kg/day)**		
Q1 (Dec - Feb)	68.78	67.27	69.38
Q2 (Mar - May)	63.80	62.19	64.20
Q3 (Jun - Aug)	52.41	50.88	52.60
Q4 (Sep - Nov)	61.40	59.71	61.67
Average	**61.60**	**60.01**	**61.96**
Quarter	**RSP Emission (kg/day)**		
Q1 (Dec - Feb)	1.92	1.58	1.67
Q2 (Mar - May)	1.92	1.58	1.67
Q3 (Jun - Aug)	1.92	1.58	1.67
Q4 (Sep - Nov)	1.92	1.58	1.67
Average	**1.92**	**1.58**	**1.67**
Quarter	**FSP Emission (kg/day)**		
Q1 (Dec - Feb)	1.77	1.46	1.54
Q2 (Mar - May)	1.77	1.46	1.54
Q3 (Jun - Aug)	1.77	1.46	1.54
Q4 (Sep - Nov)	1.77	1.46	1.54
Average	**1.77**	**1.46**	**1.54**

APPENDIX 3-3
CALINE4 INPUT

Caline 4 input for 2035 Q1

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R001	835620.80	820845.25	835496.74	820834.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821006.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.63	820578.32	11	0	1
R020	835568.73	820565.58	835478.35	820478.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820689.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820596.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821026.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820514.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820944.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	18	0	1

VKT/hr for each road (include the VKT for each sub-section; not directly used by caline4)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
164.300	116.600	90.100	74.200	63.600	76.850	169.600	426.650	471.700	410.750	400.150	402.800	416.050	408.100	394.850	381.600	400.150	426.650	466.400	458.450	376.300	378.950	341.850	243.800
164.300	116.600	90.100	74.200	63.600	76.850	169.600	426.650	471.700	410.750	400.150	402.800	416.050	408.100	394.850	381.600	400.150	426.650	466.400	458.450	376.300	378.950	341.850	243.800
164.300	116.600	90.100	74.200	63.600	76.850	169.600	426.650	471.700	410.750	400.150	402.800	416.050	408.100	394.850	381.600	400.150	426.650	466.400	458.450	376.300	378.950	341.850	243.800
164.300	116.600	90.100	74.200	63.600	76.850	169.600	426.650	471.700	410.750	400.150	402.800	416.050	408.100	394.850	381.600	400.150	426.650	466.400	458.450	376.300	378.950	341.850	243.800
164.300	116.600	90.100	74.200	63.600	76.850	169.600	426.650	471.700	410.750	400.150	402.800	416.050	408.100	394.850	381.600	400.150	426.650	466.400	458.450	376.300	378.950	341.850	243.800
164.300	116.600	90.100	74.200	63.600	76.850	169.600	426.650	471.700	410.750	400.150	402.800	416.050	408.100	394.850	381.600	400.150	426.650	466.400	458.450	376.300	378.950	341.850	243.800
87.750	62.100	49.950	39.150	32.400	39.150	86.400	218.700	241.650	209.250	207.900	209.250	218.700	216.000	205.200	197.100	210.600	228.150	252.450	256.500	206.550	210.600	189.000	136.350
129.000	92.250	69.750	57.750	50.250	58.500	130.500	330.000	353.250	312.750	304.500	306.750	319.500	318.000	301.500	291.000	305.250	330.000	367.500	357.750	289.500	293.250	262.500	189.750
141.750	99.900	78.300	66.150	55.350	64.800	145.800	378.000	396.900	351.000	337.500	338.850	352.350	345.600	321.300	310.500	321.300	349.650	384.750	388.800	315.900	319.950	292.950	207.900
141.750	99.900	78.300	66.150	55.350	64.800	145.800	378.000	396.900	351.000	337.500	338.850	352.350	345.600	321.300	310.500	321.300	349.650	384.750	388.800	315.900	319.950	292.950	207.900
303.750	212.500	168.750	131.250	120.000	137.500	307.500	785.000	835.000	737.500	712.500	717.500	742.500	733.750	692.500	670.000	700.000	751.250	831.250	821.250	670.000	676.250	612.500	442.500
303.750	212.500	168.750	131.250	120.000	137.500	307.500	785.000	835.000	737.500	712.500	717.500	742.500	733.750	692.500	670.000	700.000	751.250	831.250	821.250	670.000	676.250	612.500	442.500
255.300	210.900	177.600	148.000	136.900	159.100	333.000	802.900	954.600	921.300	880.600	876.900	821.400	769.600	765.900	732.600	673.400	732.600	765.900	721.500	658.600	588.300	595.700	458.800
255.300	210.900	177.600	148.000	136.900	159.100	333.000	802.900	954.600	921.300	880.600	876.900	821.400	769.600	765.900	732.600	673.400	732.600	765.900	721.500	658.600	588.300	595.700	458.800
255.300	210.900	177.600	148.000	136.900	159.100	333.000	802.900	954.600	921.300	880.600	876.900	821.400	769.600	765.900	732.600	673.400	732.600	765.900	721.500	658.600	588.300	595.700	458.800
255.300	210.900	177.600	148.000	136.900	159.100	333.000	802.900	954.600	921.300	880.600	876.900	821.400	769.600	765.900	732.600	673.400	732.600	765.900	721.500	658.600	588.300	595.700	458.800
255.300	210.900	177.600	148.000	136.900	159.100	333.000	802.900	954.600	921.300	880.600	876.900	821.400	769.600	765.900	732.600	673.400	732.600	765.900	721.500	658.600	588.300	595.700	458.800
255.300	210.900	177.600	148.000	136.900	159.100	333.000	802.900	954.600	921.300	880.600	876.900	821.400	769.600	765.900	732.600	673.400	732.600	765.900	721.500	658.600	588.300	595.700	458.800
135.450	110.250	89.250	73.500	65.100	78.750	156.450	396.900	505.050	492.450	471.450	475.650	448.350	424.200	420.000	407.400	383.250	405.300	422.100	375.900	353.850	311.850	296.100	221.550
0.650	0.650	0.650	0.650	0.650	0.650	1.300	3.900	4.550	3.900	3.900	3.900	3.250	3.250	3.250	2.600	1.300	1.950	1.950	2.600	1.950	1.300	1.300	1.300
81.900	66.300	53.950	44.850	39.650	47.450	95.550	230.750	283.400	280.800	269.100	272.350	260.650	246.350	247.650	241.800	230.750	250.900	264.550	256.750	227.500	202.150	200.200	152.750
4.250	3.400	2.550	2.550	2.550	2.550	5.950	15.300	17.850	17.000	15.300	15.300	14.450	13.600	13.600	11.900	10.200	11.050	11.900	15.300	10.200	9.350	9.350	8.500
186.150	150.450	119.850	100.300	89.250	107.100	215.900	509.150	620.500	612.000	593.300	601.800	574.600	548.250	550.800	544.000	518.500	572.050	612.000	551.650	542.300	476.850	472.600	360.400
186.150	150.450	119.850	100.300	89.250	107.100	215.900	509.150	620.500	612.000	593.300	601.800	574.600	548.250	550.800	544.000	518.500	572.050	612.000	551.650	542.300	476.850	472.600	360.400
17.500	10.500	10.500	10.500	9.500	17.000	22.500	23.500	27.000	42.000	45.500	47.000	43.500	39.000	38.000	35.000	34.000	31.000	29.000	30.000	30.000	28.500	24.500	23.500
2.025	1.800	1.800	1.800	1.800	1.800	2.250	2.250	2.475	3.825	3.825	3.825	3.375	2.475	2.475	2.025	1.350	0.900	0.450	0.450	0.450	0.900	0.675	0.900
2.250	1.750	1.250	1.250	1.250	2.750	3.500	3.750	4.500	6.750	7.000	7.250	6.500	5.500	5.250	4.750	4.250	4.000	3.250	3.250	3.250	3.000	2.750	2.750
41.400	28.800	27.000	25.200	21.600	41.400	55.800	59.400	63.000	57.600	61.200	64.800	57.600	55.800	59.400	63.000	66.600	66.600	68.400	63.000	68.400	63.000	52.200	52.200
41.400	28.800	27.000	25.200	21.600	41.400	55.800	59.400	63.000	57.600	61.200	64.800	57.600	55.800	59.400	63.000	66.600	66.600	68.400	63.000	68.400	63.000	52.200	52.200
5.600	4.000	3.200	3.200	3.200	5.600	8.000	8.000	8.800	9.600	10.400	11.200	9.600	9.600	9.600	10.400	11.200	10.400	11.200	10.400	11.200	10.400	8.800	8.000
5.600	4.000	3.200	3.200	3.200	5.600	8.000	8.000	8.800	9.600	10.400	11.200	9.600	9.600	9.600	10.400	11.200	10.400	11.200	10.400	11.200	10.400	8.800	8.000
5.500	3.850	3.300	3.300	2.750	4.950	6.600	6.600	7.150	12.100	12.650	14.850	13.750	13.750	13.750	12.650	13.200	14.300	14.300	12.650	13.750	12.100	9.900	9.900
35.200	25.300	23.100	20.900	18.700	35.200	45.100	48.400	56.100	88.000	94.600	101.200	89.100	81.400	79.200	72.600	70.400	68.200	63.800	59.400	62.700	58.300	48.400	46.200
66.950	57.850	49.400	44.200	48.100	68.250	87.750	139.100	129.350	113.100	95.550	111.800	81.900	105.950	131.300	139.100	156.000	151.450	174.200	117.000	90.350	73.450	65.000	48.750
153.750	133.750	115.000	107.500	118.750	175.000	232.500	371.250	326.250	277.500	228.750	260.000	187.500	232.500	283.750	288.750	313.750	288.750	313.750	207.500	165.000	135.000	121.250	92.500
265.600	227.200	195.200	179.200	196.800	292.800	388.800	620.800	592.000	529.600	452.800	516.800	379.200	440.000	496.000	528.000	524.800	507.200	563.200	552.000	441.600	364.800	331.200	249.600
9.100	5.200	4.550	3.900	3.900	8.450	11.050	11.050	13.000	21.450	23.400	25.350	24.050	22.100	22.100	20.800	20.800	21.450	20.150	18.850	19.500	17.550	15.600	14.300
88.400	78.200	66.300	57.800	64.600	96.900	127.500	200.600	190.400	163.200	134.300	153.000	113.900	141.100	173.400	176.800	190.400	178.500	197.200	127.500	98.600	78.200	71.400	52.700
74.750	51.750	47.150	46.000	41.400	74.750	96.600	103.500	75.900	102.350	109.250	116.150	104.650	101.200	104.650	111.550	123.050	120.750	125.350	118.450	115.000	117.300	98.900	96.600
22.400	14.000	12.600	11.200	9.800	21.000	28.000	29.400	30.800	49.000	51.800	56.000	50.400	46.200	44.800	40.600	39.200	39.200	37.800	36.400	37.800	33.600	29.400	28.000
74.750	52.900	50.600	50.600	46.000	80.500	105.800	115.000	104.650	103.500	108.100	113.850	101.200	93.150	98.900	103.500	109.250	102.350	102.350	97.750	105.800	105.800	93.150	89.700
2.000	1.000	1.000	1.000	1.000	3.000	4.000	4.000	4.000	6.000	6.000	7.000	6.000	6.000	6.000	4.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
39.600	33.000	27.500	25.300	26.400	36.300	50.600	77.000	69.300	60.500	50.600	59.400	45.100	57.200	73.700	81.400	92.400	90.200	108.900	67.100	52.800	42.900	36.300	27.500
78.300	66.600	55.800	52.200	54.000	78.300	109.800	175.500	170.100	149.400	122.400	140.400	149.400	174.600	198.000	186.300	175.500	179.100	191.700	123.300	99.000	78.300	67.500	52.200
2.275	1.750	1.750	1.575	1.575	2.975	3.850	4.200	4.025	3.325	3.500	3.500	3.150	2.800	2.450	2.800	2.800	2.800	2.625	2.625	2.275	2.450	2.450	2.450
60.000	52.500	45.000	41.250	45.000	65.250	88.500	140.250	142.500	137.250	132.750	129.000	113.250	124.500	120.000	120.750	120.750	128.250	132.750	87.000	71.250	57.750	54.000	40.500
55.100	38.000	35.150	36.100	34.200	63.650	83.600	91.200	92.150	80.750	83.600	85.500	77.900	76.950	67.450	68.400	58.900	54.150	57.000	56.050	63.650	60.800	54.150	54.150
29.400	21.000	17.100	13.800	12.000	14.400	32.100	83.100	90.000	79.200	76.200	75.000	76.800	74.400	68.700	65.400	66.600	69.000	72.900	81.600	66.900	69.300	63.600	46.500
29.400	21.000	17.100	13.800	12.000	14.400	32.100	83.100	90.000	79.200	76.200	75.000	76.800	74.400	68.700	65.400	66.600	69.000	72.900	81.600	66.900	69.300	63.600	46.500
12.000	8.400	6.000	4.800	4.400	4.800	10.400	27.200	28.000	24.800	24.800	25.600	27.600	27.600	26.400	26.000	28.400	32.000	38.000	42.400	34.000	34.000	29.600	21.200
65.100	44.100	34.650	27.300	24.150	27.300	58.800	150.150	164.850	148.050	144.900	151.200	158.550	160.650	155.400	153.300	163.800	177.450	201.600	200.550	172.200	171.150	153.300	108.150
46.500	31.500	30.000	28.500	25.500	50.250	66.750	70.500	71.250	69.000	66.000	61.500	61.500	63.000	55.500	59.250	64.500	63.000	66.750	63.750	68.250	66.000	57.750	55.500
9.000	6.000	6.000	6.000	6.000	9.000	13.500	13.500	16.500	24.000	25.500	27.000	25.500	22.500	22.500	21.000	22.500	18.000	18.000	18.000	18.000	15.000	15.000	13.500
41.250	27.000	24.750	24.750	22.500	44.250	59.250	63.000	64.500	66.000	63.750	60.750	58.500	58.500	51.750	52.500	54.000	51.000	51.750	49.500	54.000	53.250	47.250	45.000
21.450	14.300	14.300	12.350	11.700	20.800	26.650	29.250	29.250	27.950	24.700	24.700	25.350	20.150	24.050	27.300	30.550	31.200	35.100	33.150	35.100	32.500	26.650	26.650
8.050	6.650	5.250	4.200	3.500	4.550	9.800	23.100	24.500	15.050	12.950	11.900	12.250	10.150	14.350	16.800	20.300	22.750	23.800	10.500	7.700	7.000	6.650	5.250
52.600	43.500	33.300	28.200	23.100	29.300	64.400	156.100	161.900	108.800	94.400	86.600	87.700	74.800	95.900	114.800	137.600	151.600	159.100	203.700	146.000	129.600	131.400	100.300
1.750	1.000	1.000	1.000	1.000	1.750	2.250	2.250	2.250	2.250	2.250	2.500	2.250	3.750	4.250	4.250	4.750	4.750	4.500	7.000	6.750	6.750	5.500	5.500
2.400	1.200	1.200	1.200	0.600	2.400	2.400	2.400	2.400	4.800	5.400	5.400	5.400	5.400	5.400	4.800	4.800	5.400	5.400	5.400	5.400	4.200	4.200	3.600
56.650	50.600	41.800	37.400	41.250	61.050	82.500	126.500	131.450	116.050	87.450	90.200	75.350	76.450	109.450	118.250	144.100	140.250	141.900	90.750	72.050	57.200	51.700	37.400
171.000	123.750	114.750	112.500	103.500	175.500	234.000	256.500	180.000	252.000	240.750	225.000	227.250	175.500	184.500	204.750	249.750	258.750	267.750	256.500	274.500	256.500	231.750	227.250
171.000	123.750	114.750	112.500	103.500	175.500	234.000	256.500	180.000	252.000	240.750	225.000	227.250	175.500	184.500	204.750	249.750	258.750	267.750	256.500	274.500	256.500	231.750	227.250
171.000	123.750	114.750	112.500	103.500	175.500	234.000	256.500	180.000	252.000	240.750	225.000	227.250	175.500	184.500	204.750	249.750	258.750	267.750	256.500	274.500	256.500	231.750	227.250
171.000	123.750	114.750	112.500	103.500	175.500	234.000	256.500	180.000	252.000	240.750	225.000	227.250	175.500	184.500	204.750	249.750	258.750	267.750	256.500	274.500	256.500	231.750	227.250
154.700	108.500	86.100	70.700	63.000	145.600	290.500	427.700	424.200	364.700	349.300	348.600	358.400	352.800	325.500	312.200	323.400	359.100	404.600	380.800	311.500	319.900	291.200	212.100
154.700	108.500	86.100	70.700	63.000	145.600	290.500	427.700	424.200	364.700	349.300	348.600	358.400	352.800	325.500	312.200	323.400	359.100	404.600	380.800	311.500	319.900	291.200	212.100
9.900	8.100	7.200	7.200	6.300	12.600	14.400	15.300	15.300	14.400	15.300	15.300	14.400	10.800	10.800	11.700	11.700	12.600	11.700	12.600	14.400	17.100	17.100	17.100
5.750	3.750	3.500	3.500	3.000	5.500	7.500	8.000	7.000	6.750	7.250	6.750	7.000	6.500	6.250	7.000	8.250	10.500	10.750	10.250	10.500	9.500	8.250	8.000
8.750	6.250	5.750	5.750	4.500	8.750	11.750	12.250	11.000	10.250	11.000	10.500	10.750	9.500	9.500	10.750	13.000	15.250	16.500	16.750	17.500	16.250	14.000	13.250
232.300	156.400	147.200	142.600	126.500	218.500	282.900	301.300	278.300	264.500	287.500	273.700	282.900	259.900	257.600	294.400	338.100	409.400	443.900	409.400	427.800	386.400	328.900	315.100
93.000	63.600	60.000	60.000	55.200	96.600	127.200	136.800	121.200	108.600	114.600	105.600	107.400	93.600	88.200	99.000	109.200	127.200	127.800	126.600	136.800	126.600	111.000	108.600
7.500	4.500	4.250	4.250	3.750	7.750	9.500	10.250	9.500	8.250	9.250	8.750	9.000	8.000	8.000	9.250	10.750	13.000	14.500	13.500	14.000	12.750	10.750	10.500
206.000	146.000	138.000	136.000	122.000	208.000	275.000	297.000	263.000	233.000	250.000	232.000	236.000	204.000	194.000	218.000	245.000	284.000	290.000	311.000	338.000	319.000	276.000	270.000
206.000	146.000	138.000	136.000	122.000	208.000	275.000	297.000	263.000	233.000	250.000	232.000	236.000	204.000	194.000	218.000	245.000	284.000	290.000	311.000	338.000	319.000	276.000	270.000
14.500	10.000	9.750	10.000	9.250	17.500	23.250	25.250	23.750	21.000	21.500	15.250	13.500	9.500	9.000	12.500	13.750	13.500	13.750	12.500	13.000	10.750	10.000	11.000
11.700	6.300	6.300	6.300	5.400	12.600	15.300	16.200	11.700	12.600	14.400	14.400	16.200	14.400	14.400	12.600	11.700	9.900	16.200	15.300	16.200	15.300	14.400	13.500
94.500	66.150	63.350	63.000	56.700	99.050	130.900	142.450	134.400	126.000	117.600	114.100	99.750	86.450	82.250	98.350	126.700	123.200	121.100	125.650	137.550	128.800	113.400	111.650
58.200	39.600	38.400	37.800	34.800	61.800	81.000	87.600	82.800	78.600	73.200	70.800	61.800	55.800	52.200	61.800	75.600	74.400	72.600	75.600	82.200	78.600	69.600	69.000
75.000	53.000	49.000	49.000	43.000	75.000	98.000	104.000	100.000	93.000	90.000	89.000	77.000	69.000	67.000	81.000	106.000	108.000	113.000	118.000	124.000	116.000	104.000	101.000
3.250	2.000	2.000	2.000	1.750	4.500	5.500	5.750	5.500	5.000	4.750	4.750	4.500	3.250	3.000	2.750	3.250	3.500	4.000	4.000	4.250	4.250	3.500	3.500
1.600	0.800	0.800	0.400	0.400	1.200	1.600	1.600	1.600	1.600	1.600	1.600	1.600	1.200	1.200	1.200	1.600	2.000	2.800	2.800	2.800	2.800	2.000	2.000
1.100	1.100	1.100	0.000	0.000	1.100	1.100	1.100	1.100	1.650	1.650	2.200	1.650	1.650	2.200	2.200	2.200	2.200	2.750	2.750	2.750	2.750	1.100	1.100
13.650	9.800	9.450	9.450	8.400	16.100	21.700	23.100	21.700	19.950	18.900	18.550	16.100	12.950	12.600	12.600	14.000	15.750	15.050	14.700	16.450	16.800	14.700	15.400
3.000	1.500	1.500	0.750	0.750	2.250	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	4.500	5.250	5.250	5.250	4.500	3.750	3.750
14.000	10.000	9.000	8.500	7.500	13.000	17.500	18.500	18.000	17.500	16.500	16.500	14.500	13.500	14.500	15.500	18.000	23.500	27.500	25.500	27.000	24.500	20.500	20.500
6.500	3.500	3.500	3.500	2.500	6.500	8.000	8.500	8.500	8.000	7.500	7.500	7.000	6.500	6.500	7.500	8.500	10.000	12.000	11.000	12.000	11.500	9.500	9.000

Caline 4 input for 2035 Q1

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820244.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820384.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820250.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820200.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1
R108	836203.37	820871.38	836210.57	820716.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820994.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820594.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820578.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	0	1

Road Pair	VKT/hr for each road (include the VKT for each sub-section; not directly used by caline4)																							
	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R076	53.900	39.600	38.500	38.500	34.100	61.600	82.500	89.100	83.600	79.200	71.500	70.400	59.400	50.600	50.600	48.400	52.800	60.500	59.400	58.300	64.900	61.600	55.000	55.000
R077	1.400	1.000	0.800	0.800	0.800	1.800	2.200	2.200	2.200	2.200	2.200	2.200	1.800	1.400	1.400	1.400	1.800	2.600	3.000	2.800	3.000	2.600	2.400	2.200
R078	42.000	29.250	27.500	27.000	24.750	42.500	56.000	60.500	57.250	54.250	52.000	50.750	45.250	40.000	41.500	42.000	49.000	59.500	66.250	64.750	69.000	64.500	55.000	53.750
R079	21.000	15.750	14.250	13.500	12.750	21.750	27.750	30.000	29.250	26.250	26.250	25.500	23.250	20.250	21.750	23.250	26.250	32.250	37.500	34.500	37.500	34.500	29.250	28.500
R080+R081	105.050	73.700	68.750	67.650	62.700	108.900	142.450	154.550	146.300	138.600	129.800	127.050	111.100	95.150	97.900	98.450	111.650	129.800	140.250	134.750	148.500	140.800	123.750	122.650
R082	20.000	16.000	15.000	15.000	14.000	22.000	28.000	31.000	29.000	27.000	26.000	25.000	21.000	18.000	17.000	17.000	18.000	20.000	19.000	19.000	21.000	21.000	19.000	19.000
R083	12.000	8.000	8.000	8.000	8.000	12.000	15.000	16.000	16.000	15.000	14.000	13.000	12.000	9.000	8.000	8.000	9.000	11.000	11.000	11.000	11.000	12.000	11.000	9.000
R084	23.750	15.200	14.250	13.300	11.400	22.800	30.400	32.300	30.400	29.450	26.600	26.600	24.700	21.850	23.750	22.800	26.600	32.300	35.150	35.150	38.000	34.200	30.400	29.450
R085	60.000	42.500	41.250	41.250	38.750	66.250	86.250	95.000	90.000	83.750	77.500	75.000	65.000	51.250	50.000	50.000	56.250	60.000	58.750	57.500	65.000	63.750	58.750	57.500
R086	81.900	69.300	64.050	63.000	57.750	61.950	90.300	102.900	105.000	93.450	98.700	103.950	90.300	77.700	75.600	66.150	92.400	90.300	94.500	93.450	99.750	94.500	85.050	81.900
R087	18.000	12.500	12.000	11.500	10.500	19.000	25.500	27.500	27.500	21.500	22.500	24.500	21.500	18.500	18.000	16.000	24.500	24.500	26.500	25.000	28.000	26.000	22.500	23.000
R088	80.500	56.000	52.500	51.000	45.000	80.000	104.500	112.000	99.500	90.000	96.500	103.000	92.500	82.500	80.000	73.000	113.500	118.500	133.500	125.000	134.000	123.500	108.000	103.500
R089	1.600	1.000	1.000	1.000	0.800	1.600	2.400	2.400	2.400	2.200	2.200	2.200	2.000	1.600	1.600	1.600	2.200	2.200	2.600	2.600	2.600	2.200	2.200	2.000
R090+R091	170.100	116.900	109.900	107.100	96.600	166.600	219.100	235.200	209.300	189.000	177.100	163.100	195.300	217.000	233.800	231.700	258.300	268.100	284.200	264.600	285.600	262.500	226.800	221.900
R092	55.000	37.400	35.200	35.200	31.900	58.300	78.100	83.600	73.700	64.900	60.500	53.900	63.800	69.300	71.500	69.300	72.600	67.100	68.200	68.200	73.700	70.400	62.700	61.600
R093	237.000	161.000	151.000	151.000	137.000	241.000	316.000	342.000	302.000	273.000	253.000	231.000	273.000	302.000	318.000	312.000	342.000	345.000	356.000	338.000	367.000	340.000	299.000	290.000
R093	237.000	161.000	151.000	151.000	137.000	241.000	316.000	342.000	302.000	273.000	253.000	231.000	273.000	302.000	318.000	312.000	342.000	345.000	356.000	338.000	367.000	340.000	299.000	290.000
R094	40.600	29.400	28.000	27.300	23.800	42.000	55.300	59.500	52.500	46.900	43.400	41.300	47.600	52.500	55.300	53.200	58.800	58.100	60.200	60.200	65.800	60.900	53.900	53.200
R095	47.600	32.900	31.500	31.500	28.000	49.000	65.800	70.000	62.300	56.700	52.500	47.600	56.700	61.600	64.400	63.000	67.900	67.200	70.000	66.500	71.400	67.200	58.800	58.100
R096	11.900	7.000	6.300	6.300	6.300	11.900	15.400	16.100	14.700	13.300	12.600	11.200	14.000	16.100	16.800	16.100	17.500	18.900	19.600	18.900	19.600	19.600	16.800	16.800
R097	29.400	21.000	20.300	20.300	18.900	31.500	42.700	46.200	41.300	36.400	32.200	29.400	34.300	37.100	37.100	35.000	37.800	35.000	33.600	32.200	36.400	35.700	31.500	32.200
R098+R099	160.200	132.000	125.400	122.400	123.000	144.000	188.400	203.400	180.600	162.600	149.400	136.800	161.400	177.600	187.800	182.400	197.400	199.800	205.800	195.000	208.800	194.400	169.800	167.400
R100	12.500	9.000	8.250	8.250	8.000	13.250	17.750	19.000	16.750	15.250	14.250	12.750	15.750	17.000	17.500	16.500	17.750	18.250	18.500	17.500	19.250	18.500	16.500	16.000
R100	12.500	9.000	8.250	8.250	8.000	13.250	17.750	19.000	16.750	15.250	14.250	12.750	15.750	17.000	17.500	16.500	17.750	18.250	18.500	17.500	19.250	18.500	16.500	16.000
R101+R102	7.500	3.000	3.000	3.000	3.000	7.500	10.500	10.500	12.000	18.000	18.000	18.000	18.000	15.750	15.750	12.750	12.000	10.500	11.250	12.750	12.750	13.500	12.750	12.750
R101+R102	7.500	3.000	3.000	3.000	3.000	7.500	10.500	10.500	12.000	18.000	18.000	18.000	18.000	15.750	15.750	12.750	12.000	10.500	11.250	12.750	12.750	13.500	12.750	12.750
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R103+R104	233.750	161.500	153.000	153.000	136.000	246.500	331.500	348.500	306.000	284.750	267.750	238.000	289.000	314.500	331.500	314.500	344.250	344.250	365.500	352.750	378.250	361.250	310.250	306.000
R105	381.300	313.100	252.650	213.900	192.200	229.400	465.000	1094.300	1035.400	1010.600	1005.950	1005.950	1019.900	1029.200	1035.400	1016.800	1075.700	1105.150	1201.250	1195.050	1001.300	925.350	919.150	702.150
R106+R107	7.000	3.500	3.500	3.500	2.800	7.700	9.800	10.500	9.800	9.800	8.400	8.400	9.100	9.100	9.100	8.400	8.400	8.400	8.400	8.400	8.400	9.100	8.400	7.700
R108	45.500	32.900	30.800	31.500	29.400	54.600	69.300	74.900	70.700	59.500	56.000	51.100	58.100	64.400	67.900	63.000	63.700	63.000	67.900	69.300	72.100	70.700	63.700	61.600
R109	184.450	130.900	104.550	82.450	75.650	94.350	202.300	504.050	526.150	452.200	436.900	436.900	453.900	449.650	464.100	448.800	469.200	488.750	504.050	496.400	404.600	408.850	366.350	266.900
R110	8.000	5.600	4.000	3.200	2.800	3.200	7.600	19.600	18.000	10.800	10.000	8.800	11.200	12.400	12.400	14.400	15.600	18.800	20.400	20.000	17.600	17.600	16.000	11.600
R111+R112	8.625	6.000	6.000	5.250	4.500	8.250	10.875	11.625	11.250	10.125	9.750	9.375	10.500	10.875	11.625	13.125	12.750	12.750	12.750	12.375	13.125	12.000	10.875	10.500
R113+R114	19.550	12.750	12.750	12.750	11.050	19.550	25.500	26.350	25.500	22.950	21.250	21.250	22.950	24.650	25.500	27.200	27.200	26.350	26.350	25.500	27.200	26.350	22.950	23.800
R115+R116	3.600	2.000	1.600	1.600	1.600	4.400	5.600	5.600	5.600	4.400	4.400	4.000	4.800	4.800	5.200	6.000	5.600	5.600	5.600	5.600	6.000	6.000	5.600	6.000
R117	20.700	13.500	12.600	11.700	10.800	20.700	27.000	28.800	27.900	23.400	21.600	20.700	23.400	26.100	27.900	32.400	33.300	33.300	33.300	30.600	34.200	31.500	27.000	26.100
R118	10.250	6.150	6.150	6.150	6.150	14.350	18.450	18.450	18.450	16.400	14.350	12.300	16.400	16.400	18.450	18.450	16.400	16.400	16.400	16.400	16.400	18.450	16.400	16.400
R118	10.250	6.150	6.150	6.150	6.150	14.350	18.450	18.450	18.450	16.400	14.350	12.300	16.400	16.400	18.450	18.450	16.400	16.400	16.400	16.400	16.400	18.450	16.400	16.400
R118	10.250	6.150	6.150	6.150	6.150	14.350	18.450	18.450	18.450	16.400	14.350	12.300	16.400	16.400	18.450	18.450	16.400	16.400	16.400	16.400	16.400	18.450	16.400	16.400
R119	12.350	7.800	7.150	7.150	6.500	12.350	16.900	17.550	16.900	13.650	12.350	12.350	13.650	14.950	15.600	18.200	17.550	16.900	16.900	16.250	17.550	16.900	14.950	15.600
R119	12.350	7.800	7.150	7.150	6.500	12.350	16.900	17.550	16.900	13.650	12.350	12.350	13.650	14.950	15.600	18.200	17.550	16.900	16.900	16.250	17.550	16.900	14.950	15.600
R120	10.350	6.900	6.900	6.900	6.900	12.650	17.250	18.400	17.250	14.950	13.800	12.650	13.800	16.100	16.100	19.550	16.100	16.100	16.100	14.950	16.100	17.250	16.100	13.800
R121	11.000	8.000	7.000	7.000	7.000	14.000	18.000	19.000	18.000	16.000	14.000	14.000	15.000	15.000	16.000	19.000	16.000	15.000	14.000	14.000	14.000	15.000	14.000	14.000
R122+R123	99.000	85.500	67.500	61.500	69.000	109.500	142.500	222.000	219.000	162.000	118.500	115.500	114.000	154.500	192.000	213.000	217.500	202.500	214.500	235.500	186.000	154.500	136.500	103.500
R122+R123	99.000	85.500	67.500	61.500	69.000	109.500	142.500	222.000	219.000	162.000	118.500	115.500	114.000	154.500	192.000	213.000	217.500	202.500	214.500	235.500	186.000	154.500	136.500	103.500
R124	62.000	42.000	38.000	38.000	34.000	58.000	80.000	82.000	74.000	68.000	62.000	56.000	72.000	80.000	90.000	102.000	106.000	112.000	116.000	108.000	116.000	104.000	90.000	82.000
R124	62.000	42.000	38.000	38.000	34.000	58.000	80.000	82.000	74.000	68.000	62.000	56.000	72.000	80.000	90.000	102.000	106.000	112.000	116.000	108.000	116.000	104.000	90.000	82.000
R124	62.000	42.000	38.000	38.000	34.000	58.000	80.000	82.000	74.000	68.000	62.000	56.000	72.000	80.000	90.000	102.000	106.000	112.000	116.000	108.000	116.000	104.000	90.000	82.000
R124	62.000	42.000	38.000	38.000	34.000	58.000	80.000	82.000	74.000	68.000	62.000	56.000	72.000	80.000	90.000	102.000	106.000	112.000	116.000	108.000	116.000	104.000	90.000	82.000
R125+R126	4.000	2.000	2.000	2.000	2.000	4.000	6.000	6.000	6.000	9.000	8.000	9.000	9.000	7.000	7.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
R125+R126	4.000	2.000	2.000	2.000	2.000	4.000	6.000	6.000	6.000	9.000	8.000	9.000	9.000	7.000	7.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
R127+R128	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R127+R128	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R127+R128	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R127+R128	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R129	4.000	2.500	2.500	2.500	2.250	5.000	6.750	7.000	7.500	12.000	12.250	12.500	11.000	9.500	8.750	7.000	6.250	4.750	4.000	5.000	5.500	5.750	5.500	5.500
R130	0.675	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.225	0.450	0.900	1.350	1.350	2.250	2.475	2.475	2.925	3.375	3.600	4.275	4.275	3.825	2.925	2.700
R131	1.950	1.625	1.625	1.300	1.625	1.950	3.575	5.200	8.450	8.450	7.475	8.125	5.525	5.850	7.800	5.850	5.850	5.200	5.200	9.425	8.125	5.850	5.525	4.225
R132	2.400	2.000	1.600	1.600	1.600	2.000	3.600	5.200	6.800	8.400	8.000	8.800	6.400	7.200	9.600	8.400	8.400	8.400	8.800	6.000	5.200	2.800	2.800	2.400
R133	5.400	3.000	3.000	3.000	3.000	6.600	9.000	9.600	10.200	16.200	16.800	16.800	15.000	11.400	11.400	9.000	7.800	5.400	4.200	5.400	6.000	4.800	4.200	4.200
R134	5.950	3.500	2.100	1.750	1.750	4.550	12.950	25.200	25.200	21.350	21.350	21.350	23.800	24.850	23.800	24.500	26.600	30.100	34.300	14.700	12.250	10.850	9.450	6.650
R135	0.350	0.175	0.175	0.175	0.175	0.350	0.525	0.525	0.525	0.875	0.875	1.050	0.875	0.700	0.700	0.525	0.525	0.525	0.525	0.525	0.525	0.525	0.525	0.525
R136+R137	3.500	1.500	1.500	1.500	1.500	3.250	4.250	4.500	4.750	7.750	8.250	8.500	8.000	6.750	6.750	5.250	5.000	4.750	4.500	5.000	5.000	4.500	4.000	4.000
R138	32.400	21.600	16.200	12.150	8.100	22.950	55.350	147.150	156.600	139.050	135.000	136.350	145.800	145.800	136.350	135.000	143.100	155.250	170.100	71.550	60.750	58.050	51.300	35.100
R138	32.400	21.600	16.200	12.150	8.100	22.950	55.350	147.150	156.600	139.050	135.000	136.350	145.800	145.800	136.350	135.000	143.100	155.250	170.100	71.550	60.750	58.050	51.300	35.100

Caline 4 input for 2035 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
R001	835620.80	820845.25	835496.74	820834.92	14	3	4	310	220	170	140	120	145	320	805	890	775	755	760	785	770	745	720	755	805	880	865	710	715	645	450
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	310	220	170	140	120	145	320	805	890	775	755	760	785	770	745	720	755	805	880	865	710	715	645	450
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	310	220	170	140	120	145	320	805	890	775	755	760	785	770	745	720	755	805	880	865	710	715	645	450
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	310	220	170	140	120	145	320	805	890	775	755	760	785	770	745	720	755	805	880	865	710	715	645	450
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	310	220	170	140	120	145	320	805	890	775	755	760	785	770	745	720	755	805	880	865	710	715	645	450
R001	835226.82	820916.25	835124.41	821006.69	14	3	4	310	220	170	140	120	145	320	805	890	775	755	760	785	770	745	720	755	805	880	865	710	715	645	450
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	325	230	185	145	120	145	320	810	895	775	770	775	810	800	760	730	780	845	935	950	765	780	700	505
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	860	615	465	385	335	390	870	2200	2355	2085	2030	2045	2130	2120	2010	1940	2035	2200	2450	2385	1930	1955	1750	1265
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	525	370	290	245	205	240	540	1400	1470	1300	1250	1255	1305	1280	1190	1150	1190	1295	1425	1440	1170	1185	1085	770
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	525	370	290	245	205	240	540	1400	1470	1300	1250	1255	1305	1280	1190	1150	1190	1295	1425	1440	1170	1185	1085	770
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	1215	850	675	525	480	550	1230	3140	3340	2950	2850	2870	2970	2935	2770	2680	2800	3005	3325	3285	2680	2705	2450	1770
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1	1215	850	675	525	480	550	1230	3140	3340	2950	2850	2870	2970	2935	2770	2680	2800	3005	3325	3285	2680	2705	2450	1770
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	345	285	240	200	185	215	450	1085	1290	1245	1190	1185	1110	1040	1035	990	910	990	1035	975	890	795	805	620
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	345	285	240	200	185	215	450	1085	1290	1245	1190	1185	1110	1040	1035	990	910	990	1035	975	890	795	805	620
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	345	285	240	200	185	215	450	1085	1290	1245	1190	1185	1110	1040	1035	990	910	990	1035	975	890	795	805	620
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	345	285	240	200	185	215	450	1085	1290	1245	1190	1185	1110	1040	1035	990	910	990	1035	975	890	795	805	620
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	345	285	240	200	185	215	450	1085	1290	1245	1190	1185	1110	1040	1035	990	910	990	1035	975	890	795	805	620
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	345	285	240	200	185	215	450	1085	1290	1245	1190	1185	1110	1040	1035	990	910	990	1035	975	890	795	805	620
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	645	525	425	350	310	375	745	1890	2405	2345	2245	2265	2135	2020	2000	1940	1825	1930	2010	1790	1685	1485	1410	1055
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	5	5	5	5	5	5	10	30	35	30	30	30	25	25	25	20	10	15	15	20	15	10	10	10
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	630	510	415	345	305	365	735	1775	2180	2160	2070	2095	2005	1895	1905	1860	1775	1930	2035	1975	1750	1555	1540	1175
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	25	20	15	15	15	15	35	90	105	100	90	90	85	80	80	70	60	65	70	90	60	55	55	50
R013	836078.87	820683.70	835961.87	820661.84	27	0	1	1095	885	705	590	525	630	1270	2995	3650	3600	3490	3540	3380	3225	3240	3200	3050	3365	3600	3245	3190	2805	2780	2120
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	1095	885	705	590	525	630	1270	2995	3650	3600	3490	3540	3380	3225	3240	3200	3050	3365	3600	3245	3190	2805	2780	2120
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	175	105	105	105	95	170	225	235	270	420	455	470	435	390	380	350	340	310	290	300	300	285	245	235
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	45	40	40	40	40	40	50	50	55	85	85	85	75	55	55	45	30	20	10	10	10	20	15	20
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	45	35	25	25	25	55	70	75	90	135	140	145	130	110	105	95	85	80	65	65	65	60	55	55
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	115	80	75	70	60	115	155	165	175	160	170	180	160	155	165	175	185	185	190	175	190	175	145	145
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	115	80	75	70	60	115	155	165	175	160	170	180	160	155	165	175	185	185	190	175	190	175	145	145
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	35	25	20	20	20	35	50	50	55	60	65	70	60	60	60	65	70	65	70	65	70	65	55	50
R019	835520.16	820540.46	835514.53	820570.32	11	0	1	35	25	20	20	20	35	50	50	55	60	65	70	60	60	60	65	70	65	70	65	70	65	55	50
R020	835568.73	820565.58	835478.35	820470.77	11	0	1	50	35	30	30	25	45	60	60	65	110	115	135	125	125	125	115	120	130	130	115	125	110	90	90
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	160	115	105	95	85	160	205	220	255	400	430	460	405	370	360	330	320	310	290	270	285	265	220	210
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	515	445	380	340	370	525	675	1070	995	870	735	860	630	815	1010	1070	1200	1165	1340	900	695	565	500	375
R023	835346.26	820830.29	835376.00	820680.43	16	0	1	615	535	460	430	475	700	930	1485	1305	1110	915	1040	750	930	1135	1155	1255	1155	1255	830	660	540	485	370
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	830	710	610	560	615	915	1215	1940	1850	1655	1415	1615	1185	1375	1550	1650	1640	1585	1760	1725	1380	1140	1035	780
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	70	40	35	30	30	65	85	85	100	165	180	195	185	170	170	160	160	165	155	145	150	135	120	110
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	260	230	195	170	190	285	375	590	560	480	395	450	335	415	510	520	560	525	580	375	290	230	210	155
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	325	225	205	200	180	325	420	450	330	445	475	505	455	440	455	485	535	525	545	515	500	510	430	420
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	80	50	45	40	35	75	100	105	110	175	185	200	180	165	160	145	140	140	135	130	135	120	105	100
R029	835524.13	820833.07	835569.38	820594.78	18	0	1	325	230	220	220	200	350	460	500	455	450	470	495	440	405	430	450	475	445	445	425	460	460	405	390
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	10	5	5	5	5	15	20	20	20	30	30	35	30	30	30	20	15	15	15	15	15	15	15	15
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	180	150	125	115	120	165	230	350	315	275	230	270	205	260	335	370	420	410	495	305	240	195	165	125
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	435	370	310	290	300	435	610	975	945	830	680	780	830	970	1100	1035	975	995	1065	685	550	435	375	290
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	65	50	50	45	45	85	110	120	115	95	100	100	90	80	70	80	80	80	75	75	65	70	70	70
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	400	350	300	275	300	435	590	935	950	915	885	860	755	830	800	805	805	855	885	580	475	385	360	270
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1	290	200	185	190	180	335	440	480	485	425	440	450	410	405	355	360	310	285	300	295	335	320	285	285
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	490	350	285	230	200	240	535	1385	1500	1320	1270	1250	1280	1240	1145	1090	1110	1150	1215	1360	1115	1155	1060	775
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	490	350	285	230	200	240	535	1385	1500	1320	1270	1250	1280	1240	1145	1090	1110	1150	1215	1360	1115	1155	1060	775
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	150	105	75	60	55	60	130	340	350	310	310	320	345	345	330	325	355	400	475	530	425	425	370	255
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	310	210	165	130	115	130	280	715	785	705	690	720	755	765	740	730	780	845	960	955	820	815	730	515
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	310	210	200	190	170	335	445	470	475	460	440	410	410	420	370	395	430	420	445	425	455	440	385	370
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	30	20	20	20	20	30	45	45	55	80	85	90	85	75	75	70	75	60	60	60	60	50	50	45
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	275	180	165	165	150	295	395	420	430	440	425	405	390	390	345	350	360	340	345	330	360	355	315	300
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	165	110	110	95	90	160	205	225	225	215	190	190	195	155	185	210	235	240	270	255	270	250	205	205
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	115	95	75	60	50	65	140	330	350	215	185	170	175	145	205	240	290	325	340	150	110	100	95	75
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	260	215	165	140	115	145	320	775	805	540	470	430	435	370	475	570	680	750	785	1005	720	640	650	495
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	35	20	20	20	20	35	45	45	45	45	45	50	45	75	85	85	95	95	90	140	135	135	110	110
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	20	10	10	10	5	20	20	20	20	40	45	45	45	45	45	40	40	45	45	45	45	35	35	30
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	515	460	380	340	375	555	750	1150	1195	1055	795	820	685	695	995	1075	1310	1275	1290	825	655	520	470	340
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	380	275	255	250	230	390	520	570	400	560	535	500	505	390	410	455	555	575	595	570	610	570	515	505
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	380	275	255	250	230	390	520	570	400	560	535	500	505	390	410	455	555	575	595	570	610	570	515	505
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	380	275	255	250	230	390	520	570	400	560	535	500	505	390	410	455	555	575	595	570	610	570	515	505
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	380	275	255	250	230	390	520	570	400	560	535	500	505	390	410	455	555	575	595	570	610	570	515	505
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	1105	775	615	505	450	1040	2075	3055	3030	2605	2495	2490	2560	2520	2325	2230	2310	2565	2890	2720	2225	2285	2080	1515
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	1105	775	615	505	450	1040	2075	3055	3030	2605	2495	2490	2560	2520	2325	2230	2310	2565	2890	2720	2225	2285	2080	1515
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	55	45	40	40	35	70	80	85	85	80	85	85	80	60	60	65	65	70	65	70	80	95	95	55
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	115	75	70	70	60	110	150	160	140	135	145	135	140	130	125	140	165	210	215	205	210	190	165	150
R057	835305.88	820665.23	835365.16	820674.55	12	0	1	175	125	115	115	90	175	235	245	220	205	220	210	215	190	190	215	260	305	330	335	350	325	280	255
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	505	340	320	310	275	475	615	655	605	575	625	595	615	565	560	640	735	890	965	890	930	840	715	685
R059	835395.59	820548.47	835232.17	820516.97	16	0	1	775	530	500	500	460	805	1060	1140	1010	905	955	880	895	780	735	825	910	1060	1065	1055	1140	1055	925	935
R060	835740.08	820393.81	835672.32	820380.93	13	0	1	150	90	85	85	75	155	190	205	190	165	185	175	180	160	160	185	215	260	290	270	280	255	215	210
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1	1030	730	690	680	610	1040	1375	1485	1315	1165	1250	1160	1180	1020	970	1090	1225	1420	1450	1555	1690	1595	1380	1350
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	1030	730	690	680	610	1040	1375	1485	1315	1165	1250	1160	1180	1020	970	1090	1225	1420	1450	1555	1690	1595	1380	1350
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1	290	200	195	200	185	350	465	505	475	420	430	305	270	190	180	250	275	270	275	250	260	215	200	220
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	65	35	35	35	30	70	85	90	65	70	80	80	90	80	80	70	65	55	90	85	90	85	80	75
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	1350	945	905	900	810	1415	1870	2035	1920	1800	1680	1630	1425	1235	1175	1405	1810	1760	1730	1795	1965	1840	1620	1595
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	485	330	320	315	290	515	675	730	690	655	610	590	515	465	435	515	630	620	605	630	685	655	580	575
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	375	265	245	245	215	375	490	520	500	465	450	445	385	345	335	405	530	540	565	590	620	580	520	505
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	65	40	40	40	35	90	110	115	110	100	95	95	90	65	60	55	65	70	80	80	85	85	70	70
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	20	10	10	5	5	15	20	20	20	20	20	20	20	15	15	15	20	25	35	35	35	35	25	25
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	10	10	10	1	1	10	10	10	10	15	15	20	15	15	20	20	20	20	25	25	25	25	10	10
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	195	140	135	135	120	230	310	330	310	285	270	265	230	185	180	180	200	225	215	210	235	240	210	220
R073	835175.32	820822.66	835062.15	820684.25	18	0	1	20	10	10	5	5	15	20	20	20	20	20	20	20	20	20	20	20	30	35	35	35	30	25	25
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	140	100	90	85	75	130	175	185	180	175	165	165	145	135	145	155	180	235	275	255	270	245	205	205
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	65	35	35	35	25	65	80	85	85	80	75	75	70	65	65	75	85	100	120	110	120	115	95	90

Caline 4 input for 2035 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	245	180	175	175	155	280	375	405	380	360	325	320	270	230	230	220	240	275	270	265	295	280	250	250
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	35	25	20	20	20	45	55	55	55	55	55	55	45	35	35	35	45	65	75	70	75	65	60	55
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	840	585	550	540	495	850	1120	1210	1145	1085	1040	1015	905	800	830	840	980	1190	1325	1295	1380	1290	1100	1075
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	140	105	95	90	85	145	185	200	195	175	175	170	155	135	145	155	175	215	250	230	250	230	195	190
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	955	670	625	615	570	990	1295	1405	1330	1260	1180	1155	1010	865	890	895	1015	1180	1275	1225	1350	1280	1125	1115
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	100	80	75	75	70	110	140	155	145	135	130	125	105	90	85	85	90	100	95	95	105	105	95	55
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	60	40	40	40	40	60	75	80	80	75	70	65	60	45	40	40	45	55	55	55	55	60	55	45
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	125	80	75	70	60	120	160	170	160	155	140	140	130	115	125	120	140	170	185	185	200	180	160	155
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	240	170	165	165	155	265	345	380	360	335	310	300	260	205	200	200	225	240	235	230	260	255	235	230
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	390	330	305	300	275	295	430	490	500	445	470	495	430	370	360	315	440	430	450	445	475	450	405	390
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	180	125	120	115	105	190	255	275	275	215	225	245	215	185	180	160	245	245	265	250	280	260	225	230
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	805	560	525	510	450	800	1045	1120	995	900	965	1030	925	825	800	730	1135	1185	1335	1250	1340	1235	1080	1035
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	40	25	25	25	20	40	60	60	60	55	55	55	50	40	40	40	55	55	65	65	65	55	55	50
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	1215	835	785	765	690	1190	1565	1680	1495	1350	1265	1165	1395	1550	1670	1655	1845	1915	2030	1890	2040	1875	1620	1585
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	250	170	160	160	145	265	355	380	335	295	275	245	290	315	325	315	330	305	310	310	335	320	285	280
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	1185	805	755	755	685	1205	1580	1710	1510	1365	1265	1155	1365	1510	1590	1560	1710	1725	1780	1690	1835	1700	1495	1450
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	1185	805	755	755	685	1205	1580	1710	1510	1365	1265	1155	1365	1510	1590	1560	1710	1725	1780	1690	1835	1700	1495	1450
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	290	210	200	195	170	300	395	425	375	335	310	295	340	375	395	380	420	415	430	430	470	435	385	380
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	340	235	225	225	200	350	470	500	445	405	375	340	405	440	460	450	485	480	500	475	510	480	420	415
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	85	50	45	45	45	85	110	115	105	95	90	80	100	115	120	115	125	135	140	135	140	140	120	120
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	210	150	145	145	135	225	305	330	295	260	230	210	245	265	265	250	270	250	240	230	260	255	225	230
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	1335	1100	1045	1020	1025	1200	1570	1695	1505	1355	1245	1140	1345	1480	1565	1520	1645	1665	1715	1625	1740	1620	1415	1395
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	250	180	165	165	160	265	355	380	335	305	285	255	315	340	350	330	355	365	370	350	385	370	330	320
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	250	180	165	165	160	265	355	380	335	305	285	255	315	340	350	330	355	365	370	350	385	370	330	320
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	50	20	20	20	20	50	70	70	80	120	120	120	120	105	105	85	80	70	75	85	85	90	85	85
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	50	20	20	20	20	50	70	70	80	120	120	120	120	105	105	85	80	70	75	85	85	90	85	85
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R103+R104	836068.35	820219.28	836139.25	820234.91	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	275	190	180	180	160	290	390	410	360	335	315	280	340	370	390	370	405	405	430	415	445	425	365	350
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	1230	1010	815	690	620	740	1500	3530	3340	3260	3245	3245	3290	3320	3340	3280	3470	3565	3875	3855	3230	2985	2965	2265
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1	50	25	25	25	20	55	70	75	70	70	60	60	65	65	65	60	60	60	60	60	60	65	60	55
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	325	235	220	225	210	390	495	535	505	425	400	365	415	460	485	450	455	450	485	495	515	505	455	440
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	1085	770	615	485	445	555	1190	2965	3095	2660	2570	2570	2670	2645	2730	2640	2760	2875	2965	2920	2380	2405	2155	1570
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	100	70	50	40	35	40	95	245	225	135	125	110	140	155	155	180	195	235	255	250	220	220	200	145
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	115	80	80	70	60	110	145	155	150	135	130	125	140	145	155	175	170	170	170	165	175	160	145	140
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	115	75	75	75	65	115	150	155	150	135	125	125	135	145	150	160	160	155	155	150	160	155	135	140
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	45	25	20	20	20	55	70	70	70	55	55	50	60	60	65	75	70	70	70	70	75	75	70	75
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	115	75	70	65	60	115	150	160	155	130	120	115	130	145	155	180	185	185	185	170	190	175	150	145
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	25	15	15	15	15	35	45	45	45	40	35	30	40	40	45	45	40	40	40	40	40	45	40	40
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	25	15	15	15	15	35	45	45	45	40	35	30	40	40	45	45	40	40	40	40	40	45	40	40
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	25	15	15	15	15	35	45	45	45	40	35	30	40	40	45	45	40	40	40	40	40	45	40	40
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	95	60	55	55	50	95	130	135	130	105	95	95	105	115	120	140	135	130	130	125	135	130	115	120
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	95	60	55	55	50	95	130	135	130	105	95	95	105	115	120	140	135	130	130	125	135	130	115	120
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	45	30	30	30	30	55	75	80	75	65	60	55	60	70	70	85	70	70	70	65	70	75	70	60
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	55	40	35	35	35	70	90	95	90	80	70	70	75	75	80	95	80	75	70	70	70	75	70	70
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	330	285	225	205	230	365	475	740	730	540	395	385	380	515	640	710	725	675	715	785	620	515	455	345
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	330	285	225	205	230	365	475	740	730	540	395	385	380	515	640	710	725	675	715	785	620	515	455	345
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	155	105	95	95	85	145	200	205	185	170	155	140	180	200	225	255	265	280	290	270	290	260	225	205
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	155	105	95	95	85	145	200	205	185	170	155	140	180	200	225	255	265	280	290	270	290	260	225	205
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	155	105	95	95	85	145	200	205	185	170	155	140	180	200	225	255	265	280	290	270	290	260	225	205
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	155	105	95	95	85	145	200	205	185	170	155	140	180	200	225	255	265	280	290	270	290	260	225	205
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	80	50	50	50	45	100	135	140	150	240	245	250	220	190	175	140	125	95	80	100	110	115	110	110
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	15	5	5	5	5	5	5	5	5	10	20	30	30	50	55	55	65	75	80	95	95	85	65	60
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	30	25	25	20	25	30	55	80	130	130	115	125	85	90	120	90	90	80	80	145	125	90	85	65
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	30	25	20	20	20	25	45	65	85	105	100	110	80	90	120	105	105	105	110	75	65	35	35	30
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	45	25	25	25	25	55	75	80	85	135	140	140	125	95	95	75	65	45	35	45	50	40	35	35
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	85	50	30	25	25	65	185	360	360	305	305	305	340	355	340	350	380	430	490	210	175	155	135	55
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	10	5	5	5	5	10	15	15	15	25	25	30	25	20	20	15	15	15	15	15	15	15	15	15
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	70	30	30	30	30	65	85	90	95	155	165	170	160	135	135	105	100	95	90	100	100	90	80	80
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	120	80	60	45	30	85	205	545	580	515	500	505	540	540	505	500	530	575	630	265	225	215	190	130
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	120	80	60	45	30	85	205	545	580	515	500	505	540	540	505	500	530	575	630	265	225	215	190	130

Caline 4 input for 2035 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
R001	835620.80	820845.25	835496.74	820834.92	14	3	4	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	835226.82	820916.25	835124.41	821008.69	14	3	4	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	0.0078	0.0074	0.0084	0.0092	0.0088	0.0092	0.0083	0.0100	0.0103	0.0099	0.0102	0.0097	0.0096	0.0094	0.0091	0.0090	0.0085	0.0085	0.0082	0.0092	0.0089	0.0091	0.0091	0.0091
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	0.0061	0.0063	0.0059	0.0064	0.0067	0.0064	0.0071	0.0077	0.0078	0.0076	0.0075	0.0072	0.0073	0.0071	0.0069	0.0066	0.0063	0.0061	0.0059	0.0059	0.0059	0.0061	0.0062	0.0060
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1	0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	0.0100	0.0102	0.0108	0.0109	0.0110	0.0111	0.0116	0.0123	0.0130	0.0129	0.0126	0.0123	0.0118	0.0113	0.0109	0.0105	0.0098	0.0089	0.0082	0.0088	0.0089	0.0088	0.0091	0.0089
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0098	0.0110	0.0103	0.0110	0.0110	0.0110	0.0105	0.0105	0.0105	0.0080	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	0.0099	0.0100	0.0099	0.0102	0.0104	0.0104	0.0110	0.0120	0.0126	0.0128	0.0124	0.0122	0.0118	0.0115	0.0112	0.0108	0.0105	0.0097	0.0092	0.0096	0.0103	0.0106	0.0109	0.0107
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	0.0105	0.0080	0.0086	0.0086	0.0086	0.0086	0.0103	0.0111	0.0115	0.0114	0.0111	0.0107	0.0110	0.0108	0.0108	0.0093	0.0080	0.0079	0.0078	0.0086	0.0080	0.0082	0.0082	0.0084
R013	836078.87	820683.70	835961.87	820666.84	27	0	1	0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
R013	835962.88	820667.76	835783.32	820623.21	20	0	1	0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	0.0099	0.0118	0.0118	0.0118	0.0127	0.0126	0.0116	0.0114	0.0111	0.0125	0.0124	0.0121	0.0121	0.0112	0.0113	0.0107	0.0105	0.0086	0.0088	0.0134	0.0132	0.0143	0.0141	0.0145
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	0.0163	0.0184	0.0184	0.0184	0.0184	0.0184	0.0160	0.0160	0.0145	0.0165	0.0165	0.0165	0.0178	0.0145	0.0145	0.0163	0.0201	0.0065	0.0065	0.0065	0.0065	0.0157	0.0166	0.0157
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	0.0102	0.0094	0.0105	0.0105	0.0105	0.0114	0.0109	0.0110	0.0107	0.0111	0.0107	0.0108	0.0102	0.0099	0.0098	0.0094	0.0089	0.0082	0.0081	0.0081	0.0081	0.0087	0.0083	0.0083
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
R019	835520.16	820540.46	835514.63	820578.32	11	0	1	0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
R020	835568.73	820565.58	835478.35	820478.77	11	0	1	0.0077	0.0063	0.0063	0.0063	0.0064	0.0079	0.0080	0.0080	0.0079	0.0076	0.0075	0.0077	0.0072	0.0072	0.0072	0.0064	0.0061	0.0061	0.0061	0.0064	0.0061	0.0064	0.0063	0.0063
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	0.0149	0.0166	0.0175	0.0139	0.0139	0.0157	0.0161	0.0156	0.0150	0.0171	0.0166	0.0175	0.0162	0.0162	0.0161	0.0152	0.0153	0.0144	0.0150	0.0150	0.0147	0.0155	0.0144	0.0148
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	0.0202	0.0210	0.0215	0.0211	0.0220	0.0214	0.0220	0.0226	0.0223	0.0222	0.0219	0.0215	0.0211	0.0209	0.0204	0.0203	0.0196	0.0189	0.0185	0.0205	0.0209	0.0212	0.0214	0.0221
R023	835346.26	820830.29	835376.00	820689.43	16	0	1	0.0175	0.0180	0.0182	0.0186	0.0186	0.0188	0.0195	0.0200	0.0198	0.0197	0.0197	0.0190	0.0187	0.0182	0.0178	0.0169	0.0164	0.0151	0.0143	0.0154	0.0160	0.0164	0.0167	0.0177
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	0.0180	0.0185	0.0189	0.0193	0.0194	0.0201	0.0210	0.0226	0.0240	0.0246	0.0246	0.0245	0.0232	0.0220	0.0184	0.0198	0.0155	0.0149	0.0151	0.0156	0.0159	0.0159	0.0160	0.0164
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	0.0131	0.0082	0.0094	0.0088	0.0088	0.0159	0.0145	0.0145	0.0137	0.0145	0.0136	0.0135	0.0135	0.0125	0.0125	0.0104	0.0104	0.0093	0.0095	0.0097	0.0098	0.0108	0.0113	0.0118
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	0.0139	0.0142	0.0142	0.0132	0.0129	0.0140	0.0144	0.0152	0.0166	0.0166	0.0163	0.0168	0.0162	0.0164	0.0166	0.0164	0.0161	0.0157	0.0158	0.0148	0.0149	0.0137	0.0132	0.0141
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	0.0202	0.0201	0.0210	0.0197	0.0208	0.0213	0.0217	0.0215	0.0237	0.0263	0.0258	0.0258	0.0260	0.0237	0.0233	0.0222	0.0221	0.0200	0.0187	0.0186	0.0194	0.0198	0.0192	0.0198
R028	835581.86	820221.86	835526.68	820516.62	18	0	1	0.0127	0.0118	0.0116	0.0131	0.0131	0.0127	0.0128	0.0128	0.0128	0.0131	0.0134	0.0131	0.0131	0.0144	0.0145	0.0143	0.0143	0.0143	0.0144	0.0141	0.0144	0.0142	0.0149	0.0150
R029	835524.13	820833.07	835569.38	820594.78	18	0	1	0.0150	0.0158	0.0163	0.0163	0.0165	0.0170	0.0169	0.0169	0.0177	0.0207	0.0201	0.0199	0.0197	0.0171	0.0166	0.0161	0.0156	0.0124	0.0115	0.0120	0.0124	0.0149	0.0151	0.0155
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	0.0031	0.0061	0.0061	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0053	0.0053	0.0054	0.0053	0.0053	0.0053	0.0064	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	0.0062	0.0065	0.0064	0.0065	0.0065	0.0067	0.0083	0.0085	0.0088	0.0087	0.0082	0.0077	0.0072	0.0068	0.0066	0.0065	0.0058	0.0050	0.0051	0.0046	0.0050	0.0053	0.0052	0.0057
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	0.0141	0.0152	0.0161	0.0158	0.0155	0.0152	0.0179	0.0171	0.0192	0.0193	0.0190	0.0181	0.0165	0.0162	0.0162	0.0154	0.0145	0.0138	0.0137	0.0143	0.0153	0.0145	0.0147	0.0148
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	0.0119	0.0128	0.0128	0.0136	0.0136	0.0165	0.0165	0.0159	0.0160	0.0179	0.0173	0.0173	0.0182	0.0134	0.0140	0.0130	0.0130	0.0095	0.0062	0.0082	0.0091	0.0121	0.0116	0.0143
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	0.0089	0.0092	0.0095	0.0096	0.0101	0.0095	0.0112	0.0116	0.0136	0.0136	0.0124	0.0125	0.0118	0.0117	0.0118	0.0108	0.0097	0.0084	0.0077	0.0083	0.0090	0.0092	0.0099	0.0107
R036+R037	835405.93	820841.18	835324.17	821028.61	18	0	1	0.0159	0.0143	0.0146	0.0146	0.0146	0.0166	0.0170	0.0172	0.0170	0.0180	0.0177	0.0176	0.0181	0.0167	0.0169	0.0163	0.0162	0.0138	0.0146	0.0143	0.0152	0.0152	0.0146	0.0151
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	0.0273	0.0291	0.0305	0.0276	0.0298	0.0324	0.0307	0.0315	0.0307	0.0304	0.0294	0.0295	0.0284	0.0277	0.0270	0.0265	0.0261	0.0257	0.0252	0.0273	0.0278	0.0278	0.0283	0.0290
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	0.0080	0.0079	0.0074	0.0078	0.0085	0.0083	0.0094	0.0096	0.0098	0.0095	0.0091	0.0088	0.0087	0.0087	0.0087	0.0084	0.0078	0.0072	0.0069	0.0077	0.0074	0.0078	0.0081	0.0077
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	0.0117	0.0126	0.0111	0.0115	0.0121	0.0135	0.0137	0.0133	0.0136	0.0153	0.0157	0.0161	0.0156	0.0132	0.0139	0.0127	0.0125	0.0101	0.0099	0.0106	0.0106	0.0119	0.0128	0.0132
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	0.0088	0.0099	0.0099	0.0099	0.0099	0.0122	0.0111	0.0111	0.0102	0.0108	0.0102	0.0103	0.0102	0.0122	0.0122	0.0131	0.0122	0.0124	0.0124	0.0124	0.0124	0.0136	0.0136	0.0137
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	0.0113	0.0098	0.0101	0.0101	0.0107	0.0134	0.0127	0.0124	0.0124	0.0157	0.0162	0.0166	0.0161	0.0136	0.0142	0.0120	0.0111	0.0082	0.0071	0.0075	0.0079	0.0104	0.0107	0.0111
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	0.0169	0.0166	0.0166	0.0156	0.0157	0.0153	0.0173	0.0167	0.0167	0.0179	0.0179	0.0191	0.0175	0.0187	0.0177	0.0165	0.0171	0.0163	0.0166	0.0170	0.0173	0.0164	0.0167	0.0173
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	0.0075	0.0084	0.0080	0.0046	0.0052	0.0064	0.0076	0.0088	0.0085	0.0088	0.0090	0.0094	0.0091	0.0098	0.0095	0.0066	0.0068	0.0068	0.0065	0.0071	0.0059	0.0075	0.0079	0.0093
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	0.0144	0.0130	0.0140	0.0154	0.0144	0.0154	0.0155	0.0158	0.0159	0.0160	0.0157	0.0154	0.0156	0.0151	0.0144	0.0134	0.0129	0.0123	0.0119	0.0132	0.0135	0.0138	0.0141	0.0144
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	0.0163	0.0235	0.0235	0.0235	0.0235	0.0153	0.0126	0.0126	0.0126	0.0210	0.0225	0.0284	0.0225	0.0346	0.0309	0.0309	0.0287	0.0287	0.0307	0.0426	0.0437	0.0437	0.0416	0.0416
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	0.0064	0.0031	0.0031	0.0031	0.0061	0.0064	0.0064	0.0064	0.0064	0.0064	0.0057	0.0057	0.0057	0.0057	0.0057	0.0047	0.0047	0.0049	0.0049	0.0049	0.0049	0.0054	0.0054	0.0053
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	0.0176	0.0184	0.0180	0.0190	0.0187	0.0190	0.0206	0.0213	0.0221	0.0221	0.0216	0.0213	0.0200	0.0199	0.0184	0.0169	0.0160	0.0151	0.0150	0.0157	0.0161	0.0158	0.0167	0.0167
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	0.0288	0.0297	0.0318	0.0347	0.0344	0.0320	0.0311	0.0314	0.0314	0.0294	0.0285	0.0285	0.0280	0.0231	0.0231	0.0223	0.0205	0.0202	0.0171	0.0202	0.0208	0.0285	0.0298	0.0310
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	0.0067	0.0068	0.0069	0.0069	0.0075	0.0092	0.0090	0.0091	0.0094	0.0096	0.0094	0.0088	0.0087	0.0085	0.0083	0.0084	0.0079	0.0079	0.0077	0.0078	0.0077	0.0078	0.0077	0.0077
R057	835305.88	820665.23	835365.16	820676.55	12	0	1	0.0077	0.0083	0.0088	0.0088	0.0078	0.0102	0.0106	0.0105	0.0099	0.0116	0.0111	0.0113	0.0112	0.0101	0.0101	0.0094	0.0092	0.0079	0.0076	0.0102	0.0107	0.0108	0.0106	0.0109
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	0.0275	0.0275	0.0278	0.0273	0.0283	0.0275	0.0283	0.0283	0.0281	0.0275	0.0276	0.0273	0.0272	0.0273	0.0273	0.0274	0.0276	0.0285	0.0293	0.0289	0.0291	0.0292	0.0287	0.0291
R059	835395.59	820548.47	835232.17	820514.97	16	0	1	0.0088	0.0093	0.0096	0.0097	0.0102	0.0093	0.0094	0.0094	0.0095	0.0093	0.0093	0.0088	0.0086	0.0080	0.0077	0.0075	0.0071	0.0066	0.0059	0.0080	0.0082	0.0087	0.0092	0.0090
R060	835740.08	820393.81	835672.32	820389.93	13	0	1	0.0283	0.0264	0.0272	0.0272	0.0299	0.0302	0.0291	0.0307	0.0291	0.0288	0.0299	0.0279	0.0275	0.0273	0.0252	0.0250	0.0243	0.0232	0.0224	0.0229	0.0223	0.0234	0.0235	0.0238
R061+R062	835198.18	821137.62	835283.81	820944.88	22	0	1	0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1	0.0125	0.0129	0.0129	0.0125	0.0125	0.0137	0.0140	0.0143	0.0138	0.0138	0.0138	0.0131	0.0133	0.0131	0.0138	0.0143	0.0145	0.0143	0.0157	0.0168	0.0178	0.0193	0.0192	0.0198
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	0.0141	0.0094	0.0094	0.0094	0.0088	0.0157	0.0145	0.0144	0.0159	0.0157	0.0146	0.0146	0.0144	0.0146	0.0146	0.0131	0.0131	0.0143	0.0116	0.0115	0.0116	0.0137	0.0137	0.0146
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	0.0133	0.0135	0.0137	0.0139	0.0140	0.0134	0.0138	0.0140	0.0138	0.0135	0.0135	0.0134	0.0128	0.0124	0.0124	0.0122	0.0126	0.0118	0.0113	0.0141	0.0147	0.0148	0.0150	0.0149
R067	835152.02	820987.68	835260.71	820894.31	14	0	1	0.0197	0.0196	0.0201	0.0195	0.0189	0.0190	0.0190	0.0190	0.0188	0.0191	0.0191	0.0193	0.0189	0.0192	0.0193	0.0193	0.0193	0.0193	0.0198	0.0218	0.0221	0.0220	0.0222	0.0224
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	0.0212	0.0217	0.0219	0.0219	0.0203	0.0211	0.0205	0.0201	0.0202	0.0205	0.0205	0.0206	0.0209	0.0207	0.0207	0.0210	0.0211	0.0214	0.0219	0.0235	0.0239	0.0235	0.0241	0.0242
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	0.0141	0.0099	0.0099	0.0099	0.0094	0.0168	0.0155	0.0154	0.0155	0.0164	0.0166	0.0166	0.0168	0.0141	0.0142	0.0143	0.0141	0.0131	0.0123	0.0123	0.0123	0.0137	0.0148	0.0148
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	0.0099	0.0065	0.0065	0.0130	0.0130	0.0088	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0088	0.0088	0.0088	0.0099	0.0195	0.0158	0.0158	0.0158	0.0158	0.0195	0.0195
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	0.0065	0.0065	0.0065	0.0000	0.0000	0.0065	0.0065	0.0065	0.0065	0.0043	0.0043	0.0033	0.0043	0.0043	0.0066	0.0066	0.0066	0.0066	0.0079	0.0079	0.0079	0.0079	0.0065	0.0065
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	0.0112	0.0107	0.0109	0.0109	0.0111	0.0138	0.0126	0.0122	0.0126	0.0122	0.0126	0.0127	0.0133	0.0095	0.0094	0.0094	0.0089	0.0080	0.0067	0.0076	0.0075	0.0112	0.0117	0.0124
R073	835175.32	820822.66	835062.15	820686.25	18	0	1	0.0064	0.0031	0.0031	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0053	0.0054	0.0054	0.0054	0.0053	0.0064	0.0064
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	0.0153	0.0170	0.0181	0.0158	0.0171	0.0156	0.0154	0.0156	0.0154	0.0154	0.0148	0.0148	0.0152	0.0153	0.0147	0.0169	0.0156	0.0161	0.0165	0.0173	0.0173	0.0168	0.0167	0.0173
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	0.0141	0.0094	0.0094	0.0094	0.0105	0.0169	0.0154	0.0153	0.0153	0.0154	0.0155	0.0155	0.0157	0.0141	0.0141	0.0131	0.0123	0.0118	0.0109	0.0113	0.0109	0.0124	0.0129	0.0136

Caline 4 input for 2035 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	0.0115	0.0118	0.0120	0.0120	0.0128	0.0122	0.0119	0.0120	0.0117	0.0121	0.0110	0.0111	0.0114	0.0112	0.0105	0.0095	0.0090	0.0086	0.0075	0.0076	0.0082	0.0085	0.0079	0.0087
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	0.0094	0.0105	0.0099	0.0099	0.0099	0.0137	0.0136	0.0136	0.0136	0.0136	0.0136	0.0136	0.0137	0.0094	0.0094	0.0094	0.0087	0.0125	0.0117	0.0116	0.0117	0.0125	0.0124	0.0136
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	0.0115	0.0118	0.0118	0.0120	0.0121	0.0119	0.0118	0.0119	0.0119	0.0118	0.0118	0.0119	0.0115	0.0111	0.0108	0.0108	0.0105	0.0104	0.0101	0.0111	0.0111	0.0116	0.0117	0.0117
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	0.0199	0.0188	0.0203	0.0209	0.0211	0.0198	0.0189	0.0195	0.0198	0.0193	0.0193	0.0196	0.0192	0.0192	0.0201	0.0191	0.0193	0.0197	0.0199	0.0199	0.0199	0.0199	0.0194	0.0199
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	0.0106	0.0112	0.0114	0.0116	0.0117	0.0111	0.0110	0.0110	0.0110	0.0109	0.0107	0.0107	0.0107	0.0096	0.0094	0.0092	0.0085	0.0079	0.0072	0.0080	0.0083	0.0089	0.0092	0.0097
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	0.0164	0.0180	0.0184	0.0184	0.0197	0.0161	0.0156	0.0150	0.0151	0.0157	0.0154	0.0155	0.0162	0.0131	0.0131	0.0131	0.0131	0.0125	0.0124	0.0124	0.0125	0.0136	0.0144	0.0144
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	0.0173	0.0209	0.0209	0.0209	0.0209	0.0173	0.0156	0.0154	0.0154	0.0156	0.0157	0.0169	0.0173	0.0152	0.0154	0.0154	0.0151	0.0136	0.0136	0.0136	0.0136	0.0155	0.0157	0.0178
R084	835334.32	820425.38	835123.33	820386.30	18	0	1	0.0172	0.0158	0.0160	0.0130	0.0141	0.0174	0.0161	0.0160	0.0161	0.0166	0.0167	0.0167	0.0166	0.0163	0.0155	0.0156	0.0151	0.0157	0.0155	0.0172	0.0166	0.0169	0.0164	0.0165
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	0.0140	0.0147	0.0140	0.0140	0.0146	0.0143	0.0137	0.0142	0.0147	0.0140	0.0145	0.0149	0.0145	0.0123	0.0122	0.0122	0.0120	0.0116	0.0116	0.0117	0.0122	0.0116	0.0123	0.0125
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	0.0201	0.0206	0.0200	0.0201	0.0197	0.0205	0.0196	0.0191	0.0201	0.0236	0.0234	0.0233	0.0224	0.0216	0.0212	0.0200	0.0183	0.0165	0.0156	0.0163	0.0165	0.0178	0.0174	0.0174
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	0.0076	0.0079	0.0082	0.0083	0.0082	0.0090	0.0093	0.0095	0.0095	0.0089	0.0086	0.0086	0.0086	0.0074	0.0075	0.0076	0.0068	0.0059	0.0059	0.0057	0.0066	0.0066	0.0068	0.0074
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	0.0224	0.0225	0.0227	0.0223	0.0223	0.0235	0.0241	0.0241	0.0238	0.0237	0.0232	0.0234	0.0229	0.0226	0.0222	0.0216	0.0217	0.0213	0.0210	0.0213	0.0213	0.0217	0.0214	0.0215
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	0.0056	0.0064	0.0064	0.0064	0.0064	0.0082	0.0076	0.0076	0.0076	0.0077	0.0077	0.0077	0.0071	0.0056	0.0056	0.0056	0.0052	0.0052	0.0049	0.0049	0.0049	0.0052	0.0052	0.0051
R090+R091	835479.99	820110.19	835462.39	820208.60	28	0	1	0.0183	0.0191	0.0190	0.0194	0.0196	0.0193	0.0196	0.0198	0.0196	0.0194	0.0192	0.0189	0.0188	0.0184	0.0181	0.0174	0.0171	0.0166	0.0159	0.0161	0.0164	0.0166	0.0166	0.0170
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	0.0135	0.0126	0.0132	0.0132	0.0132	0.0135	0.0151	0.0146	0.0142	0.0138	0.0140	0.0137	0.0139	0.0132	0.0131	0.0125	0.0122	0.0102	0.0100	0.0117	0.0113	0.0116	0.0119	0.0120
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	0.0103	0.0112	0.0116	0.0118	0.0107	0.0112	0.0120	0.0121	0.0120	0.0112	0.0111	0.0108	0.0111	0.0108	0.0105	0.0102	0.0098	0.0089	0.0082	0.0101	0.0105	0.0104	0.0105	0.0110
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	0.0230	0.0223	0.0232	0.0232	0.0239	0.0241	0.0250	0.0252	0.0248	0.0251	0.0239	0.0236	0.0235	0.0236	0.0231	0.0224	0.0221	0.0213	0.0206	0.0207	0.0210	0.0216	0.0213	0.0215
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	0.0133	0.0139	0.0147	0.0147	0.0147	0.0151	0.0150	0.0146	0.0157	0.0145	0.0146	0.0160	0.0141	0.0146	0.0142	0.0133	0.0143	0.0135	0.0132	0.0135	0.0132	0.0143	0.0142	0.0142
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	0.0213	0.0227	0.0230	0.0230	0.0238	0.0212	0.0221	0.0218	0.0226	0.0223	0.0211	0.0213	0.0215	0.0207	0.0206	0.0193	0.0186	0.0180	0.0177	0.0179	0.0183	0.0198	0.0201	0.0205
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	0.0216	0.0227	0.0228	0.0231	0.0233	0.0231	0.0244	0.0250	0.0245	0.0237	0.0232	0.0226	0.0225	0.0227	0.0224	0.0214	0.0210	0.0201	0.0193	0.0192	0.0191	0.0192	0.0190	0.0193
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	0.0091	0.0093	0.0091	0.0094	0.0096	0.0097	0.0099	0.0110	0.0112	0.0112	0.0108	0.0105	0.0102	0.0099	0.0098	0.0094	0.0091	0.0088	0.0088	0.0092	0.0088	0.0084	0.0085	0.0084
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1	0.0078	0.0063	0.0063	0.0063	0.0063	0.0104	0.0095	0.0093	0.0095	0.0096	0.0106	0.0106	0.0103	0.0103	0.0103	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081	0.0103	0.0106	0.0104
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	0.0170	0.0148	0.0152	0.0157	0.0147	0.0171	0.0164	0.0162	0.0162	0.0167	0.0170	0.0170	0.0166	0.0167	0.0168	0.0149	0.0153	0.0153	0.0158	0.0184	0.0187	0.0203	0.0210	0.0214
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	0.0062	0.0060	0.0067	0.0058	0.0066	0.0081	0.0083	0.0092	0.0089	0.0081	0.0078	0.0074	0.0075	0.0075	0.0070	0.0070	0.0067	0.0066	0.0065	0.0066	0.0064	0.0066	0.0063	0.0061
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	0.0079	0.0076	0.0087	0.0055	0.0054	0.0055	0.0080	0.0090	0.0094	0.0109	0.0116	0.0111	0.0097	0.0092	0.0087	0.0083	0.0074	0.0073	0.0071	0.0073	0.0068	0.0068	0.0070	0.0073
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	0.0074	0.0070	0.0070	0.0071	0.0078	0.0075	0.0083	0.0082	0.0082	0.0070	0.0070	0.0071	0.0070	0.0070	0.0067	0.0072	0.0070	0.0060	0.0060	0.0060	0.0070	0.0072	0.0070	0.0083
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	0.0129	0.0102	0.0102	0.0102	0.0108	0.0129	0.0132	0.0132	0.0132	0.0117	0.0121	0.0119	0.0117	0.0118	0.0119	0.0124	0.0124	0.0116	0.0116	0.0115	0.0124	0.0124	0.0125	0.0133
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	0.0090	0.0122	0.0138	0.0138	0.0138	0.0112	0.0123	0.0123	0.0123	0.0112	0.0112	0.0117	0.0108	0.0108	0.0104	0.0104	0.0085	0.0063	0.0063	0.0063	0.0083	0.0104	0.0107	0.0124
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	0.0135	0.0150	0.0151	0.0119	0.0118	0.0135	0.0141	0.0136	0.0136	0.0130	0.0135	0.0135	0.0130	0.0133	0.0129	0.0138	0.0140	0.0134	0.0134	0.0135	0.0140	0.0142	0.0133	0.0141
R118	835970.40	821123.86	835855.29	820996.26	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	0.0102	0.0109	0.0109	0.0109	0.0109	0.0135	0.0126	0.0126	0.0126	0.0135	0.0135	0.0135	0.0135	0.0125	0.0125	0.0152	0.0135	0.0135	0.0135	0.0135	0.0135	0.0150	0.0151	0.0166
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	0.0148	0.0098	0.0094	0.0094	0.0094	0.0157	0.0144	0.0143	0.0144	0.0154	0.0157	0.0157	0.0155	0.0155	0.0154	0.0143	0.0126	0.0134	0.0135	0.0135	0.0135	0.0150	0.0151	0.0151
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R129	835627.77	820607.32	835569.14	820596.35	13	0	1	0.0147	0.0128	0.0128	0.0128	0.0128	0.0187	0.0175	0.0174	0.0170	0.0191	0.0190	0.0189	0.0189	0.0177	0.0181	0.0169	0.0179	0.0138	0.0147	0.0202	0.0211	0.0226	0.0230	0.0230
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	0.0087	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0098	0.0109	0.0109	0.0170	0.0167	0.0167	0.0151	0.0149	0.0147	0.0206	0.0206	0.0222	0.0206	0.0206
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	0.0063	0.0064	0.0064	0.0064	0.0064	0.0063	0.0135	0.0113	0.0128	0.0128	0.0133	0.0130	0.0106	0.0104	0.0133	0.0104	0.0104	0.0113	0.0113	0.0122	0.0130	0.0104	0.0106	0.0119
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	0.0109	0.0105	0.0099	0.0099	0.0099	0.0105	0.0189	0.0161	0.0193	0.0179	0.0177	0.0177	0.0147	0.0146	0.0168	0.0141	0.0141	0.0141	0.0140	0.0173	0.0179	0.0146	0.0146	0.0149
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	0.0128	0.0105	0.0105	0.0105	0.0105	0.0167	0.0149	0.0147	0.0139	0.0154	0.0153	0.0153	0.0161	0.0150	0.0150	0.0149	0.0161	0.0128	0.0146	0.0195	0.0189	0.0144	0.0146	0.0146
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	0.0077	0.0058	0.0038	0.0038	0.0038	0.0093	0.0062	0.0087	0.0098	0.0103	0.0103	0.0104	0.0103	0.0105	0.0100	0.0097	0.0099	0.0094	0.0087	0.0118	0.0127	0.0107	0.0105	0.0113
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	0.0133	0.0130	0.0130	0.0130	0.0130	0.0133	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0131	0.0131	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	0.0159	0.0109	0.0109	0.0109	0.0109	0.0161	0.0147	0.0146	0.0138	0.0151	0.0150	0.0150	0.0150	0.0159	0.0159	0.0137	0.0138	0.0145	0.0146	0.0168	0.0168	0.0146	0.0148	0.0148
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120

Caline 4 input for 2035 Q1

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R001	835620.80	820845.25	835496.74	820838.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.63	820570.32	11	0	1
R020	835568.73	820565.58	835478.35	820470.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820516.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	18	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
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0072	0.0068	0.0077	0.0085	0.0081	0.0085	0.0076	0.0092	0.0095	0.0092	0.0094	0.0090	0.0088	0.0086	0.0084	0.0083	0.0079	0.0078	0.0076	0.0085	0.0082	0.0085	0.0084	0.0083
0.0056	0.0058	0.0054	0.0059	0.0061	0.0058	0.0065	0.0071	0.0072	0.0070	0.0069	0.0067	0.0067	0.0066	0.0064	0.0061	0.0058	0.0055	0.0055	0.0055	0.0055	0.0056	0.0056	0.0055
0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0092	0.0093	0.0099	0.0100	0.0101	0.0101	0.0106	0.0114	0.0120	0.0119	0.0116	0.0113	0.0109	0.0104	0.0100	0.0097	0.0090	0.0083	0.0076	0.0080	0.0081	0.0081	0.0083	0.0082
0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0092	0.0102	0.0096	0.0102	0.0102	0.0102	0.0098	0.0098	0.0098	0.0075	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058
0.0091	0.0091	0.0091	0.0093	0.0096	0.0095	0.0100	0.0110	0.0116	0.0118	0.0114	0.0112	0.0109	0.0107	0.0104	0.0100	0.0096	0.0090	0.0085	0.0089	0.0094	0.0098	0.0100	0.0099
0.0098	0.0075	0.0080	0.0080	0.0080	0.0080	0.0096	0.0104	0.0106	0.0105	0.0104	0.0100	0.0102	0.0101	0.0101	0.0087	0.0075	0.0074	0.0073	0.0080	0.0075	0.0077	0.0077	0.0079
0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
0.0091	0.0109	0.0109	0.0109	0.0117	0.0116	0.0107	0.0105	0.0102	0.0116	0.0114	0.0112	0.0112	0.0103	0.0104	0.0099	0.0097	0.0080	0.0082	0.0123	0.0122	0.0132	0.0130	0.0134
0.0150	0.0169	0.0169	0.0169	0.0169	0.0169	0.0147	0.0147	0.0134	0.0151	0.0151	0.0151	0.0163	0.0134	0.0134	0.0150	0.0183	0.0061	0.0061	0.0061	0.0061	0.0145	0.0153	0.0145
0.0096	0.0088	0.0098	0.0098	0.0098	0.0106	0.0101	0.0103	0.0099	0.0102	0.0099	0.0100	0.0095	0.0092	0.0091	0.0088	0.0083	0.0077	0.0075	0.0075	0.0075	0.0082	0.0078	0.0078
0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
0.0072	0.0059	0.0060	0.0060	0.0060	0.0073	0.0075	0.0075	0.0074	0.0071	0.0071	0.0071	0.0067	0.0067	0.0067	0.0060	0.0057	0.0057	0.0057	0.0060	0.0057	0.0060	0.0059	0.0059
0.0137	0.0153	0.0162	0.0129	0.0129	0.0144	0.0148	0.0144	0.0138	0.0158	0.0153	0.0161	0.0149	0.0149	0.0149	0.0140	0.0141	0.0133	0.0138	0.0138	0.0136	0.0143	0.0133	0.0136
0.0186	0.0193	0.0198	0.0194	0.0202	0.0196	0.0202	0.0208	0.0206	0.0204	0.0201	0.0197	0.0194	0.0192	0.0188	0.0187	0.0180	0.0174	0.0171	0.0189	0.0192	0.0195	0.0196	0.0203
0.0161	0.0165	0.0167	0.0171	0.0171	0.0172	0.0179	0.0184	0.0183	0.0181	0.0181	0.0174	0.0172	0.0167	0.0163	0.0155	0.0151	0.0139	0.0132	0.0142	0.0146	0.0151	0.0153	0.0162
0.0166	0.0169	0.0174	0.0177	0.0178	0.0185	0.0194	0.0209	0.0221	0.0226	0.0227	0.0225	0.0213	0.0202	0.0170	0.0182	0.0143	0.0137	0.0139	0.0144	0.0146	0.0146	0.0148	0.0151
0.0121	0.0077	0.0088	0.0082	0.0082	0.0147	0.0134	0.0134	0.0126	0.0132	0.0125	0.0124	0.0124	0.0115	0.0115	0.0095	0.0095	0.0086	0.0087	0.0089	0.0090	0.0099	0.0105	0.0109
0.0128	0.0131	0.0131	0.0122	0.0119	0.0129	0.0133	0.0140	0.0153	0.0154	0.0150	0.0155	0.0150	0.0151	0.0153	0.0151	0.0148	0.0144	0.0145	0.0137	0.0138	0.0126	0.0122	0.0130
0.0186	0.0184	0.0193	0.0182	0.0192	0.0196	0.0200	0.0198	0.0218	0.0241	0.0237	0.0237	0.0239	0.0218	0.0214	0.0204	0.0203	0.0184	0.0172	0.0172	0.0178	0.0183	0.0176	0.0182
0.0119	0.0110	0.0109	0.0122	0.0122	0.0119	0.0120	0.0120	0.0120	0.0121	0.0124	0.0121	0.0121	0.0133	0.0133	0.0132	0.0132	0.0132	0.0132	0.0131	0.0132	0.0131	0.0139	0.0139
0.0138	0.0145	0.0149	0.0149	0.0152	0.0157	0.0156	0.0156	0.0163	0.0190	0.0185	0.0184	0.0181	0.0157	0.0153	0.0148	0.0144	0.0114	0.0106	0.0110	0.0114	0.0137	0.0139	0.0143
0.0029	0.0058	0.0058	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0050	0.0050	0.0051	0.0050	0.0050	0.0050	0.0060	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039
0.0057	0.0060	0.0059	0.0060	0.0059	0.0062	0.0077	0.0079	0.0081	0.0081	0.0075	0.0071	0.0067	0.0063	0.0062	0.0060	0.0054	0.0046	0.0047	0.0043	0.0046	0.0049	0.0048	0.0052
0.0130	0.0140	0.0148	0.0145	0.0143	0.0140	0.0164	0.0158	0.0176	0.0178	0.0175	0.0167	0.0152	0.0150	0.0149	0.0142	0.0134	0.0127	0.0127	0.0132	0.0141	0.0133	0.0135	0.0136
0.0110	0.0119	0.0119	0.0126	0.0126	0.0152	0.0153	0.0148	0.0149	0.0166	0.0161	0.0161	0.0168	0.0125	0.0130	0.0121	0.0121	0.0088	0.0059	0.0077	0.0085	0.0113	0.0108	0.0133
0.0082	0.0085	0.0088	0.0089	0.0093	0.0088	0.0103	0.0108	0.0126	0.0125	0.0115	0.0116	0.0109	0.0108	0.0109	0.0100	0.0090	0.0078	0.0072	0.0077	0.0083	0.0085	0.0091	0.0099
0.0145	0.0131	0.0133	0.0133	0.0134	0.0152	0.0155	0.0158	0.0156	0.0165	0.0162	0.0162	0.0166	0.0153	0.0155	0.0149	0.0148	0.0127	0.0134	0.0132	0.0139	0.0140	0.0134	0.0138
0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
0.0251	0.0267	0.0280	0.0253	0.0273	0.0298	0.0282	0.0289	0.0282	0.0279	0.0270	0.0271	0.0261	0.0255	0.0248	0.0243	0.0240	0.0236	0.0232	0.0250	0.0255	0.0255	0.0260	0.0266
0.0074	0.0072	0.0067	0.0071	0.0078	0.0076	0.0086	0.0088	0.0090	0.0087	0.0083	0.0081	0.0080	0.0080	0.0079	0.0077	0.0072	0.0066	0.0063	0.0070	0.0068	0.0072	0.0075	0.0071
0.0108	0.0117	0.0103	0.0107	0.0112	0.0125	0.0126	0.0122	0.0125	0.0140	0.0144	0.0147	0.0143	0.0122	0.0128	0.0117	0.0115	0.0093	0.0091	0.0097	0.0097	0.0110	0.0118	0.0121
0.0082	0.0092	0.0092	0.0092	0.0092	0.0113	0.0103	0.0103	0.0095	0.0100	0.0095	0.0096	0.0095	0.0113	0.0113	0.0121	0.0113	0.0115	0.0115	0.0115	0.0115	0.0125	0.0125	0.0126
0.0104	0.0091	0.0093	0.0093	0.0099	0.0124	0.0117	0.0114	0.0114	0.0144	0.0149	0.0153	0.0148	0.0125	0.0131	0.0110	0.0102	0.0075	0.0065	0.0070	0.0073	0.0095	0.0100	0.0103
0.0155	0.0154	0.0154	0.0144	0.0146	0.0141	0.0160	0.0154	0.0154	0.0164	0.0165	0.0175	0.0161	0.0172	0.0162	0.0152	0.0158	0.0150	0.0153	0.0157	0.0159	0.0151	0.0154	0.0159
0.0068	0.0077	0.0073	0.0042	0.0047	0.0059	0.0070	0.0081	0.0078	0.0081	0.0082	0.0086	0.0084	0.0089	0.0087	0.0060	0.0062	0.0062	0.0059	0.0065	0.0053	0.0069	0.0072	0.0085
0.0132	0.0119	0.0129	0.0141	0.0132	0.0142	0.0143	0.0145	0.0146	0.0146	0.0144	0.0141	0.0143	0.0139	0.0132	0.0123	0.0118	0.0113	0.0109	0.0121	0.0124	0.0127	0.0129	0.0132
0.0151	0.0217	0.0217	0.0217	0.0217	0.0141	0.0116	0.0116	0.0116	0.0193	0.0207	0.0262	0.0207	0.0319	0.0285	0.0285	0.0265	0.0265	0.0283	0.0392	0.0402	0.0402	0.0383	0.0383
0.0060	0.0029	0.0029	0.0029	0.0058	0.0060	0.0060	0.0060	0.0060	0.0060	0.0054	0.0054	0.0054	0.0054	0.0054	0.0045	0.0045	0.0046	0.0046	0.0046	0.0046	0.0051	0.0051	0.0050
0.0162	0.0169	0.0166	0.0175	0.0173	0.0175	0.0189	0.0196	0.0203	0.0203	0.0199	0.0196	0.0184	0.0183	0.0169	0.0156	0.0147	0.0139	0.0139	0.0145	0.0148	0.0146	0.0154	0.0154
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
0.0266	0.0275	0.0294	0.0320	0.0318	0.0295	0.0287	0.0290	0.0290	0.0272	0.0263	0.0263	0.0258	0.0212	0.0212	0.0205	0.0189	0.0186	0.0158	0.0186	0.0192	0.0263	0.0274	0.0285
0.0062	0.0064	0.0064	0.0064	0.0070	0.0086	0.0083	0.0084	0.0087	0.0088	0.0086	0.0081	0.0080	0.0079	0.0077	0.0077	0.0073	0.0073	0.0071	0.0072	0.0071	0.0072	0.0071	0.0071
0.0071	0.0078	0.0082	0.0082	0.0072	0.0094	0.0097	0.0097	0.0091	0.0106	0.0102	0.0104	0.0103	0.0093	0.0093	0.0087	0.0085	0.0073	0.0070	0.0094	0.0098	0.0100	0.0098	0.0101
0.0254	0.0254	0.0256	0.0252	0.0261	0.0254	0.0260	0.0260	0.0259	0.0252	0.0254	0.0251	0.0250	0.0251	0.0251	0.0252	0.0254	0.0263	0.0270	0.0266	0.0268	0.0269	0.0264	0.0268
0.0081	0.0085	0.0088	0.0088	0.0093	0.0086	0.0087	0.0087	0.0087	0.0085	0.0085	0.0081	0.0080	0.0073	0.0070	0.0069	0.0065	0.0061	0.0055	0.0074	0.0076	0.0080	0.0084	0.0083
0.0261	0.0244	0.0251	0.0251	0.0276	0.0279	0.0268	0.0282	0.0268	0.0265	0.0275	0.0257	0.0253	0.0252	0.0233	0.0231	0.0224	0.0214	0.0207	0.0211	0.0205	0.0216	0.0216	0.0219
0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
0.0115	0.0119	0.0119	0.0116	0.0116	0.0127	0.0130	0.0131	0.0128	0.0128	0.0128	0.0121	0.0123	0.0121	0.0128	0.0132	0.0134	0.0132	0.0145	0.0155	0.0164	0.0177	0.0177	0.0182
0.0130	0.0088	0.0088	0.0088	0.0082	0.0145	0.0134	0.0133	0.0147	0.0145	0.0134	0.0134	0.0133	0.0134	0.0134	0.0121	0.0120	0.0131	0.0107	0.0106	0.0107	0.0126	0.0127	0.0135
0.0122	0.0124	0.0125	0.0127	0.0129	0.0123	0.0127	0.0129	0.0127	0.0125	0.0125	0.0124	0.0118	0.0115	0.0113	0.0112	0.0115	0.0109	0.0105	0.0131	0.0135	0.0136	0.0138	0.0137
0.0181	0.0180	0.0185	0.0179	0.0174	0.0174	0.0175	0.0175	0.0173	0.0176	0.0176	0.0177	0.0174	0.0177	0.0177	0.0177	0.0178	0.0178	0.0182	0.0201	0.0203	0.0203	0.0204	0.0205
0.0195	0.0199	0.0201	0.0201	0.0187	0.0193	0.0188	0.0185	0.0185	0.0189	0.0188	0.0189	0.0192	0.0190	0.0190	0.0193	0.0194	0.0197	0.0201	0.0216	0.0220	0.0216	0.0222	0.0222
0.0130	0.0092	0.0092	0.0092	0.0088	0.0154	0.0143	0.0142	0.0143	0.0151	0.0153	0.0153	0.0154	0.0130	0.0131	0.0131	0.0130	0.0121	0.0113	0.0113	0.0114	0.0126	0.0136	0.0136
0.0092	0.0061	0.0061	0.0122	0.0122	0.0083	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0083	0.0083	0.0083	0.0092	0.0178	0.0144	0.0144	0.0144	0.0144	0.0178	0.0178
0.0061	0.0061	0.0061	0.0000	0.0000	0.0061	0.0061	0.0061	0.0061	0.0041	0.0041	0.0030	0.0041	0.0041	0.0062	0.0062	0.0062	0.0062	0.0074	0.0074	0.0074	0.0074	0.0061	0.0061
0.0104	0.0099	0.0101	0.0101	0.0103	0.0128	0.0117	0.0113	0.0117	0.0113	0.0116	0.0117	0.0123	0.0088	0.0087	0.0087	0.0083	0.0075	0.0063	0.0071	0.0070	0.0104	0.0108	0.0115
0.0060	0.0029	0.0029	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0050	0.0051	0.0051	0.0051	0.0050	0.0060	0.0060
0.0140	0.0157	0.0167	0.0147	0.0158	0.0144	0.0142	0.0144	0.0142	0.0142	0.0136	0.0136	0.0140	0.0141	0.0135	0.0155	0.0144	0.0149	0.0152	0.0159	0.0159	0.0155	0.0154	0.0159
0.0130	0.0088	0.0088	0.0088	0.0098	0.0156	0.0142	0.0141	0.0141	0.0142	0.0143	0.0143	0.0145	0.0130	0.0130	0.0121	0.0114	0.0109	0.0101	0.0105	0.0101	0.0115	0.0119	0.0126

Caline 4 input for 2035 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	0.0105	0.0108	0.0110	0.0110	0.0118	0.0112	0.0109	0.0110	0.0108	0.0111	0.0101	0.0102	0.0104	0.0103	0.0096	0.0087	0.0082	0.0079	0.0069	0.0070	0.0075	0.0078	0.0073	0.0079
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	0.0088	0.0098	0.0092	0.0092	0.0092	0.0127	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126	0.0127	0.0088	0.0088	0.0088	0.0082	0.0115	0.0108	0.0107	0.0108	0.0115	0.0115	0.0125
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	0.0105	0.0108	0.0108	0.0110	0.0111	0.0109	0.0108	0.0109	0.0109	0.0108	0.0108	0.0109	0.0105	0.0102	0.0099	0.0099	0.0097	0.0096	0.0093	0.0102	0.0102	0.0107	0.0107	0.0107
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	0.0183	0.0173	0.0186	0.0192	0.0194	0.0182	0.0174	0.0179	0.0182	0.0177	0.0177	0.0180	0.0176	0.0176	0.0184	0.0175	0.0177	0.0181	0.0183	0.0182	0.0182	0.0182	0.0178	0.0183
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	0.0097	0.0103	0.0105	0.0106	0.0108	0.0101	0.0100	0.0101	0.0101	0.0100	0.0098	0.0098	0.0098	0.0088	0.0086	0.0084	0.0078	0.0072	0.0066	0.0073	0.0076	0.0081	0.0084	0.0089
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	0.0151	0.0166	0.0169	0.0169	0.0181	0.0149	0.0144	0.0138	0.0139	0.0144	0.0143	0.0143	0.0150	0.0121	0.0121	0.0121	0.0121	0.0115	0.0115	0.0115	0.0116	0.0126	0.0133	0.0133
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	0.0159	0.0192	0.0192	0.0192	0.0192	0.0159	0.0144	0.0142	0.0142	0.0144	0.0145	0.0156	0.0159	0.0140	0.0142	0.0142	0.0139	0.0125	0.0125	0.0125	0.0125	0.0143	0.0145	0.0163
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	0.0159	0.0146	0.0147	0.0121	0.0131	0.0161	0.0148	0.0147	0.0148	0.0153	0.0153	0.0153	0.0153	0.0151	0.0143	0.0144	0.0139	0.0144	0.0142	0.0158	0.0152	0.0155	0.0151	0.0152
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	0.0129	0.0136	0.0129	0.0129	0.0134	0.0132	0.0126	0.0131	0.0135	0.0129	0.0134	0.0137	0.0134	0.0114	0.0112	0.0112	0.0111	0.0106	0.0107	0.0108	0.0112	0.0107	0.0113	0.0115
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	0.0185	0.0190	0.0184	0.0185	0.0181	0.0188	0.0181	0.0175	0.0185	0.0218	0.0215	0.0214	0.0206	0.0199	0.0196	0.0184	0.0169	0.0153	0.0144	0.0151	0.0152	0.0164	0.0161	0.0160
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	0.0071	0.0074	0.0077	0.0078	0.0076	0.0084	0.0087	0.0087	0.0087	0.0083	0.0080	0.0080	0.0080	0.0069	0.0070	0.0071	0.0063	0.0055	0.0054	0.0054	0.0061	0.0062	0.0063	0.0069
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	0.0206	0.0207	0.0209	0.0205	0.0205	0.0216	0.0222	0.0222	0.0219	0.0218	0.0214	0.0215	0.0211	0.0208	0.0204	0.0198	0.0200	0.0197	0.0193	0.0196	0.0196	0.0200	0.0197	0.0198
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	0.0052	0.0060	0.0060	0.0060	0.0060	0.0076	0.0071	0.0071	0.0071	0.0072	0.0072	0.0072	0.0066	0.0052	0.0052	0.0052	0.0049	0.0049	0.0046	0.0046	0.0046	0.0049	0.0049	0.0048
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	0.0168	0.0175	0.0174	0.0178	0.0180	0.0177	0.0180	0.0182	0.0180	0.0178	0.0177	0.0173	0.0172	0.0169	0.0167	0.0160	0.0158	0.0152	0.0147	0.0148	0.0151	0.0152	0.0152	0.0156
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	0.0125	0.0116	0.0122	0.0122	0.0121	0.0124	0.0140	0.0134	0.0131	0.0127	0.0129	0.0126	0.0128	0.0122	0.0121	0.0116	0.0112	0.0094	0.0093	0.0108	0.0104	0.0107	0.0110	0.0111
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	0.0095	0.0103	0.0107	0.0109	0.0098	0.0103	0.0111	0.0112	0.0111	0.0104	0.0102	0.0100	0.0103	0.0099	0.0097	0.0094	0.0091	0.0082	0.0076	0.0093	0.0097	0.0096	0.0097	0.0102
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	0.0212	0.0206	0.0214	0.0214	0.0220	0.0221	0.0230	0.0232	0.0228	0.0231	0.0220	0.0217	0.0217	0.0218	0.0213	0.0206	0.0204	0.0197	0.0190	0.0191	0.0194	0.0199	0.0196	0.0198
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	0.0123	0.0129	0.0137	0.0137	0.0137	0.0139	0.0138	0.0135	0.0145	0.0134	0.0135	0.0148	0.0131	0.0135	0.0132	0.0123	0.0133	0.0125	0.0123	0.0125	0.0123	0.0133	0.0132	0.0132
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	0.0196	0.0209	0.0213	0.0213	0.0219	0.0195	0.0203	0.0200	0.0208	0.0205	0.0194	0.0196	0.0198	0.0190	0.0190	0.0178	0.0171	0.0165	0.0163	0.0165	0.0168	0.0182	0.0185	0.0188
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	0.0199	0.0209	0.0210	0.0213	0.0214	0.0213	0.0225	0.0230	0.0226	0.0218	0.0213	0.0208	0.0207	0.0210	0.0206	0.0198	0.0193	0.0185	0.0178	0.0177	0.0176	0.0177	0.0175	0.0177
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	0.0083	0.0085	0.0083	0.0086	0.0088	0.0089	0.0091	0.0102	0.0103	0.0103	0.0099	0.0097	0.0094	0.0091	0.0090	0.0086	0.0084	0.0081	0.0081	0.0085	0.0081	0.0078	0.0079	0.0078
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1	0.0073	0.0059	0.0059	0.0059	0.0059	0.0097	0.0089	0.0087	0.0089	0.0089	0.0099	0.0099	0.0096	0.0096	0.0096	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0096	0.0099	0.0097
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	0.0156	0.0137	0.0141	0.0146	0.0136	0.0158	0.0152	0.0150	0.0150	0.0154	0.0157	0.0157	0.0153	0.0154	0.0155	0.0138	0.0141	0.0141	0.0145	0.0170	0.0173	0.0187	0.0193	0.0197
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	0.0057	0.0055	0.0061	0.0053	0.0060	0.0074	0.0076	0.0085	0.0082	0.0074	0.0072	0.0069	0.0069	0.0069	0.0064	0.0064	0.0061	0.0061	0.0060	0.0061	0.0059	0.0061	0.0058	0.0057
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	0.0074	0.0071	0.0081	0.0052	0.0051	0.0052	0.0075	0.0084	0.0087	0.0100	0.0106	0.0102	0.0089	0.0085	0.0081	0.0076	0.0068	0.0067	0.0066	0.0067	0.0063	0.0063	0.0065	0.0067
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	0.0069	0.0065	0.0065	0.0066	0.0072	0.0070	0.0077	0.0075	0.0076	0.0065	0.0065	0.0066	0.0064	0.0064	0.0062	0.0066	0.0064	0.0056	0.0056	0.0056	0.0064	0.0066	0.0064	0.0077
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	0.0120	0.0096	0.0096	0.0096	0.0101	0.0120	0.0121	0.0121	0.0121	0.0109	0.0112	0.0110	0.0109	0.0110	0.0110	0.0114	0.0114	0.0107	0.0107	0.0106	0.0114	0.0114	0.0116	0.0123
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	0.0084	0.0114	0.0128	0.0128	0.0128	0.0104	0.0114	0.0114	0.0114	0.0104	0.0104	0.0109	0.0101	0.0101	0.0097	0.0097	0.0079	0.0059	0.0059	0.0059	0.0078	0.0097	0.0099	0.0115
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	0.0125	0.0139	0.0140	0.0111	0.0110	0.0125	0.0130	0.0125	0.0125	0.0120	0.0125	0.0125	0.0120	0.0122	0.0118	0.0127	0.0129	0.0123	0.0123	0.0124	0.0129	0.0130	0.0122	0.0130
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	0.0095	0.0102	0.0102	0.0102	0.0102	0.0126	0.0117	0.0117	0.0117	0.0125	0.0125	0.0126	0.0125	0.0116	0.0116	0.0141	0.0124	0.0124	0.0124	0.0125	0.0124	0.0139	0.0140	0.0153
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	0.0136	0.0092	0.0088	0.0088	0.0088	0.0145	0.0133	0.0132	0.0133	0.0142	0.0145	0.0145	0.0143	0.0143	0.0142	0.0132	0.0117	0.0124	0.0124	0.0124	0.0124	0.0139	0.0140	0.0140
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R129	835627.77	820607.32	835569.14	820596.35	13	0	1	0.0137	0.0120	0.0120	0.0120	0.0119	0.0173	0.0161	0.0160	0.0157	0.0176	0.0175	0.0174	0.0174	0.0163	0.0167	0.0156	0.0164	0.0128	0.0137	0.0187	0.0194	0.0208	0.0212	0.0212
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	0.0081	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0091	0.0102	0.0102	0.0158	0.0154	0.0154	0.0140	0.0138	0.0137	0.0190	0.0190	0.0206	0.0190	0.0190
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0125	0.0105	0.0118	0.0118	0.0122	0.0120	0.0099	0.0096	0.0123	0.0096	0.0096	0.0105	0.0105	0.0113	0.0120	0.0096	0.0099	0.0110
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	0.0102	0.0098	0.0092	0.0092	0.0092	0.0098	0.0175	0.0150	0.0178	0.0165	0.0164	0.0163	0.0137	0.0135	0.0154	0.0130	0.0130	0.0130	0.0130	0.0160	0.0166	0.0136	0.0136	0.0138
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	0.0119	0.0098	0.0098	0.0098	0.0098	0.0154	0.0138	0.0137	0.0129	0.0142	0.0141	0.0141	0.0148	0.0139	0.0139	0.0138	0.0150	0.0119	0.0136	0.0181	0.0175	0.0134	0.0136	0.0136
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	0.0070	0.0053	0.0034	0.0035	0.0035	0.0085	0.0056	0.0079	0.0090	0.0095	0.0095	0.0095	0.0095	0.0096	0.0092	0.0089	0.0090	0.0086	0.0079	0.0108	0.0116	0.0098	0.0096	0.0104
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	0.0124	0.0122	0.0122	0.0122	0.0122	0.0124	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	0.0148	0.0102	0.0102	0.0102	0.0102	0.0150	0.0136	0.0135	0.0128	0.0139	0.0138	0.0138	0.0139	0.0146	0.0146	0.0128	0.0128	0.0135	0.0135	0.0156	0.0156	0.0135	0.0137	0.0137
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110

Caline 4 input for 2035 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R001	835620.80	820845.25	835496.74	820838.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.53	820570.32	11	0	1
R020	835568.73	820565.58	835478.35	820470.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820674.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820516.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	18	0	1

RSP (g/VMT)

Road Pair	Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11
R001	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057
R001	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057
R001	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057
R001	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057
R001	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057
R001	0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057
R002	0.0078	0.0074	0.0084	0.0092	0.0088	0.0092	0.0083	0.0100	0.0103	0.0099	0.0102	0.0097
R003	0.0061	0.0063	0.0059	0.0064	0.0067	0.0064	0.0071	0.0077	0.0078	0.0076	0.0075	0.0072
R004+R005	0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099
R004+R005	0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099
R006+R007	0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088
R006+R007	0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088
R008	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075
R008	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075
R008	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075
R008	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075
R008	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075
R008	0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075
R009	0.0100	0.0102	0.0108	0.0109	0.0110	0.0111	0.0116	0.0123	0.0130	0.0129	0.0126	0.0123
R010	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0098	0.0110	0.0103	0.0110	0.0110	0.0110
R011	0.0099	0.0100	0.0099	0.0102	0.0104	0.0104	0.0110	0.0120	0.0126	0.0128	0.0124	0.0122
R012	0.0105	0.0080	0.0086	0.0086	0.0086	0.0086	0.0103	0.0111	0.0115	0.0114	0.0111	0.0107
R013	0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096
R013	0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096
R014+R015	0.0099	0.0118	0.0118	0.0118	0.0127	0.0126	0.0116	0.0114	0.0111	0.0125	0.0124	0.0121
R016	0.0163	0.0184	0.0184	0.0184	0.0184	0.0184	0.0160	0.0160	0.0145	0.0165	0.0165	0.0165
R017	0.0102	0.0094	0.0105	0.0105	0.0105	0.0114	0.0109	0.0110	0.0107	0.0111	0.0107	0.0108
R018	0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134
R018	0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134
R019	0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095
R019	0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095
R020	0.0077	0.0063	0.0063	0.0063	0.0064	0.0079	0.0080	0.0080	0.0079	0.0076	0.0075	0.0077
R021	0.0149	0.0166	0.0175	0.0139	0.0139	0.0157	0.0161	0.0156	0.0150	0.0171	0.0166	0.0175
R022	0.0202	0.0210	0.0215	0.0211	0.0220	0.0214	0.0220	0.0226	0.0223	0.0222	0.0219	0.0215
R023	0.0175	0.0180	0.0182	0.0186	0.0186	0.0188	0.0195	0.0200	0.0198	0.0197	0.0197	0.0190
R024	0.0180	0.0185	0.0189	0.0193	0.0194	0.0201	0.0210	0.0226	0.0240	0.0246	0.0246	0.0245
R025	0.0131	0.0082	0.0094	0.0088	0.0088	0.0159	0.0145	0.0145	0.0137	0.0145	0.0136	0.0135
R026	0.0139	0.0142	0.0142	0.0132	0.0129	0.0140	0.0144	0.0152	0.0166	0.0166	0.0163	0.0168
R027	0.0202	0.0201	0.0210	0.0197	0.0208	0.0213	0.0217	0.0215	0.0237	0.0263	0.0258	0.0258
R028	0.0127	0.0118	0.0116	0.0131	0.0131	0.0127	0.0128	0.0128	0.0128	0.0131	0.0134	0.0131
R029	0.0150	0.0158	0.0163	0.0163	0.0165	0.0170	0.0169	0.0169	0.0177	0.0207	0.0201	0.0199
R030	0.0031	0.0061	0.0061	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0053	0.0053	0.0054
R031	0.0062	0.0065	0.0064	0.0065	0.0065	0.0067	0.0083	0.0085	0.0088	0.0087	0.0082	0.0077
R032+R033	0.0141	0.0152	0.0161	0.0158	0.0155	0.0152	0.0179	0.0171	0.0192	0.0193	0.0190	0.0181
R034	0.0119	0.0128	0.0128	0.0136	0.0136	0.0165	0.0165	0.0159	0.0160	0.0179	0.0173	0.0173
R035	0.0089	0.0092	0.0095	0.0096	0.0101	0.0095	0.0112	0.0116	0.0136	0.0136	0.0124	0.0125
R036+R037	0.0159	0.0143	0.0146	0.0146	0.0146	0.0166	0.0170	0.0172	0.0170	0.0180	0.0177	0.0176
R038	0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186
R038	0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186
R039	0.0273	0.0291	0.0305	0.0276	0.0298	0.0324	0.0307	0.0315	0.0307	0.0304	0.0294	0.0295
R040	0.0080	0.0079	0.0074	0.0078	0.0085	0.0083	0.0094	0.0096	0.0098	0.0095	0.0091	0.0088
R041	0.0117	0.0126	0.0111	0.0115	0.0121	0.0135	0.0137	0.0133	0.0136	0.0153	0.0157	0.0161
R042	0.0088	0.0099	0.0099	0.0099	0.0099	0.0122	0.0111	0.0111	0.0102	0.0108	0.0102	0.0103
R043	0.0113	0.0098	0.0101	0.0101	0.0107	0.0134	0.0127	0.0124	0.0124	0.0157	0.0162	0.0166
R044	0.0169	0.0166	0.0166	0.0156	0.0157	0.0153	0.0173	0.0167	0.0167	0.0179	0.0179	0.0191
R045	0.0075	0.0084	0.0080	0.0046	0.0052	0.0064	0.0076	0.0088	0.0085	0.0088	0.0090	0.0094
R046+R047	0.0144	0.0130	0.0140	0.0154	0.0144	0.0154	0.0155	0.0158	0.0159	0.0160	0.0157	0.0154
R048	0.0163	0.0235	0.0235	0.0235	0.0235	0.0153	0.0126	0.0126	0.0126	0.0210	0.0225	0.0284
R049	0.0064	0.0031	0.0031	0.0031	0.0061	0.0064	0.0064	0.0064	0.0064	0.0064	0.0057	0.0057
R050+R051	0.0176	0.0184	0.0180	0.0190	0.0187	0.0190	0.0206	0.0213	0.0221	0.0221	0.0216	0.0213
R052+R053	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131
R052+R053	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131
R052+R053	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131
R052+R053	0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131
R054	0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088
R054	0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088
R055	0.0288	0.0297	0.0318	0.0347	0.0344	0.0320	0.0311	0.0314	0.0314	0.0294	0.0285	0.0285
R056	0.0067	0.0068	0.0069	0.0069	0.0075	0.0092	0.0090	0.0091	0.0094	0.0096	0.0094	0.0088
R057	0.0077	0.0083	0.0088	0.0088	0.0078	0.0102	0.0106	0.0105	0.0099	0.0116	0.0111	0.0113
R058	0.0275	0.0275	0.0278	0.0273	0.0283	0.0275	0.0283	0.0283	0.0281	0.0275	0.0276	0.0273
R059	0.0088	0.0093	0.0096	0.0097	0.0102	0.0093	0.0094	0.0094	0.0095	0.0093	0.0093	0.0088
R060	0.0283	0.0264	0.0272	0.0272	0.0299	0.0302	0.0291	0.0307	0.0291	0.0288	0.0299	0.0279
R061+R062	0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114
R061+R062	0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114
R063+R064	0.0125	0.0129	0.0129	0.0125	0.0125	0.0137	0.0140	0.0143	0.0138	0.0138	0.0138	0.0131
R065	0.0141	0.0094	0.0094	0.0094	0.0088	0.0157	0.0145	0.0144	0.0159	0.0157	0.0146	0.0146
R066	0.0133	0.0135	0.0137	0.0139	0.0140	0.0134	0.0138	0.0140	0.0138	0.0135	0.0135	0.0134
R067	0.0197	0.0196	0.0201	0.0195	0.0189	0.0190	0.0190	0.0190	0.0188	0.0191	0.0191	0.0193
R068	0.0212	0.0217	0.0219	0.0219	0.0203	0.0211	0.0205	0.0201	0.0202	0.0205	0.0205	0.0206
R069	0.0141	0.0099	0.0099	0.0099	0.0094	0.0168	0.0155	0.0154	0.0155	0.0164	0.0166	0.0166
R070	0.0099	0.0065	0.0065	0.0130	0.0130	0.0088	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099
R071	0.0065	0.0065	0.0065	0.0000	0.0000	0.0065	0.0065	0.0065	0.0065	0.0043	0.0043	0.0033
R072	0.0112	0.0107	0.0109	0.0109	0.0111	0.0138	0.0126	0.0122	0.0126	0.0122	0.0126	0.0127
R073	0.0064	0.0031	0.0031	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064
R074	0.0153	0.0170	0.0181	0.0158	0.0171	0.0156	0.0154	0.0156	0.0154	0.0154	0.0148	0.0148
R075	0.0141	0.0094	0.0094	0.0094	0.0105	0.0169	0.0154	0.0153	0.0153	0.0154	0.0155	0.0155

Road Pair	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
R001	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R001	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
R002	0.0096	0.0094	0.0091	0.0090	0.0085	0.0085	0.0082	0.0092	0.0089	0.0091	0.0091	0.0091
R003	0.0073	0.0071	0.0069	0.0066	0.0063	0.0061	0.0059	0.0059	0.0059	0.0061	0.0062	0.0060
R004+R005	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
R004+R005	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
R006+R007	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
R006+R007	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
R008	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R008	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
R009	0.0118	0.0113	0.0109	0.0105	0.0098	0.0089	0.0082	0.0088	0.0089	0.0088	0.0091	0.0089
R010	0.0105	0.0105	0.0105	0.0080	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061
R011	0.0118	0.0115	0.0112	0.0108	0.0105	0.0097	0.0092	0.0096	0.0103	0.0106	0.0109	0.0107
R012	0.0110	0.0108	0.0108	0.0093	0.0080	0.0079	0.0078	0.0086	0.0080	0.0082	0.0082	0.0084
R013	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
R013	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
R014+R015	0.0121	0.0112	0.0113	0.0107	0.0105	0.0086	0.0088	0.0134	0.0132	0.0143	0.0141	0.0145
R016	0.0178	0.0145	0.0145	0.0163	0.0201	0.0065	0.0065	0.0065	0.0065	0.0157	0.0166	0.0157
R017	0.0102	0.0099	0.0098	0.0094	0.0089	0.0082	0.0081	0.0081	0.0081	0.0087	0.0083	0.0083
R018	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
R018	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
R019	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
R019	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
R020	0.0072	0.0072	0.0072	0.0064	0.0061	0.0061	0.0061	0.0064	0.0061	0.0064	0.0063	0.0063
R021	0.0162	0.0162	0.0161	0.0152	0.0153	0.0144	0.0150	0.0150	0.0147	0.0155	0.0144	0.0148
R022	0.0211	0.0209	0.0204	0.0203	0.0196	0.0189	0.0185	0.0205	0.0209	0.0212	0.0214	0.0221
R023	0.0187	0.0182	0.0178	0.0169	0.0164	0.0151	0.0143	0.0154	0.0160	0.0164	0.0167	0.0177
R024	0.0232	0.0220	0.0184	0.0198	0.0155	0.0149	0.0151	0.0156	0.0159	0.0159	0.0160	0.0164
R025	0.0135	0.0125	0.0125	0.0104	0.0104	0.0093	0.0095	0.0097	0.0098	0.0108	0.0113	0.0118
R026	0.0162	0.0164	0.0166	0.0164	0.0161	0.0157	0.0158	0.0148	0.0149	0.0137	0.0132	0.0141
R027	0.0260	0.0237	0.0233	0.0222	0.0221	0.0200	0.0187	0.0186	0.0194	0.0198	0.0192	0.0198
R028	0.0131	0.0144	0.0145	0.0143	0.0143	0.0143	0.0144	0.0141	0.0144	0.0142	0.0149	0.0150
R029	0.0197	0.0171	0.0166	0.0161	0.0156	0.0124	0.0115	0.0120	0.0124	0.0149	0.0151	0.0155
R030	0.0053	0.0053	0.0053	0.0064	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041
R031	0.0072	0.0068	0.0066	0.0065	0.0058	0.0050	0.0051	0.0046	0.0050	0.0053	0.0052	0.0057
R032+R033	0.0165	0.0162	0.0162	0.0154	0.0145	0.0138	0.0137	0.0143	0.0153	0.0145	0.0147	0.0148
R034	0.0182	0.0134	0.0140	0.0130	0.0130	0.0095	0.0062	0.0082	0.0091	0.0121	0.0116	0.0143
R035	0.0118	0.0117	0.0118	0.0108	0.0097	0.0084	0.0077	0.0083	0.0090	0.0092	0.0099	0.0107
R036+R037	0.0181	0.0167	0.0169	0.0163	0.0162	0.0138	0.0146	0.0143	0.0152	0.0152	0.0146	0.0151
R038	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
R038	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
R039	0.0284	0.0277	0.0270	0.0265	0.0261	0.0257	0.0252	0.0273	0.0278	0.0278	0.0283	0.0290
R040	0.0087	0.0087	0.0087	0.0084	0.0078	0.0072	0.0069	0.0077	0.0074	0.0078	0.0081	0.0077
R041	0.0156	0.0132	0.0139	0.0127	0.0125	0.0101	0.0099	0.0106	0.0106	0.0119	0.0128	0.0132
R042	0.0102	0.0122	0.0122	0.0131	0.0122	0.0124	0.0124	0.0124	0.0124	0.0136	0.0136	0.0137
R043	0.0161	0.0136	0.0142	0.0120	0.0111	0.0082	0.0071	0.0075	0.0079	0.0104	0.0107	0.0111
R044	0.0175	0.0187	0.0177	0.0165	0.0171	0.0163	0.0166	0.0170	0.0173	0.0164	0.0167	0.0173
R045	0.0091	0.0098	0.0095	0.0066	0.0068	0.0068	0.0065	0.0071	0.0059	0.0075	0.0079	0.0093
R046+R047	0.0156	0.0151	0.0144	0.0134	0.0129	0.0123	0.0119	0.0132	0.0135	0.0138	0.0141	0.0144
R048	0.0225	0.0346	0.0309	0.0309	0.0287	0.0287	0.0307	0.0426	0.0437	0.0437	0.0416	0.0416
R049	0.0057	0.0057	0.0057	0.0047	0.0047	0.0049	0.0049	0.0049	0.0049	0.0054	0.0054	0.0053
R050+R051	0.0200	0.0199	0.0184	0.0169	0.0160	0.0151	0.0150	0.0157	0.0161	0.0158	0.0167	0.0167
R052+R053	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R052+R053	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R052+R053	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R052+R053	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
R054	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
R054	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
R055	0.0280	0.0231	0.0231	0.0223	0.0205	0.0202	0.0171	0.0202	0.0208	0.0285	0.0298	0.0310
R056	0.0087	0.0085	0.0083	0.0084	0.0079	0.0079	0.0077	0.0078	0.0077	0.0078	0.0077	0.0077
R057	0.0112	0.0101	0.0101	0.0094	0.0092	0.0079	0.0076	0.0102	0.0107	0.0108	0.0106	0.0109
R058	0.0272	0.0273	0.0273	0.0274	0.0276	0.0285	0.0293	0.0289	0.0291	0.0292	0.0287	0.0291
R059	0.0086	0.0080	0.0077	0.0075	0.0071	0.0066	0.0059	0.0080	0.0082	0.0087	0.0092	0.0090
R060	0.0275	0.0273	0.0252	0.0250	0.0243	0.0232	0.0224	0.0229	0.0223	0.0234	0.0235	0.0238
R061+R062	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
R061+R062	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
R063+R064	0.0133	0.0131	0.0138	0.0143	0.0145	0.0143	0.0157	0.0168	0.0178	0.0193	0.0192	0.0198
R065	0.0144	0.0146	0.0146	0.0131	0.0131	0.0143	0.0116	0.0115	0.0116	0.0137	0.0137	0.0146
R066	0.0128	0.0124	0.0124	0.0122	0.0126	0.0118	0.0113	0.0141	0.0147	0.0148	0.0150	0.0149
R067	0.0189	0.0192	0.0193	0.0193	0.0193	0.0193	0.0198	0.0218	0.0221	0.0220	0.0222	0.0224
R068	0.0209	0.0207	0.0207	0.0210	0.0211	0.0214	0.0219	0.0235	0.0239	0.0235	0.0241	0.0242
R069	0.0168	0.0141	0.0142	0.0143	0.0141	0.0131	0.0123	0.0123	0.0123	0.0137	0.0148	0.0148
R070	0.0099	0.0088	0.0088	0.0088	0.0099	0.0195	0.0158	0.0158	0.0158	0.0158	0.0195	0.0195
R071	0.0043	0.0043	0.0066	0.0066	0.0066	0.0066	0.0079	0.0079	0.0079	0.0079	0.0065	0.0065
R072	0.0133	0.0095	0.0094	0.0094	0.0089	0.0080	0.0067	0.0076	0.0075	0.0112	0.0117	0.0124
R073	0.0064	0.0064	0.0064	0.0064	0.0064	0.0053	0.0054	0.0054	0.0054	0.0053	0.0064	0.0064
R074	0.0152	0.0153	0.0147	0.0169	0.0156	0.0161	0.0165	0.0173	0.0173	0.0168	0.0167	0.0173
R075	0.0157	0.0141	0.0141	0.0131	0.0123	0.0118	0.0109	0.0113	0.0109	0.0124	0.0129	0.0136

Caline 4 input for 2035 Q2

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820248.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820386.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820250.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820200.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820804.49	14	0	1
R108	836203.37	820871.38	836210.57	820716.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820994.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820594.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820578.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	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
0.0115	0.0118	0.0120	0.0120	0.0128	0.0122	0.0119	0.0120	0.0117	0.0121	0.0110	0.0111	0.0114	0.0112	0.0105	0.0095	0.0090	0.0086	0.0075	0.0076	0.0082	0.0085	0.0079	0.0087
0.0094	0.0105	0.0099	0.0099	0.0099	0.0137	0.0136	0.0136	0.0136	0.0136	0.0136	0.0136	0.0137	0.0094	0.0094	0.0094	0.0087	0.0125	0.0117	0.0116	0.0117	0.0125	0.0124	0.0136
0.0115	0.0118	0.0118	0.0120	0.0121	0.0119	0.0118	0.0119	0.0119	0.0118	0.0118	0.0119	0.0115	0.0111	0.0108	0.0108	0.0105	0.0104	0.0101	0.0111	0.0111	0.0116	0.0117	0.0117
0.0199	0.0188	0.0203	0.0209	0.0211	0.0198	0.0189	0.0195	0.0198	0.0193	0.0193	0.0196	0.0192	0.0192	0.0201	0.0191	0.0193	0.0197	0.0199	0.0199	0.0199	0.0199	0.0194	0.0199
0.0106	0.0112	0.0114	0.0116	0.0117	0.0111	0.0110	0.0110	0.0110	0.0109	0.0107	0.0107	0.0107	0.0096	0.0094	0.0092	0.0085	0.0079	0.0072	0.0080	0.0083	0.0089	0.0092	0.0097
0.0164	0.0180	0.0184	0.0184	0.0197	0.0161	0.0156	0.0150	0.0151	0.0157	0.0154	0.0155	0.0162	0.0131	0.0131	0.0131	0.0131	0.0125	0.0124	0.0124	0.0125	0.0136	0.0144	0.0144
0.0173	0.0209	0.0209	0.0209	0.0209	0.0173	0.0156	0.0154	0.0154	0.0156	0.0157	0.0169	0.0173	0.0152	0.0154	0.0154	0.0151	0.0136	0.0136	0.0136	0.0136	0.0155	0.0157	0.0178
0.0172	0.0158	0.0160	0.0130	0.0141	0.0174	0.0161	0.0160	0.0161	0.0166	0.0167	0.0167	0.0166	0.0163	0.0155	0.0156	0.0151	0.0157	0.0155	0.0172	0.0166	0.0169	0.0164	0.0165
0.0140	0.0147	0.0140	0.0140	0.0146	0.0143	0.0137	0.0142	0.0147	0.0140	0.0145	0.0149	0.0145	0.0123	0.0122	0.0122	0.0120	0.0116	0.0116	0.0117	0.0122	0.0116	0.0123	0.0125
0.0201	0.0206	0.0200	0.0201	0.0197	0.0205	0.0196	0.0191	0.0201	0.0236	0.0234	0.0233	0.0224	0.0216	0.0212	0.0200	0.0183	0.0165	0.0156	0.0163	0.0165	0.0178	0.0174	0.0174
0.0076	0.0079	0.0082	0.0083	0.0082	0.0090	0.0093	0.0095	0.0095	0.0089	0.0086	0.0086	0.0086	0.0074	0.0075	0.0076	0.0068	0.0059	0.0059	0.0057	0.0066	0.0066	0.0068	0.0074
0.0224	0.0225	0.0227	0.0223	0.0223	0.0235	0.0241	0.0241	0.0238	0.0237	0.0232	0.0234	0.0229	0.0226	0.0222	0.0216	0.0217	0.0213	0.0210	0.0213	0.0213	0.0217	0.0214	0.0215
0.0056	0.0064	0.0064	0.0064	0.0064	0.0082	0.0076	0.0076	0.0076	0.0077	0.0077	0.0077	0.0071	0.0056	0.0056	0.0056	0.0052	0.0052	0.0049	0.0049	0.0049	0.0052	0.0052	0.0051
0.0183	0.0191	0.0190	0.0194	0.0196	0.0193	0.0196	0.0198	0.0196	0.0194	0.0192	0.0189	0.0188	0.0184	0.0181	0.0174	0.0171	0.0166	0.0159	0.0161	0.0164	0.0166	0.0166	0.0170
0.0135	0.0126	0.0132	0.0132	0.0132	0.0135	0.0151	0.0146	0.0142	0.0138	0.0140	0.0137	0.0139	0.0132	0.0131	0.0125	0.0122	0.0102	0.0100	0.0117	0.0113	0.0116	0.0119	0.0120
0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
0.0103	0.0112	0.0116	0.0118	0.0107	0.0112	0.0120	0.0121	0.0120	0.0112	0.0111	0.0108	0.0111	0.0108	0.0105	0.0102	0.0098	0.0089	0.0082	0.0101	0.0105	0.0104	0.0105	0.0110
0.0230	0.0223	0.0232	0.0232	0.0239	0.0241	0.0250	0.0252	0.0248	0.0251	0.0239	0.0236	0.0235	0.0236	0.0231	0.0224	0.0221	0.0213	0.0206	0.0207	0.0210	0.0216	0.0213	0.0215
0.0133	0.0139	0.0147	0.0147	0.0147	0.0151	0.0150	0.0146	0.0157	0.0145	0.0146	0.0160	0.0141	0.0146	0.0142	0.0133	0.0143	0.0135	0.0132	0.0135	0.0132	0.0143	0.0142	0.0142
0.0213	0.0227	0.0230	0.0230	0.0238	0.0212	0.0221	0.0218	0.0226	0.0223	0.0211	0.0213	0.0215	0.0207	0.0206	0.0193	0.0186	0.0180	0.0177	0.0179	0.0183	0.0198	0.0201	0.0205
0.0216	0.0227	0.0228	0.0231	0.0233	0.0231	0.0244	0.0250	0.0245	0.0237	0.0232	0.0226	0.0225	0.0227	0.0224	0.0214	0.0210	0.0201	0.0193	0.0192	0.0191	0.0192	0.0190	0.0193
0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
0.0091	0.0093	0.0091	0.0094	0.0096	0.0097	0.0099	0.0110	0.0112	0.0112	0.0108	0.0105	0.0102	0.0099	0.0098	0.0094	0.0091	0.0088	0.0088	0.0092	0.0088	0.0084	0.0085	0.0084
0.0078	0.0063	0.0063	0.0063	0.0063	0.0104	0.0095	0.0093	0.0095	0.0096	0.0106	0.0106	0.0103	0.0103	0.0103	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081	0.0103	0.0106	0.0104
0.0170	0.0148	0.0152	0.0157	0.0147	0.0171	0.0164	0.0162	0.0162	0.0167	0.0170	0.0170	0.0166	0.0167	0.0168	0.0149	0.0153	0.0153	0.0158	0.0184	0.0187	0.0203	0.0210	0.0214
0.0062	0.0060	0.0067	0.0058	0.0066	0.0081	0.0083	0.0092	0.0089	0.0081	0.0078	0.0074	0.0075	0.0075	0.0070	0.0070	0.0067	0.0066	0.0065	0.0066	0.0064	0.0066	0.0063	0.0061
0.0079	0.0076	0.0087	0.0055	0.0054	0.0055	0.0080	0.0090	0.0094	0.0109	0.0116	0.0111	0.0097	0.0092	0.0087	0.0083	0.0074	0.0073	0.0071	0.0073	0.0068	0.0068	0.0070	0.0073
0.0074	0.0070	0.0070	0.0071	0.0078	0.0075	0.0083	0.0082	0.0082	0.0070	0.0070	0.0071	0.0070	0.0070	0.0067	0.0072	0.0070	0.0060	0.0060	0.0060	0.0070	0.0072	0.0070	0.0083
0.0129	0.0102	0.0102	0.0102	0.0108	0.0129	0.0132	0.0132	0.0132	0.0117	0.0121	0.0119	0.0117	0.0118	0.0119	0.0124	0.0124	0.0116	0.0116	0.0115	0.0124	0.0124	0.0125	0.0133
0.0090	0.0122	0.0138	0.0138	0.0138	0.0112	0.0123	0.0123	0.0123	0.0112	0.0112	0.0117	0.0108	0.0108	0.0104	0.0104	0.0085	0.0063	0.0063	0.0063	0.0083	0.0104	0.0107	0.0124
0.0135	0.0150	0.0151	0.0119	0.0118	0.0135	0.0141	0.0136	0.0136	0.0130	0.0135	0.0135	0.0130	0.0133	0.0129	0.0138	0.0140	0.0134	0.0134	0.0135	0.0140	0.0142	0.0133	0.0141
0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
0.0102	0.0109	0.0109	0.0109	0.0109	0.0135	0.0126	0.0126	0.0126	0.0135	0.0135	0.0135	0.0135	0.0125	0.0125	0.0152	0.0135	0.0135	0.0135	0.0135	0.0135	0.0150	0.0151	0.0166
0.0148	0.0098	0.0094	0.0094	0.0094	0.0157	0.0144	0.0143	0.0144	0.0154	0.0157	0.0157	0.0155	0.0155	0.0154	0.0143	0.0126	0.0134	0.0135	0.0135	0.0135	0.0150	0.0151	0.0151
0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
0.0147	0.0128	0.0128	0.0128	0.0128	0.0187	0.0175	0.0174	0.0170	0.0191	0.0190	0.0189	0.0189	0.0177	0.0181	0.0169	0.0179	0.0138	0.0147	0.0202	0.0211	0.0226	0.0230	0.0230
0.0087	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0098	0.0109	0.0109	0.0170	0.0167	0.0167	0.0151	0.0149	0.0147	0.0206	0.0206	0.0222	0.0206	0.0206
0.0063	0.0064	0.0064	0.0064	0.0064	0.0063	0.0135	0.0113	0.0128	0.0128	0.0133	0.0130	0.0106	0.0104	0.0133	0.0104	0.0104	0.0113	0.0113	0.0122	0.0130	0.0104	0.0106	0.0119
0.0109	0.0105	0.0099	0.0099	0.0099	0.0105	0.0189	0.0161	0.0193	0.0179	0.0177	0.0177	0.0147	0.0146	0.0168	0.0141	0.0141	0.0141	0.0140	0.0173	0.0179	0.0146	0.0146	0.0149
0.0128	0.0105	0.0105	0.0105	0.0105	0.0167	0.0149	0.0147	0.0139	0.0154	0.0153	0.0153	0.0161	0.0150	0.0150	0.0149	0.0161	0.0128	0.0146	0.0195	0.0189	0.0144	0.0146	0.0146
0.0077	0.0058	0.0038	0.0038	0.0038	0.0093	0.0062	0.0087	0.0098	0.0103	0.0103	0.0104	0.0103	0.0105	0.0100	0.0097	0.0099	0.0094	0.0087	0.0118	0.0127	0.0107	0.0105	0.0113
0.0133	0.0130	0.0130	0.0130	0.0130	0.0133	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0131	0.0131	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132
0.0159	0.0109	0.0109	0.0109	0.0109	0.0161	0.0147	0.0146	0.0138	0.0151	0.0150	0.0150	0.0150	0.0159	0.0159	0.0137	0.0138	0.0145	0.0146	0.0168	0.0168	0.0146	0.0148	0.0148
0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120
0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120

Caline 4 input for 2035 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R001	835620.80	820845.25	835496.74	820838.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821008.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.63	820570.32	11	0	1
R020	835568.73	820565.58	835478.35	820470.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820674.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820516.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	18	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
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0072	0.0068	0.0077	0.0085	0.0081	0.0085	0.0076	0.0092	0.0095	0.0092	0.0094	0.0090	0.0088	0.0086	0.0084	0.0083	0.0079	0.0078	0.0076	0.0085	0.0082	0.0085	0.0084	0.0083
0.0056	0.0058	0.0054	0.0059	0.0061	0.0058	0.0065	0.0071	0.0072	0.0070	0.0069	0.0067	0.0067	0.0066	0.0064	0.0061	0.0058	0.0055	0.0055	0.0055	0.0055	0.0056	0.0056	0.0055
0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0092	0.0093	0.0099	0.0100	0.0101	0.0101	0.0106	0.0114	0.0120	0.0119	0.0116	0.0113	0.0109	0.0104	0.0100	0.0097	0.0090	0.0083	0.0076	0.0080	0.0081	0.0081	0.0083	0.0082
0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0092	0.0102	0.0096	0.0102	0.0102	0.0102	0.0098	0.0098	0.0098	0.0075	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058
0.0091	0.0091	0.0091	0.0093	0.0096	0.0095	0.0100	0.0110	0.0116	0.0118	0.0114	0.0112	0.0109	0.0107	0.0104	0.0100	0.0096	0.0090	0.0085	0.0089	0.0094	0.0098	0.0100	0.0099
0.0098	0.0075	0.0080	0.0080	0.0080	0.0080	0.0096	0.0104	0.0106	0.0105	0.0104	0.0100	0.0102	0.0101	0.0101	0.0087	0.0075	0.0074	0.0073	0.0080	0.0075	0.0077	0.0077	0.0079
0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
0.0091	0.0109	0.0109	0.0109	0.0117	0.0116	0.0107	0.0105	0.0102	0.0116	0.0114	0.0112	0.0112	0.0103	0.0104	0.0099	0.0097	0.0080	0.0082	0.0123	0.0122	0.0132	0.0130	0.0134
0.0150	0.0169	0.0169	0.0169	0.0169	0.0169	0.0147	0.0147	0.0134	0.0151	0.0151	0.0151	0.0163	0.0134	0.0134	0.0150	0.0183	0.0061	0.0061	0.0061	0.0061	0.0145	0.0153	0.0145
0.0096	0.0088	0.0098	0.0098	0.0098	0.0106	0.0101	0.0103	0.0099	0.0102	0.0099	0.0100	0.0095	0.0092	0.0091	0.0088	0.0083	0.0077	0.0075	0.0075	0.0075	0.0082	0.0078	0.0078
0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
0.0072	0.0059	0.0060	0.0060	0.0060	0.0073	0.0075	0.0075	0.0074	0.0071	0.0071	0.0071	0.0067	0.0067	0.0067	0.0060	0.0057	0.0057	0.0057	0.0060	0.0057	0.0060	0.0059	0.0059
0.0137	0.0153	0.0162	0.0129	0.0129	0.0144	0.0148	0.0144	0.0138	0.0158	0.0153	0.0161	0.0149	0.0149	0.0149	0.0140	0.0141	0.0133	0.0138	0.0138	0.0136	0.0143	0.0133	0.0136
0.0186	0.0193	0.0198	0.0194	0.0202	0.0196	0.0202	0.0208	0.0206	0.0204	0.0201	0.0197	0.0194	0.0192	0.0188	0.0187	0.0180	0.0174	0.0171	0.0189	0.0192	0.0195	0.0196	0.0203
0.0161	0.0165	0.0167	0.0171	0.0171	0.0172	0.0179	0.0184	0.0183	0.0181	0.0181	0.0174	0.0172	0.0167	0.0163	0.0155	0.0151	0.0139	0.0132	0.0142	0.0146	0.0151	0.0153	0.0162
0.0166	0.0169	0.0174	0.0177	0.0178	0.0185	0.0194	0.0209	0.0221	0.0226	0.0227	0.0225	0.0213	0.0202	0.0170	0.0182	0.0143	0.0137	0.0139	0.0144	0.0146	0.0146	0.0148	0.0151
0.0121	0.0077	0.0088	0.0082	0.0082	0.0147	0.0134	0.0134	0.0126	0.0132	0.0125	0.0124	0.0124	0.0115	0.0115	0.0095	0.0095	0.0086	0.0087	0.0089	0.0090	0.0099	0.0105	0.0109
0.0128	0.0131	0.0131	0.0122	0.0119	0.0129	0.0133	0.0140	0.0153	0.0154	0.0150	0.0155	0.0150	0.0151	0.0153	0.0151	0.0148	0.0144	0.0145	0.0137	0.0138	0.0126	0.0122	0.0130
0.0186	0.0184	0.0193	0.0182	0.0192	0.0196	0.0200	0.0198	0.0218	0.0241	0.0237	0.0237	0.0239	0.0218	0.0214	0.0204	0.0203	0.0184	0.0172	0.0172	0.0178	0.0183	0.0176	0.0182
0.0119	0.0110	0.0109	0.0122	0.0122	0.0119	0.0120	0.0120	0.0120	0.0121	0.0124	0.0121	0.0121	0.0133	0.0133	0.0132	0.0132	0.0132	0.0132	0.0131	0.0132	0.0131	0.0139	0.0139
0.0138	0.0145	0.0149	0.0149	0.0152	0.0157	0.0156	0.0156	0.0163	0.0190	0.0185	0.0184	0.0181	0.0157	0.0153	0.0148	0.0144	0.0114	0.0106	0.0110	0.0114	0.0137	0.0139	0.0143
0.0029	0.0058	0.0058	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0050	0.0050	0.0051	0.0050	0.0050	0.0050	0.0060	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039
0.0057	0.0060	0.0059	0.0060	0.0059	0.0062	0.0077	0.0079	0.0081	0.0081	0.0075	0.0071	0.0067	0.0063	0.0062	0.0060	0.0054	0.0046	0.0047	0.0043	0.0046	0.0049	0.0048	0.0052
0.0130	0.0140	0.0148	0.0145	0.0143	0.0140	0.0164	0.0158	0.0176	0.0178	0.0175	0.0167	0.0152	0.0150	0.0149	0.0142	0.0134	0.0127	0.0127	0.0132	0.0141	0.0133	0.0135	0.0136
0.0110	0.0119	0.0119	0.0126	0.0126	0.0152	0.0153	0.0148	0.0149	0.0166	0.0161	0.0161	0.0168	0.0125	0.0130	0.0121	0.0121	0.0088	0.0059	0.0077	0.0085	0.0113	0.0108	0.0133
0.0082	0.0085	0.0088	0.0089	0.0093	0.0088	0.0103	0.0108	0.0126	0.0125	0.0115	0.0116	0.0109	0.0108	0.0109	0.0100	0.0090	0.0078	0.0072	0.0077	0.0083	0.0085	0.0091	0.0099
0.0145	0.0131	0.0133	0.0133	0.0134	0.0152	0.0155	0.0158	0.0156	0.0165	0.0162	0.0162	0.0166	0.0153	0.0155	0.0149	0.0148	0.0127	0.0134	0.0132	0.0139	0.0140	0.0134	0.0138
0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
0.0251	0.0267	0.0280	0.0253	0.0273	0.0298	0.0282	0.0289	0.0282	0.0279	0.0270	0.0271	0.0261	0.0255	0.0248	0.0243	0.0240	0.0236	0.0232	0.0250	0.0255	0.0255	0.0260	0.0266
0.0074	0.0072	0.0067	0.0071	0.0078	0.0076	0.0086	0.0088	0.0090	0.0087	0.0083	0.0081	0.0080	0.0080	0.0079	0.0077	0.0072	0.0066	0.0063	0.0070	0.0068	0.0072	0.0075	0.0071
0.0108	0.0117	0.0103	0.0107	0.0112	0.0125	0.0126	0.0122	0.0125	0.0140	0.0144	0.0147	0.0143	0.0122	0.0128	0.0117	0.0115	0.0093	0.0091	0.0097	0.0097	0.0110	0.0118	0.0121
0.0082	0.0092	0.0092	0.0092	0.0092	0.0113	0.0103	0.0103	0.0095	0.0100	0.0095	0.0096	0.0095	0.0113	0.0113	0.0121	0.0113	0.0115	0.0115	0.0115	0.0115	0.0125	0.0125	0.0126
0.0104	0.0091	0.0093	0.0093	0.0099	0.0124	0.0117	0.0114	0.0114	0.0144	0.0149	0.0153	0.0148	0.0125	0.0131	0.0110	0.0102	0.0075	0.0065	0.0070	0.0073	0.0095	0.0100	0.0103
0.0155	0.0154	0.0154	0.0144	0.0146	0.0141	0.0160	0.0154	0.0154	0.0164	0.0165	0.0175	0.0161	0.0172	0.0162	0.0152	0.0158	0.0150	0.0153	0.0157	0.0159	0.0151	0.0154	0.0159
0.0068	0.0077	0.0073	0.0042	0.0047	0.0059	0.0070	0.0081	0.0078	0.0081	0.0082	0.0086	0.0084	0.0089	0.0087	0.0060	0.0062	0.0062	0.0059	0.0065	0.0053	0.0069	0.0072	0.0085
0.0132	0.0119	0.0129	0.0141	0.0132	0.0142	0.0143	0.0145	0.0146	0.0146	0.0144	0.0141	0.0143	0.0139	0.0132	0.0123	0.0118	0.0113	0.0109	0.0121	0.0124	0.0127	0.0129	0.0132
0.0151	0.0217	0.0217	0.0217	0.0217	0.0141	0.0116	0.0116	0.0116	0.0193	0.0207	0.0262	0.0207	0.0319	0.0285	0.0285	0.0265	0.0265	0.0283	0.0392	0.0402	0.0402	0.0383	0.0383
0.0060	0.0029	0.0029	0.0029	0.0058	0.0060	0.0060	0.0060	0.0060	0.0060	0.0054	0.0054	0.0054	0.0054	0.0054	0.0045	0.0045	0.0046	0.0046	0.0046	0.0046	0.0051	0.0051	0.0050
0.0162	0.0169	0.0166	0.0175	0.0173	0.0175	0.0189	0.0196	0.0203	0.0203	0.0199	0.0196	0.0184	0.0183	0.0169	0.0156	0.0147	0.0139	0.0139	0.0145	0.0148	0.0146	0.0154	0.0154
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
0.0266	0.0275	0.0294	0.0320	0.0318	0.0295	0.0287	0.0290	0.0290	0.0272	0.0263	0.0263	0.0258	0.0212	0.0212	0.0205	0.0189	0.0186	0.0158	0.0186	0.0192	0.0263	0.0274	0.0285
0.0062	0.0064	0.0064	0.0064	0.0070	0.0086	0.0083	0.0084	0.0087	0.0088	0.0086	0.0081	0.0080	0.0079	0.0077	0.0077	0.0073	0.0073	0.0071	0.0072	0.0071	0.0072	0.0071	0.0071
0.0071	0.0078	0.0082	0.0082	0.0072	0.0094	0.0097	0.0097	0.0091	0.0106	0.0102	0.0104	0.0103	0.0093	0.0093	0.0087	0.0085	0.0073	0.0070	0.0094	0.0098	0.0100	0.0098	0.0101
0.0254	0.0254	0.0256	0.0252	0.0261	0.0254	0.0260	0.0260	0.0259	0.0252	0.0254	0.0251	0.0250	0.0251	0.0251	0.0252	0.0254	0.0263	0.0270	0.0266	0.0268	0.0269	0.0264	0.0268
0.0081	0.0085	0.0088	0.0088	0.0093	0.0086	0.0087	0.0087	0.0087	0.0085	0.0085	0.0081	0.0080	0.0073	0.0070	0.0069	0.0065	0.0061	0.0055	0.0074	0.0076	0.0080	0.0084	0.0083
0.0261	0.0244	0.0251	0.0251	0.0276	0.0279	0.0268	0.0282	0.0268	0.0265	0.0275	0.0257	0.0253	0.0252	0.0233	0.0231	0.0224	0.0214	0.0207	0.0211	0.0205	0.0216	0.0216	0.0219
0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
0.0115	0.0119	0.0119	0.0116	0.0116	0.0127	0.0130	0.0131	0.0128	0.0128	0.0128	0.0121	0.0123	0.0121	0.0128	0.0132	0.0134	0.0132	0.0145	0.0155	0.0164	0.0177	0.0177	0.0182
0.0130	0.0088	0.0088	0.0088	0.0082	0.0145	0.0134	0.0133	0.0147	0.0145	0.0134	0.0134	0.0133	0.0134	0.0134	0.0121	0.0120	0.0131	0.0107	0.0106	0.0107	0.0126	0.0127	0.0135
0.0122	0.0124	0.0125	0.0127	0.0129	0.0123	0.0127	0.0129	0.0127	0.0125	0.0125	0.0124	0.0118	0.0115	0.0113	0.0112	0.0115	0.0109	0.0105	0.0131	0.0135	0.0136	0.0138	0.0137
0.0181	0.0180	0.0185	0.0179	0.0174	0.0174	0.0175	0.0175	0.0173	0.0176	0.0176	0.0177	0.0174	0.0177	0.0177	0.0177	0.0178	0.0178	0.0182	0.0201	0.0203	0.0203	0.0204	0.0205
0.0195	0.0199	0.0201	0.0201	0.0187	0.0193	0.0188	0.0185	0.0185	0.0189	0.0188	0.0189	0.0192	0.0190	0.0190	0.0193	0.0194	0.0197	0.0201	0.0216	0.0220	0.0216	0.0222	0.0222
0.0130	0.0092	0.0092	0.0092	0.0088	0.0154	0.0143	0.0142	0.0143	0.0151	0.0153	0.0153	0.0154	0.0130	0.0131	0.0131	0.0130	0.0121	0.0113	0.0113	0.0114	0.0126	0.0136	0.0136
0.0092	0.0061	0.0061	0.0122	0.0122	0.0083	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0083	0.0083	0.0083	0.0092	0.0178	0.0144	0.0144	0.0144	0.0144	0.0178	0.0178
0.0061	0.0061	0.0061	0.0000	0.0000	0.0061	0.0061	0.0061	0.0061	0.0041	0.0041	0.0030	0.0041	0.0041	0.0062	0.0062	0.0062	0.0062	0.0074	0.0074	0.0074	0.0074	0.0061	0.0061
0.0104	0.0099	0.0101	0.0101	0.0103	0.0128	0.0117	0.0113	0.0117	0.0113	0.0116	0.0117	0.0123	0.0088	0.0087	0.0087	0.0083	0.0075	0.0063	0.0071	0.0070	0.0104	0.0108	0.0115
0.0060	0.0029	0.0029	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0050	0.0051	0.0051	0.0051	0.0050	0.0060	0.0060
0.0140	0.0157	0.0167	0.0147	0.0158	0.0144	0.0142	0.0144	0.0142	0.0142	0.0136	0.0136	0.0140	0.0141	0.0135	0.0155	0.0144	0.0149	0.0152	0.0159	0.0159	0.0155	0.0154	0.0159
0.0130	0.0088	0.0088	0.0088	0.0098	0.0156	0.0142	0.0141	0.0141	0.0142	0.0143	0.0143	0.0145	0.0130	0.0130	0.0121	0.0114	0.0109	0.0101	0.0105	0.0101	0.0115	0.0119	0.0126

Caline 4 input for 2035 Q2

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820244.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820384.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820250.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820200.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820234.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1
R108	836203.37	820871.38	836210.57	820716.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820994.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820594.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820570.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	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
0.0105	0.0108	0.0110	0.0110	0.0118	0.0112	0.0109	0.0110	0.0108	0.0111	0.0101	0.0102	0.0104	0.0103	0.0096	0.0087	0.0082	0.0079	0.0069	0.0070	0.0075	0.0078	0.0073	0.0079
0.0088	0.0098	0.0092	0.0092	0.0092	0.0127	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126	0.0127	0.0088	0.0088	0.0088	0.0082	0.0115	0.0108	0.0107	0.0108	0.0115	0.0115	0.0125
0.0105	0.0108	0.0108	0.0110	0.0111	0.0109	0.0108	0.0109	0.0109	0.0108	0.0108	0.0109	0.0105	0.0102	0.0099	0.0099	0.0097	0.0096	0.0093	0.0102	0.0102	0.0107	0.0107	0.0107
0.0183	0.0173	0.0186	0.0192	0.0194	0.0182	0.0174	0.0179	0.0182	0.0177	0.0177	0.0180	0.0176	0.0176	0.0184	0.0175	0.0177	0.0181	0.0183	0.0182	0.0182	0.0182	0.0178	0.0183
0.0097	0.0103	0.0105	0.0106	0.0108	0.0101	0.0100	0.0101	0.0101	0.0100	0.0098	0.0098	0.0098	0.0088	0.0086	0.0084	0.0078	0.0072	0.0066	0.0073	0.0076	0.0081	0.0084	0.0089
0.0151	0.0166	0.0169	0.0169	0.0181	0.0149	0.0144	0.0138	0.0139	0.0144	0.0143	0.0143	0.0150	0.0121	0.0121	0.0121	0.0121	0.0115	0.0115	0.0115	0.0116	0.0126	0.0133	0.0133
0.0159	0.0192	0.0192	0.0192	0.0192	0.0159	0.0144	0.0142	0.0142	0.0144	0.0145	0.0156	0.0159	0.0140	0.0142	0.0142	0.0139	0.0125	0.0125	0.0125	0.0125	0.0143	0.0145	0.0163
0.0159	0.0146	0.0147	0.0121	0.0131	0.0161	0.0148	0.0147	0.0148	0.0153	0.0153	0.0153	0.0153	0.0151	0.0143	0.0144	0.0139	0.0144	0.0142	0.0158	0.0152	0.0155	0.0151	0.0152
0.0129	0.0136	0.0129	0.0129	0.0134	0.0132	0.0126	0.0131	0.0135	0.0129	0.0134	0.0137	0.0134	0.0114	0.0112	0.0112	0.0111	0.0106	0.0107	0.0108	0.0112	0.0107	0.0113	0.0115
0.0185	0.0190	0.0184	0.0185	0.0181	0.0188	0.0181	0.0175	0.0185	0.0218	0.0215	0.0214	0.0206	0.0199	0.0196	0.0184	0.0169	0.0153	0.0144	0.0151	0.0152	0.0164	0.0161	0.0160
0.0071	0.0074	0.0077	0.0078	0.0076	0.0084	0.0087	0.0087	0.0087	0.0083	0.0080	0.0080	0.0080	0.0069	0.0070	0.0071	0.0063	0.0055	0.0054	0.0054	0.0061	0.0062	0.0063	0.0069
0.0206	0.0207	0.0209	0.0205	0.0205	0.0216	0.0222	0.0222	0.0219	0.0218	0.0214	0.0215	0.0211	0.0208	0.0204	0.0198	0.0200	0.0197	0.0193	0.0196	0.0196	0.0200	0.0197	0.0198
0.0052	0.0060	0.0060	0.0060	0.0060	0.0076	0.0071	0.0071	0.0071	0.0072	0.0072	0.0072	0.0066	0.0052	0.0052	0.0052	0.0049	0.0049	0.0046	0.0046	0.0046	0.0049	0.0049	0.0048
0.0168	0.0175	0.0174	0.0178	0.0180	0.0177	0.0180	0.0182	0.0180	0.0178	0.0177	0.0173	0.0172	0.0169	0.0167	0.0160	0.0158	0.0152	0.0147	0.0148	0.0151	0.0152	0.0152	0.0156
0.0125	0.0116	0.0122	0.0122	0.0121	0.0124	0.0140	0.0134	0.0131	0.0127	0.0129	0.0126	0.0128	0.0122	0.0121	0.0116	0.0112	0.0094	0.0093	0.0108	0.0104	0.0107	0.0110	0.0111
0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
0.0095	0.0103	0.0107	0.0109	0.0098	0.0103	0.0111	0.0112	0.0111	0.0104	0.0102	0.0100	0.0103	0.0099	0.0097	0.0094	0.0091	0.0082	0.0076	0.0093	0.0097	0.0096	0.0097	0.0102
0.0212	0.0206	0.0214	0.0214	0.0220	0.0221	0.0230	0.0232	0.0228	0.0231	0.0220	0.0217	0.0217	0.0218	0.0213	0.0206	0.0204	0.0197	0.0190	0.0191	0.0194	0.0199	0.0196	0.0198
0.0123	0.0129	0.0137	0.0137	0.0137	0.0139	0.0138	0.0135	0.0145	0.0134	0.0135	0.0148	0.0131	0.0135	0.0132	0.0123	0.0133	0.0125	0.0123	0.0125	0.0123	0.0133	0.0132	0.0132
0.0196	0.0209	0.0213	0.0213	0.0219	0.0195	0.0203	0.0200	0.0208	0.0205	0.0194	0.0196	0.0198	0.0190	0.0190	0.0178	0.0171	0.0165	0.0163	0.0165	0.0168	0.0182	0.0185	0.0188
0.0199	0.0209	0.0210	0.0213	0.0214	0.0213	0.0225	0.0230	0.0226	0.0218	0.0213	0.0208	0.0207	0.0210	0.0206	0.0198	0.0193	0.0185	0.0178	0.0177	0.0176	0.0177	0.0175	0.0177
0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0083	0.0085	0.0083	0.0086	0.0088	0.0089	0.0091	0.0102	0.0103	0.0103	0.0099	0.0097	0.0094	0.0091	0.0090	0.0086	0.0084	0.0081	0.0081	0.0085	0.0081	0.0078	0.0079	0.0078
0.0073	0.0059	0.0059	0.0059	0.0059	0.0097	0.0089	0.0087	0.0089	0.0089	0.0099	0.0099	0.0096	0.0096	0.0096	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0096	0.0099	0.0097
0.0156	0.0137	0.0141	0.0146	0.0136	0.0158	0.0152	0.0150	0.0150	0.0154	0.0157	0.0157	0.0153	0.0154	0.0155	0.0138	0.0141	0.0141	0.0145	0.0170	0.0173	0.0187	0.0193	0.0197
0.0057	0.0055	0.0061	0.0053	0.0060	0.0074	0.0076	0.0085	0.0082	0.0074	0.0072	0.0069	0.0069	0.0069	0.0064	0.0064	0.0061	0.0061	0.0060	0.0061	0.0059	0.0061	0.0058	0.0057
0.0074	0.0071	0.0081	0.0052	0.0051	0.0052	0.0075	0.0084	0.0087	0.0100	0.0106	0.0102	0.0089	0.0085	0.0081	0.0076	0.0068	0.0067	0.0066	0.0067	0.0063	0.0063	0.0065	0.0067
0.0069	0.0065	0.0065	0.0066	0.0072	0.0070	0.0077	0.0075	0.0076	0.0065	0.0065	0.0066	0.0064	0.0064	0.0062	0.0066	0.0064	0.0056	0.0056	0.0056	0.0064	0.0066	0.0064	0.0077
0.0120	0.0096	0.0096	0.0096	0.0101	0.0120	0.0121	0.0121	0.0121	0.0109	0.0112	0.0110	0.0109	0.0110	0.0110	0.0114	0.0114	0.0107	0.0107	0.0106	0.0114	0.0114	0.0116	0.0123
0.0084	0.0114	0.0128	0.0128	0.0128	0.0104	0.0114	0.0114	0.0114	0.0104	0.0104	0.0109	0.0101	0.0101	0.0097	0.0097	0.0079	0.0059	0.0059	0.0059	0.0078	0.0097	0.0099	0.0115
0.0125	0.0139	0.0140	0.0111	0.0110	0.0125	0.0130	0.0125	0.0125	0.0120	0.0125	0.0125	0.0120	0.0122	0.0118	0.0127	0.0129	0.0123	0.0123	0.0124	0.0129	0.0130	0.0122	0.0130
0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
0.0095	0.0102	0.0102	0.0102	0.0102	0.0126	0.0117	0.0117	0.0117	0.0125	0.0125	0.0126	0.0125	0.0116	0.0116	0.0141	0.0124	0.0124	0.0124	0.0125	0.0124	0.0139	0.0140	0.0153
0.0136	0.0092	0.0088	0.0088	0.0088	0.0145	0.0133	0.0132	0.0133	0.0142	0.0145	0.0145	0.0143	0.0143	0.0142	0.0132	0.0117	0.0124	0.0124	0.0124	0.0124	0.0139	0.0140	0.0140
0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0137	0.0120	0.0120	0.0120	0.0119	0.0173	0.0161	0.0160	0.0157	0.0176	0.0175	0.0174	0.0174	0.0163	0.0167	0.0156	0.0164	0.0128	0.0137	0.0187	0.0194	0.0208	0.0212	0.0212
0.0081	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0091	0.0102	0.0102	0.0158	0.0154	0.0154	0.0140	0.0138	0.0137	0.0190	0.0190	0.0206	0.0190	0.0190
0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0125	0.0105	0.0118	0.0118	0.0122	0.0120	0.0099	0.0096	0.0123	0.0096	0.0096	0.0105	0.0105	0.0113	0.0120	0.0096	0.0099	0.0110
0.0102	0.0098	0.0092	0.0092	0.0092	0.0098	0.0175	0.0150	0.0178	0.0165	0.0164	0.0163	0.0137	0.0135	0.0154	0.0130	0.0130	0.0130	0.0130	0.0160	0.0166	0.0136	0.0136	0.0138
0.0119	0.0098	0.0098	0.0098	0.0098	0.0154	0.0138	0.0137	0.0129	0.0142	0.0141	0.0141	0.0148	0.0139	0.0139	0.0138	0.0150	0.0119	0.0136	0.0181	0.0175	0.0134	0.0136	0.0136
0.0070	0.0053	0.0034	0.0035	0.0035	0.0085	0.0056	0.0079	0.0090	0.0095	0.0095	0.0095	0.0095	0.0096	0.0092	0.0089	0.0090	0.0086	0.0079	0.0108	0.0116	0.0098	0.0096	0.0104
0.0124	0.0122	0.0122	0.0122	0.0122	0.0124	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123
0.0148	0.0102	0.0102	0.0102	0.0102	0.0150	0.0136	0.0135	0.0128	0.0139	0.0138	0.0138	0.0139	0.0146	0.0146	0.0128	0.0128	0.0135	0.0135	0.0156	0.0156	0.0135	0.0137	0.0137
0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110
0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110

Caline 4 input for 2035 Q3

Road Pair	X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R001	835620.80	820845.25	835496.74	820838.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820666.84	27	0	1
R013	835962.88	820667.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.53	820578.32	11	0	1
R020	835568.73	820565.58	835478.35	820478.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821028.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820514.97	16	0	1
R060	835740.08	820393.81	835672.32	820389.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820944.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820686.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	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
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0078	0.0074	0.0084	0.0092	0.0088	0.0092	0.0083	0.0100	0.0103	0.0099	0.0102	0.0097	0.0096	0.0094	0.0091	0.0090	0.0085	0.0085	0.0082	0.0092	0.0089	0.0091	0.0091	0.0091
0.0061	0.0063	0.0059	0.0064	0.0067	0.0064	0.0071	0.0077	0.0078	0.0076	0.0075	0.0072	0.0073	0.0071	0.0069	0.0066	0.0063	0.0061	0.0059	0.0059	0.0059	0.0061	0.0062	0.0060
0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0100	0.0102	0.0108	0.0109	0.0110	0.0111	0.0116	0.0123	0.0130	0.0129	0.0126	0.0123	0.0118	0.0113	0.0109	0.0105	0.0098	0.0089	0.0082	0.0088	0.0089	0.0088	0.0091	0.0089
0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0098	0.0110	0.0103	0.0110	0.0110	0.0110	0.0105	0.0105	0.0105	0.0080	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061
0.0099	0.0100	0.0099	0.0102	0.0104	0.0104	0.0110	0.0120	0.0126	0.0128	0.0124	0.0122	0.0118	0.0115	0.0112	0.0108	0.0105	0.0097	0.0092	0.0096	0.0103	0.0106	0.0109	0.0107
0.0105	0.0080	0.0086	0.0086	0.0086	0.0086	0.0103	0.0111	0.0115	0.0114	0.0111	0.0107	0.0110	0.0108	0.0108	0.0093	0.0080	0.0079	0.0078	0.0086	0.0080	0.0082	0.0082	0.0084
0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
0.0099	0.0118	0.0118	0.0118	0.0127	0.0126	0.0116	0.0114	0.0111	0.0125	0.0124	0.0121	0.0121	0.0112	0.0113	0.0107	0.0105	0.0086	0.0088	0.0134	0.0132	0.0143	0.0141	0.0145
0.0163	0.0184	0.0184	0.0184	0.0184	0.0184	0.0160	0.0160	0.0145	0.0165	0.0165	0.0165	0.0178	0.0145	0.0145	0.0163	0.0201	0.0065	0.0065	0.0065	0.0065	0.0157	0.0166	0.0157
0.0102	0.0094	0.0105	0.0105	0.0105	0.0114	0.0109	0.0110	0.0107	0.0111	0.0107	0.0108	0.0102	0.0099	0.0098	0.0094	0.0089	0.0082	0.0081	0.0081	0.0081	0.0087	0.0083	0.0083
0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
0.0077	0.0063	0.0063	0.0063	0.0064	0.0079	0.0080	0.0080	0.0079	0.0076	0.0075	0.0077	0.0072	0.0072	0.0072	0.0064	0.0061	0.0061	0.0061	0.0064	0.0061	0.0064	0.0063	0.0063
0.0149	0.0166	0.0175	0.0139	0.0139	0.0157	0.0161	0.0156	0.0150	0.0171	0.0166	0.0175	0.0162	0.0162	0.0161	0.0152	0.0153	0.0144	0.0150	0.0150	0.0147	0.0155	0.0144	0.0148
0.0202	0.0210	0.0215	0.0211	0.0220	0.0214	0.0220	0.0226	0.0223	0.0222	0.0219	0.0215	0.0211	0.0209	0.0204	0.0203	0.0196	0.0189	0.0185	0.0205	0.0209	0.0212	0.0214	0.0221
0.0175	0.0180	0.0182	0.0186	0.0186	0.0188	0.0195	0.0200	0.0198	0.0197	0.0197	0.0190	0.0187	0.0182	0.0178	0.0169	0.0164	0.0151	0.0143	0.0154	0.0160	0.0164	0.0167	0.0177
0.0180	0.0185	0.0189	0.0193	0.0194	0.0201	0.0210	0.0226	0.0240	0.0246	0.0246	0.0245	0.0232	0.0220	0.0184	0.0198	0.0155	0.0149	0.0151	0.0156	0.0159	0.0159	0.0160	0.0164
0.0131	0.0082	0.0094	0.0088	0.0088	0.0159	0.0145	0.0145	0.0137	0.0145	0.0136	0.0135	0.0135	0.0125	0.0125	0.0104	0.0104	0.0093	0.0095	0.0097	0.0098	0.0108	0.0113	0.0118
0.0139	0.0142	0.0142	0.0132	0.0129	0.0140	0.0144	0.0152	0.0166	0.0166	0.0163	0.0168	0.0162	0.0164	0.0166	0.0164	0.0161	0.0157	0.0158	0.0148	0.0149	0.0137	0.0132	0.0141
0.0202	0.0201	0.0210	0.0197	0.0208	0.0213	0.0217	0.0215	0.0237	0.0263	0.0258	0.0258	0.0260	0.0237	0.0233	0.0222	0.0221	0.0200	0.0187	0.0186	0.0194	0.0198	0.0192	0.0198
0.0127	0.0118	0.0116	0.0131	0.0131	0.0127	0.0128	0.0128	0.0128	0.0131	0.0134	0.0131	0.0131	0.0144	0.0145	0.0143	0.0143	0.0143	0.0144	0.0141	0.0144	0.0142	0.0149	0.0150
0.0150	0.0158	0.0163	0.0163	0.0165	0.0170	0.0169	0.0169	0.0177	0.0207	0.0201	0.0199	0.0197	0.0171	0.0166	0.0161	0.0156	0.0124	0.0115	0.0120	0.0124	0.0149	0.0151	0.0155
0.0031	0.0061	0.0061	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0053	0.0053	0.0054	0.0053	0.0053	0.0053	0.0064	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041
0.0062	0.0065	0.0064	0.0065	0.0065	0.0067	0.0083	0.0085	0.0088	0.0087	0.0082	0.0077	0.0072	0.0068	0.0066	0.0065	0.0058	0.0050	0.0051	0.0046	0.0050	0.0053	0.0052	0.0057
0.0141	0.0152	0.0161	0.0158	0.0155	0.0152	0.0179	0.0171	0.0192	0.0193	0.0190	0.0181	0.0165	0.0162	0.0162	0.0154	0.0145	0.0138	0.0137	0.0143	0.0153	0.0145	0.0147	0.0148
0.0119	0.0128	0.0128	0.0136	0.0136	0.0165	0.0165	0.0159	0.0160	0.0179	0.0173	0.0173	0.0182	0.0134	0.0140	0.0130	0.0130	0.0095	0.0062	0.0082	0.0091	0.0121	0.0116	0.0143
0.0089	0.0092	0.0095	0.0096	0.0101	0.0095	0.0112	0.0116	0.0136	0.0136	0.0124	0.0125	0.0118	0.0117	0.0118	0.0108	0.0097	0.0084	0.0077	0.0083	0.0090	0.0092	0.0099	0.0107
0.0159	0.0143	0.0146	0.0146	0.0146	0.0166	0.0170	0.0172	0.0170	0.0180	0.0177	0.0176	0.0181	0.0167	0.0169	0.0163	0.0162	0.0138	0.0146	0.0143	0.0152	0.0152	0.0146	0.0151
0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
0.0273	0.0291	0.0305	0.0276	0.0298	0.0324	0.0307	0.0315	0.0307	0.0304	0.0294	0.0295	0.0284	0.0277	0.0270	0.0265	0.0261	0.0257	0.0252	0.0273	0.0278	0.0278	0.0283	0.0290
0.0080	0.0079	0.0074	0.0078	0.0085	0.0083	0.0094	0.0096	0.0098	0.0095	0.0091	0.0088	0.0087	0.0087	0.0087	0.0084	0.0078	0.0072	0.0069	0.0077	0.0074	0.0078	0.0081	0.0077
0.0117	0.0126	0.0111	0.0115	0.0121	0.0135	0.0137	0.0133	0.0136	0.0153	0.0157	0.0161	0.0156	0.0132	0.0139	0.0127	0.0125	0.0101	0.0099	0.0106	0.0106	0.0119	0.0128	0.0132
0.0088	0.0099	0.0099	0.0099	0.0099	0.0122	0.0111	0.0111	0.0102	0.0108	0.0102	0.0103	0.0102	0.0122	0.0122	0.0131	0.0122	0.0124	0.0124	0.0124	0.0124	0.0136	0.0136	0.0137
0.0113	0.0098	0.0101	0.0101	0.0107	0.0134	0.0127	0.0124	0.0124	0.0157	0.0162	0.0166	0.0161	0.0136	0.0142	0.0120	0.0111	0.0082	0.0071	0.0075	0.0079	0.0104	0.0107	0.0111
0.0169	0.0166	0.0166	0.0156	0.0157	0.0153	0.0173	0.0167	0.0167	0.0179	0.0179	0.0191	0.0175	0.0187	0.0177	0.0165	0.0171	0.0163	0.0166	0.0170	0.0173	0.0164	0.0167	0.0173
0.0075	0.0084	0.0080	0.0046	0.0052	0.0064	0.0076	0.0088	0.0085	0.0088	0.0090	0.0094	0.0091	0.0098	0.0095	0.0066	0.0068	0.0068	0.0065	0.0071	0.0059	0.0075	0.0079	0.0093
0.0144	0.0130	0.0140	0.0154	0.0144	0.0154	0.0155	0.0158	0.0159	0.0160	0.0157	0.0154	0.0156	0.0151	0.0144	0.0134	0.0129	0.0123	0.0119	0.0132	0.0135	0.0138	0.0141	0.0144
0.0163	0.0235	0.0235	0.0235	0.0235	0.0153	0.0126	0.0126	0.0126	0.0210	0.0225	0.0284	0.0225	0.0346	0.0309	0.0309	0.0287	0.0287	0.0307	0.0426	0.0437	0.0437	0.0416	0.0416
0.0064	0.0031	0.0031	0.0031	0.0061	0.0064	0.0064	0.0064	0.0064	0.0064	0.0057	0.0057	0.0057	0.0057	0.0057	0.0047	0.0047	0.0049	0.0049	0.0049	0.0049	0.0054	0.0054	0.0053
0.0176	0.0184	0.0180	0.0190	0.0187	0.0190	0.0206	0.0213	0.0221	0.0221	0.0216	0.0213	0.0200	0.0199	0.0184	0.0169	0.0160	0.0151	0.0150	0.0157	0.0161	0.0158	0.0167	0.0167
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
0.0288	0.0297	0.0318	0.0347	0.0344	0.0320	0.0311	0.0314	0.0314	0.0294	0.0285	0.0285	0.0280	0.0231	0.0231	0.0223	0.0205	0.0202	0.0171	0.0202	0.0208	0.0285	0.0298	0.0310
0.0067	0.0068	0.0069	0.0069	0.0075	0.0092	0.0090	0.0091	0.0094	0.0096	0.0094	0.0088	0.0087	0.0085	0.0083	0.0084	0.0079	0.0079	0.0077	0.0078	0.0077	0.0078	0.0077	0.0077
0.0077	0.0083	0.0088	0.0088	0.0078	0.0102	0.0106	0.0105	0.0099	0.0116	0.0111	0.0113	0.0112	0.0101	0.0101	0.0094	0.0092	0.0079	0.0076	0.0102	0.0107	0.0108	0.0106	0.0109
0.0275	0.0275	0.0278	0.0273	0.0283	0.0275	0.0283	0.0283	0.0281	0.0275	0.0276	0.0273	0.0272	0.0273	0.0273	0.0274	0.0276	0.0285	0.0293	0.0289	0.0291	0.0292	0.0287	0.0291
0.0088	0.0093	0.0096	0.0097	0.0102	0.0093	0.0094	0.0094	0.0095	0.0093	0.0093	0.0088	0.0086	0.0080	0.0077	0.0075	0.0071	0.0066	0.0059	0.0080	0.0082	0.0087	0.0092	0.0090
0.0283	0.0264	0.0272	0.0272	0.0299	0.0302	0.0291	0.0307	0.0291	0.0288	0.0299	0.0279	0.0275	0.0273	0.0252	0.0250	0.0243	0.0232	0.0224	0.0229	0.0223	0.0234	0.0235	0.0238
0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
0.0125	0.0129	0.0129	0.0125	0.0125	0.0137	0.0140	0.0143	0.0138	0.0138	0.0138	0.0131	0.0133	0.0131	0.0138	0.0143	0.0145	0.0143	0.0157	0.0168	0.0178	0.0193	0.0192	0.0198
0.0141	0.0094	0.0094	0.0094	0.0088	0.0157	0.0145	0.0144	0.0159	0.0157	0.0146	0.0146	0.0144	0.0146	0.0146	0.0131	0.0131	0.0143	0.0116	0.0115	0.0116	0.0137	0.0137	0.0146
0.0133	0.0135	0.0137	0.0139	0.0140	0.0134	0.0138	0.0140	0.0138	0.0135	0.0135	0.0134	0.0128	0.0124	0.0124	0.0122	0.0126	0.0118	0.0113	0.0141	0.0147	0.0148	0.0150	0.0149
0.0197	0.0196	0.0201	0.0195	0.0189	0.0190	0.0190	0.0190	0.0188	0.0191	0.0191	0.0193	0.0189	0.0192	0.0193	0.0193	0.0193	0.0193	0.0198	0.0218	0.0221	0.0220	0.0222	0.0224
0.0212	0.0217	0.0219	0.0219	0.0203	0.0211	0.0205	0.0201	0.0202	0.0205	0.0205	0.0206	0.0209	0.0207	0.0207	0.0210	0.0211	0.0214	0.0219	0.0235	0.0239	0.0235	0.0241	0.0242
0.0141	0.0099	0.0099	0.0099	0.0094	0.0168	0.0155	0.0154	0.0155	0.0164	0.0166	0.0166	0.0168	0.0141	0.0142	0.0143	0.0141	0.0131	0.0123	0.0123	0.0123	0.0137	0.0148	0.0148
0.0099	0.0065	0.0065	0.0130	0.0130	0.0088	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0088	0.0088	0.0088	0.0099	0.0195	0.0158	0.0158	0.0158	0.0158	0.0195	0.0195
0.0065	0.0065	0.0065	0.0000	0.0000	0.0065	0.0065	0.0065	0.0065	0.0043	0.0043	0.0033	0.0043	0.0043	0.0066	0.0066	0.0066	0.0066	0.0079	0.0079	0.0079	0.0079	0.0065	0.0065
0.0112	0.0107	0.0109	0.0109	0.0111	0.0138	0.0126	0.0122	0.0126	0.0122	0.0126	0.0127	0.0133	0.0095	0.0094	0.0094	0.0089	0.0080	0.0067	0.0076	0.0075	0.0112	0.0117	0.0124
0.0064	0.0031	0.0031	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0053	0.0054	0.0054	0.0054	0.0053	0.0064	0.0064
0.0153	0.0170	0.0181	0.0158	0.0171	0.0156	0.0154	0.0156	0.0154	0.0154	0.0148	0.0148	0.0152	0.0153	0.0147	0.0169	0.0156	0.0161	0.0165	0.0173	0.0173	0.0168	0.0167	0.0173
0.0141	0.0094	0.0094	0.0094	0.0105	0.0169	0.0154	0.0153	0.0153	0.0154	0.0155	0.0155	0.0157	0.0141	0.0141	0.0131	0.0123	0.0118	0.0109	0.0113	0.0109	0.0124	0.0129	0.0136

Caline 4 input for 2035 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	0.0115	0.0118	0.0120	0.0120	0.0128	0.0122	0.0119	0.0120	0.0117	0.0121	0.0110	0.0111	0.0114	0.0112	0.0105	0.0095	0.0090	0.0086	0.0075	0.0076	0.0082	0.0085	0.0079	0.0087
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	0.0094	0.0105	0.0099	0.0099	0.0099	0.0137	0.0136	0.0136	0.0136	0.0136	0.0136	0.0136	0.0137	0.0094	0.0094	0.0094	0.0087	0.0125	0.0117	0.0116	0.0117	0.0125	0.0124	0.0136
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	0.0115	0.0118	0.0118	0.0120	0.0121	0.0119	0.0118	0.0119	0.0119	0.0118	0.0118	0.0119	0.0115	0.0111	0.0108	0.0108	0.0105	0.0104	0.0101	0.0111	0.0111	0.0116	0.0117	0.0117
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	0.0199	0.0188	0.0203	0.0209	0.0211	0.0198	0.0189	0.0195	0.0198	0.0193	0.0193	0.0196	0.0192	0.0192	0.0201	0.0191	0.0193	0.0197	0.0199	0.0199	0.0199	0.0199	0.0194	0.0199
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	0.0106	0.0112	0.0114	0.0116	0.0117	0.0111	0.0110	0.0110	0.0110	0.0109	0.0107	0.0107	0.0107	0.0096	0.0094	0.0092	0.0085	0.0079	0.0072	0.0080	0.0083	0.0089	0.0092	0.0097
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	0.0164	0.0180	0.0184	0.0184	0.0197	0.0161	0.0156	0.0150	0.0151	0.0157	0.0154	0.0155	0.0162	0.0131	0.0131	0.0131	0.0131	0.0125	0.0124	0.0124	0.0125	0.0136	0.0144	0.0144
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	0.0173	0.0209	0.0209	0.0209	0.0209	0.0173	0.0156	0.0154	0.0154	0.0156	0.0157	0.0169	0.0173	0.0152	0.0154	0.0154	0.0151	0.0136	0.0136	0.0136	0.0136	0.0155	0.0157	0.0178
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	0.0172	0.0158	0.0160	0.0130	0.0141	0.0174	0.0161	0.0160	0.0161	0.0166	0.0167	0.0167	0.0166	0.0163	0.0155	0.0156	0.0151	0.0157	0.0155	0.0172	0.0166	0.0169	0.0164	0.0165
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	0.0140	0.0147	0.0140	0.0140	0.0146	0.0143	0.0137	0.0142	0.0147	0.0140	0.0145	0.0149	0.0145	0.0123	0.0122	0.0122	0.0120	0.0116	0.0116	0.0117	0.0122	0.0116	0.0123	0.0125
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	0.0201	0.0206	0.0200	0.0201	0.0197	0.0205	0.0196	0.0191	0.0201	0.0236	0.0234	0.0233	0.0224	0.0216	0.0212	0.0200	0.0183	0.0165	0.0156	0.0163	0.0165	0.0178	0.0174	0.0174
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	0.0076	0.0079	0.0082	0.0083	0.0082	0.0090	0.0093	0.0095	0.0095	0.0089	0.0086	0.0086	0.0086	0.0074	0.0075	0.0076	0.0068	0.0059	0.0059	0.0057	0.0066	0.0066	0.0068	0.0074
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	0.0224	0.0225	0.0227	0.0223	0.0223	0.0235	0.0241	0.0241	0.0238	0.0237	0.0232	0.0234	0.0229	0.0226	0.0222	0.0216	0.0217	0.0213	0.0210	0.0213	0.0213	0.0217	0.0214	0.0215
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	0.0056	0.0064	0.0064	0.0064	0.0064	0.0082	0.0076	0.0076	0.0076	0.0077	0.0077	0.0077	0.0071	0.0056	0.0056	0.0056	0.0052	0.0052	0.0049	0.0049	0.0049	0.0052	0.0052	0.0051
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	0.0183	0.0191	0.0190	0.0194	0.0196	0.0193	0.0196	0.0198	0.0196	0.0194	0.0192	0.0189	0.0188	0.0184	0.0181	0.0174	0.0171	0.0166	0.0159	0.0161	0.0164	0.0166	0.0166	0.0170
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	0.0135	0.0126	0.0132	0.0132	0.0132	0.0135	0.0151	0.0146	0.0142	0.0138	0.0140	0.0137	0.0139	0.0132	0.0131	0.0125	0.0122	0.0102	0.0100	0.0117	0.0113	0.0116	0.0119	0.0120
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	0.0103	0.0112	0.0116	0.0118	0.0107	0.0112	0.0120	0.0121	0.0120	0.0112	0.0111	0.0108	0.0111	0.0108	0.0105	0.0102	0.0098	0.0089	0.0082	0.0101	0.0105	0.0104	0.0105	0.0110
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	0.0230	0.0223	0.0232	0.0232	0.0239	0.0241	0.0250	0.0252	0.0248	0.0251	0.0239	0.0236	0.0235	0.0236	0.0231	0.0224	0.0221	0.0213	0.0206	0.0207	0.0210	0.0216	0.0213	0.0215
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	0.0133	0.0139	0.0147	0.0147	0.0147	0.0151	0.0150	0.0146	0.0157	0.0145	0.0146	0.0160	0.0141	0.0146	0.0142	0.0133	0.0143	0.0135	0.0132	0.0135	0.0132	0.0143	0.0142	0.0142
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	0.0213	0.0227	0.0230	0.0230	0.0238	0.0212	0.0221	0.0218	0.0226	0.0223	0.0211	0.0213	0.0215	0.0207	0.0206	0.0193	0.0186	0.0180	0.0177	0.0179	0.0183	0.0198	0.0201	0.0205
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	0.0216	0.0227	0.0228	0.0231	0.0233	0.0231	0.0244	0.0250	0.0245	0.0237	0.0232	0.0226	0.0225	0.0227	0.0224	0.0214	0.0210	0.0201	0.0193	0.0192	0.0191	0.0192	0.0190	0.0193
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836068.35	820219.28	836139.25	820234.91	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	0.0091	0.0093	0.0091	0.0094	0.0096	0.0097	0.0099	0.0110	0.0112	0.0112	0.0108	0.0105	0.0102	0.0099	0.0098	0.0094	0.0091	0.0088	0.0088	0.0092	0.0088	0.0084	0.0085	0.0084
R106+R107	836206.79	820799.16	836346.83	820804.49	14	0	1	0.0078	0.0063	0.0063	0.0063	0.0063	0.0104	0.0095	0.0093	0.0095	0.0096	0.0106	0.0106	0.0103	0.0103	0.0103	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081	0.0103	0.0106	0.0104
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	0.0170	0.0148	0.0152	0.0157	0.0147	0.0171	0.0164	0.0162	0.0162	0.0167	0.0170	0.0170	0.0166	0.0167	0.0168	0.0149	0.0153	0.0153	0.0158	0.0184	0.0187	0.0203	0.0210	0.0214
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	0.0062	0.0060	0.0067	0.0058	0.0066	0.0081	0.0083	0.0092	0.0089	0.0081	0.0078	0.0074	0.0075	0.0075	0.0070	0.0070	0.0067	0.0066	0.0065	0.0066	0.0064	0.0066	0.0063	0.0061
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	0.0079	0.0076	0.0087	0.0055	0.0054	0.0055	0.0080	0.0090	0.0094	0.0109	0.0116	0.0111	0.0097	0.0092	0.0087	0.0083	0.0074	0.0073	0.0071	0.0073	0.0068	0.0068	0.0070	0.0073
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	0.0074	0.0070	0.0070	0.0071	0.0078	0.0075	0.0083	0.0082	0.0082	0.0070	0.0070	0.0071	0.0070	0.0070	0.0067	0.0072	0.0070	0.0060	0.0060	0.0060	0.0070	0.0072	0.0070	0.0083
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	0.0129	0.0102	0.0102	0.0102	0.0108	0.0129	0.0132	0.0132	0.0132	0.0117	0.0121	0.0119	0.0117	0.0118	0.0119	0.0124	0.0124	0.0116	0.0116	0.0115	0.0124	0.0124	0.0125	0.0133
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	0.0090	0.0122	0.0138	0.0138	0.0138	0.0112	0.0123	0.0123	0.0123	0.0112	0.0112	0.0117	0.0108	0.0108	0.0104	0.0104	0.0085	0.0063	0.0063	0.0063	0.0083	0.0104	0.0107	0.0124
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	0.0135	0.0150	0.0151	0.0119	0.0118	0.0135	0.0141	0.0136	0.0136	0.0130	0.0135	0.0135	0.0130	0.0133	0.0129	0.0138	0.0140	0.0134	0.0134	0.0135	0.0140	0.0142	0.0133	0.0141
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	0.0102	0.0109	0.0109	0.0109	0.0109	0.0135	0.0126	0.0126	0.0126	0.0135	0.0135	0.0135	0.0135	0.0125	0.0125	0.0152	0.0135	0.0135	0.0135	0.0135	0.0135	0.0150	0.0151	0.0166
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	0.0148	0.0098	0.0094	0.0094	0.0094	0.0157	0.0144	0.0143	0.0144	0.0154	0.0157	0.0157	0.0155	0.0155	0.0154	0.0143	0.0126	0.0134	0.0135	0.0135	0.0135	0.0150	0.0151	0.0151
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	0.0147	0.0128	0.0128	0.0128	0.0128	0.0187	0.0175	0.0174	0.0170	0.0191	0.0190	0.0189	0.0189	0.0177	0.0181	0.0169	0.0179	0.0138	0.0147	0.0202	0.0211	0.0226	0.0230	0.0230
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	0.0087	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0098	0.0109	0.0109	0.0170	0.0167	0.0167	0.0151	0.0149	0.0147	0.0206	0.0206	0.0222	0.0206	0.0206
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	0.0063	0.0064	0.0064	0.0064	0.0064	0.0063	0.0135	0.0113	0.0128	0.0128	0.0133	0.0130	0.0106	0.0104	0.0133	0.0104	0.0104	0.0113	0.0113	0.0122	0.0130	0.0104	0.0106	0.0119
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	0.0109	0.0105	0.0099	0.0099	0.0099	0.0105	0.0189	0.0161	0.0193	0.0179	0.0177	0.0177	0.0147	0.0146	0.0168	0.0141	0.0141	0.0141	0.0140	0.0173	0.0179	0.0146	0.0146	0.0149
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	0.0128	0.0105	0.0105	0.0105	0.0105	0.0167	0.0149	0.0147	0.0139	0.0154	0.0153	0.0153	0.0161	0.0150	0.0150	0.0149	0.0161	0.0128	0.0146	0.0195	0.0189	0.0144	0.0146	0.0146
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	0.0077	0.0058	0.0038	0.0038	0.0038	0.0093	0.0062	0.0087	0.0098	0.0103	0.0103	0.0104	0.0103	0.0105	0.0100	0.0097	0.0099	0.0094	0.0087	0.0118	0.0127	0.0107	0.0105	0.0113
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	0.0133	0.0130	0.0130	0.0130	0.0130	0.0133	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0131	0.0131	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	0.0159	0.0109	0.0109	0.0109	0.0109	0.0161	0.0147	0.0146	0.0138	0.0151	0.0150	0.0150	0.0150	0.0159	0.0159	0.0137	0.0138	0.0145	0.0146	0.0168	0.0168	0.0146	0.0148	0.0148
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120

Caline 4 input for 2035 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
R001	835620.80	820845.25	835496.74	820838.92	14	3	4	0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
R001	835226.82	820916.25	835124.41	821000.69	14	3	4	0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	0.0072	0.0068	0.0077	0.0085	0.0081	0.0085	0.0076	0.0092	0.0095	0.0092	0.0094	0.0090	0.0088	0.0086	0.0084	0.0083	0.0079	0.0078	0.0076	0.0085	0.0082	0.0085	0.0084	0.0083
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	0.0056	0.0058	0.0054	0.0059	0.0061	0.0058	0.0065	0.0071	0.0072	0.0070	0.0069	0.0067	0.0067	0.0066	0.0064	0.0061	0.0058	0.0055	0.0055	0.0055	0.0055	0.0056	0.0056	0.0055
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1	0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	0.0092	0.0093	0.0099	0.0100	0.0101	0.0101	0.0106	0.0114	0.0120	0.0119	0.0116	0.0113	0.0109	0.0104	0.0100	0.0097	0.0090	0.0083	0.0076	0.0080	0.0081	0.0081	0.0083	0.0082
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0092	0.0102	0.0096	0.0102	0.0102	0.0102	0.0098	0.0098	0.0098	0.0075	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	0.0091	0.0091	0.0091	0.0093	0.0096	0.0095	0.0100	0.0110	0.0116	0.0118	0.0114	0.0112	0.0109	0.0107	0.0104	0.0100	0.0096	0.0090	0.0085	0.0089	0.0094	0.0098	0.0100	0.0099
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	0.0098	0.0075	0.0080	0.0080	0.0080	0.0080	0.0096	0.0104	0.0106	0.0105	0.0104	0.0100	0.0102	0.0101	0.0101	0.0087	0.0075	0.0074	0.0073	0.0080	0.0075	0.0077	0.0077	0.0079
R013	836078.87	820683.70	835961.87	820661.84	27	0	1	0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	0.0091	0.0109	0.0109	0.0109	0.0117	0.0116	0.0107	0.0105	0.0102	0.0116	0.0114	0.0112	0.0112	0.0103	0.0104	0.0099	0.0097	0.0080	0.0082	0.0123	0.0122	0.0132	0.0130	0.0134
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	0.0150	0.0169	0.0169	0.0169	0.0169	0.0169	0.0147	0.0147	0.0134	0.0151	0.0151	0.0151	0.0163	0.0134	0.0134	0.0150	0.0183	0.0061	0.0061	0.0061	0.0061	0.0145	0.0153	0.0145
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	0.0096	0.0088	0.0098	0.0098	0.0098	0.0106	0.0101	0.0103	0.0099	0.0102	0.0099	0.0100	0.0095	0.0092	0.0091	0.0088	0.0083	0.0077	0.0075	0.0075	0.0075	0.0082	0.0078	0.0078
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
R019	835520.16	820540.46	835514.53	820570.32	11	0	1	0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
R020	835568.73	820565.58	835478.35	820470.77	11	0	1	0.0072	0.0059	0.0060	0.0060	0.0060	0.0073	0.0075	0.0075	0.0074	0.0071	0.0071	0.0071	0.0067	0.0067	0.0067	0.0060	0.0057	0.0057	0.0057	0.0060	0.0057	0.0060	0.0059	0.0059
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	0.0137	0.0153	0.0162	0.0129	0.0129	0.0144	0.0148	0.0144	0.0138	0.0158	0.0153	0.0161	0.0149	0.0149	0.0149	0.0140	0.0141	0.0133	0.0138	0.0138	0.0136	0.0143	0.0133	0.0136
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	0.0186	0.0193	0.0198	0.0194	0.0202	0.0196	0.0202	0.0208	0.0206	0.0204	0.0201	0.0197	0.0194	0.0192	0.0188	0.0187	0.0180	0.0174	0.0171	0.0189	0.0192	0.0195	0.0196	0.0203
R023	835346.26	820830.29	835376.00	820680.43	16	0	1	0.0161	0.0165	0.0167	0.0171	0.0171	0.0172	0.0179	0.0184	0.0183	0.0181	0.0181	0.0174	0.0172	0.0167	0.0163	0.0155	0.0151	0.0139	0.0132	0.0142	0.0146	0.0151	0.0153	0.0162
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	0.0166	0.0169	0.0174	0.0177	0.0178	0.0185	0.0194	0.0209	0.0221	0.0226	0.0227	0.0225	0.0213	0.0202	0.0170	0.0182	0.0143	0.0137	0.0139	0.0144	0.0146	0.0146	0.0148	0.0151
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	0.0121	0.0077	0.0088	0.0082	0.0082	0.0147	0.0134	0.0134	0.0126	0.0132	0.0125	0.0124	0.0124	0.0115	0.0115	0.0095	0.0095	0.0086	0.0087	0.0089	0.0090	0.0099	0.0105	0.0109
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	0.0128	0.0131	0.0131	0.0122	0.0119	0.0129	0.0133	0.0140	0.0153	0.0154	0.0150	0.0155	0.0150	0.0151	0.0153	0.0151	0.0148	0.0144	0.0145	0.0137	0.0138	0.0126	0.0122	0.0130
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	0.0186	0.0184	0.0193	0.0182	0.0192	0.0196	0.0200	0.0198	0.0218	0.0241	0.0237	0.0237	0.0239	0.0218	0.0214	0.0204	0.0203	0.0184	0.0172	0.0172	0.0178	0.0183	0.0176	0.0182
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	0.0119	0.0110	0.0109	0.0122	0.0122	0.0119	0.0120	0.0120	0.0120	0.0121	0.0124	0.0121	0.0121	0.0133	0.0133	0.0132	0.0132	0.0132	0.0132	0.0131	0.0132	0.0131	0.0139	0.0139
R029	835524.13	820833.07	835569.38	820596.78	18	0	1	0.0138	0.0145	0.0149	0.0149	0.0152	0.0157	0.0156	0.0156	0.0163	0.0190	0.0185	0.0184	0.0181	0.0157	0.0153	0.0148	0.0144	0.0114	0.0106	0.0110	0.0114	0.0137	0.0139	0.0143
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	0.0029	0.0058	0.0058	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0050	0.0050	0.0051	0.0050	0.0050	0.0050	0.0060	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	0.0057	0.0060	0.0059	0.0060	0.0059	0.0062	0.0077	0.0079	0.0081	0.0081	0.0075	0.0071	0.0067	0.0063	0.0062	0.0060	0.0054	0.0046	0.0047	0.0043	0.0046	0.0049	0.0048	0.0052
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	0.0130	0.0140	0.0148	0.0145	0.0143	0.0140	0.0164	0.0158	0.0176	0.0178	0.0175	0.0167	0.0152	0.0150	0.0149	0.0142	0.0134	0.0127	0.0127	0.0132	0.0141	0.0133	0.0135	0.0136
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	0.0110	0.0119	0.0119	0.0126	0.0126	0.0152	0.0153	0.0148	0.0149	0.0166	0.0161	0.0161	0.0168	0.0125	0.0130	0.0121	0.0121	0.0088	0.0059	0.0077	0.0085	0.0113	0.0108	0.0133
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	0.0082	0.0085	0.0088	0.0089	0.0093	0.0088	0.0103	0.0108	0.0126	0.0125	0.0115	0.0116	0.0109	0.0108	0.0109	0.0100	0.0090	0.0078	0.0072	0.0077	0.0083	0.0085	0.0091	0.0099
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1	0.0145	0.0131	0.0133	0.0133	0.0134	0.0152	0.0155	0.0158	0.0156	0.0165	0.0162	0.0162	0.0166	0.0153	0.0155	0.0149	0.0148	0.0127	0.0134	0.0132	0.0139	0.0140	0.0134	0.0138
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	0.0251	0.0267	0.0280	0.0253	0.0273	0.0298	0.0282	0.0289	0.0282	0.0279	0.0270	0.0271	0.0261	0.0255	0.0248	0.0243	0.0240	0.0236	0.0232	0.0250	0.0255	0.0255	0.0260	0.0266
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	0.0074	0.0072	0.0067	0.0071	0.0078	0.0076	0.0086	0.0088	0.0090	0.0087	0.0083	0.0081	0.0080	0.0080	0.0079	0.0077	0.0072	0.0066	0.0063	0.0070	0.0068	0.0072	0.0075	0.0071
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	0.0108	0.0117	0.0103	0.0107	0.0112	0.0125	0.0126	0.0122	0.0125	0.0140	0.0144	0.0147	0.0143	0.0122	0.0128	0.0117	0.0115	0.0093	0.0091	0.0097	0.0097	0.0110	0.0118	0.0121
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	0.0082	0.0092	0.0092	0.0092	0.0092	0.0113	0.0103	0.0103	0.0095	0.0100	0.0095	0.0096	0.0095	0.0113	0.0113	0.0121	0.0113	0.0115	0.0115	0.0115	0.0115	0.0125	0.0125	0.0126
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	0.0104	0.0091	0.0093	0.0093	0.0099	0.0124	0.0117	0.0114	0.0114	0.0144	0.0149	0.0153	0.0148	0.0125	0.0131	0.0110	0.0102	0.0075	0.0065	0.0070	0.0073	0.0095	0.0100	0.0103
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	0.0155	0.0154	0.0154	0.0144	0.0146	0.0141	0.0160	0.0154	0.0154	0.0164	0.0165	0.0175	0.0161	0.0172	0.0162	0.0152	0.0158	0.0150	0.0153	0.0157	0.0159	0.0151	0.0154	0.0159
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	0.0068	0.0077	0.0073	0.0042	0.0047	0.0059	0.0070	0.0081	0.0078	0.0081	0.0082	0.0086	0.0084	0.0089	0.0087	0.0060	0.0062	0.0062	0.0059	0.0065	0.0053	0.0069	0.0072	0.0085
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	0.0132	0.0119	0.0129	0.0141	0.0132	0.0142	0.0143	0.0145	0.0146	0.0146	0.0144	0.0141	0.0143	0.0139	0.0132	0.0123	0.0118	0.0113	0.0109	0.0121	0.0124	0.0127	0.0129	0.0132
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	0.0151	0.0217	0.0217	0.0217	0.0217	0.0141	0.0116	0.0116	0.0116	0.0193	0.0207	0.0262	0.0207	0.0319	0.0285	0.0285	0.0265	0.0265	0.0283	0.0392	0.0402	0.0402	0.0383	0.0383
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	0.0060	0.0029	0.0029	0.0029	0.0058	0.0060	0.0060	0.0060	0.0060	0.0060	0.0054	0.0054	0.0054	0.0054	0.0054	0.0045	0.0045	0.0046	0.0046	0.0046	0.0046	0.0051	0.0051	0.0050
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	0.0162	0.0169	0.0166	0.0175	0.0173	0.0175	0.0189	0.0196	0.0203	0.0203	0.0199	0.0196	0.0184	0.0183	0.0169	0.0156	0.0147	0.0139	0.0139	0.0145	0.0148	0.0146	0.0154	0.0154
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	0.0266	0.0275	0.0294	0.0320	0.0318	0.0295	0.0287	0.0290	0.0290	0.0272	0.0263	0.0263	0.0258	0.0212	0.0212	0.0205	0.0189	0.0186	0.0158	0.0186	0.0192	0.0263	0.0274	0.0285
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	0.0062	0.0064	0.0064	0.0064	0.0070	0.0086	0.0083	0.0084	0.0087	0.0088	0.0086	0.0081	0.0080	0.0079	0.0077	0.0077	0.0073	0.0073	0.0071	0.0072	0.0071	0.0072	0.0071	0.0071
R057	835305.88	820665.23	835365.16	820674.55	12	0	1	0.0071	0.0078	0.0082	0.0082	0.0072	0.0094	0.0097	0.0097	0.0091	0.0106	0.0102	0.0104	0.0103	0.0093	0.0093	0.0087	0.0085	0.0073	0.0070	0.0094	0.0098	0.0100	0.0098	0.0101
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	0.0254	0.0254	0.0256	0.0252	0.0261	0.0254	0.0260	0.0260	0.0259	0.0252	0.0254	0.0251	0.0250	0.0251	0.0251	0.0252	0.0254	0.0263	0.0270	0.0266	0.0268	0.0269	0.0264	0.0268
R059	835395.59	820548.47	835232.17	820516.97	16	0	1	0.0081	0.0085	0.0088	0.0088	0.0093	0.0086	0.0087	0.0087	0.0087	0.0085	0.0085	0.0081	0.0080	0.0073	0.0070	0.0069	0.0065	0.0061	0.0055	0.0074	0.0076	0.0080	0.0084	0.0083
R060	835740.08	820393.81	835672.32	820380.93	13	0	1	0.0261	0.0244	0.0251	0.0251	0.0276	0.0279	0.0268	0.0282	0.0268	0.0265	0.0275	0.0257	0.0253	0.0252	0.0233	0.0231	0.0224	0.0214	0.0207	0.0211	0.0205	0.0216	0.0216	0.0219
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1	0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1	0.0115	0.0119	0.0119	0.0116	0.0116	0.0127	0.0130	0.0131	0.0128	0.0128	0.0128	0.0121	0.0123	0.0121	0.0128	0.0132	0.0134	0.0132	0.0145	0.0155	0.0164	0.0177	0.0177	0.0182
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	0.0130	0.0088	0.0088	0.0088	0.0082	0.0145	0.0134	0.0133	0.0147	0.0145	0.0134	0.0134	0.0133	0.0134	0.0134	0.0121	0.0120	0.0131	0.0107	0.0106	0.0107	0.0126	0.0127	0.0135
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	0.0122	0.0124	0.0125	0.0127	0.0129	0.0123	0.0127	0.0129	0.0127	0.0125	0.0125	0.0124	0.0118	0.0115	0.0113	0.0112	0.0115	0.0109	0.0105	0.0131	0.0135	0.0136	0.0138	0.0137
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	0.0181	0.0180	0.0185	0.0179	0.0174	0.0174	0.0175	0.0175	0.0173	0.0176	0.0176	0.0177	0.0174	0.0177	0.0177	0.0177	0.0178	0.0178	0.0182	0.0201	0.0203	0.0203	0.0204	0.0205
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	0.0195	0.0199	0.0201	0.0201	0.0187	0.0193	0.0188	0.0185	0.0185	0.0189	0.0188	0.0189	0.0192	0.0190	0.0190	0.0193	0.0194	0.0197	0.0201	0.0216	0.0220	0.0216	0.0222	0.0222
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	0.0130	0.0092	0.0092	0.0092	0.0088	0.0154	0.0143	0.0142	0.0143	0.0151	0.0153	0.0153	0.0154	0.0130	0.0131	0.0131	0.0130	0.0121	0.0113	0.0113	0.0114	0.0126	0.0136	0.0136
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	0.0092	0.0061	0.0061	0.0122	0.0122	0.0083	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0083	0.0083	0.0083	0.0092	0.0178	0.0144	0.0144	0.0144	0.0144	0.0178	0.0178
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	0.0061	0.0061	0.0061	0.0000	0.0000	0.0061	0.0061	0.0061	0.0061	0.0041	0.0041	0.0030	0.0041	0.0041	0.0062	0.0062	0.0062	0.0062	0.0074	0.0074	0.0074	0.0074	0.0061	0.0061
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	0.0104	0.0099	0.0101	0.0101	0.0103	0.0128	0.0117	0.0113	0.0117	0.0113	0.0116	0.0117	0.0123	0.0088	0.0087	0.0087	0.0083	0.0075	0.0063	0.0071	0.0070	0.0104	0.0108	0.0115
R073	835175.32	820822.66	835062.15	820686.25	18	0	1	0.0060	0.0029	0.0029	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0050	0.0051	0.0051	0.0051	0.0050	0.0060	0.0060
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	0.0140	0.0157	0.0167	0.0147	0.0158	0.0144	0.0142	0.0144	0.0142	0.0142	0.0136	0.0136	0.0140	0.0141	0.0135	0.0155	0.0144	0.0149	0.0152	0.0159	0.0159	0.0155	0.0154	0.0159
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	0.0130	0.0088	0.0088	0.0088	0.0098	0.0156	0.0142	0.0141	0.0141	0.0142	0.0143	0.0143	0.0145	0.0130	0.0130	0.0121	0.0114	0.0109	0.0101	0.0105	0.0101	0.0115	0.0119	0.0126

Caline 4 input for 2035 Q3

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820248.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820384.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820250.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820200.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1
R108	836203.37	820871.38	836210.57	820716.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820994.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820596.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820578.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	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
0.0105	0.0108	0.0110	0.0110	0.0118	0.0112	0.0109	0.0110	0.0108	0.0111	0.0101	0.0102	0.0104	0.0103	0.0096	0.0087	0.0082	0.0079	0.0069	0.0070	0.0075	0.0078	0.0073	0.0079
0.0088	0.0098	0.0092	0.0092	0.0092	0.0127	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126	0.0127	0.0088	0.0088	0.0088	0.0082	0.0115	0.0108	0.0107	0.0108	0.0115	0.0115	0.0125
0.0105	0.0108	0.0108	0.0110	0.0111	0.0109	0.0108	0.0109	0.0109	0.0108	0.0108	0.0109	0.0105	0.0102	0.0099	0.0099	0.0097	0.0096	0.0093	0.0102	0.0102	0.0107	0.0107	0.0107
0.0183	0.0173	0.0186	0.0192	0.0194	0.0182	0.0174	0.0179	0.0182	0.0177	0.0177	0.0180	0.0176	0.0176	0.0184	0.0175	0.0177	0.0181	0.0183	0.0182	0.0182	0.0182	0.0178	0.0183
0.0097	0.0103	0.0105	0.0106	0.0108	0.0101	0.0100	0.0101	0.0101	0.0100	0.0098	0.0098	0.0098	0.0088	0.0086	0.0084	0.0078	0.0072	0.0066	0.0073	0.0076	0.0081	0.0084	0.0089
0.0151	0.0166	0.0169	0.0169	0.0181	0.0149	0.0144	0.0138	0.0139	0.0144	0.0143	0.0143	0.0150	0.0121	0.0121	0.0121	0.0121	0.0115	0.0115	0.0115	0.0116	0.0126	0.0133	0.0133
0.0159	0.0192	0.0192	0.0192	0.0192	0.0159	0.0144	0.0142	0.0142	0.0144	0.0145	0.0156	0.0159	0.0140	0.0142	0.0142	0.0139	0.0125	0.0125	0.0125	0.0125	0.0143	0.0145	0.0163
0.0159	0.0146	0.0147	0.0121	0.0131	0.0161	0.0148	0.0147	0.0148	0.0153	0.0153	0.0153	0.0153	0.0151	0.0143	0.0144	0.0139	0.0144	0.0142	0.0158	0.0152	0.0155	0.0151	0.0152
0.0129	0.0136	0.0129	0.0129	0.0134	0.0132	0.0126	0.0131	0.0135	0.0129	0.0134	0.0137	0.0134	0.0114	0.0112	0.0112	0.0111	0.0106	0.0107	0.0108	0.0112	0.0107	0.0113	0.0115
0.0185	0.0190	0.0184	0.0185	0.0181	0.0188	0.0181	0.0175	0.0185	0.0218	0.0215	0.0214	0.0206	0.0199	0.0196	0.0184	0.0169	0.0153	0.0144	0.0151	0.0152	0.0164	0.0161	0.0160
0.0071	0.0074	0.0077	0.0078	0.0076	0.0084	0.0087	0.0087	0.0087	0.0083	0.0080	0.0080	0.0080	0.0069	0.0070	0.0071	0.0063	0.0055	0.0054	0.0054	0.0061	0.0062	0.0063	0.0069
0.0206	0.0207	0.0209	0.0205	0.0205	0.0216	0.0222	0.0222	0.0219	0.0218	0.0214	0.0215	0.0211	0.0208	0.0204	0.0198	0.0200	0.0197	0.0193	0.0196	0.0196	0.0200	0.0197	0.0198
0.0052	0.0060	0.0060	0.0060	0.0060	0.0076	0.0071	0.0071	0.0071	0.0072	0.0072	0.0072	0.0066	0.0052	0.0052	0.0052	0.0049	0.0049	0.0046	0.0046	0.0046	0.0049	0.0049	0.0048
0.0168	0.0175	0.0174	0.0178	0.0180	0.0177	0.0180	0.0182	0.0180	0.0178	0.0177	0.0173	0.0172	0.0169	0.0167	0.0160	0.0158	0.0152	0.0147	0.0148	0.0151	0.0152	0.0152	0.0156
0.0125	0.0116	0.0122	0.0122	0.0121	0.0124	0.0140	0.0134	0.0131	0.0127	0.0129	0.0126	0.0128	0.0122	0.0121	0.0116	0.0112	0.0094	0.0093	0.0108	0.0104	0.0107	0.0110	0.0111
0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
0.0095	0.0103	0.0107	0.0109	0.0098	0.0103	0.0111	0.0112	0.0111	0.0104	0.0102	0.0100	0.0103	0.0099	0.0097	0.0094	0.0091	0.0082	0.0076	0.0093	0.0097	0.0096	0.0097	0.0102
0.0212	0.0206	0.0214	0.0214	0.0220	0.0221	0.0230	0.0232	0.0228	0.0231	0.0220	0.0217	0.0217	0.0218	0.0213	0.0206	0.0204	0.0197	0.0190	0.0191	0.0194	0.0199	0.0196	0.0198
0.0123	0.0129	0.0137	0.0137	0.0137	0.0139	0.0138	0.0135	0.0145	0.0134	0.0135	0.0148	0.0131	0.0135	0.0132	0.0123	0.0133	0.0125	0.0123	0.0125	0.0123	0.0133	0.0132	0.0132
0.0196	0.0209	0.0213	0.0213	0.0219	0.0195	0.0203	0.0200	0.0208	0.0205	0.0194	0.0196	0.0198	0.0190	0.0190	0.0178	0.0171	0.0165	0.0163	0.0165	0.0168	0.0182	0.0185	0.0188
0.0199	0.0209	0.0210	0.0213	0.0214	0.0213	0.0225	0.0230	0.0226	0.0218	0.0213	0.0208	0.0207	0.0210	0.0206	0.0198	0.0193	0.0185	0.0178	0.0177	0.0176	0.0177	0.0175	0.0177
0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
0.0083	0.0085	0.0083	0.0086	0.0088	0.0089	0.0091	0.0102	0.0103	0.0103	0.0099	0.0097	0.0094	0.0091	0.0090	0.0086	0.0084	0.0081	0.0081	0.0085	0.0081	0.0078	0.0079	0.0078
0.0073	0.0059	0.0059	0.0059	0.0059	0.0097	0.0089	0.0087	0.0089	0.0089	0.0099	0.0099	0.0096	0.0096	0.0096	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0096	0.0099	0.0097
0.0156	0.0137	0.0141	0.0146	0.0136	0.0158	0.0152	0.0150	0.0150	0.0154	0.0157	0.0157	0.0153	0.0154	0.0155	0.0138	0.0141	0.0141	0.0145	0.0170	0.0173	0.0187	0.0193	0.0197
0.0057	0.0055	0.0061	0.0053	0.0060	0.0074	0.0076	0.0085	0.0082	0.0074	0.0072	0.0069	0.0069	0.0069	0.0064	0.0064	0.0061	0.0061	0.0060	0.0061	0.0059	0.0061	0.0058	0.0057
0.0074	0.0071	0.0081	0.0052	0.0051	0.0052	0.0075	0.0084	0.0087	0.0100	0.0106	0.0102	0.0089	0.0085	0.0081	0.0076	0.0068	0.0067	0.0066	0.0067	0.0063	0.0063	0.0065	0.0067
0.0069	0.0065	0.0065	0.0066	0.0072	0.0070	0.0077	0.0075	0.0076	0.0065	0.0065	0.0066	0.0064	0.0064	0.0062	0.0066	0.0064	0.0056	0.0056	0.0056	0.0064	0.0066	0.0064	0.0077
0.0120	0.0096	0.0096	0.0096	0.0101	0.0120	0.0121	0.0121	0.0121	0.0109	0.0112	0.0110	0.0109	0.0110	0.0110	0.0114	0.0114	0.0107	0.0107	0.0106	0.0114	0.0114	0.0116	0.0123
0.0084	0.0114	0.0128	0.0128	0.0128	0.0104	0.0114	0.0114	0.0114	0.0104	0.0104	0.0109	0.0101	0.0101	0.0097	0.0097	0.0079	0.0059	0.0059	0.0059	0.0078	0.0097	0.0099	0.0115
0.0125	0.0139	0.0140	0.0111	0.0110	0.0125	0.0130	0.0125	0.0125	0.0120	0.0125	0.0125	0.0120	0.0122	0.0118	0.0127	0.0129	0.0123	0.0123	0.0124	0.0129	0.0130	0.0122	0.0130
0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
0.0095	0.0102	0.0102	0.0102	0.0102	0.0126	0.0117	0.0117	0.0117	0.0125	0.0125	0.0126	0.0125	0.0116	0.0116	0.0141	0.0124	0.0124	0.0124	0.0125	0.0124	0.0139	0.0140	0.0153
0.0136	0.0092	0.0088	0.0088	0.0088	0.0145	0.0133	0.0132	0.0133	0.0142	0.0145	0.0145	0.0143	0.0143	0.0142	0.0132	0.0117	0.0124	0.0124	0.0124	0.0124	0.0139	0.0140	0.0140
0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
0.0137	0.0120	0.0120	0.0120	0.0119	0.0173	0.0161	0.0160	0.0157	0.0176	0.0175	0.0174	0.0174	0.0163	0.0167	0.0156	0.0164	0.0128	0.0137	0.0187	0.0194	0.0208	0.0212	0.0212
0.0081	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0091	0.0102	0.0102	0.0158	0.0154	0.0154	0.0140	0.0138	0.0137	0.0190	0.0190	0.0206	0.0190	0.0190
0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0125	0.0105	0.0118	0.0118	0.0122	0.0120	0.0099	0.0096	0.0123	0.0096	0.0096	0.0105	0.0105	0.0113	0.0120	0.0096	0.0099	0.0110
0.0102	0.0098	0.0092	0.0092	0.0092	0.0098	0.0175	0.0150	0.0178	0.0165	0.0164	0.0163	0.0137	0.0135	0.0154	0.0130	0.0130	0.0130	0.0130	0.0160	0.0166	0.0136	0.0136	0.0138
0.0119	0.0098	0.0098	0.0098	0.0098	0.0154	0.0138	0.0137	0.0129	0.0142	0.0141	0.0141	0.0148	0.0139	0.0139	0.0138	0.0150	0.0119	0.0136	0.0181	0.0175	0.0134	0.0136	0.0136
0.0070	0.0053	0.0034	0.0035	0.0035	0.0085	0.0056	0.0079	0.0090	0.0095	0.0095	0.0095	0.0095	0.0096	0.0092	0.0089	0.0090	0.0086	0.0079	0.0108	0.0116	0.0098	0.0096	0.0104
0.0124	0.0122	0.0122	0.0122	0.0122	0.0124	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123
0.0148	0.0102	0.0102	0.0102	0.0102	0.0150	0.0136	0.0135	0.0128	0.0139	0.0138	0.0138	0.0139	0.0146	0.0146	0.0128	0.0128	0.0135	0.0135	0.0156	0.0156	0.0135	0.0137	0.0137
0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110
0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110

Caline 4 input for 2035 Q4

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R001	835620.80	820845.25	835496.74	820838.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.63	820570.32	11	0	1
R020	835568.73	820565.58	835478.35	820470.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820514.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	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
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0051	0.0049	0.0042	0.0043	0.0046	0.0043	0.0054	0.0057	0.0059	0.0058	0.0057	0.0057	0.0058	0.0056	0.0064	0.0063	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0065	0.0054
0.0078	0.0074	0.0084	0.0092	0.0088	0.0092	0.0083	0.0100	0.0103	0.0099	0.0102	0.0097	0.0096	0.0094	0.0091	0.0090	0.0085	0.0085	0.0082	0.0092	0.0089	0.0091	0.0091	0.0091
0.0061	0.0063	0.0059	0.0064	0.0067	0.0064	0.0071	0.0077	0.0078	0.0076	0.0075	0.0072	0.0073	0.0071	0.0069	0.0066	0.0063	0.0061	0.0059	0.0059	0.0059	0.0061	0.0062	0.0060
0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
0.0081	0.0089	0.0073	0.0080	0.0083	0.0081	0.0090	0.0102	0.0105	0.0105	0.0102	0.0099	0.0100	0.0098	0.0089	0.0088	0.0084	0.0080	0.0076	0.0082	0.0083	0.0084	0.0089	0.0083
0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
0.0069	0.0065	0.0069	0.0065	0.0068	0.0068	0.0074	0.0094	0.0097	0.0094	0.0090	0.0088	0.0085	0.0085	0.0081	0.0078	0.0077	0.0073	0.0072	0.0077	0.0074	0.0075	0.0076	0.0072
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0053	0.0053	0.0056	0.0059	0.0059	0.0056	0.0060	0.0076	0.0079	0.0078	0.0077	0.0075	0.0073	0.0072	0.0071	0.0065	0.0061	0.0060	0.0058	0.0067	0.0061	0.0064	0.0065	0.0067
0.0100	0.0102	0.0108	0.0109	0.0110	0.0111	0.0116	0.0123	0.0130	0.0129	0.0126	0.0123	0.0118	0.0113	0.0109	0.0105	0.0098	0.0089	0.0082	0.0088	0.0089	0.0088	0.0091	0.0089
0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0098	0.0110	0.0103	0.0110	0.0110	0.0110	0.0105	0.0105	0.0105	0.0080	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061	0.0061
0.0099	0.0100	0.0099	0.0102	0.0104	0.0104	0.0110	0.0120	0.0126	0.0128	0.0124	0.0122	0.0118	0.0115	0.0112	0.0108	0.0105	0.0097	0.0092	0.0096	0.0103	0.0106	0.0109	0.0107
0.0105	0.0080	0.0086	0.0086	0.0086	0.0086	0.0103	0.0111	0.0115	0.0114	0.0111	0.0107	0.0110	0.0108	0.0108	0.0093	0.0080	0.0079	0.0078	0.0086	0.0080	0.0082	0.0082	0.0084
0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
0.0077	0.0079	0.0077	0.0078	0.0078	0.0082	0.0086	0.0093	0.0100	0.0101	0.0097	0.0096	0.0094	0.0090	0.0088	0.0085	0.0081	0.0079	0.0075	0.0080	0.0076	0.0077	0.0078	0.0076
0.0099	0.0118	0.0118	0.0118	0.0127	0.0126	0.0116	0.0114	0.0111	0.0125	0.0124	0.0121	0.0121	0.0112	0.0113	0.0107	0.0105	0.0086	0.0088	0.0134	0.0132	0.0143	0.0141	0.0145
0.0163	0.0184	0.0184	0.0184	0.0184	0.0184	0.0160	0.0160	0.0145	0.0165	0.0165	0.0165	0.0178	0.0145	0.0145	0.0163	0.0201	0.0065	0.0065	0.0065	0.0065	0.0157	0.0166	0.0157
0.0102	0.0094	0.0105	0.0105	0.0105	0.0114	0.0109	0.0110	0.0107	0.0111	0.0107	0.0108	0.0102	0.0099	0.0098	0.0094	0.0089	0.0082	0.0081	0.0081	0.0081	0.0087	0.0083	0.0083
0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
0.0100	0.0104	0.0107	0.0114	0.0117	0.0125	0.0132	0.0130	0.0130	0.0145	0.0140	0.0134	0.0138	0.0120	0.0116	0.0109	0.0106	0.0082	0.0076	0.0074	0.0084	0.0083	0.0086	0.0097
0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
0.0094	0.0105	0.0099	0.0099	0.0099	0.0123	0.0113	0.0113	0.0102	0.0100	0.0103	0.0095	0.0100	0.0131	0.0131	0.0131	0.0131	0.0135	0.0135	0.0135	0.0135	0.0135	0.0148	0.0149
0.0077	0.0063	0.0063	0.0063	0.0064	0.0079	0.0080	0.0080	0.0079	0.0076	0.0075	0.0077	0.0072	0.0072	0.0072	0.0064	0.0061	0.0061	0.0061	0.0064	0.0061	0.0064	0.0063	0.0063
0.0149	0.0166	0.0175	0.0139	0.0139	0.0157	0.0161	0.0156	0.0150	0.0171	0.0166	0.0175	0.0162	0.0162	0.0161	0.0152	0.0153	0.0144	0.0150	0.0150	0.0147	0.0155	0.0144	0.0148
0.0202	0.0210	0.0215	0.0211	0.0220	0.0214	0.0220	0.0226	0.0223	0.0222	0.0219	0.0215	0.0211	0.0209	0.0204	0.0203	0.0196	0.0189	0.0185	0.0205	0.0209	0.0212	0.0214	0.0221
0.0175	0.0180	0.0182	0.0186	0.0186	0.0188	0.0195	0.0200	0.0198	0.0197	0.0197	0.0190	0.0187	0.0182	0.0178	0.0169	0.0164	0.0151	0.0143	0.0154	0.0160	0.0164	0.0167	0.0177
0.0180	0.0185	0.0189	0.0193	0.0194	0.0201	0.0210	0.0226	0.0240	0.0246	0.0246	0.0245	0.0232	0.0220	0.0184	0.0198	0.0155	0.0149	0.0151	0.0156	0.0159	0.0159	0.0160	0.0164
0.0131	0.0082	0.0094	0.0088	0.0088	0.0159	0.0145	0.0145	0.0137	0.0145	0.0136	0.0135	0.0135	0.0125	0.0125	0.0104	0.0104	0.0093	0.0095	0.0097	0.0098	0.0108	0.0113	0.0118
0.0139	0.0142	0.0142	0.0132	0.0129	0.0140	0.0144	0.0152	0.0166	0.0166	0.0163	0.0168	0.0162	0.0164	0.0166	0.0164	0.0161	0.0157	0.0158	0.0148	0.0149	0.0137	0.0132	0.0141
0.0202	0.0201	0.0210	0.0197	0.0208	0.0213	0.0217	0.0215	0.0237	0.0263	0.0258	0.0258	0.0260	0.0237	0.0233	0.0222	0.0221	0.0200	0.0187	0.0186	0.0194	0.0198	0.0192	0.0198
0.0127	0.0118	0.0116	0.0131	0.0131	0.0127	0.0128	0.0128	0.0128	0.0131	0.0134	0.0131	0.0131	0.0144	0.0145	0.0143	0.0143	0.0143	0.0144	0.0141	0.0144	0.0142	0.0149	0.0150
0.0150	0.0158	0.0163	0.0163	0.0165	0.0170	0.0169	0.0169	0.0177	0.0207	0.0201	0.0199	0.0197	0.0171	0.0166	0.0161	0.0156	0.0124	0.0115	0.0120	0.0124	0.0149	0.0151	0.0155
0.0031	0.0061	0.0061	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0053	0.0053	0.0054	0.0053	0.0053	0.0053	0.0064	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041	0.0041
0.0062	0.0065	0.0064	0.0065	0.0065	0.0067	0.0083	0.0085	0.0088	0.0087	0.0082	0.0077	0.0072	0.0068	0.0066	0.0065	0.0058	0.0050	0.0051	0.0046	0.0050	0.0053	0.0052	0.0057
0.0141	0.0152	0.0161	0.0158	0.0155	0.0152	0.0179	0.0171	0.0192	0.0193	0.0190	0.0181	0.0165	0.0162	0.0162	0.0154	0.0145	0.0138	0.0137	0.0143	0.0153	0.0145	0.0147	0.0148
0.0119	0.0128	0.0128	0.0136	0.0136	0.0165	0.0165	0.0159	0.0160	0.0179	0.0173	0.0173	0.0182	0.0134	0.0140	0.0130	0.0130	0.0095	0.0062	0.0082	0.0091	0.0121	0.0116	0.0143
0.0089	0.0092	0.0095	0.0096	0.0101	0.0095	0.0112	0.0116	0.0136	0.0136	0.0124	0.0125	0.0118	0.0117	0.0118	0.0108	0.0097	0.0084	0.0077	0.0083	0.0090	0.0092	0.0099	0.0107
0.0159	0.0143	0.0146	0.0146	0.0146	0.0166	0.0170	0.0172	0.0170	0.0180	0.0177	0.0176	0.0181	0.0167	0.0169	0.0163	0.0162	0.0138	0.0146	0.0143	0.0152	0.0152	0.0146	0.0151
0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
0.0163	0.0164	0.0168	0.0166	0.0171	0.0175	0.0182	0.0189	0.0197	0.0195	0.0191	0.0186	0.0182	0.0178	0.0169	0.0163	0.0157	0.0143	0.0131	0.0146	0.0149	0.0155	0.0159	0.0161
0.0273	0.0291	0.0305	0.0276	0.0298	0.0324	0.0307	0.0315	0.0307	0.0304	0.0294	0.0295	0.0284	0.0277	0.0270	0.0265	0.0261	0.0257	0.0252	0.0273	0.0278	0.0278	0.0283	0.0290
0.0080	0.0079	0.0074	0.0078	0.0085	0.0083	0.0094	0.0096	0.0098	0.0095	0.0091	0.0088	0.0087	0.0087	0.0087	0.0084	0.0078	0.0072	0.0069	0.0077	0.0074	0.0078	0.0081	0.0077
0.0117	0.0126	0.0111	0.0115	0.0121	0.0135	0.0137	0.0133	0.0136	0.0153	0.0157	0.0161	0.0156	0.0132	0.0139	0.0127	0.0125	0.0101	0.0099	0.0106	0.0106	0.0119	0.0128	0.0132
0.0088	0.0099	0.0099	0.0099	0.0099	0.0122	0.0111	0.0111	0.0102	0.0108	0.0102	0.0103	0.0102	0.0122	0.0122	0.0131	0.0122	0.0124	0.0124	0.0124	0.0124	0.0136	0.0136	0.0137
0.0113	0.0098	0.0101	0.0101	0.0107	0.0134	0.0127	0.0124	0.0124	0.0157	0.0162	0.0166	0.0161	0.0136	0.0142	0.0120	0.0111	0.0082	0.0071	0.0075	0.0079	0.0104	0.0107	0.0111
0.0169	0.0166	0.0166	0.0156	0.0157	0.0153	0.0173	0.0167	0.0167	0.0179	0.0179	0.0191	0.0175	0.0187	0.0177	0.0165	0.0171	0.0163	0.0166	0.0170	0.0173	0.0164	0.0167	0.0173
0.0075	0.0084	0.0080	0.0046	0.0052	0.0064	0.0076	0.0088	0.0085	0.0088	0.0090	0.0094	0.0091	0.0098	0.0095	0.0066	0.0068	0.0068	0.0065	0.0071	0.0059	0.0075	0.0079	0.0093
0.0144	0.0130	0.0140	0.0154	0.0144	0.0154	0.0155	0.0158	0.0159	0.0160	0.0157	0.0154	0.0156	0.0151	0.0144	0.0134	0.0129	0.0123	0.0119	0.0132	0.0135	0.0138	0.0141	0.0144
0.0163	0.0235	0.0235	0.0235	0.0235	0.0153	0.0126	0.0126	0.0126	0.0210	0.0225	0.0284	0.0225	0.0346	0.0309	0.0309	0.0287	0.0287	0.0307	0.0426	0.0437	0.0437	0.0416	0.0416
0.0064	0.0031	0.0031	0.0031	0.0061	0.0064	0.0064	0.0064	0.0064	0.0064	0.0057	0.0057	0.0057	0.0057	0.0057	0.0047	0.0047	0.0049	0.0049	0.0049	0.0049	0.0054	0.0054	0.0053
0.0176	0.0184	0.0180	0.0190	0.0187	0.0190	0.0206	0.0213	0.0221	0.0221	0.0216	0.0213	0.0200	0.0199	0.0184	0.0169	0.0160	0.0151	0.0150	0.0157	0.0161	0.0158	0.0167	0.0167
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0089	0.0096	0.0099	0.0101	0.0102	0.0100	0.0110	0.0112	0.0111	0.0129	0.0129	0.0131	0.0127	0.0131	0.0125	0.0117	0.0116	0.0100	0.0095	0.0100	0.0104	0.0108	0.0114	0.0117
0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
0.0070	0.0066	0.0072	0.0072	0.0074	0.0072	0.0085	0.0102	0.0102	0.0097	0.0092	0.0088	0.0087	0.0085	0.0078	0.0077	0.0073	0.0068	0.0067	0.0058	0.0058	0.0063	0.0064	0.0061
0.0288	0.0297	0.0318	0.0347	0.0344	0.0320	0.0311	0.0314	0.0314	0.0294	0.0285	0.0285	0.0280	0.0231	0.0231	0.0223	0.0205	0.0202	0.0171	0.0202	0.0208	0.0285	0.0298	0.0310
0.0067	0.0068	0.0069	0.0069	0.0075	0.0092	0.0090	0.0091	0.0094	0.0096	0.0094	0.0088	0.0087	0.0085	0.0083	0.0084	0.0079	0.0079	0.0077	0.0078	0.0077	0.0078	0.0077	0.0077
0.0077	0.0083	0.0088	0.0088	0.0078	0.0102	0.0106	0.0105	0.0099	0.0116	0.0111	0.0113	0.0112	0.0101	0.0101	0.0094	0.0092	0.0079	0.0076	0.0102	0.0107	0.0108	0.0106	0.0109
0.0275	0.0275	0.0278	0.0273	0.0283	0.0275	0.0283	0.0283	0.0281	0.0275	0.0276	0.0273	0.0272	0.0273	0.0273	0.0274	0.0276	0.0285	0.0293	0.0289	0.0291	0.0292	0.0287	0.0291
0.0088	0.0093	0.0096	0.0097	0.0102	0.0093	0.0094	0.0094	0.0095	0.0093	0.0093	0.0088	0.0086	0.0080	0.0077	0.0075	0.0071	0.0066	0.0059	0.0080	0.0082	0.0087	0.0092	0.0090
0.0283	0.0264	0.0272	0.0272	0.0299	0.0302	0.0291	0.0307	0.0291	0.0288	0.0299	0.0279	0.0275	0.0273	0.0252	0.0250	0.0243	0.0232	0.0224	0.0229	0.0223	0.0234	0.0235	0.0238
0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
0.0123	0.0131	0.0130	0.0136	0.0132	0.0118	0.0123	0.0122	0.0121	0.0115	0.0119	0.0114	0.0115	0.0107	0.0104	0.0103	0.0101	0.0094	0.0089	0.0139	0.0143	0.0149	0.0151	0.0153
0.0125	0.0129	0.0129	0.0125	0.0125	0.0137	0.0140	0.0143	0.0138	0.0138	0.0138	0.0131	0.0133	0.0131	0.0138	0.0143	0.0145	0.0143	0.0157	0.0168	0.0178	0.0193	0.0192	0.0198
0.0141	0.0094	0.0094	0.0094	0.0088	0.0157	0.0145	0.0144	0.0159	0.0157	0.0146	0.0146	0.0144	0.0146	0.0146	0.0131	0.0131	0.0143	0.0116	0.0115	0.0116	0.0137	0.0137	0.0146
0.0133	0.0135	0.0137	0.0139	0.0140	0.0134	0.0138	0.0140	0.0138	0.0135	0.0135	0.0134	0.0128	0.0124	0.0124	0.0122	0.0126	0.0118	0.0113	0.0141	0.0147	0.0148	0.0150	0.0149
0.0197	0.0196	0.0201	0.0195	0.0189	0.0190	0.0190	0.0190	0.0188	0.0191	0.0191	0.0193	0.0189	0.0192	0.0193	0.0193	0.0193	0.0193	0.0198	0.0218	0.0221	0.0220	0.0222	0.0224
0.0212	0.0217	0.0219	0.0219	0.0203	0.0211	0.0205	0.0201	0.0202	0.0205	0.0205	0.0206	0.0209	0.0207	0.0207	0.0210	0.0211	0.0214	0.0219	0.0235	0.0239	0.0235	0.0241	0.0242
0.0141	0.0099	0.0099	0.0099	0.0094	0.0168	0.0155	0.0154	0.0155	0.0164	0.0166	0.0166	0.0168	0.0141	0.0142	0.0143	0.0141	0.0131	0.0123	0.0123	0.0123	0.0137	0.0148	0.0148
0.0099	0.0065	0.0065	0.0130	0.0130	0.0088	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0088	0.0088	0.0088	0.0099	0.0195	0.0158	0.0158	0.0158	0.0158	0.0195	0.0195
0.0065	0.0065	0.0065	0.0000	0.0000	0.0065	0.0065	0.0065	0.0065	0.0043	0.0043	0.0033	0.0043	0.0043	0.0066	0.0066	0.0066	0.0066	0.0079	0.0079	0.0079	0.0079	0.0065	0.0065
0.0112	0.0107	0.0109	0.0109	0.0111	0.0138	0.0126	0.0122	0.0126	0.0122	0.0126	0.0127	0.0133	0.0095	0.0094	0.0094	0.0089	0.0080	0.0067	0.0076	0.0075	0.0112	0.0117	0.0124
0.0064	0.0031	0.0031	0.0061	0.0061	0.0065	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0064	0.0053	0.0054	0.0054	0.0054	0.0053	0.0064	0.0064
0.0153	0.0170	0.0181	0.0158	0.0171	0.0156	0.0154	0.0156	0.0154	0.0154	0.0148	0.0148	0.0152	0.0153	0.0147	0.0169	0.0156	0.0161	0.0165	0.0173	0.0173	0.0168	0.0167	0.0173
0.0141	0.0094	0.0094	0.0094	0.0105	0.0169	0.0154	0.0153	0.0153	0.0154	0.0155	0.0155	0.0157	0.0141	0.0141	0.0131	0.0123	0.0118	0.0109	0.0113	0.0109	0.0124	0.0129	0.0136

Caline 4 input for 2035 Q4

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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	0.0115	0.0118	0.0120	0.0120	0.0128	0.0122	0.0119	0.0120	0.0117	0.0121	0.0110	0.0111	0.0114	0.0112	0.0105	0.0095	0.0090	0.0086	0.0075	0.0076	0.0082	0.0085	0.0079	0.0087
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	0.0094	0.0105	0.0099	0.0099	0.0099	0.0137	0.0136	0.0136	0.0136	0.0136	0.0136	0.0136	0.0137	0.0094	0.0094	0.0094	0.0087	0.0125	0.0117	0.0116	0.0117	0.0125	0.0124	0.0136
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	0.0115	0.0118	0.0118	0.0120	0.0121	0.0119	0.0118	0.0119	0.0119	0.0118	0.0118	0.0119	0.0115	0.0111	0.0108	0.0108	0.0105	0.0104	0.0101	0.0111	0.0111	0.0116	0.0117	0.0117
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	0.0199	0.0188	0.0203	0.0209	0.0211	0.0198	0.0189	0.0195	0.0198	0.0193	0.0193	0.0196	0.0192	0.0192	0.0201	0.0191	0.0193	0.0197	0.0199	0.0199	0.0199	0.0199	0.0194	0.0199
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	0.0106	0.0112	0.0114	0.0116	0.0117	0.0111	0.0110	0.0110	0.0110	0.0109	0.0107	0.0107	0.0107	0.0096	0.0094	0.0092	0.0085	0.0079	0.0072	0.0080	0.0083	0.0089	0.0092	0.0097
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	0.0164	0.0180	0.0184	0.0184	0.0197	0.0161	0.0156	0.0150	0.0151	0.0157	0.0154	0.0155	0.0162	0.0131	0.0131	0.0131	0.0131	0.0125	0.0124	0.0124	0.0125	0.0136	0.0144	0.0144
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	0.0173	0.0209	0.0209	0.0209	0.0209	0.0173	0.0156	0.0154	0.0154	0.0156	0.0157	0.0169	0.0173	0.0152	0.0154	0.0154	0.0151	0.0136	0.0136	0.0136	0.0136	0.0155	0.0157	0.0178
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	0.0172	0.0158	0.0160	0.0130	0.0141	0.0174	0.0161	0.0160	0.0161	0.0166	0.0167	0.0167	0.0166	0.0163	0.0155	0.0156	0.0151	0.0157	0.0155	0.0172	0.0166	0.0169	0.0164	0.0165
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	0.0140	0.0147	0.0140	0.0140	0.0146	0.0143	0.0137	0.0142	0.0147	0.0140	0.0145	0.0149	0.0145	0.0123	0.0122	0.0122	0.0120	0.0116	0.0116	0.0117	0.0122	0.0116	0.0123	0.0125
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	0.0201	0.0206	0.0200	0.0201	0.0197	0.0205	0.0196	0.0191	0.0201	0.0236	0.0234	0.0233	0.0224	0.0216	0.0212	0.0200	0.0183	0.0165	0.0156	0.0163	0.0165	0.0178	0.0174	0.0174
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	0.0076	0.0079	0.0082	0.0083	0.0082	0.0090	0.0093	0.0095	0.0095	0.0089	0.0086	0.0086	0.0086	0.0074	0.0075	0.0076	0.0068	0.0059	0.0059	0.0057	0.0066	0.0066	0.0068	0.0074
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	0.0224	0.0225	0.0227	0.0223	0.0223	0.0235	0.0241	0.0241	0.0238	0.0237	0.0232	0.0234	0.0229	0.0226	0.0222	0.0216	0.0217	0.0213	0.0210	0.0213	0.0213	0.0217	0.0214	0.0215
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	0.0056	0.0064	0.0064	0.0064	0.0064	0.0082	0.0076	0.0076	0.0076	0.0077	0.0077	0.0077	0.0071	0.0056	0.0056	0.0056	0.0052	0.0052	0.0049	0.0049	0.0049	0.0052	0.0052	0.0051
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	0.0183	0.0191	0.0190	0.0194	0.0196	0.0193	0.0196	0.0198	0.0196	0.0194	0.0192	0.0189	0.0188	0.0184	0.0181	0.0174	0.0171	0.0166	0.0159	0.0161	0.0164	0.0166	0.0166	0.0170
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	0.0135	0.0126	0.0132	0.0132	0.0132	0.0135	0.0151	0.0146	0.0142	0.0138	0.0140	0.0137	0.0139	0.0132	0.0131	0.0125	0.0122	0.0102	0.0100	0.0117	0.0113	0.0116	0.0119	0.0120
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	0.0236	0.0231	0.0235	0.0235	0.0236	0.0248	0.0264	0.0269	0.0258	0.0250	0.0249	0.0241	0.0242	0.0243	0.0242	0.0236	0.0231	0.0222	0.0210	0.0211	0.0218	0.0224	0.0220	0.0221
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	0.0103	0.0112	0.0116	0.0118	0.0107	0.0112	0.0120	0.0121	0.0120	0.0112	0.0111	0.0108	0.0111	0.0108	0.0105	0.0102	0.0098	0.0089	0.0082	0.0101	0.0105	0.0104	0.0105	0.0110
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	0.0230	0.0223	0.0232	0.0232	0.0239	0.0241	0.0250	0.0252	0.0248	0.0251	0.0239	0.0236	0.0235	0.0236	0.0231	0.0224	0.0221	0.0213	0.0206	0.0207	0.0210	0.0216	0.0213	0.0215
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	0.0133	0.0139	0.0147	0.0147	0.0147	0.0151	0.0150	0.0146	0.0157	0.0145	0.0146	0.0160	0.0141	0.0146	0.0142	0.0133	0.0143	0.0135	0.0132	0.0135	0.0132	0.0143	0.0142	0.0142
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	0.0213	0.0227	0.0230	0.0230	0.0238	0.0212	0.0221	0.0218	0.0226	0.0223	0.0211	0.0213	0.0215	0.0207	0.0206	0.0193	0.0186	0.0180	0.0177	0.0179	0.0183	0.0198	0.0201	0.0205
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	0.0216	0.0227	0.0228	0.0231	0.0233	0.0231	0.0244	0.0250	0.0245	0.0237	0.0232	0.0226	0.0225	0.0227	0.0224	0.0214	0.0210	0.0201	0.0193	0.0192	0.0191	0.0192	0.0190	0.0193
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	0.0250	0.0255	0.0251	0.0251	0.0257	0.0278	0.0279	0.0287	0.0275	0.0275	0.0275	0.0270	0.0269	0.0259	0.0254	0.0239	0.0232	0.0226	0.0212	0.0217	0.0223	0.0230	0.0229	0.0234
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	0.0280	0.0031	0.0031	0.0031	0.0031	0.0295	0.0219	0.0219	0.0192	0.0240	0.0240	0.0240	0.0240	0.0271	0.0271	0.0184	0.0183	0.0209	0.0199	0.0270	0.0270	0.0267	0.0279	0.0279
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	0.0072	0.0077	0.0078	0.0078	0.0070	0.0086	0.0088	0.0087	0.0084	0.0086	0.0084	0.0080	0.0085	0.0084	0.0085	0.0074	0.0073	0.0074	0.0072	0.0073	0.0072	0.0079	0.0073	0.0078
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	0.0091	0.0093	0.0091	0.0094	0.0096	0.0097	0.0099	0.0110	0.0112	0.0112	0.0108	0.0105	0.0102	0.0099	0.0098	0.0094	0.0091	0.0088	0.0088	0.0092	0.0088	0.0084	0.0085	0.0084
R106+R107	836206.79	820799.16	836346.83	820804.49	14	0	1	0.0078	0.0063	0.0063	0.0063	0.0063	0.0104	0.0095	0.0093	0.0095	0.0096	0.0106	0.0106	0.0103	0.0103	0.0103	0.0081	0.0081	0.0081	0.0081	0.0081	0.0081	0.0103	0.0106	0.0104
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	0.0170	0.0148	0.0152	0.0157	0.0147	0.0171	0.0164	0.0162	0.0162	0.0167	0.0170	0.0170	0.0166	0.0167	0.0168	0.0149	0.0153	0.0153	0.0158	0.0184	0.0187	0.0203	0.0210	0.0214
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	0.0062	0.0060	0.0067	0.0058	0.0066	0.0081	0.0083	0.0092	0.0089	0.0081	0.0078	0.0074	0.0075	0.0075	0.0070	0.0070	0.0067	0.0066	0.0065	0.0066	0.0064	0.0066	0.0063	0.0061
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	0.0079	0.0076	0.0087	0.0055	0.0054	0.0055	0.0080	0.0090	0.0094	0.0109	0.0116	0.0111	0.0097	0.0092	0.0087	0.0083	0.0074	0.0073	0.0071	0.0073	0.0068	0.0068	0.0070	0.0073
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	0.0074	0.0070	0.0070	0.0071	0.0078	0.0075	0.0083	0.0082	0.0082	0.0070	0.0070	0.0071	0.0070	0.0070	0.0067	0.0072	0.0070	0.0060	0.0060	0.0060	0.0070	0.0072	0.0070	0.0083
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	0.0129	0.0102	0.0102	0.0102	0.0108	0.0129	0.0132	0.0132	0.0132	0.0117	0.0121	0.0119	0.0117	0.0118	0.0119	0.0124	0.0124	0.0116	0.0116	0.0115	0.0124	0.0124	0.0125	0.0133
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	0.0090	0.0122	0.0138	0.0138	0.0138	0.0112	0.0123	0.0123	0.0123	0.0112	0.0112	0.0117	0.0108	0.0108	0.0104	0.0104	0.0085	0.0063	0.0063	0.0063	0.0083	0.0104	0.0107	0.0124
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	0.0135	0.0150	0.0151	0.0119	0.0118	0.0135	0.0141	0.0136	0.0136	0.0130	0.0135	0.0135	0.0130	0.0133	0.0129	0.0138	0.0140	0.0134	0.0134	0.0135	0.0140	0.0142	0.0133	0.0141
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	0.0105	0.0087	0.0087	0.0087	0.0087	0.0146	0.0128	0.0128	0.0128	0.0128	0.0146	0.0149	0.0128	0.0128	0.0128	0.0128	0.0098	0.0098	0.0098	0.0098	0.0098	0.0128	0.0128	0.0128
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	0.0143	0.0118	0.0117	0.0117	0.0128	0.0143	0.0142	0.0142	0.0142	0.0139	0.0143	0.0143	0.0139	0.0138	0.0138	0.0133	0.0133	0.0123	0.0123	0.0123	0.0133	0.0133	0.0138	0.0148
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	0.0102	0.0109	0.0109	0.0109	0.0109	0.0135	0.0126	0.0126	0.0126	0.0135	0.0135	0.0135	0.0135	0.0125	0.0125	0.0152	0.0135	0.0135	0.0135	0.0135	0.0135	0.0150	0.0151	0.0166
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	0.0148	0.0098	0.0094	0.0094	0.0094	0.0157	0.0144	0.0143	0.0144	0.0154	0.0157	0.0157	0.0155	0.0155	0.0154	0.0143	0.0126	0.0134	0.0135	0.0135	0.0135	0.0150	0.0151	0.0151
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	0.0095	0.0102	0.0074	0.0078	0.0079	0.0098	0.0103	0.0103	0.0103	0.0100	0.0095	0.0093	0.0093	0.0089	0.0090	0.0095	0.0092	0.0089	0.0085	0.0104	0.0101	0.0098	0.0097	0.0109
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	0.0192	0.0194	0.0206	0.0206	0.0185	0.0200	0.0208	0.0207	0.0216	0.0211	0.0198	0.0201	0.0209	0.0200	0.0203	0.0196	0.0192	0.0190	0.0194	0.0194	0.0200	0.0186	0.0196	0.0186
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	0.0098	0.0061	0.0061	0.0061	0.0061	0.0098	0.0086	0.0086	0.0086	0.0094	0.0098	0.0094	0.0094	0.0082	0.0082	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086	0.0086
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	0.0147	0.0128	0.0128	0.0128	0.0128	0.0187	0.0175	0.0174	0.0170	0.0191	0.0190	0.0189	0.0189	0.0177	0.0181	0.0169	0.0179	0.0138	0.0147	0.0202	0.0211	0.0226	0.0230	0.0230
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	0.0087	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.0098	0.0109	0.0109	0.0170	0.0167	0.0167	0.0151	0.0149	0.0147	0.0206	0.0206	0.0222	0.0206	0.0206
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	0.0063	0.0064	0.0064	0.0064	0.0064	0.0063	0.0135	0.0113	0.0128	0.0128	0.0133	0.0130	0.0106	0.0104	0.0133	0.0104	0.0104	0.0113	0.0113	0.0122	0.0130	0.0104	0.0106	0.0119
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	0.0109	0.0105	0.0099	0.0099	0.0099	0.0105	0.0189	0.0161	0.0193	0.0179	0.0177	0.0177	0.0147	0.0146	0.0168	0.0141	0.0141	0.0141	0.0140	0.0173	0.0179	0.0146	0.0146	0.0149
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	0.0128	0.0105	0.0105	0.0105	0.0105	0.0167	0.0149	0.0147	0.0139	0.0154	0.0153	0.0153	0.0161	0.0150	0.0150	0.0149	0.0161	0.0128	0.0146	0.0195	0.0189	0.0144	0.0146	0.0146
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	0.0077	0.0058	0.0038	0.0038	0.0038	0.0093	0.0062	0.0087	0.0098	0.0103	0.0103	0.0104	0.0103	0.0105	0.0100	0.0097	0.0099	0.0094	0.0087	0.0118	0.0127	0.0107	0.0105	0.0113
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	0.0133	0.0130	0.0130	0.0130	0.0130	0.0133	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0131	0.0131	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	0.0159	0.0109	0.0109	0.0109	0.0109	0.0161	0.0147	0.0146	0.0138	0.0151	0.0150	0.0150	0.0150	0.0159	0.0159	0.0137	0.0138	0.0145	0.0146	0.0168	0.0168	0.0146	0.0148	0.0148
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	0.0065	0.0080	0.0093	0.0060	0.0038	0.0077	0.0079	0.0105	0.0109	0.0107	0.0107	0.0106	0.0108	0.0108	0.0106	0.0107	0.0107	0.0107	0.0104	0.0123	0.0131	0.0123	0.0113	0.0120

Caline 4 input for 2035 Q4

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R001	835620.80	820845.25	835496.74	820834.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821006.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820666.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.53	820578.32	11	0	1
R020	835568.73	820565.58	835478.35	820478.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820689.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820596.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821026.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820514.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820944.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820686.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	18	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
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0047	0.0044	0.0039	0.0040	0.0042	0.0039	0.0049	0.0053	0.0054	0.0054	0.0053	0.0053	0.0053	0.0052	0.0059	0.0059	0.0058	0.0056	0.0056	0.0058	0.0058	0.0059	0.0060	0.0050
0.0072	0.0068	0.0077	0.0085	0.0081	0.0085	0.0076	0.0092	0.0095	0.0092	0.0094	0.0090	0.0088	0.0086	0.0084	0.0083	0.0079	0.0078	0.0076	0.0085	0.0082	0.0085	0.0084	0.0083
0.0056	0.0058	0.0054	0.0059	0.0061	0.0058	0.0065	0.0071	0.0072	0.0070	0.0069	0.0067	0.0067	0.0066	0.0064	0.0061	0.0058	0.0055	0.0055	0.0055	0.0055	0.0056	0.0056	0.0055
0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
0.0075	0.0082	0.0067	0.0074	0.0076	0.0074	0.0083	0.0094	0.0097	0.0097	0.0094	0.0092	0.0092	0.0091	0.0082	0.0081	0.0077	0.0074	0.0070	0.0076	0.0077	0.0078	0.0082	0.0076
0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
0.0063	0.0059	0.0063	0.0059	0.0062	0.0062	0.0068	0.0087	0.0090	0.0087	0.0083	0.0081	0.0079	0.0079	0.0075	0.0072	0.0071	0.0068	0.0067	0.0071	0.0068	0.0069	0.0070	0.0067
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0048	0.0048	0.0051	0.0054	0.0054	0.0051	0.0055	0.0070	0.0073	0.0072	0.0071	0.0070	0.0068	0.0066	0.0065	0.0060	0.0057	0.0055	0.0053	0.0062	0.0057	0.0059	0.0060	0.0061
0.0092	0.0093	0.0099	0.0100	0.0101	0.0101	0.0106	0.0114	0.0120	0.0119	0.0116	0.0113	0.0109	0.0104	0.0100	0.0097	0.0090	0.0083	0.0076	0.0080	0.0081	0.0081	0.0083	0.0082
0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0092	0.0102	0.0096	0.0102	0.0102	0.0102	0.0098	0.0098	0.0098	0.0075	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058
0.0091	0.0091	0.0091	0.0093	0.0096	0.0095	0.0100	0.0110	0.0116	0.0118	0.0114	0.0112	0.0109	0.0107	0.0104	0.0100	0.0096	0.0090	0.0085	0.0089	0.0094	0.0098	0.0100	0.0099
0.0098	0.0075	0.0080	0.0080	0.0080	0.0080	0.0096	0.0104	0.0106	0.0105	0.0104	0.0100	0.0102	0.0101	0.0101	0.0087	0.0075	0.0074	0.0073	0.0080	0.0075	0.0077	0.0077	0.0079
0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
0.0070	0.0072	0.0070	0.0072	0.0072	0.0075	0.0079	0.0086	0.0093	0.0093	0.0090	0.0088	0.0086	0.0083	0.0081	0.0078	0.0075	0.0073	0.0070	0.0074	0.0070	0.0071	0.0071	0.0069
0.0091	0.0109	0.0109	0.0109	0.0117	0.0116	0.0107	0.0105	0.0102	0.0116	0.0114	0.0112	0.0112	0.0103	0.0104	0.0099	0.0097	0.0080	0.0082	0.0123	0.0122	0.0132	0.0130	0.0134
0.0150	0.0169	0.0169	0.0169	0.0169	0.0169	0.0147	0.0147	0.0134	0.0151	0.0151	0.0151	0.0163	0.0134	0.0134	0.0150	0.0183	0.0061	0.0061	0.0061	0.0061	0.0145	0.0153	0.0145
0.0096	0.0088	0.0098	0.0098	0.0098	0.0106	0.0101	0.0103	0.0099	0.0102	0.0099	0.0100	0.0095	0.0092	0.0091	0.0088	0.0083	0.0077	0.0075	0.0075	0.0075	0.0082	0.0078	0.0078
0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
0.0094	0.0097	0.0099	0.0107	0.0109	0.0116	0.0121	0.0120	0.0120	0.0133	0.0129	0.0123	0.0127	0.0110	0.0107	0.0101	0.0098	0.0076	0.0070	0.0068	0.0078	0.0076	0.0079	0.0089
0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
0.0088	0.0098	0.0092	0.0092	0.0092	0.0115	0.0105	0.0105	0.0095	0.0093	0.0095	0.0088	0.0093	0.0120	0.0120	0.0120	0.0120	0.0125	0.0124	0.0125	0.0124	0.0125	0.0136	0.0138
0.0072	0.0059	0.0060	0.0060	0.0060	0.0073	0.0075	0.0075	0.0074	0.0071	0.0071	0.0071	0.0067	0.0067	0.0067	0.0060	0.0057	0.0057	0.0057	0.0060	0.0057	0.0060	0.0059	0.0059
0.0137	0.0153	0.0162	0.0129	0.0129	0.0144	0.0148	0.0144	0.0138	0.0158	0.0153	0.0161	0.0149	0.0149	0.0149	0.0140	0.0141	0.0133	0.0138	0.0138	0.0136	0.0143	0.0133	0.0136
0.0186	0.0193	0.0198	0.0194	0.0202	0.0196	0.0202	0.0208	0.0206	0.0204	0.0201	0.0197	0.0194	0.0192	0.0188	0.0187	0.0180	0.0174	0.0171	0.0189	0.0192	0.0195	0.0196	0.0203
0.0161	0.0165	0.0167	0.0171	0.0171	0.0172	0.0179	0.0184	0.0183	0.0181	0.0181	0.0174	0.0172	0.0167	0.0163	0.0155	0.0151	0.0139	0.0132	0.0142	0.0146	0.0151	0.0153	0.0162
0.0166	0.0169	0.0174	0.0177	0.0178	0.0185	0.0194	0.0209	0.0221	0.0226	0.0227	0.0225	0.0213	0.0202	0.0170	0.0182	0.0143	0.0137	0.0139	0.0144	0.0146	0.0146	0.0148	0.0151
0.0121	0.0077	0.0088	0.0082	0.0082	0.0147	0.0134	0.0134	0.0126	0.0132	0.0125	0.0124	0.0124	0.0115	0.0115	0.0095	0.0095	0.0086	0.0087	0.0089	0.0090	0.0099	0.0105	0.0109
0.0128	0.0131	0.0131	0.0122	0.0119	0.0129	0.0133	0.0140	0.0153	0.0154	0.0150	0.0155	0.0150	0.0151	0.0153	0.0151	0.0148	0.0144	0.0145	0.0137	0.0138	0.0126	0.0122	0.0130
0.0186	0.0184	0.0193	0.0182	0.0192	0.0196	0.0200	0.0198	0.0218	0.0241	0.0237	0.0237	0.0239	0.0218	0.0214	0.0204	0.0203	0.0184	0.0172	0.0172	0.0178	0.0183	0.0176	0.0182
0.0119	0.0110	0.0109	0.0122	0.0122	0.0119	0.0120	0.0120	0.0120	0.0121	0.0124	0.0121	0.0121	0.0133	0.0133	0.0132	0.0132	0.0132	0.0132	0.0131	0.0132	0.0131	0.0139	0.0139
0.0138	0.0145	0.0149	0.0149	0.0152	0.0157	0.0156	0.0156	0.0163	0.0190	0.0185	0.0184	0.0181	0.0157	0.0153	0.0148	0.0144	0.0114	0.0106	0.0110	0.0114	0.0137	0.0139	0.0143
0.0029	0.0058	0.0058	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0050	0.0050	0.0051	0.0050	0.0050	0.0050	0.0060	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039
0.0057	0.0060	0.0059	0.0060	0.0059	0.0062	0.0077	0.0079	0.0081	0.0081	0.0075	0.0071	0.0067	0.0063	0.0062	0.0060	0.0054	0.0046	0.0047	0.0043	0.0046	0.0049	0.0048	0.0052
0.0130	0.0140	0.0148	0.0145	0.0143	0.0140	0.0164	0.0158	0.0176	0.0178	0.0175	0.0167	0.0152	0.0150	0.0149	0.0142	0.0134	0.0127	0.0127	0.0132	0.0141	0.0133	0.0135	0.0136
0.0110	0.0119	0.0119	0.0126	0.0126	0.0152	0.0153	0.0148	0.0149	0.0166	0.0161	0.0161	0.0168	0.0125	0.0130	0.0121	0.0121	0.0088	0.0059	0.0077	0.0085	0.0113	0.0108	0.0133
0.0082	0.0085	0.0088	0.0089	0.0093	0.0088	0.0103	0.0108	0.0126	0.0125	0.0115	0.0116	0.0109	0.0108	0.0109	0.0100	0.0090	0.0078	0.0072	0.0077	0.0083	0.0085	0.0091	0.0099
0.0145	0.0131	0.0133	0.0133	0.0134	0.0152	0.0155	0.0158	0.0156	0.0165	0.0162	0.0162	0.0166	0.0153	0.0155	0.0149	0.0148	0.0127	0.0134	0.0132	0.0139	0.0140	0.0134	0.0138
0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
0.0149	0.0151	0.0154	0.0152	0.0157	0.0161	0.0167	0.0174	0.0181	0.0179	0.0176	0.0172	0.0168	0.0164	0.0155	0.0149	0.0144	0.0131	0.0120	0.0134	0.0137	0.0142	0.0146	0.0148
0.0251	0.0267	0.0280	0.0253	0.0273	0.0298	0.0282	0.0289	0.0282	0.0279	0.0270	0.0271	0.0261	0.0255	0.0248	0.0243	0.0240	0.0236	0.0232	0.0250	0.0255	0.0255	0.0260	0.0266
0.0074	0.0072	0.0067	0.0071	0.0078	0.0076	0.0086	0.0088	0.0090	0.0087	0.0083	0.0081	0.0080	0.0080	0.0079	0.0077	0.0072	0.0066	0.0063	0.0070	0.0068	0.0072	0.0075	0.0071
0.0108	0.0117	0.0103	0.0107	0.0112	0.0125	0.0126	0.0122	0.0125	0.0140	0.0144	0.0147	0.0143	0.0122	0.0128	0.0117	0.0115	0.0093	0.0091	0.0097	0.0097	0.0110	0.0118	0.0121
0.0082	0.0092	0.0092	0.0092	0.0092	0.0113	0.0103	0.0103	0.0095	0.0100	0.0095	0.0096	0.0095	0.0113	0.0113	0.0121	0.0113	0.0115	0.0115	0.0115	0.0115	0.0125	0.0125	0.0126
0.0104	0.0091	0.0093	0.0093	0.0099	0.0124	0.0117	0.0114	0.0114	0.0144	0.0149	0.0153	0.0148	0.0125	0.0131	0.0110	0.0102	0.0075	0.0065	0.0070	0.0073	0.0095	0.0100	0.0103
0.0155	0.0154	0.0154	0.0144	0.0146	0.0141	0.0160	0.0154	0.0154	0.0164	0.0165	0.0175	0.0161	0.0172	0.0162	0.0152	0.0158	0.0150	0.0153	0.0157	0.0159	0.0151	0.0154	0.0159
0.0068	0.0077	0.0073	0.0042	0.0047	0.0059	0.0070	0.0081	0.0078	0.0081	0.0082	0.0086	0.0084	0.0089	0.0087	0.0060	0.0062	0.0062	0.0059	0.0065	0.0053	0.0069	0.0072	0.0085
0.0132	0.0119	0.0129	0.0141	0.0132	0.0142	0.0143	0.0145	0.0146	0.0146	0.0144	0.0141	0.0143	0.0139	0.0132	0.0123	0.0118	0.0113	0.0109	0.0121	0.0124	0.0127	0.0129	0.0132
0.0151	0.0217	0.0217	0.0217	0.0217	0.0141	0.0116	0.0116	0.0116	0.0193	0.0207	0.0262	0.0207	0.0319	0.0285	0.0285	0.0265	0.0265	0.0283	0.0392	0.0402	0.0402	0.0383	0.0383
0.0060	0.0029	0.0029	0.0029	0.0058	0.0060	0.0060	0.0060	0.0060	0.0060	0.0054	0.0054	0.0054	0.0054	0.0054	0.0045	0.0045	0.0046	0.0046	0.0046	0.0046	0.0051	0.0051	0.0050
0.0162	0.0169	0.0166	0.0175	0.0173	0.0175	0.0189	0.0196	0.0203	0.0203	0.0199	0.0196	0.0184	0.0183	0.0169	0.0156	0.0147	0.0139	0.0139	0.0145	0.0148	0.0146	0.0154	0.0154
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0082	0.0089	0.0091	0.0093	0.0095	0.0092	0.0101	0.0104	0.0102	0.0119	0.0119	0.0121	0.0117	0.0121	0.0115	0.0108	0.0107	0.0092	0.0088	0.0092	0.0097	0.0099	0.0106	0.0108
0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
0.0064	0.0060	0.0066	0.0066	0.0068	0.0066	0.0078	0.0094	0.0094	0.0089	0.0085	0.0082	0.0081	0.0079	0.0072	0.0070	0.0067	0.0063	0.0062	0.0054	0.0053	0.0058	0.0059	0.0057
0.0266	0.0275	0.0294	0.0320	0.0318	0.0295	0.0287	0.0290	0.0290	0.0272	0.0263	0.0263	0.0258	0.0212	0.0212	0.0205	0.0189	0.0186	0.0158	0.0186	0.0192	0.0263	0.0274	0.0285
0.0062	0.0064	0.0064	0.0064	0.0070	0.0086	0.0083	0.0084	0.0087	0.0088	0.0086	0.0081	0.0080	0.0079	0.0077	0.0077	0.0073	0.0073	0.0071	0.0072	0.0071	0.0072	0.0071	0.0071
0.0071	0.0078	0.0082	0.0082	0.0072	0.0094	0.0097	0.0097	0.0091	0.0106	0.0102	0.0104	0.0103	0.0093	0.0093	0.0087	0.0085	0.0073	0.0070	0.0094	0.0098	0.0100	0.0098	0.0101
0.0254	0.0254	0.0256	0.0252	0.0261	0.0254	0.0260	0.0260	0.0259	0.0252	0.0254	0.0251	0.0250	0.0251	0.0251	0.0252	0.0254	0.0263	0.0270	0.0266	0.0268	0.0269	0.0264	0.0268
0.0081	0.0085	0.0088	0.0088	0.0093	0.0086	0.0087	0.0087	0.0087	0.0085	0.0085	0.0081	0.0080	0.0073	0.0070	0.0069	0.0065	0.0061	0.0055	0.0074	0.0076	0.0080	0.0084	0.0083
0.0261	0.0244	0.0251	0.0251	0.0276	0.0279	0.0268	0.0282	0.0268	0.0265	0.0275	0.0257	0.0253	0.0252	0.0233	0.0231	0.0224	0.0214	0.0207	0.0211	0.0205	0.0216	0.0216	0.0219
0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
0.0113	0.0120	0.0119	0.0125	0.0121	0.0108	0.0113	0.0112	0.0111	0.0106	0.0109	0.0105	0.0106	0.0098	0.0096	0.0094	0.0093	0.0087	0.0082	0.0128	0.0132	0.0137	0.0139	0.0141
0.0115	0.0119	0.0119	0.0116	0.0116	0.0127	0.0130	0.0131	0.0128	0.0128	0.0128	0.0121	0.0123	0.0121	0.0128	0.0132	0.0134	0.0132	0.0145	0.0155	0.0164	0.0177	0.0177	0.0182
0.0130	0.0088	0.0088	0.0088	0.0082	0.0145	0.0134	0.0133	0.0147	0.0145	0.0134	0.0134	0.0133	0.0134	0.0134	0.0121	0.0120	0.0131	0.0107	0.0106	0.0107	0.0126	0.0127	0.0135
0.0122	0.0124	0.0125	0.0127	0.0129	0.0123	0.0127	0.0129	0.0127	0.0125	0.0125	0.0124	0.0118	0.0115	0.0113	0.0112	0.0115	0.0109	0.0105	0.0131	0.0135	0.0136	0.0138	0.0137
0.0181	0.0180	0.0185	0.0179	0.0174	0.0174	0.0175	0.0175	0.0173	0.0176	0.0176	0.0177	0.0174	0.0177	0.0177	0.0177	0.0178	0.0178	0.0182	0.0201	0.0203	0.0203	0.0204	0.0205
0.0195	0.0199	0.0201	0.0201	0.0187	0.0193	0.0188	0.0185	0.0185	0.0189	0.0188	0.0189	0.0192	0.0190	0.0190	0.0193	0.0194	0.0197	0.0201	0.0216	0.0220	0.0216	0.0222	0.0222
0.0130	0.0092	0.0092	0.0092	0.0088	0.0154	0.0143	0.0142	0.0143	0.0151	0.0153	0.0153	0.0154	0.0130	0.0131	0.0131	0.0130	0.0121	0.0113	0.0113	0.0114	0.0126	0.0136	0.0136
0.0092	0.0061	0.0061	0.0122	0.0122	0.0083	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0092	0.0083	0.0083	0.0083	0.0092	0.0178	0.0144	0.0144	0.0144	0.0144	0.0178	0.0178
0.0061	0.0061	0.0061	0.0000	0.0000	0.0061	0.0061	0.0061	0.0061	0.0041	0.0041	0.0030	0.0041	0.0041	0.0062	0.0062	0.0062	0.0062	0.0074	0.0074	0.0074	0.0074	0.0061	0.0061
0.0104	0.0099	0.0101	0.0101	0.0103	0.0128	0.0117	0.0113	0.0117	0.0113	0.0116	0.0117	0.0123	0.0088	0.0087	0.0087	0.0083	0.0075	0.0063	0.0071	0.0070	0.0104	0.0108	0.0115
0.0060	0.0029	0.0029	0.0058	0.0058	0.0061	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0050	0.0051	0.0051	0.0051	0.0050	0.0060	0.0060
0.0140	0.0157	0.0167	0.0147	0.0158	0.0144	0.0142	0.0144	0.0142	0.0142	0.0136	0.0136	0.0140	0.0141	0.0135	0.0155	0.0144	0.0149	0.0152	0.0159	0.0159	0.0155	0.0154	0.0159
0.0130	0.0088	0.0088	0.0088	0.0098	0.0156	0.0142	0.0141	0.0141	0.0142	0.0143	0.0143	0.0145	0.0130	0.0130	0.0121	0.0114	0.0109	0.0101	0.0105	0.0101	0.0115	0.0119	0.0126

Caline 4 input for 2035 Q4

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820248.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820384.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820250.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820200.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1
R108	836203.37	820871.38	836210.57	820716.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820996.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820596.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820578.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	0	1

Road Pair	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
R076	0.0105	0.0108	0.0110	0.0110	0.0118	0.0112	0.0109	0.0110	0.0108	0.0111	0.0101	0.0102	0.0104	0.0103	0.0096	0.0087	0.0082	0.0079	0.0069	0.0070	0.0075	0.0078	0.0073	0.0079
R077	0.0088	0.0098	0.0092	0.0092	0.0092	0.0127	0.0126	0.0126	0.0126	0.0126	0.0126	0.0126	0.0127	0.0088	0.0088	0.0088	0.0082	0.0115	0.0108	0.0107	0.0108	0.0115	0.0115	0.0125
R078	0.0105	0.0108	0.0108	0.0110	0.0111	0.0109	0.0108	0.0109	0.0109	0.0108	0.0108	0.0109	0.0105	0.0102	0.0099	0.0099	0.0097	0.0096	0.0093	0.0102	0.0102	0.0107	0.0107	0.0107
R079	0.0183	0.0173	0.0186	0.0192	0.0194	0.0182	0.0174	0.0179	0.0182	0.0177	0.0177	0.0180	0.0176	0.0176	0.0184	0.0175	0.0177	0.0181	0.0183	0.0182	0.0182	0.0182	0.0178	0.0183
R080+R081	0.0097	0.0103	0.0105	0.0106	0.0108	0.0101	0.0100	0.0101	0.0101	0.0100	0.0098	0.0098	0.0098	0.0088	0.0086	0.0084	0.0078	0.0072	0.0066	0.0073	0.0076	0.0081	0.0084	0.0089
R082	0.0151	0.0166	0.0169	0.0169	0.0181	0.0149	0.0144	0.0138	0.0139	0.0144	0.0143	0.0143	0.0150	0.0121	0.0121	0.0121	0.0121	0.0115	0.0115	0.0115	0.0116	0.0126	0.0133	0.0133
R083	0.0159	0.0192	0.0192	0.0192	0.0192	0.0159	0.0144	0.0142	0.0142	0.0144	0.0145	0.0156	0.0159	0.0140	0.0142	0.0142	0.0139	0.0125	0.0125	0.0125	0.0125	0.0143	0.0145	0.0163
R084	0.0159	0.0146	0.0147	0.0121	0.0131	0.0161	0.0148	0.0147	0.0148	0.0153	0.0153	0.0153	0.0153	0.0151	0.0143	0.0144	0.0139	0.0144	0.0142	0.0158	0.0152	0.0155	0.0151	0.0152
R085	0.0129	0.0136	0.0129	0.0129	0.0134	0.0132	0.0126	0.0131	0.0135	0.0129	0.0134	0.0137	0.0134	0.0114	0.0112	0.0112	0.0111	0.0106	0.0107	0.0108	0.0112	0.0107	0.0113	0.0115
R086	0.0185	0.0190	0.0184	0.0185	0.0181	0.0188	0.0181	0.0175	0.0185	0.0218	0.0215	0.0214	0.0206	0.0199	0.0196	0.0184	0.0169	0.0153	0.0144	0.0151	0.0152	0.0164	0.0161	0.0160
R087	0.0071	0.0074	0.0077	0.0078	0.0076	0.0084	0.0087	0.0087	0.0087	0.0083	0.0080	0.0080	0.0080	0.0069	0.0070	0.0071	0.0063	0.0055	0.0054	0.0054	0.0061	0.0062	0.0063	0.0069
R088	0.0206	0.0207	0.0209	0.0205	0.0205	0.0216	0.0222	0.0222	0.0219	0.0218	0.0214	0.0215	0.0211	0.0208	0.0204	0.0198	0.0200	0.0197	0.0193	0.0196	0.0196	0.0200	0.0197	0.0198
R089	0.0052	0.0060	0.0060	0.0060	0.0060	0.0076	0.0071	0.0071	0.0071	0.0072	0.0072	0.0072	0.0066	0.0052	0.0052	0.0052	0.0049	0.0049	0.0046	0.0046	0.0046	0.0049	0.0049	0.0048
R090+R091	0.0168	0.0175	0.0174	0.0178	0.0180	0.0177	0.0180	0.0182	0.0180	0.0178	0.0177	0.0173	0.0172	0.0169	0.0167	0.0160	0.0158	0.0152	0.0147	0.0148	0.0151	0.0152	0.0152	0.0156
R092	0.0125	0.0116	0.0122	0.0122	0.0121	0.0124	0.0140	0.0134	0.0131	0.0127	0.0129	0.0126	0.0128	0.0122	0.0121	0.0116	0.0112	0.0094	0.0093	0.0108	0.0104	0.0107	0.0110	0.0111
R093	0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
R093	0.0217	0.0213	0.0216	0.0216	0.0217	0.0229	0.0243	0.0248	0.0237	0.0230	0.0230	0.0222	0.0223	0.0224	0.0223	0.0217	0.0212	0.0204	0.0193	0.0194	0.0200	0.0207	0.0202	0.0203
R094	0.0095	0.0103	0.0107	0.0109	0.0098	0.0103	0.0111	0.0112	0.0111	0.0104	0.0102	0.0100	0.0103	0.0099	0.0097	0.0094	0.0091	0.0082	0.0076	0.0093	0.0097	0.0096	0.0097	0.0102
R095	0.0212	0.0206	0.0214	0.0214	0.0220	0.0221	0.0230	0.0232	0.0228	0.0231	0.0220	0.0217	0.0217	0.0218	0.0213	0.0206	0.0204	0.0197	0.0190	0.0191	0.0194	0.0199	0.0196	0.0198
R096	0.0123	0.0129	0.0137	0.0137	0.0137	0.0139	0.0138	0.0135	0.0145	0.0134	0.0135	0.0148	0.0131	0.0135	0.0132	0.0123	0.0133	0.0125	0.0123	0.0125	0.0123	0.0133	0.0132	0.0132
R097	0.0196	0.0209	0.0213	0.0213	0.0219	0.0195	0.0203	0.0200	0.0208	0.0205	0.0194	0.0196	0.0198	0.0190	0.0190	0.0178	0.0171	0.0165	0.0163	0.0165	0.0168	0.0182	0.0185	0.0188
R098+R099	0.0199	0.0209	0.0210	0.0213	0.0214	0.0213	0.0225	0.0230	0.0226	0.0218	0.0213	0.0208	0.0207	0.0210	0.0206	0.0198	0.0193	0.0185	0.0178	0.0177	0.0176	0.0177	0.0175	0.0177
R100	0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
R100	0.0230	0.0235	0.0232	0.0232	0.0237	0.0256	0.0257	0.0264	0.0253	0.0254	0.0254	0.0249	0.0248	0.0239	0.0234	0.0220	0.0213	0.0208	0.0196	0.0200	0.0205	0.0212	0.0211	0.0216
R101+R102	0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
R101+R102	0.0258	0.0029	0.0029	0.0029	0.0029	0.0272	0.0203	0.0203	0.0177	0.0221	0.0221	0.0221	0.0221	0.0250	0.0250	0.0170	0.0169	0.0193	0.0184	0.0249	0.0249	0.0246	0.0257	0.0257
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R103+R104	0.0067	0.0071	0.0072	0.0072	0.0065	0.0080	0.0082	0.0080	0.0078	0.0080	0.0078	0.0074	0.0079	0.0078	0.0078	0.0068	0.0068	0.0069	0.0067	0.0068	0.0067	0.0073	0.0068	0.0072
R105	0.0083	0.0085	0.0083	0.0086	0.0088	0.0089	0.0091	0.0102	0.0103	0.0103	0.0099	0.0097	0.0094	0.0091	0.0090	0.0086	0.0084	0.0081	0.0081	0.0085	0.0081	0.0078	0.0079	0.0078
R106+R107	0.0073	0.0059	0.0059	0.0059	0.0059	0.0097	0.0089	0.0087	0.0089	0.0089	0.0099	0.0099	0.0096	0.0096	0.0096	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0096	0.0099	0.0097
R108	0.0156	0.0137	0.0141	0.0146	0.0136	0.0158	0.0152	0.0150	0.0150	0.0154	0.0157	0.0157	0.0153	0.0154	0.0155	0.0138	0.0141	0.0141	0.0145	0.0170	0.0173	0.0187	0.0193	0.0197
R109	0.0057	0.0055	0.0061	0.0053	0.0060	0.0074	0.0076	0.0085	0.0082	0.0074	0.0072	0.0069	0.0069	0.0069	0.0064	0.0064	0.0061	0.0061	0.0060	0.0061	0.0059	0.0061	0.0058	0.0057
R110	0.0074	0.0071	0.0081	0.0052	0.0051	0.0052	0.0075	0.0084	0.0087	0.0100	0.0106	0.0102	0.0089	0.0085	0.0081	0.0076	0.0068	0.0067	0.0066	0.0067	0.0063	0.0063	0.0065	0.0067
R111+R112	0.0069	0.0065	0.0065	0.0066	0.0072	0.0070	0.0077	0.0075	0.0076	0.0065	0.0065	0.0066	0.0064	0.0064	0.0062	0.0066	0.0064	0.0056	0.0056	0.0056	0.0064	0.0066	0.0064	0.0077
R113+R114	0.0120	0.0096	0.0096	0.0096	0.0101	0.0120	0.0121	0.0121	0.0121	0.0109	0.0112	0.0110	0.0109	0.0110	0.0110	0.0114	0.0114	0.0107	0.0107	0.0106	0.0114	0.0114	0.0116	0.0123
R115+R116	0.0084	0.0114	0.0128	0.0128	0.0128	0.0104	0.0114	0.0114	0.0114	0.0104	0.0104	0.0109	0.0101	0.0101	0.0097	0.0097	0.0079	0.0059	0.0059	0.0059	0.0078	0.0097	0.0099	0.0115
R117	0.0125	0.0139	0.0140	0.0111	0.0110	0.0125	0.0130	0.0125	0.0125	0.0120	0.0125	0.0125	0.0120	0.0122	0.0118	0.0127	0.0129	0.0123	0.0123	0.0124	0.0129	0.0130	0.0122	0.0130
R118	0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
R118	0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
R118	0.0098	0.0081	0.0081	0.0081	0.0081	0.0136	0.0119	0.0119	0.0119	0.0119	0.0136	0.0138	0.0119	0.0119	0.0119	0.0119	0.0092	0.0092	0.0092	0.0092	0.0092	0.0119	0.0119	0.0119
R119	0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
R119	0.0132	0.0110	0.0109	0.0109	0.0120	0.0132	0.0131	0.0130	0.0131	0.0127	0.0132	0.0132	0.0127	0.0127	0.0127	0.0122	0.0122	0.0113	0.0113	0.0113	0.0122	0.0122	0.0127	0.0136
R120	0.0095	0.0102	0.0102	0.0102	0.0102	0.0126	0.0117	0.0117	0.0117	0.0125	0.0125	0.0126	0.0125	0.0116	0.0116	0.0141	0.0124	0.0124	0.0124	0.0125	0.0124	0.0139	0.0140	0.0153
R121	0.0136	0.0092	0.0088	0.0088	0.0088	0.0145	0.0133	0.0132	0.0133	0.0142	0.0145	0.0145	0.0143	0.0143	0.0142	0.0132	0.0117	0.0124	0.0124	0.0124	0.0124	0.0139	0.0140	0.0140
R122+R123	0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
R122+R123	0.0088	0.0094	0.0068	0.0072	0.0073	0.0090	0.0095	0.0095	0.0096	0.0092	0.0088	0.0086	0.0085	0.0082	0.0083	0.0088	0.0086	0.0083	0.0079	0.0096	0.0093	0.0091	0.0090	0.0101
R124	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R124	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R124	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R124	0.0177	0.0179	0.0190	0.0190	0.0171	0.0185	0.0192	0.0192	0.0199	0.0195	0.0183	0.0185	0.0193	0.0185	0.0188	0.0181	0.0177	0.0175	0.0179	0.0179	0.0184	0.0172	0.0181	0.0172
R125+R126	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R125+R126	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R127+R128	0.0092	0.0058	0.0058	0.0058	0.0058	0.0092	0.0080	0.0080	0.0080	0.0088	0.0092	0.0088	0.0088	0.0077	0.0077	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080	0.0080
R129	0.0137	0.0120	0.0120	0.0120	0.0119	0.0173	0.0161	0.0160	0.0157	0.0176	0.0175	0.0174	0.0174	0.0163	0.0167	0.0156	0.0164	0.0128	0.0137	0.0187	0.0194	0.0208	0.0212	0.0212
R130	0.0081	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0122	0.0091	0.0102	0.0102	0.0158	0.0154	0.0154	0.0140	0.0138	0.0137	0.0190	0.0190	0.0206	0.0190	0.0190
R131	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0125	0.0105	0.0118	0.0118	0.0122	0.0120	0.0099	0.0096	0.0123	0.0096	0.0096	0.0105	0.0105	0.0113	0.0120	0.0096	0.0099	0.0110
R132	0.0102	0.0098	0.0092	0.0092	0.0092	0.0098	0.0175	0.0150	0.0178	0.0165	0.0164	0.0163	0.0137	0.0135	0.0154	0.0130	0.0130	0.0130	0.0130	0.0160	0.0166	0.0136	0.0136	0.0138
R133	0.0119	0.0098	0.0098	0.0098	0.0098	0.0154	0.0138	0.0137	0.0129	0.0142	0.0141	0.0141	0.0148	0.0139	0.0139	0.0138	0.0150	0.0119	0.0136	0.0181	0.0175	0.0134	0.0136	0.0136
R134	0.0070	0.0053	0.0034	0.0035	0.0035	0.0085	0.0056	0.0079	0.0090	0.0095	0.0095	0.0095	0.0095	0.0096	0.0092	0.0089	0.0090	0.0086	0.0079	0.0108	0.0116	0.0098	0.0096	0.0104
R135	0.0124	0.0122	0.0122	0.0122	0.0122	0.0124	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123	0.0123
R136+R137	0.0148	0.0102	0.0102	0.0102	0.0102	0.0150	0.0136	0.0135	0.0128	0.0139	0.0138	0.0138	0.0139	0.0146	0.0146	0.0128	0.0128	0.0135	0.0135	0.0156	0.0156	0.0135	0.0137	0.0137
R138	0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110
R138	0.0060	0.0073	0.0085	0.0055	0.0034	0.0070	0.0072	0.0097	0.0101	0.0098	0.0098	0.0098	0.0099	0.0099	0.0098	0.0098	0.0098	0.0098	0.0096	0.0113	0.0121	0.0113	0.0103	0.0110

Caline 4 input for 2050 Q1

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R001	835620.80	820845.25	835496.74	820834.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820724.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.53	820570.32	11	0	1
R020	835568.73	820565.58	835478.35	820470.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820564.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820516.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	18	0	1

VKT/hr for each road (include the VKT for each sub-section; not directly used by caline4)																							
Hr00	Hr01	Hr02	Hr03	Hr04	Hr05	Hr06	Hr07	Hr08	Hr09	Hr10	Hr11	Hr12	Hr13	Hr14	Hr15	Hr16	Hr17	Hr18	Hr19	Hr20	Hr21	Hr22	Hr23
172.250	124.550	92.750	76.850	68.900	79.500	177.550	447.850	492.900	429.300	416.050	421.350	437.250	429.300	413.400	397.500	418.700	442.550	484.950	477.000	392.200	397.500	352.450	254.400
172.250	124.550	92.750	76.850	68.900	79.500	177.550	447.850	492.900	429.300	416.050	421.350	437.250	429.300	413.400	397.500	418.700	442.550	484.950	477.000	392.200	397.500	352.450	254.400
172.250	124.550	92.750	76.850	68.900	79.500	177.550	447.850	492.900	429.300	416.050	421.350	437.250	429.300	413.400	397.500	418.700	442.550	484.950	477.000	392.200	397.500	352.450	254.400
172.250	124.550	92.750	76.850	68.900	79.500	177.550	447.850	492.900	429.300	416.050	421.350	437.250	429.300	413.400	397.500	418.700	442.550	484.950	477.000	392.200	397.500	352.450	254.400
172.250	124.550	92.750	76.850	68.900	79.500	177.550	447.850	492.900	429.300	416.050	421.350	437.250	429.300	413.400	397.500	418.700	442.550	484.950	477.000	392.200	397.500	352.450	254.400
172.250	124.550	92.750	76.850	68.900	79.500	177.550	447.850	492.900	429.300	416.050	421.350	437.250	429.300	413.400	397.500	418.700	442.550	484.950	477.000	392.200	397.500	352.450	254.400
95.850	67.500	52.650	41.850	39.150	43.200	95.850	244.350	271.350	232.200	229.500	232.200	241.650	238.950	226.800	220.050	232.200	251.100	278.100	280.800	230.850	234.900	207.900	148.500
138.000	98.250	76.500	60.750	53.250	63.000	136.500	348.750	372.750	330.750	321.750	325.500	338.250	336.000	320.250	309.750	324.000	352.500	390.750	381.000	308.250	311.250	278.250	202.500
149.850	106.650	82.350	67.500	59.400	67.500	152.550	391.500	410.400	363.150	351.000	353.700	365.850	361.800	337.500	325.350	338.850	368.550	406.350	409.050	330.750	337.500	307.800	217.350
149.850	106.650	82.350	67.500	59.400	67.500	152.550	391.500	410.400	363.150	351.000	353.700	365.850	361.800	337.500	325.350	338.850	368.550	406.350	409.050	330.750	337.500	307.800	217.350
316.250	225.000	178.750	138.750	125.000	145.000	320.000	820.000	872.500	768.750	745.000	750.000	777.500	767.500	726.250	702.500	733.750	792.500	876.250	867.500	703.750	712.500	642.500	465.000
316.250	225.000	178.750	138.750	125.000	145.000	320.000	820.000	872.500	768.750	745.000	750.000	777.500	767.500	726.250	702.500	733.750	792.500	876.250	867.500	703.750	712.500	642.500	465.000
273.800	225.700	185.000	155.400	136.900	166.500	344.100	836.200	991.600	958.300	921.300	921.300	865.800	814.000	802.900	769.600	721.500	777.000	817.700	769.600	699.300	629.000	629.000	488.400
273.800	225.700	185.000	155.400	136.900	166.500	344.100	836.200	991.600	958.300	921.300	921.300	865.800	814.000	802.900	769.600	721.500	777.000	817.700	769.600	699.300	629.000	629.000	488.400
273.800	225.700	185.000	155.400	136.900	166.500	344.100	836.200	991.600	958.300	921.300	921.300	865.800	814.000	802.900	769.600	721.500	777.000	817.700	769.600	699.300	629.000	629.000	488.400
273.800	225.700	185.000	155.400	136.900	166.500	344.100	836.200	991.600	958.300	921.300	921.300	865.800	814.000	802.900	769.600	721.500	777.000	817.700	769.600	699.300	629.000	629.000	488.400
273.800	225.700	185.000	155.400	136.900	166.500	344.100	836.200	991.600	958.300	921.300	921.300	865.800	814.000	802.900	769.600	721.500	777.000	817.700	769.600	699.300	629.000	629.000	488.400
273.800	225.700	185.000	155.400	136.900	166.500	344.100	836.200	991.600	958.300	921.300	921.300	865.800	814.000	802.900	769.600	721.500	777.000	817.700	769.600	699.300	629.000	629.000	488.400
152.250	121.800	96.600	84.000	72.450	85.050	173.250	434.700	555.450	539.700	518.700	521.850	494.550	466.200	465.150	451.500	428.400	455.700	474.600	423.150	397.950	350.700	330.750	245.700
0.650	0.650	0.650	0.650	0.650	0.650	1.300	3.900	4.550	3.900	3.900	3.900	3.250	3.250	3.250	2.600	1.950	2.600	2.600	3.250	1.950	1.950	1.950	1.300
87.100	70.200	57.850	48.100	43.550	50.050	102.700	244.400	299.650	297.700	287.300	290.550	278.200	264.550	265.850	260.000	247.000	269.100	286.000	277.550	246.350	217.750	215.150	165.100
4.250	3.400	2.550	2.550	2.550	2.550	6.800	17.000	20.400	18.700	17.000	16.150	16.150	13.600	13.600	13.600	11.050	11.050	11.900	15.300	10.200	9.350	10.200	8.500
193.800	158.950	127.500	106.250	93.500	113.050	226.100	533.800	648.550	641.750	623.050	631.550	601.800	575.450	578.850	570.350	544.000	600.100	642.600	580.550	569.500	501.500	494.700	377.400
193.800	158.950	127.500	106.250	93.500	113.050	226.100	533.800	648.550	641.750	623.050	631.550	601.800	575.450	578.850	570.350	544.000	600.100	642.600	580.550	569.500	501.500	494.700	377.400
17.500	11.000	10.500	10.500	9.500	18.000	23.500	24.500	28.500	44.000	47.000	49.000	45.000	40.000	39.000	36.000	34.000	32.000	29.500	30.500	30.500	29.500	25.000	24.000
2.025	1.800	1.800	1.800	1.800	1.800	2.250	2.250	2.475	3.825	3.825	3.825	3.375	2.475	2.475	2.025	1.350	0.900	0.450	0.450	0.450	0.900	0.675	0.900
2.250	1.750	1.250	1.250	1.250	2.750	3.500	3.750	4.500	6.750	7.000	7.250	6.500	5.500	5.250	4.750	4.250	4.000	3.250	3.250	3.250	3.000	2.750	2.750
45.000	32.400	30.600	30.600	27.000	46.800	63.000	66.600	72.000	66.600	70.200	73.800	68.400	61.200	64.800	68.400	72.000	68.400	70.200	64.800	70.200	66.600	55.800	57.600
45.000	32.400	30.600	30.600	27.000	46.800	63.000	66.600	72.000	66.600	70.200	73.800	68.400	61.200	64.800	68.400	72.000	68.400	70.200	64.800	70.200	66.600	55.800	57.600
6.400	4.000	4.000	4.000	3.200	5.600	8.800	8.800	9.600	10.400	10.400	12.000	9.600	9.600	10.400	11.200	12.000	10.400	11.200	10.400	11.200	10.400	8.800	8.800
6.400	4.000	4.000	4.000	3.200	5.600	8.800	8.800	9.600	10.400	10.400	12.000	9.600	9.600	10.400	11.200	12.000	10.400	11.200	10.400	11.200	10.400	8.800	8.800
6.600	3.850	3.850	3.300	3.300	6.050	7.150	7.700	8.800	13.200	14.850	16.500	14.850	14.850	14.850	13.200	13.750	14.300	14.300	13.750	13.750	12.650	10.450	9.900
38.500	27.500	26.400	24.200	20.900	39.600	50.600	53.900	61.600	96.800	103.400	112.200	96.800	88.000	84.700	78.100	74.800	71.500	64.900	60.500	63.800	59.400	49.500	48.400
74.750	63.700	54.600	48.750	53.300	76.050	98.800	156.000	144.300	126.750	106.600	124.150	93.600	115.700	146.900	154.050	172.250	167.050	191.100	130.650	99.450	81.900	70.200	52.650
165.000	145.000	123.750	113.750	126.250	190.000	247.500	397.500	351.250	295.000	246.250	280.000	202.500	247.500	307.500	312.500	340.000	313.750	342.500	225.000	176.250	148.750	133.750	101.250
276.800	240.000	203.200	190.400	208.000	312.000	406.400	649.600	619.200	553.600	475.200	539.200	393.600	459.200	520.000	552.000	547.200	529.600	588.800	580.800	460.800	379.200	345.600	257.600
10.400	5.200	5.200	5.200	3.900	9.750	12.350	12.350	14.950	23.400	26.650	27.950	26.650	24.700	25.350	22.750	23.400	23.400	22.100	20.800	20.800	19.500	16.250	15.600
96.900	86.700	73.100	64.600	73.100	108.800	144.500	226.100	210.800	181.900	151.300	171.700	125.800	156.400	192.100	197.200	210.800	198.900	217.600	137.700	108.800	86.700	79.900	57.800
78.200	52.900	49.450	49.450	42.550	77.050	100.050	106.950	79.350	106.950	111.550	121.900	109.250	104.650	110.400	116.150	128.800	127.650	132.250	124.200	121.900	123.050	104.650	102.350
22.400	14.000	12.600	11.200	9.800	21.000	28.000	29.400	30.800	49.000	51.800	56.000	50.400	46.200	44.800	40.600	39.200	39.200	37.800	36.400	37.800	33.600	29.400	28.000
78.200	55.200	52.900	51.750	48.300	83.950	109.250	118.450	106.950	106.950	111.550	117.300	104.650	96.600	101.200	106.950	113.850	106.950	108.100	102.350	112.700	111.550	96.600	94.300
3.000	1.000	1.000	1.000	1.000	4.000	5.000	5.000	5.000	8.000	8.000	8.000	7.000	7.000	6.000	5.000	4.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
41.800	35.200	28.600	26.400	26.400	38.500	51.700	79.200	71.500	62.700	52.800	61.600	47.300	59.400	77.000	85.800	97.900	95.700	115.500	70.400	56.100	44.000	38.500	28.600
85.500	73.800	61.200	56.700	60.300	84.600	116.100	187.200	181.800	158.400	133.200	151.200	162.000	188.100	215.100	203.400	193.500	194.400	208.800	135.000	107.100	85.500	75.600	55.800
2.450	1.750	1.750	1.750	1.575	3.150	4.200	4.550	4.200	3.675	3.850	3.850	3.500	2.975	2.800	2.975	2.975	2.975	2.975	2.975	2.450	2.625	2.625	2.450
62.250	54.000	45.750	42.000	45.750	67.500	90.000	142.500	144.750	139.500	135.000	132.750	115.500	127.500	124.500	126.000	126.000	133.500	138.750	90.750	73.500	61.500	55.500	42.000
57.000	38.950	38.000	38.000	34.200	63.650	85.500	93.100	94.050	81.700	85.500	88.350	79.800	79.800	69.350	70.300	63.650	57.000	62.700	60.800	69.350	64.600	57.950	57.950
31.800	23.100	18.000	14.400	12.900	15.600	34.500	88.800	96.300	84.900	81.300	80.700	83.100	80.400	73.800	69.900	72.300	74.400	79.200	88.800	73.200	75.000	68.100	50.400
31.800	23.100	18.000	14.400	12.900	15.600	34.500	88.800	96.300	84.900	81.300	80.700	83.100	80.400	73.800	69.900	72.300	74.400	79.200	88.800	73.200	75.000	68.100	50.400
15.600	10.800	8.400	6.400	4.800	6.000	14.000	35.600	36.400	32.800	32.800	33.600	35.600	36.000	34.400	34.400	36.400	41.600	48.400	54.000	43.600	42.800	38.000	27.200
70.350	48.300	39.900	28.350	26.250	29.400	64.050	162.750	178.500	159.600	157.500	161.700	171.150	175.350	168.000	169.050	177.450	196.350	220.500	218.400	185.850	186.900	166.950	117.600
52.500	35.250	34.500	32.250	29.250	55.500	72.750	78.750	80.250	76.500	73.500	69.750	69.000	70.500	62.250	66.750	70.500	69.750	74.250	70.500	76.500	74.250	65.250	62.250
9.000	6.000	6.000	6.000	6.000	9.000	13.500	13.500	16.500	24.000	25.500	27.000	25.500	22.500	22.500	21.000	22.500	18.000	18.000	18.000	18.000	15.000	15.000	13.500
48.000	31.500	30.000	30.000	27.750	52.500	67.500	72.750	74.250	78.000	75.000	72.000	70.500	68.250	60.750	60.750	64.500	60.000	60.750	60.000	65.250	63.750	57.000	55.500
22.750	16.250	14.950	14.950	13.650	22.750	29.900	32.500	33.150	31.850	29.250	28.600	27.950	22.100	27.300	29.900	33.150	33.150	37.050	34.450	37.050	35.100	29.900	29.250
8.400	7.000	5.250	4.550	3.850	4.550	10.150	23.800	25.200	15.750	13.650	12.250	12.950	10.850	15.050	17.850	22.050	24.150	25.550	11.200	8.050	7.350	7.350	5.250
56.200	46.200	36.200	30.000	28.200	32.200	67.100	165.700	171.500	114.400	100.400	90.400	95.100	79.300	104.600	122.600	148.800	163.000	172.300	219.800	158.300	139.000	140.800	105.900
4.250	2.750	2.500	2.500	2.250	3.750	4.500	5.000	4.750	5.500	6.750	7.000	6.750	7.000	8.250	8.500	9.750	9.500	9.250	14.500	14.500	13.000	11.000	10.500
2.400	1.200	1.200	1.200	0.600	2.400	2.400	2.400	2.400	4.800	5.400	5.400	5.400	5.400	5.400	4.800	4.800	5.400	5.400	5.400	5.400	4.200	4.200	3.600
63.250	54.450	45.650	41.800	45.650	66.550	88.000	137.500	142.450	125.950	95.700	98.450	81.950	81.400	117.150	129.250	157.850	152.350	154.550	97.900	77.550	62.700	55.550	40.700
182.250	132.750	128.250	123.750	112.500	191.250	254.250	276.750	198.000	270.000	261.000	245.250	243.000	189.000	202.500	222.750	267.750	281.250	283.500	272.250	290.250	276.750	245.250	243.000
182.250	132.750	128.250	123.750	112.500	191.250	254.250	276.750	198.000	270.000	261.000	245.250	243.000	189.000	202.500	222.750	267.750	281.250	283.500	272.250	290.250	276.750	245.250	243.000
182.250	132.750	128.250	123.750	112.500	191.250	254.250	276.750	198.000	270.000	261.000	245.250	243.000	189.000	202.500	222.750	267.750	281.250	283.500	272.250	290.250	276.750	245.250	243.000
182.250	132.750	128.250	123.750	112.500	191.250	254.250	276.750	198.000	270.000	261.000	245.250	243.000	189.000	202.500	222.750	267.750	281.250	283.500	272.250	290.250	276.750	245.250	243.000
163.100	114.800	91.700	73.500	65.800	153.300	306.600	449.400	445.900	382.200	368.900	366.800	378.700	369.600	343.700	329.000	340.200	379.400	427.700	402.500	330.400	338.100	307.300	224.700
163.100	114.800	91.700	73.500	65.800	153.300	306.600	449.400	445.900	382.200	368.900	366.800	378.700	369.600	343.700	329.000	340.200	379.400	427.700	402.500	330.400	338.100	307.300	224.700
9.900	8.100	7.200	7.200	6.300	12.600	14.400	15.300	15.300	14.400	15.300	15.300	14.400	10.800	10.800	11.700	11.700	12.600	11.700	12.600	14.400	17.100	17.100	17.100
7.250	4.750	4.500	4.250	4.000	7.250	9.000	9.750	8.750	8.000	8.750	8.250	8.750	7.750	7.500	8.500	9.750	12.250	12.500	11.750	12.250	11.250	9.500	9.250
10.250	7.000	6.750	6.500	6.000	10.500	13.250	14.250	12.750	12.500	13.500	12.500	13.000	11.250	11.000	12.250	14.750	16.750	18.000	18.250	19.000	18.000	15.250	14.500
243.800	163.300	154.100	149.500	131.100	227.700	299.000	317.400	292.100	278.300	296.700	289.800	296.700	271.400	269.100	305.900	356.500	425.500	462.300	430.100	448.500	407.100	342.700	328.900
106.200	73.800	69.600	69.000	62.400	109.800	144.600	156.000	137.400	124.800	131.400	120.600	123.000	108.000	102.000	115.200	128.400	150.000	153.000	150.000	160.800	150.000	130.200	126.600
7.750	5.250	4.500	4.250	4.250	8.000	10.000	10.750	9.750	8.750	9.750	9.000	9.500	8.500	8.250	10.000	11.250	14.000	15.500	14.500	14.750	13.750	11.500	11.250
214.000	152.000	140.000	143.000	128.000	217.000	286.000	309.000	275.000	243.000	260.000	240.000	244.000	211.000	201.000	224.000	250.000	290.000	295.000	317.000	344.000	323.000	283.000	277.000
214.000	152.000	140.000	143.000	128.000	217.000	286.000	309.000	275.000	243.000	260.000	240.000	244.000	211.000	201.000	224.000	250.000	290.000	295.000	317.000	344.000	323.000	283.000	277.000
14.500	10.250	9.750	10.000	9.500	17.500	23.500	25.500	24.000	21.250	21.750	15.250	13.500	9.750	9.250	12.500	13.750	13.500	13.750	12.500	13.000	11.000	10.000	11.000
11.700	6.300	6.300	6.300	6.300	12.600	16.200	17.100	12.600	13.500	15.300	15.300	17.100	15.300	14.400	13.500	11.700	10.800	16.200	15.300	16.200	16.200	15.300	13.500
99.750	70.350	66.500	66.150	60.900	104.650	138.250	150.150	141.400	133.000	124.250	121.100	105.700	92.050	88.200	103.600	134.050	130.550	129.150	134.400	147.000	137.900	121.800	119.000
65.400	44.400	43.200	42.600	38.400	68.400	89.400	97.200	92.400	86.400	81.000	78.600	69.000	61.800	57.600	68.400	87.000	85.200	84.000	87.000	94.800	88.200	78.600	78.000
83.000	59.000	56.000	55.000	47.000	84.000	110.000	116.000	111.000	103.000	100.000	99.000	86.000	78.000	74.000	91.000	121.000	121.000	128.000	133.000	141.000	133.000	116.000	114.000
3.750	2.750	2.500	2.750	2.250	5.000	6.250	6.500	6.250	5.750	5.500	5.250	4.750	3.250	3.250	3.000	3.250	3.500	4.000	4.000	4.250	4.500	4.000	4.000
4.400	2.000	2.000	1.600	1.600	4.000	5.200	5.200	5.200	5.200	5.200	5.200	4.400	4.000	4.000	4.000	5.200	6.000	8.000	9.200	9.200	8.800	7.200	6.800
1.650	1.100	1.100	0.550	0.550	1.650	2.200	2.200	2.200	3.300	3.300	3.850	2.750	2.200	2.200	2.200	2.200	2.200	2.750	2.750	2.750	2.750	2.200	2.200
14.350	10.150	9.800	9.800	8.750	16.450	22.050	23.800	22.400	20.650	19.250	18.900	16.450	13.650	13.300	13.300	14.700	16.100	16.100	15.750	17.500	17.850	15.750	16.100
3.750	2.250	2.250	2.250	2.250	3.750	5.250	5.250	5.250	5.250	4.500	4.500	3.750	3.750	3.750	3.750	4.500	5.250	5.250	5.250	5.250	5.250	4.500	4.500
16.500	11.000	10.000	9.500	9.000	15.000	20.000	21.000	20.500	20.000	18.500	18.000	17.500	16.000	16.500	17.500	20.000	25.500	30.500	28.000	30.000	27.000	23.000	22.500
6.500	3.500	3.500	3.500	2.500	6.500	8.000	8.500	8.500	8.000	7.500	7.500	7.000	6.500	6.500	7.000	8.000	10.000	11.500	10.500	11.500	11.000	9.000	9.000

Caline 4 input for 2050 Q1

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)	VKT/hr for each road (include the VKT for each sub-section; not directly used by caline4)																							
	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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	59.400	41.800	41.800	41.800	37.400	66.000	90.200	96.800	91.300	85.800	78.100	74.800	66.000	55.000	53.900	52.800	59.400	63.800	62.700	61.600	68.200	66.000	59.400	62.700
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	1.400	1.000	0.800	0.800	0.800	1.800	2.200	2.200	2.200	2.200	2.200	2.200	1.800	1.400	1.400	1.400	1.800	2.600	3.000	2.800	3.000	2.600	2.400	2.200
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	43.750	30.750	28.500	28.250	25.750	44.750	59.000	63.500	60.250	57.250	54.500	53.000	47.250	41.500	43.250	43.750	51.000	61.750	68.500	67.000	71.250	67.000	57.250	55.750
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	23.250	17.250	15.750	15.750	12.750	23.250	30.750	32.250	31.500	28.500	27.750	27.000	26.250	22.500	24.000	24.750	28.500	35.250	41.250	38.250	41.250	38.250	32.250	30.750
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	110.000	76.450	73.150	71.500	65.450	114.950	148.500	161.150	152.350	144.650	134.200	132.000	117.150	100.100	103.400	103.950	117.700	137.500	149.050	144.100	158.400	149.600	132.000	129.250
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	23.000	17.000	16.000	16.000	16.000	25.000	33.000	36.000	34.000	32.000	29.000	29.000	25.000	20.000	19.000	18.000	20.000	22.000	21.000	21.000	23.000	23.000	21.000	21.000
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	12.000	8.000	8.000	8.000	8.000	12.000	15.000	16.000	16.000	15.000	14.000	13.000	12.000	10.000	9.000	9.000	9.000	11.000	12.000	12.000	12.000	13.000	12.000	10.000
R084	835334.32	820425.38	835123.33	820386.30	18	0	1	24.700	16.150	15.200	14.250	13.300	25.650	32.300	35.150	33.250	32.300	29.450	29.450	26.600	23.750	23.750	24.700	27.550	32.300	35.150	35.150	38.000	35.150	30.400	30.400
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	62.500	45.000	41.250	41.250	40.000	67.500	87.500	96.250	91.250	85.000	78.750	76.250	66.250	53.750	52.500	51.250	57.500	62.500	63.750	62.500	70.000	66.250	60.000	60.000
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	86.100	72.450	66.150	66.150	59.850	64.050	94.500	108.150	110.250	98.700	101.850	107.100	95.550	81.900	78.750	68.250	95.550	93.450	99.750	97.650	105.000	99.750	88.200	87.150
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	20.000	14.000	13.500	13.500	12.000	21.500	28.500	31.000	31.000	24.500	26.000	27.000	24.500	20.500	19.000	18.000	26.500	26.000	28.000	26.500	29.500	27.500	24.000	24.500
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	84.500	59.000	55.000	53.000	47.500	84.000	109.500	118.000	104.500	94.500	102.000	107.500	96.500	86.000	84.000	77.500	119.000	123.000	139.000	129.500	140.500	128.500	111.500	108.000
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	1.600	1.000	1.000	1.000	0.800	1.600	2.400	2.400	2.400	2.200	2.200	2.200	2.000	1.600	1.600	1.600	2.200	2.200	2.600	2.600	2.600	2.200	2.200	2.000
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	176.400	120.400	113.400	110.600	100.100	174.300	228.900	245.000	218.400	196.700	184.100	168.700	201.600	225.400	242.200	241.500	269.500	277.900	294.700	276.500	297.500	273.700	238.700	231.000
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	55.000	37.400	37.400	36.300	31.900	59.400	80.300	85.800	74.800	66.000	61.600	56.100	64.900	70.400	72.600	69.300	73.700	69.300	68.200	68.200	73.700	70.400	62.700	61.600
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	256.000	177.000	165.000	164.000	148.000	262.000	344.000	372.000	329.000	295.000	275.000	250.000	297.000	327.000	348.000	338.000	368.000	373.000	383.000	363.000	396.000	369.000	324.000	315.000
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	256.000	177.000	165.000	164.000	148.000	262.000	344.000	372.000	329.000	295.000	275.000	250.000	297.000	327.000	348.000	338.000	368.000	373.000	383.000	363.000	396.000	369.000	324.000	315.000
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	43.400	29.400	28.700	28.000	25.900	44.800	59.500	63.700	56.700	50.400	46.900	42.700	49.700	56.000	58.800	55.300	60.900	60.900	62.300	62.300	68.600	63.000	56.700	56.000
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	49.000	33.600	31.500	31.500	28.700	50.400	67.900	72.100	64.400	58.100	54.600	49.700	57.400	63.000	66.500	64.400	69.300	69.300	71.400	67.900	72.800	68.600	60.900	58.800
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	11.900	7.000	6.300	6.300	6.300	11.900	15.400	16.100	14.700	13.300	12.600	11.200	14.000	16.100	16.800	16.100	17.500	18.900	19.600	18.900	19.600	19.600	16.800	16.800
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	30.100	22.400	21.700	21.700	19.600	32.900	44.100	47.600	42.700	37.800	33.600	30.100	35.700	39.200	39.200	36.400	39.200	37.800	36.400	35.000	39.200	37.800	34.300	35.000
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	176.400	145.200	136.800	135.600	135.000	161.400	210.000	226.800	202.200	180.600	167.400	153.000	180.000	198.600	209.400	203.400	222.000	223.200	229.800	217.200	231.600	217.800	190.200	187.200
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	12.750	9.000	8.500	8.500	8.000	13.500	18.000	19.250	17.000	15.500	14.500	13.250	15.750	17.250	17.750	16.750	18.250	18.500	19.000	18.000	19.750	18.750	16.750	16.250
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	12.750	9.000	8.500	8.500	8.000	13.500	18.000	19.250	17.000	15.500	14.500	13.250	15.750	17.250	17.750	16.750	18.250	18.500	19.000	18.000	19.750	18.750	16.750	16.250
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	7.500	3.000	3.000	3.000	3.000	7.500	10.500	10.500	12.000	18.000	18.000	18.000	18.000	15.750	15.750	12.750	12.000	10.500	11.250	12.750	12.750	13.500	12.750	12.750
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	7.500	3.000	3.000	3.000	3.000	7.500	10.500	10.500	12.000	18.000	18.000	18.000	18.000	15.750	15.750	12.750	12.000	10.500	11.250	12.750	12.750	13.500	12.750	12.750
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	238.000	161.500	157.250	153.000	140.250	250.750	331.500	352.750	314.500	289.000	272.000	238.000	297.500	318.750	344.250	323.000	357.000	357.000	378.250	361.250	391.000	369.750	318.750	318.750
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	401.450	327.050	263.500	224.750	199.950	237.150	483.600	1143.900	1080.350	1055.550	1050.900	1052.450	1066.400	1077.250	1080.350	1064.850	1123.750	1159.400	1257.050	1249.300	1049.350	967.200	959.450	736.250
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1	7.700	4.900	4.900	4.900	4.900	9.800	12.600	13.300	11.900	11.200	10.500	9.800	10.500	10.500	10.500	9.100	9.800	8.400	8.400	8.400	8.400	9.100	9.100	9.100
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	45.500	32.900	31.500	32.200	30.100	55.300	70.700	76.300	71.400	60.900	56.700	51.800	59.500	64.400	68.600	63.000	63.700	63.000	67.900	69.300	72.100	70.700	63.700	62.300
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	192.950	136.000	108.800	86.700	79.900	98.600	212.500	527.850	549.950	473.450	457.300	457.300	476.850	471.750	487.900	471.750	494.700	513.400	530.400	521.050	424.150	430.950	382.500	280.500
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	8.400	5.600	4.000	3.200	2.800	3.200	8.000	20.400	18.800	11.200	10.400	8.800	11.600	13.200	12.800	14.800	16.000	20.000	21.600	21.200	18.400	18.400	16.800	12.000
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	8.625	6.375	6.000	5.250	4.500	8.250	11.250	12.000	11.625	10.500	10.125	9.750	10.500	11.250	12.000	13.125	13.125	12.750	12.750	12.375	13.125	12.375	10.875	10.875
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	19.550	13.600	12.750	12.750	11.050	19.550	26.350	27.200	26.350	23.800	22.100	22.100	23.800	25.500	26.350	28.050	28.050	27.200	27.200	26.350	28.050	27.200	23.800	24.650
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	4.000	2.000	2.000	2.000	2.000	4.800	6.000	6.000	6.000	4.800	4.800	4.400	4.800	5.200	5.600	6.400	6.000	5.600	5.600	5.600	6.000	6.400	5.600	6.000
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	21.600	16.200	14.400	13.500	12.600	23.400	30.600	32.400	31.500	25.200	24.300	22.500	25.200	27.900	29.700	35.100	36.000	34.200	34.200	32.400	35.100	33.300	28.800	29.700
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	10.250	6.150	6.150	6.150	6.150	14.350	18.450	18.450	18.450	16.400	14.350	12.300	16.400	16.400	18.450	18.450	16.400	16.400	16.400	16.400	16.400	18.450	16.400	16.400
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	10.250	6.150	6.150	6.150	6.150	14.350	18.450	18.450	18.450	16.400	14.350	12.300	16.400	16.400	18.450	18.450	16.400	16.400	16.400	16.400	16.400	18.450	16.400	16.400
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	10.250	6.150	6.150	6.150	6.150	14.350	18.450	18.450	18.450	16.400	14.350	12.300	16.400	16.400	18.450	18.450	16.400	16.400	16.400	16.400	16.400	18.450	16.400	16.400
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	12.350	7.800	7.150	7.150	6.500	12.350	16.900	17.550	16.900	13.650	13.000	12.350	14.300	14.950	15.600	18.200	18.200	17.550	17.550	16.900	18.200	17.550	15.600	15.600
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	12.350	7.800	7.150	7.150	6.500	12.350	16.900	17.550	16.900	13.650	13.000	12.350	14.300	14.950	15.600	18.200	18.200	17.550	17.550	16.900	18.200	17.550	15.600	15.600
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	10.350	6.900	6.900	6.900	6.900	12.650	17.250	18.400	18.400	14.950	13.800	12.650	13.800	16.100	17.250	20.700	17.250	17.250	17.250	16.100	17.250	17.250	16.100	14.950
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	11.000	8.000	7.000	7.000	7.000	14.000	18.000	19.000	18.000	16.000	14.000	14.000	15.000	15.000	16.000	19.000	16.000	15.000	14.000	14.000	14.000	15.000	14.000	14.000
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	105.000	91.500	73.500	66.000	75.000	117.000	151.500	237.000	235.500	171.000	124.500	123.000	120.000	163.500	201.000	225.000	228.000	214.500	225.000	249.000	196.500	163.500	147.000	111.000
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	105.000	91.500	73.500	66.000	75.000	117.000	151.500	237.000	235.500	171.000	124.500	123.000	120.000	163.500	201.000	225.000	228.000	214.500	225.000	249.000	196.500	163.500	147.000	111.000
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	66.000	46.000	44.000	44.000	36.000	66.000	86.000	94.000	84.000	80.000	70.000	66.000	82.000	90.000	98.000	112.000	114.000	120.000	120.000	114.000	120.000	110.000	96.000	90.000
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	66.000	46.000	44.000	44.000	36.000	66.000	86.000	94.000	84.000	80.000	70.000	66.000	82.000	90.000	98.000	112.000	114.000	120.000	120.000	114.000	120.000	110.000	96.000	90.000
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	66.000	46.000	44.000	44.000	36.000	66.000	86.000	94.000	84.000	80.000	70.000	66.000	82.000	90.000	98.000	112.000	114.000	120.000	120.000	114.000	120.000	110.000	96.000	90.000
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	66.000	46.000	44.000	44.000	36.000	66.000	86.000	94.000	84.000	80.000	70.000	66.000	82.000	90.000	98.000	112.000	114.000	120.000	120.000	114.000	120.000	110.000	96.000	90.000
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	4.000	2.000	2.000	2.000	2.000	4.000	6.000	6.000	6.000	9.000	8.000	9.000	9.000	7.000	7.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	4.000	2.000	2.000	2.000	2.000	4.000	6.000	6.000	6.000	9.000	8.000	9.000	9.000	7.000	7.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	5.400	2.700	2.700	2.700	2.700	5.400	8.100	8.100	8.100	12.150	10.800	12.150	12.150	9.450	9.450	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100	8.100
R129	835627.77	820607.32	835569.14	820596.35	13	0	1	4.250	2.500	2.500	2.500	2.250	5.000	6.750	7.000	7.500	12.250	12.500	12.750	11.500	9.750	9.250	7.500	6.750	5.500	4.750	5.750	6.250	6.250	6.000	5.750
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	1.125	0.900	0.675	0.450	0.225	0.900	0.900	0.900	0.900	1.800	2.250	2.250	2.250	2.925	3.150	3.150	3.150	3.375	3.600	4.275	4.275	3.825	2.925	2.700
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	1.950	1.625	1.625	1.300	1.625	1.950	3.575	5.200	8.450	8.450	7.800	8.450	5.850	6.500	8.125	6.500	6.500	6.175	6.175	11.050	9.100	6.825	6.175	4.875
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	9.600	7.600	6.400	6.000	6.400	9.200	11.200	17.200	22.800	26.800	24.800	29.600	22.400	27.200	32.800	30.000	30.000	28.800	30.800	24.800	17.600	14.400	13.200	9.600
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	6.000	3.600	3.600	3.600	3.000	7.200	9.600	10.200	11.400	17.400	18.000	18.000	16.200	13.800	12.600	10.800	9.600	7.800	6.600	7.800	8.400	6.600	6.600	6.600
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	6.300	3.500	2.100	1.750	1.750	4.550	13.300	25.550	25.550	21.700	21.700	21.700	24.150	25.200	24.150	24.850	27.650	30.800	35.350	14.700	12.600	11.200	9.450	6.650
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	0.350	0.175	0.175	0.175	0.175	0.350	0.525	0.525	0.525	0.875	0.875	1.050	0.875	0.700	0.700	0.525	0.525	0.525	0.525	0.525	0.525	0.525	0.525	0.525
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	3.500	1.500	1.500	1.500	1.500	3.250	4.250	4.500	4.750	7.750	8.250	8.500	8.000	7.000	7.000	5.500	5.250	5.000	4.750	5.250	5.250	4.500	4.250	4.250
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	35.100	21.600	17.550	12.150	8.100	22.950	58.050	151.200	160.650	143.100	140.400	143.100	151.200	149.850	143.100	140.400	148.500	162.000	178.200	75.600	62.100	62.100	51.300	36.450
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	35.100	21.600	17.550	12.150	8.100	22.950	58.050	151.200	160.650	143.100	140.400	143.100	151.200	149.850	143.100	140.400	148.500	162.000	178.200	75.600	62.100	62.100	51.300	36.450

Caline 4 input for 2050 Q1

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)	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
R001	835620.80	820845.25	835496.74	820838.92	14	3	4	325	235	175	145	130	150	335	845	930	810	785	795	825	810	780	750	790	835	915	900	740	750	665	480
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	325	235	175	145	130	150	335	845	930	810	785	795	825	810	780	750	790	835	915	900	740	750	665	480
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	325	235	175	145	130	150	335	845	930	810	785	795	825	810	780	750	790	835	915	900	740	750	665	480
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	325	235	175	145	130	150	335	845	930	810	785	795	825	810	780	750	790	835	915	900	740	750	665	480
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	325	235	175	145	130	150	335	845	930	810	785	795	825	810	780	750	790	835	915	900	740	750	665	480
R001	835226.82	820916.25	835124.41	821000.69	14	3	4	325	235	175	145	130	150	335	845	930	810	785	795	825	810	780	750	790	835	915	900	740	750	665	480
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	355	250	195	155	145	160	355	905	1005	860	850	860	895	885	840	815	860	930	1030	1040	855	870	770	550
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	920	655	510	405	355	420	910	2325	2485	2205	2145	2170	2255	2240	2135	2065	2160	2350	2605	2540	2055	2075	1855	1350
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	555	395	305	250	220	250	565	1450	1520	1345	1300	1310	1355	1340	1250	1205	1255	1365	1505	1515	1225	1250	1140	805
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	555	395	305	250	220	250	565	1450	1520	1345	1300	1310	1355	1340	1250	1205	1255	1365	1505	1515	1225	1250	1140	805
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	1265	900	715	555	500	580	1280	3280	3490	3075	2980	3000	3110	3070	2905	2810	2935	3170	3505	3470	2815	2850	2570	1860
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1	1265	900	715	555	500	580	1280	3280	3490	3075	2980	3000	3110	3070	2905	2810	2935	3170	3505	3470	2815	2850	2570	1860
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	370	305	250	210	185	225	465	1130	1340	1295	1245	1245	1170	1100	1085	1040	975	1050	1105	1040	945	850	850	650
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	370	305	250	210	185	225	465	1130	1340	1295	1245	1245	1170	1100	1085	1040	975	1050	1105	1040	945	850	850	650
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	370	305	250	210	185	225	465	1130	1340	1295	1245	1245	1170	1100	1085	1040	975	1050	1105	1040	945	850	850	650
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	370	305	250	210	185	225	465	1130	1340	1295	1245	1245	1170	1100	1085	1040	975	1050	1105	1040	945	850	850	650
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	370	305	250	210	185	225	465	1130	1340	1295	1245	1245	1170	1100	1085	1040	975	1050	1105	1040	945	850	850	650
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	370	305	250	210	185	225	465	1130	1340	1295	1245	1245	1170	1100	1085	1040	975	1050	1105	1040	945	850	850	650
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	725	580	460	400	345	405	825	2070	2645	2570	2470	2485	2355	2220	2215	2150	2040	2170	2260	2015	1895	1670	1575	1170
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	5	5	5	5	5	5	10	30	35	30	30	30	25	25	25	20	15	20	20	25	15	15	15	10
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	670	540	445	370	335	385	790	1880	2305	2290	2210	2235	2140	2035	2045	2000	1900	2070	2200	2135	1895	1675	1655	1270
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	25	20	15	15	15	15	40	100	120	110	100	95	95	80	80	80	65	65	70	90	60	55	60	50
R013	836078.87	820683.70	835961.87	820661.84	27	0	1	1140	935	750	625	550	665	1330	3140	3815	3775	3665	3715	3540	3385	3405	3355	3200	3530	3780	3415	3350	2950	2910	2220
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	1140	935	750	625	550	665	1330	3140	3815	3775	3665	3715	3540	3385	3405	3355	3200	3530	3780	3415	3350	2950	2910	2220
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	175	110	105	105	95	180	235	245	285	440	470	490	450	400	390	360	340	320	295	305	305	295	250	240
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	45	40	40	40	40	40	50	50	55	85	85	85	75	55	55	45	30	20	10	10	10	20	15	20
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	45	35	25	25	25	55	70	75	90	135	140	145	130	110	105	95	85	80	65	65	65	60	55	55
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	125	90	85	85	75	130	175	185	200	185	195	205	190	170	180	190	200	190	195	180	195	185	155	150
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	125	90	85	85	75	130	175	185	200	185	195	205	190	170	180	190	200	190	195	180	195	185	155	150
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	40	25	25	25	20	35	55	55	60	65	65	75	60	60	65	70	75	65	70	65	70	65	55	55
R019	835520.16	820540.46	835514.63	820570.32	11	0	1	40	25	25	25	20	35	55	55	60	65	65	75	60	60	65	70	75	65	70	65	70	65	55	55
R020	835568.73	820565.58	835478.35	820470.77	11	0	1	60	35	35	30	30	55	65	70	80	120	135	150	135	135	135	120	125	130	130	125	125	115	95	90
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	175	125	120	110	95	180	230	245	280	440	470	510	440	400	385	355	340	325	295	275	290	270	225	220
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	575	490	420	375	410	585	760	1200	1110	975	820	955	720	890	1130	1185	1325	1285	1470	1005	765	630	540	405
R023	835346.26	820830.29	835376.00	820680.43	16	0	1	660	580	495	455	505	760	990	1590	1405	1180	985	1120	810	990	1230	1250	1360	1255	1370	900	705	595	535	405
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	865	750	635	595	650	975	1270	2030	1935	1730	1485	1685	1230	1435	1625	1725	1710	1655	1840	1815	1440	1185	1080	805
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	80	40	40	40	30	75	95	95	115	180	205	215	205	190	195	175	180	180	170	160	160	150	125	120
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	285	255	215	190	215	320	425	665	620	535	445	505	370	460	565	580	620	585	640	405	320	255	235	170
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	340	230	215	215	185	335	435	465	345	465	485	530	475	455	480	505	560	555	575	540	530	535	455	445
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	80	50	45	40	35	75	100	105	110	175	185	200	180	165	160	145	140	140	135	130	135	120	105	100
R029	835524.13	820833.07	835569.38	820594.78	18	0	1	340	240	230	225	210	365	475	515	465	465	485	510	455	420	440	465	495	465	470	445	490	485	420	410
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	15	5	5	5	5	20	25	25	25	40	40	40	35	35	30	25	20	15	15	15	15	15	15	15
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	190	160	130	120	120	175	235	360	325	285	240	280	215	270	350	390	445	435	525	320	255	200	175	130
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	475	410	340	315	335	470	645	1040	1010	880	740	840	900	1045	1195	1130	1075	1080	1160	750	595	475	420	310
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	70	50	50	50	45	90	120	130	120	105	110	110	100	85	80	85	85	85	85	85	70	75	75	70
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	415	360	305	280	305	450	600	950	965	930	900	885	770	850	830	840	840	890	925	605	490	410	370	280
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1	300	205	200	200	180	335	450	490	495	430	450	465	420	420	365	370	335	300	330	320	365	340	305	305
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	530	385	300	240	215	260	575	1480	1605	1415	1355	1345	1385	1340	1230	1165	1205	1240	1320	1480	1220	1250	1135	840
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	530	385	300	240	215	260	575	1480	1605	1415	1355	1345	1385	1340	1230	1165	1205	1240	1320	1480	1220	1250	1135	840
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	195	135	105	80	60	75	175	445	455	410	410	420	445	450	430	430	455	520	605	675	545	535	475	340
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	335	230	190	135	125	140	305	775	850	760	750	770	815	835	800	805	845	935	1050	1040	885	890	795	550
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	350	235	230	215	195	370	485	525	535	510	490	465	460	470	415	445	470	465	495	470	510	495	435	415
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	30	20	20	20	20	30	45	45	55	80	85	90	85	75	75	70	75	60	60	60	60	50	50	45
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	320	210	200	200	185	350	450	485	495	520	500	480	470	455	405	405	430	400	405	400	435	425	380	370
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	175	125	115	115	105	175	230	250	255	245	225	220	215	170	210	230	255	255	285	265	285	270	230	225
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	120	100	75	65	55	65	145	340	360	225	195	175	185	155	215	255	315	345	365	160	115	105	105	75
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	280	230	180	150	140	160	335	825	855	570	500	450	475	395	520	610	740	810	855	1090	785	690	700	525
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	85	55	50	50	45	75	90	100	95	110	135	140	135	140	165	170	195	190	185	290	290	260	220	210
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	20	10	10	10	5	20	20	20	20	40	45	45	45	45	45	40	40	45	45	45	45	35	35	30
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	575	495	415	380	415	605	800	1250	1295	1145	870	895	745	740	1065	1175	1435	1385	1405	890	705	570	505	370
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	405	295	285	275	250	425	565	615	440	600	580	545	540	420	450	495	595	625	630	605	645	615	545	540
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	405	295	285	275	250	425	565	615	440	600	580	545	540	420	450	495	595	625	630	605	645	615	545	540
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	405	295	285	275	250	425	565	615	440	600	580	545	540	420	450	495	595	625	630	605	645	615	545	540
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	405	295	285	275	250	425	565	615	440	600	580	545	540	420	450	495	595	625	630	605	645	615	545	540
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	1165	820	655	525	470	1095	2190	3210	3185	2730	2635	2620	2705	2640	2455	2350	2430	2710	3055	2875	2360	2415	2195	1605
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	1165	820	655	525	470	1095	2190	3210	3185	2730	2635	2620	2705	2640	2455	2350	2430	2710	3055	2875	2360	2415	2195	1605
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	55	45	40	40	35	70	80	85	85	80	85	85	80	60	60	65	65	70	65	70	80	95	95	55
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	145	95	90	85	80	145	180	195	175	160	175	165	175	155	150	170	195	245	250	235	245	225	190	185
R057	835305.88	820665.23	835365.16	820674.55	12	0	1	205	140	135	130	120	210	265	285	255	250	270	250	260	225	220	245	295	335	360	365	380	360	305	290
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	530	355	335	325	285	495	650	690	635	605	645	630	645	590	585	665	775	925	1005	935	975	885	745	715
R059	835395.59	820548.47	835232.17	820516.97	16	0	1	885	615	580	575	520	915	1205	1300	1145	1040	1095	1005	1025	900	850	960	1070	1250	1275	1250	1340	1250	1085	1055
R060	835740.08	820393.81	835672.32	820389.93	13	0	1	155	105	90	85	85	160	200	215	195	175	195	180	190	170	165	200	225	280	310	290	295	275	230	225
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1	1070	760	700	715	640	1085	1430	1545	1375	1215	1300	1200	1220	1055	1005	1120	1250	1450	1475	1585	1720	1615	1415	1385
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	1070	760	700	715	640	1085	1430	1545	1375	1215	1300	1200	1220	1055	1005	1120	1250	1450	1475	1585	1720	1615	1415	1385
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1	290	205	195	200	190	350	470	510	480	425	435	305	270	195	185	250	275	270	275	250	260	220	200	220
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	65	35	35	35	35	70	90	95	70	75	85	85	95	85	80	75	65	60	90	85	90	90	85	75
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	1425	1005	950	945	870	1495	1975	2145	2020	1900	1775	1730	1510	1315	1260	1480	1915	1865	1845	1920	2100	1970	1740	1700
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	545	370	360	355	320	570	745	810	770	720	675	655	575	515	480	570	725	710	700	725	790	735	655	650
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	415	295	280	275	235	420	550	580	555	515	500	495	430	390	370	455	605	605	640	665	705	665	580	570
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	75	55	50	55	45	100	125	130	125	115	110	105	95	65	65	60	65	70	80	80	85	90	80	80
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	55	25	25	20	20	50	65	65	65	65	65	65	55	50	50	50	65	75	100	115	115	110	90	85
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	15	10	10	5	5	15	20	20	20	30	30	35	25	20	20	20	20	20	25	25	25	25	20	20
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	205	145	140	140	125	235	315	340	320	295	275	270	235	195	190	190	210	230	230	225	250	255	225	230
R073	835175.32	820822.66	835062.15	820686.25	18	0	1	25	15	15	15	15	25	35	35	35	35	30	30	25	25	25	25	30	35	35	35	35	35	30	30
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	165	110	100	95	90	150	200	210	205	200	185	180	175	160	165	175	200	255	305	280	300	270	230	225
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	65	35	35	35	25	65	80	85	85	80	75	75	70	65	65	70	80	100	115	105	115	110	90	90

Caline 4 input for 2050 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	270	190	190	190	170	300	410	440	415	390	355	340	300	250	245	240	270	290	285	280	310	300	270	285
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	35	25	20	20	20	45	55	55	55	55	55	55	45	35	35	35	45	65	75	70	75	65	60	55
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	875	615	570	565	515	895	1180	1270	1205	1145	1090	1060	945	830	865	875	1020	1235	1370	1340	1425	1340	1145	1115
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	155	115	105	105	85	155	205	215	210	190	185	180	175	150	160	165	190	235	275	255	275	255	215	205
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	1000	695	665	650	595	1045	1350	1465	1385	1315	1220	1200	1065	910	940	945	1070	1250	1355	1310	1440	1360	1200	1175
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	115	85	80	80	80	125	165	180	170	160	145	145	125	100	95	90	100	110	105	105	115	115	105	105
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	60	40	40	40	40	60	75	80	80	75	70	65	60	50	45	45	45	55	60	60	60	65	60	50
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	130	85	80	75	70	135	170	185	175	170	155	155	140	125	125	130	145	170	185	185	200	185	160	150
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	250	180	165	165	160	270	350	385	365	340	315	305	265	215	210	205	230	250	255	250	280	265	240	240
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	410	345	315	315	285	305	450	515	525	470	485	510	455	390	375	325	455	445	475	465	500	475	420	415
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	200	140	135	135	120	215	285	310	310	245	260	270	245	205	190	180	265	260	280	265	295	275	240	245
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	845	590	550	530	475	840	1095	1180	1045	945	1020	1075	965	860	840	775	1190	1230	1390	1295	1405	1285	1115	1080
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	40	25	25	25	20	40	60	60	60	55	55	55	50	40	40	40	55	55	65	65	65	55	55	50
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	1260	860	810	790	715	1245	1635	1750	1560	1405	1315	1205	1440	1610	1730	1725	1925	1985	2105	1975	2125	1955	1705	1650
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	250	170	170	165	145	270	365	390	340	300	280	255	295	320	330	315	335	315	310	310	335	320	285	280
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	1280	885	825	820	740	1310	1720	1860	1645	1475	1375	1250	1485	1635	1740	1690	1840	1865	1915	1815	1980	1845	1620	1575
R093	835524.72	820220.82	835697.55	820256.15	16	0	1	1280	885	825	820	740	1310	1720	1860	1645	1475	1375	1250	1485	1635	1740	1690	1840	1865	1915	1815	1980	1845	1620	1575
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	310	210	205	200	185	320	425	455	405	360	335	305	355	400	420	395	435	435	445	445	490	450	405	400
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	350	240	225	225	205	360	485	515	460	415	390	355	410	450	475	460	495	495	510	485	520	490	435	420
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	85	50	45	45	45	85	110	115	105	95	90	80	100	115	120	115	125	135	140	135	140	140	120	120
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	215	160	155	155	140	235	315	340	305	270	240	215	255	280	280	260	280	270	260	250	280	270	245	250
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	1470	1210	1140	1130	1125	1345	1750	1890	1685	1505	1395	1275	1500	1655	1745	1695	1850	1860	1915	1810	1930	1815	1585	1560
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	255	180	170	170	160	270	360	385	340	310	290	265	315	345	355	335	365	370	380	360	395	375	335	325
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	255	180	170	170	160	270	360	385	340	310	290	265	315	345	355	335	365	370	380	360	395	375	335	325
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	50	20	20	20	20	50	70	70	80	120	120	120	120	105	105	85	80	70	75	85	85	90	85	85
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	50	20	20	20	20	50	70	70	80	120	120	120	120	105	105	85	80	70	75	85	85	90	85	85
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R103+R104	836068.35	820219.28	836139.25	820234.91	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	280	190	185	180	165	295	390	415	370	340	320	280	350	375	405	380	420	420	445	425	460	435	375	375
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	1295	1055	850	725	645	765	1560	3690	3485	3405	3390	3395	3440	3475	3485	3435	3625	3740	4055	4030	3385	3120	3095	2375
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1	55	35	35	35	35	70	90	95	85	80	75	70	75	75	75	65	70	60	60	60	60	65	65	65
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	325	235	225	230	215	395	505	545	510	435	405	370	425	460	490	450	455	450	485	495	515	505	455	445
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	1135	800	640	510	470	580	1250	3105	3235	2785	2690	2690	2805	2775	2870	2775	2910	3020	3120	3065	2495	2535	2250	1650
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	105	70	50	40	35	40	100	255	235	140	130	110	145	165	160	185	200	250	270	265	230	230	210	150
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	115	85	80	70	60	110	150	160	155	140	135	130	140	150	160	175	175	170	170	165	175	165	145	145
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	115	80	75	75	65	115	155	160	155	140	130	130	140	150	155	165	165	160	160	155	165	160	140	145
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	50	25	25	25	25	60	75	75	75	60	60	55	60	65	70	80	75	70	70	70	75	80	70	75
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	120	90	80	75	70	130	170	180	175	140	135	125	140	155	165	195	200	190	190	180	195	185	160	155
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	25	15	15	15	15	35	45	45	45	40	35	30	40	40	45	45	40	40	40	40	40	45	40	40
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	25	15	15	15	15	35	45	45	45	40	35	30	40	40	45	45	40	40	40	40	40	45	40	40
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	25	15	15	15	15	35	45	45	45	40	35	30	40	40	45	45	40	40	40	40	40	45	40	40
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	95	60	55	55	50	95	130	135	130	105	100	95	110	115	120	140	140	135	135	130	140	135	120	120
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	95	60	55	55	50	95	130	135	130	105	100	95	110	115	120	140	140	135	135	130	140	135	120	120
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	45	30	30	30	30	55	75	80	80	65	60	55	60	70	75	90	75	75	75	70	75	75	70	65
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	55	40	35	35	35	70	90	95	90	80	70	70	75	75	80	95	80	75	70	70	70	75	70	70
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	350	305	245	220	250	390	505	790	785	570	415	410	400	545	670	750	760	715	750	830	655	545	490	370
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	350	305	245	220	250	390	505	790	785	570	415	410	400	545	670	750	760	715	750	830	655	545	490	370
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	165	115	110	110	90	165	215	235	210	200	175	165	205	225	245	280	285	300	300	285	300	275	240	225
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	165	115	110	110	90	165	215	235	210	200	175	165	205	225	245	280	285	300	300	285	300	275	240	225
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	165	115	110	110	90	165	215	235	210	200	175	165	205	225	245	280	285	300	300	285	300	275	240	225
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	165	115	110	110	90	165	215	235	210	200	175	165	205	225	245	280	285	300	300	285	300	275	240	225
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	20	10	10	10	10	20	30	30	30	45	40	45	45	35	35	30	30	30	30	30	30	30	30	30
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	85	50	50	50	45	100	135	140	150	245	250	255	230	195	185	150	135	110	95	115	125	125	120	115
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	25	20	15	10	5	20	20	20	20	40	50	50	50	65	70	70	70	75	80	95	95	85	65	60
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	30	25	25	20	25	30	55	80	130	130	120	130	90	100	125	100	100	95	95	170	140	105	95	75
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	120	95	80	75	80	115	140	215	285	335	310	370	280	340	410	375	375	360	385	310	220	180	165	120
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	50	30	30	30	25	60	80	85	95	145	150	150	135	115	105	90	80	65	55	65	70	55	55	55
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	90	50	30	25	25	65	190	365	365	310	310	310	345	360	345	355	395	440	505	210	180	160	135	55
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	10	5	5	5	5	10	15	15	15	25	25	30	25	20	20	15	15	15	15	15	15	15	15	15
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	70	30	30	30	30	65	85	90	95	155	165	170	160	140	140	110	105	100	95	105	105	90	85	85
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	130	80	65	45	30	85	215	560	595	530	520	530	560	555	530	520	550	600	660	280	230	230	190	135
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	130	80	65	45	30	85	215	560	595	530	520	530	560	555	530	520	550	600	660	280	230	230	190	135

Caline 4 input for 2050 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
R001	835620.80	820845.25	835496.74	820834.92	14	3	4	23.1916	23.3779	22.0001	22.6196	22.9814	21.9932	24.1094	27.1192	29.1255	29.5152	29.3308	28.7546	28.7114	28.5023	28.4411	27.9508	27.9979	26.3501	25.3920	25.5894	25.3930	25.4237	25.1429	23.1155
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	23.1916	23.3779	22.0001	22.6196	22.9814	21.9932	24.1094	27.1192	29.1255	29.5152	29.3308	28.7546	28.7114	28.5023	28.4411	27.9508	27.9979	26.3501	25.3920	25.5894	25.3930	25.4237	25.1429	23.1155
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	23.1916	23.3779	22.0001	22.6196	22.9814	21.9932	24.1094	27.1192	29.1255	29.5152	29.3308	28.7546	28.7114	28.5023	28.4411	27.9508	27.9979	26.3501	25.3920	25.5894	25.3930	25.4237	25.1429	23.1155
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	23.1916	23.3779	22.0001	22.6196	22.9814	21.9932	24.1094	27.1192	29.1255	29.5152	29.3308	28.7546	28.7114	28.5023	28.4411	27.9508	27.9979	26.3501	25.3920	25.5894	25.3930	25.4237	25.1429	23.1155
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	23.1916	23.3779	22.0001	22.6196	22.9814	21.9932	24.1094	27.1192	29.1255	29.5152	29.3308	28.7546	28.7114	28.5023	28.4411	27.9508	27.9979	26.3501	25.3920	25.5894	25.3930	25.4237	25.1429	23.1155
R001	835226.82	820916.25	835124.41	821000.69	14	3	4	23.1916	23.3779	22.0001	22.6196	22.9814	21.9932	24.1094	27.1192	29.1255	29.5152	29.3308	28.7546	28.7114	28.5023	28.4411	27.9508	27.9979	26.3501	25.3920	25.5894	25.3930	25.4237	25.1429	23.1155
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	26.6382	27.5496	28.7758	29.8979	31.0308	29.8990	29.5554	35.2132	37.5797	36.0755	35.3564	35.1463	34.7220	34.4584	32.8625	32.3791	31.6106	30.8672	29.7501	30.8876	30.6795	31.0277	30.0153	28.5125
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	25.7567	26.1127	25.9692	26.7500	27.3631	27.7193	28.2092	32.2847	33.2508	32.6065	32.0208	30.8015	30.1676	30.0493	29.3818	28.1590	27.1076	25.9388	24.5472	24.5068	24.1737	24.5771	24.5692	24.2204
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	25.5772	27.1202	23.3819	25.7617	26.1770	25.3255	27.9871	31.4998	32.6420	32.4347	32.0840	31.2568	30.8865	30.9563	29.4301	28.8774	27.4139	26.5125	24.5875	25.7103	25.4249	25.8949	27.2440	24.9949
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	25.5772	27.1202	23.3819	25.7617	26.1770	25.3255	27.9871	31.4998	32.6420	32.4347	32.0840	31.2568	30.8865	30.9563	29.4301	28.8774	27.4139	26.5125	24.5875	25.7103	25.4249	25.8949	27.2440	24.9949
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	24.5758	24.0950	24.7420	24.1801	25.0548	25.2568	26.9413	36.6372	38.9354	36.1605	35.4945	34.4108	33.8252	33.2600	32.0082	30.6556	29.5192	28.4307	27.5392	28.8154	27.1015	27.5032	27.6689	25.7148
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1	24.5758	24.0950	24.7420	24.1801	25.0548	25.2568	26.9413	36.6372	38.9354	36.1605	35.4945	34.4108	33.8252	33.2600	32.0082	30.6556	29.5192	28.4307	27.5392	28.8154	27.1015	27.5032	27.6689	25.7148
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	19.8999	20.0234	19.5860	20.4773	20.2068	20.4826	20.6551	25.4802	28.0558	28.0227	27.4742	26.9972	26.3851	26.0211	25.9450	25.2394	24.4676	23.4151	22.3568	23.9553	22.6617	22.1616	22.4574	22.1235
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	19.8999	20.0234	19.5860	20.4773	20.2068	20.4826	20.6551	25.4802	28.0558	28.0227	27.4742	26.9972	26.3851	26.0211	25.9450	25.2394	24.4676	23.4151	22.3568	23.9553	22.6617	22.1616	22.4574	22.1235
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	19.8999	20.0234	19.5860	20.4773	20.2068	20.4826	20.6551	25.4802	28.0558	28.0227	27.4742	26.9972	26.3851	26.0211	25.9450	25.2394	24.4676	23.4151	22.3568	23.9553	22.6617	22.1616	22.4574	22.1235
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	19.8999	20.0234	19.5860	20.4773	20.2068	20.4826	20.6551	25.4802	28.0558	28.0227	27.4742	26.9972	26.3851	26.0211	25.9450	25.2394	24.4676	23.4151	22.3568	23.9553	22.6617	22.1616	22.4574	22.1235
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	19.8999	20.0234	19.5860	20.4773	20.2068	20.4826	20.6551	25.4802	28.0558	28.0227	27.4742	26.9972	26.3851	26.0211	25.9450	25.2394	24.4676	23.4151	22.3568	23.9553	22.6617	22.1616	22.4574	22.1235
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	19.8999	20.0234	19.5860	20.4773	20.2068	20.4826	20.6551	25.4802	28.0558	28.0227	27.4742	26.9972	26.3851	26.0211	25.9450	25.2394	24.4676	23.4151	22.3568	23.9553	22.6617	22.1616	22.4574	22.1235
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	31.5088	31.8468	31.9052	33.5743	33.7143	33.8285	34.0866	37.7582	41.5760	41.9390	41.5835	40.6362	39.5487	39.2455	38.0250	37.1780	36.2576	33.9604	32.5932	32.1116	32.3708	31.5329	30.4152	28.9674
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	4.0555	4.0877	4.0394	4.0555	4.0555	4.0555	58.8777	50.7854	44.0729	50.7854	50.8417	50.5950	38.0609	38.1832	38.2186	31.5994	3.9751	4.0234	4.0555	4.0394	4.0555	4.0394	4.0394	4.0555
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	28.3345	28.7266	29.4654	29.3093	29.8763	29.4532	30.2302	34.1149	36.8695	37.1981	36.0102	35.9126	35.0225	34.7123	34.1642	32.7161	31.8012	30.4186	28.6322	29.0849	30.0543	29.9459	29.5778	29.0208
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	38.0287	31.5994	40.5178	40.6036	40.6412	40.6412	48.0046	48.3027	50.9926	47.0264	48.3591	44.6067	44.7058	41.1498	41.1901	41.1498	36.2064	30.7396	28.9371	32.7921	33.0840	35.6761	39.0359	38.9299
R013	836078.87	820683.70	835961.87	820661.84	27	0	1	24.1112	24.8924	24.4253	24.8006	24.1708	25.1753	25.2792	28.8105	31.5896	31.9304	31.6642	31.0558	30.0942	30.1243	29.7208	29.2888	27.8863	26.9503	26.0270	26.6772	27.6178	26.9751	27.2298	25.8753
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	24.1112	24.8924	24.4253	24.8006	24.1708	25.1753	25.2792	28.8105	31.5896	31.9304	31.6642	31.0558	30.0942	30.1243	29.7208	29.2888	27.8863	26.9503	26.0270	26.6772	27.6178	26.9751	27.2298	25.8753
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	50.9289	46.9831	48.6732	48.7920	49.9122	54.1316	53.1610	51.3465	54.0227	59.9494	62.4344	60.2325	59.6796	56.7390	57.7959	56.9241	56.7986	50.8641	51.8755	58.7448	56.7588	58.5295	55.0382	55.7808
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	71.8699	69.9767	69.6186	69.7393	69.7957	69.7957	65.4778	65.6516	67.7371	69.5885	69.6557	68.7931	71.7401	67.8659	67.9273	72.1310	71.9480	48.1901	48.3752	48.3108	48.3752	68.7554	89.0298	68.8560
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	49.4581	46.4090	45.2073	45.3071	45.3522	56.4131	59.3334	56.0601	58.4037	63.1338	64.1913	61.6146	62.0324	56.7281	59.1061	58.8340	57.6662	51.2997	47.1778	47.1171	47.1778	43.6528	46.9001	47.0113
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	40.8405	43.1455	45.1533	45.2518	46.7760	51.7384	53.5441	56.3408	55.8405	61.5664	60.3800	57.2493	56.6738	47.6332	45.2618	42.9897	38.9979	27.8221	22.5456	23.2214	24.4781	27.3279	24.9863	28.6659
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	40.8405	43.1455	45.1533	45.2518	46.7760	51.7384	53.5441	56.3408	55.8405	61.5664	60.3800	57.2493	56.6738	47.6332	45.2618	42.9897	38.9979	27.8221	22.5456	23.2214	24.4781	27.3279	24.9863	28.6659
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	41.4184	45.5034	45.2073	45.3071	54.7031	57.3902	56.3663	56.5111	59.1886	73.7921	73.8602	69.7493	69.8847	62.5668	58.4199	54.7688	50.8740	39.5171	37.3863	39.6025	37.3863	39.6025	38.0192	38.0997
R019	835520.16	820540.46	835514.53	820578.32	11	0	1	41.4184	45.5034	45.2073	45.3071	54.7031	57.3902	56.3663	56.5111	59.1886	73.7921	73.8602	69.7493	69.8847	62.5668	58.4199	54.7688	50.8740	39.5171	37.3863	39.6025	37.3863	39.6025	38.0192	38.0997
R020	835568.73	820565.58	835478.35	820478.77	11	0	1	29.7500	29.7590	29.5337	33.8686	33.9061	32.1224	36.2077	34.0283	34.5928	34.4399	34.8070	37.4912	34.4715	35.7935	35.8334	31.3841	29.7721	28.9694	29.0925	30.0477	30.0940	29.3082	28.8682	26.4862
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	81.8542	90.8796	93.9220	94.7208	95.8608	92.0133	97.7417	98.9790	97.3397	110.3024	110.2044	109.2350	101.3299	101.1746	97.0863	89.4908	82.3138	72.1232	67.1890	68.2381	68.2057	70.2122	71.0050	72.5453
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	49.1322	49.6892	49.7784	50.1382	50.8173	51.1224	51.5145	53.6921	52.7398	51.2614	50.1664	50.0854	48.9813	48.6671	50.1334	49.8620	49.4908	48.9222	49.1657	48.5830	48.0010	48.3515	48.4003	48.8560
R023	835346.26	820830.29	835376.00	820680.43	16	0	1	47.7453	48.8084	49.0216	48.7722	50.1872	50.2008	50.7012	52.9237	51.6551	50.2801	50.0696	49.1440	48.8744	48.1295	48.6165	47.1239	45.7974	44.6476	43.1267	43.9542	44.4023	44.2877	45.3356	45.8078
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	47.4285	48.6482	48.7549	49.9473	50.3073	51.8642	54.3472	60.7026	62.2304	62.7055	60.9988	62.1071	57.8024	55.9601	50.9269	53.0194	45.4029	43.8987	44.3323	45.3559	43.9658	43.4293	44.1473	43.5902
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	60.4108	51.7785	51.4184	51.5391	52.6313	69.4117	66.2584	66.4320	67.8866	73.5699	74.1097	72.1902	72.6309	71.8790	72.4792	68.2761	67.8297	63.7775	61.6008	62.3062	58.9156	64.9686	64.0947	63.1954
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	46.7560	48.4082	49.6294	49.2424	50.3041	49.9644	55.4430	60.5253	67.7423	70.3212	67.2263	65.1527	62.8275	60.0067	58.4052	57.6329	51.0113	47.2784	46.1474	42.6190	42.9696	37.7572	38.2997	36.9513
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	99.9246	90.6748	94.1963	94.3003	99.8732	105.8243	104.2876	102.2124	104.6447	116.7394	113.2292	118.6349	113.9157	103.3867	99.2296	100.3483	95.5280	91.6858	87.7035	92.1181	92.2852	95.9515	93.3015	94.3287
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	36.1753	26.7421	28.6407	21.1769	23.0828	38.0840	35.8213	34.5768	33.3445	37.8992	37.3359	36.9314	36.8709	38.3284	39.3014	36.9174	33.5760	33.7437	34.7855	34.8973	34.7855	32.7436	32.4425	33.7252
R029	835524.13	820833.07	835569.38	820596.78	18	0	1	73.1742	76.1774	76.9488	76.7788	79.7947	83.7680	82.0832	83.1822	85.1582	101.3031	99.3517	96.5492	98.2600	83.7326	81.1539	79.9935	74.1685	59.8788	56.9121	58.5372	60.5337	69.8754	70.9553	71.5728
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	27.1335	4.0877	4.0394	4.0555	4.0555	48.8314	39.8312	39.9728	39.9277	35.2043	35.2566	34.7557	39.2610	39.7093	45.7026	40.0275	20.9737	26.9618	27.0959	27.0476	27.0959	27.0476	27.0476	27.1335
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	27.5087	28.1740	29.2349	29.0493	29.0902	29.8776	33.8290	37.0309	36.1507	35.1838	33.1165	31.9480	30.6085	30.0994	29.0904	29.1161	27.0047	25.2735	25.5485	23.3221	23.9842	23.8645	22.5767	24.2249
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	35.7067	36.8619	39.2345	39.2449	40.2196	39.6141	44.1192	44.5547	47.3892	46.1679	44.5279	43.9745	41.4344	41.1755	41.2428	38.3678	35.5425	32.5618	31.7004	32.7879	33.5745	33.7560	33.6793	31.9358
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	49.1343	50.3788	50.0762	50.1792	55.3559	57.5420	58.7798	58.9545	58.8938	62.3466	59.7621	59.4812	59.6695	54.2376	53.6473	47.7643	43.8072	28.6784	18.1032	22.3055	34.0801	36.8335	36.8335	44.4120
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	25.3806	25.4613	26.1375	26.5173	26.2621	26.2904	29.3715	32.1259	35.0571	34.8597	32.5837	32.5904	30.8485	30.9383	31.9780	29.7008	27.1158	25.2473	23.7205	23.9886	25.0755	26.1237	26.1068	27.3424
R036+R037	835405.93	820841.18	835324.17	821029.61	18	0	1	66.9585	68.3791	69.5012	69.6304	69.4436	77.7294	79.9654	81.4762	81.4785	83.5882	81.3612	80.6157	80.7512	72.7243	69.5277	69.1576	64.8906	50.7327	44.8935	45.9884	49.2512	50.2330	50.4874	53.3735
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	44.4897	45.2394	46.5797	46.9636	47.7581	48.4950	48.6484	51.0676	52.7181	53.2375	51.7081	50.3994	49.7693	49.4351	48.2487	46.4200	44.9607	42.8445	40.1414	44.8574	45.0902	45.5799	45.6025	46.5826
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	44.4897	45.2394	46.5797	46.9636	47.7581	48.4950	48.6484	51.0676	52.7181	53.2375	51.7081	50.3994	49.7693	49.4351	48.2487	46.4200	44.9607	42.8445	40.1414	44.8574	45.0902	45.5799	45.6025	46.5826
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	64.6608	64.6001	66.4604	65.8733	73.2826	68.6684	69.6453	69.7300	68.4360	67.4188	66.6912	65.0286	65.0835	63.9359	63.6432	62.4866	61.7633	60.9903	61.5491	67.0614	65.3562	65.9856	66.0770	66.6096
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	27.4330	28.1036	29.2417	26.9249	28.8728	28.7417	30.0102	30.6787	32.2441	31.5760	31.0684	30.7903	30.8342	31.0460	30.4808	30.4164	28.9035	28.5285	27.5287	31.1898	29.2642	29.4471	29.6840	28.6243
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	53.3685	53.4082	54.0990	51.9865	52.3737	54.6791	56.4624	56.2765	56.1675	59.0407	59.3756	57.3088	56.4520	52.4640	53.6748	53.8143	50.7218	47.9504	48.2527	46.4654	48.3722	51.5119	49.1618	49.4360
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	52.5750	54.8841	54.5260	54.6467	54.7031	65.6305	67.1258	67.2992	63.8453	68.0827	69.3952	65.3126	68.8269	64.1572	64.2173	62.3566	63.2232	48.8628	49.0304	48.9714	49.0304	49.1035	49.1035	53.7961
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	51.7028	51.5142	51.7805	51.9032	53.9703	57.0654	54.0273	56.2826	56.1047	62.9916	62.9403	63.1495	60.5997	56.3953	57.5266	52.9044	50.2642	45.4655	42.9962	47.0865	46.8821	49.9138	51.0483	51.1298
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	109.5432	99.7929	103.8483	103.9799	109.3323	110.4232	104.6960	103.1897	102.5371	110.7540	107.6664	109.2399	109.0322	111.8185	104.3690	114.9421	107.9790	110.8623	116.5574	121.4460	117.9983	114.2582	122.7946	111.6305
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	30.5218	31.2711	32.1460	32.8627	27.8109	27.9703	29.9803	31.2865	30.6856	31.5145	32.0882	32.2309	31.4730	33.2998	32.8347	31.3458	31.2587	30.3864	31.2970	30.3346	29.5230	29.7973	29.7973	32.4690
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	40.0411	40.9103	40.6735	42.5160	43.5508	42.3839	44.4965	44.2805	43.7197	41.7002	41.6058	40.8234	40.5549	40.2563	39.8438	39.1359	37.5592	36.6276	35.9294	39.4030	40.1618	40.7625	41.3918	41.7982
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	75.1041	78.9191	68.7043	68.8604	66.2458	56.5554	53.0519	51.8063	54.2542	66.3399	79.3589	84.5484	83.3388	90.9001	89.7929	87.1884	89.9217	93.4290	97.4160	120.9971	120.1686	113.5216	107.1839	105.5581
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	48.7751	38.9138	38.5517	38.6724	4.0555	48.8314	48.7751	48.9481	48.8917	48.9481	51.7600	51.1037	51.2414	51.7600	51.8225	43.9631	43.1545	39.0998	39.2661	39.2071	39.2661	39.3943	39.3943	45.4075
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	41.9409	43.3132	42.3132	43.8721	46.0572	46.5563	49.0999	52.5793	54.0563	52.7152	50.4845	49.4618	46.8289	45.8182	42.9569	40.8573	38.3583	36.2841	35.5688	35.1983	36.5033	35.9696	36.9858	36.5194
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	37.7376	38.4649	38.8483	40.2113	38.7770	41.7853	42.9202	43.8828	43.9291	48.5723	47.3963	46.7630	45.7993	45.9430	45.4041	42.3182	41.0652	37.5977	35.1914	35.8186	35.9031	38.2357	38.1279	38.8356
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	37.7376	38.4649	38.8483	40.2113	38.7770	41.7853	42.9202	43.8828	43.9291	48.5723	47.3963	46.7630	45.7993	45.9430	45.4041	42.3182	41.0652	37.5977	35.1914	35.8186	35.9031	38.2357	38.1279	38.8356
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	37.7376	38.4649	38.8483	40.2113	38.7770	41.7853	42.9202	43.8828	43.9291	48.5723	47.3963	46.7630	45.7993	45.9430	45.4041	42.3182	41.0652	37.5977	35.1914	35.8186	35.9031	38.2357	38.1279	38.8356
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	37.7376	38.4649	38.8483	40.2113	38.7770	41.7853	42.9202	43.8828	43.9291	48.5723	47.3963	46.7630	45.7993	45.9430	45.4041	42.3182	41.0652	37.5977	35.1914	35.8186	35.9031	38.2357	38.1279	38.8356
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	25.3813	24.8550	25.4910	25.8670	26.7602	26.3191	30.5466	36.9858	36.5548	33.5080	32.9922	31.6378	31.1545	30.6378	28.8482	27.2929	26.2947	26.0219	25.9084	24.6904	24.0623	25.2655	24.8892	24.0772
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	25.3813	24.8550	25.4910	25.8670	26.7602	26.3191	30.5466	36.9858	36.5548	33.5080	32.9922	31.6378	31.1545	30.6378	28.8482	27.2929	26.2947	26.0219	25.9084	24.6904	24.0623	25.2655	24.8892	24.0772
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	125.0425	133.2811	148.4548	155.7244	153.6687	135.3011	129.4922	132.1042	132.0436	132.3124	125.0717	124.7252	122.0102	93.2594	93.3130	86.6995	73.7379	62.0739	41.3508	62.1486	65.5723	104.7999	113.3544	122.0334
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	40.8700	40.7324	42.4660	44.8334	47.4343	49.3773	47.4304	50.8737	48.7791	47.4514	47.8461	46.1251	45.8294	38.1045	37.1682	35.1087	33.9942	32.9284	29.9688	30.6566	30.4937	31.2398	29.6648	30.4217
R057	835305.88	820665.23	835365.16	820676.55	12	0	1	50.1046	50.2223	51.5513	49.1944	50.0102	53.0891	52.7463	53.0246	53.2600	60.3190	58.1177	58.7647	59.2231	52.8439	54.0116	53.5191	53.6445	49.2979	50.9962	53.7198	52.1380	54.3300	50.9551	51.7214
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	88.9428	87.3387	88.0513	88.0965	89.0970	88.6423	92.4104	92.8688	91.3108	90.4371	89.6814	88.2543	87.7094	86.4779	85.9720	85.1554	87.6634	87.0607	88.8992	86.3321	89.4300	86.9267	86.3403	84.0047
R059	835395.59	820548.47	835232.17	820516.97	16	0	1	28.8768	29.1608	29.2353	29.5374	29.8783	30.4275	31.7240	32.6724	31.2692	31.3180	31.1379	29.5285	29.3389	28.3916	28.0874	28.0601	27.6626	27.5807	26.5806	28.6529	29.0935	29.0130	28.5728	28.7440
R060	835740.08	820393.81	835672.32	820380.93	13	0	1	183.3226	165.2983	181.3035	191.6684	191.7479	192.1652	185.7475	197.9819	190.4777	181.1701	188.5601	175.6806	169.8044	170.5322	149.4909	153.1897	139.6773	134.5959	125.4107	131.9910	129.4118	135.0166	134.8141	137.7657
R061+R062	835198.18	821137.62	835283.81	820944.88	22	0	1	35.1178	35.0182	35.0404	35.4840	35.6182	35.2508	37.4060	38.1058	37.4125	35.3731	36.3556	34.8615	34.9018	33.6270	32.7309	32.8315	32.4192	31.6103	30.1625	35.8385	36.9242	37.4850	37.0868	37.1938
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	35.1178	35.0182	35.0404	35.4840	35.6182	35.2508	37.4060	38.1058	37.4125	35.3731	36.3556	34.8615	34.9018	33.6270	32.7309	32.8315	32.4192	31.6103	30.1625	35.8385	36.9242	37.4850	37.0868	37.1938
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1	52.8985	53.6275	55.6692	56.6673	56.2317	64.5449	66.2034	67.3691	65.9579	67.6824	66.3823	65.1428	65.0450	59.6613	57.6303	54.5384	46.2772	33.9483	21.7114	34.0514	46.3357	56.3332	63.6693	71.3499
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	60.0612	46.4090	46.0940	46.1998	46.2481	68.0106	64.9997	62.1537	68.0692	64.1095	62.3445	61.7055	61.7227	62.3445	65.7956	58.7316	57.5000	55.3838	53.1504	55.7488	53.1504	57.6356	60.5593	62.2997
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	36.7405	36.1437	36.1561	36.4183	36.7430	37.2052	39.0484	39.9865	39.8310	38.8079	37.7147	37.3499	36.2561	35.2782	35.4129	35.2945	35.6953	34.7457	33.5911	37.1677	38.1087	37.7656	37.3394	37.6493
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	48.5362	49.0481	48.3915	49.1406	48.7084	48.1003	49.5774	50.9292	49.7943	50.4926	49.3437	48.6847	47.4016	48.4533	48.8084	48.0108	49.5459	49.1723	48.9036	50.8604	51.0165	51.2178	50.2454	50.7135
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	50.8598	50.6124	51.0678	49.9510	50.1720	50.2995	50.0993	49.8549	49.9773	50.0088	50.9964	50.5928	51.0215	50.6061	51.5974	52.0706	52.2208	53.2419	54.8720	54.9275	55.1416	54.6166	54.0197	53.5789
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	74.6977	86.0577	93.4421	85.8002	91.4046	93.6456	90.2875	87.3044	90.4175	89.5044	93.2787	96.7244	97.8561	60.2791	60.3311	64.6373	59.5119	61.8865	60.3545	60.2911	57.2718	81.4727	79.0169	79.1386
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	109.8702	58.3131	57.9720	54.6467	54.7031	109.5457	100.4181	100.6236	100.5580	100.6236	100.6979	99.9997	109.6600	109.7517	109.8177	109.7517	99.8474	109.3830	96.7097	127.3275	122.8124	127.9537	128.6234	129.6634
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	70.2128	48.6729	48.3108	7.9485	7.9485	70.2879	54.6467	54.8198	54.7634	70.4381	70.5186	72.2706	82.2868	75.2302	75.3147	75.2302	74.0003	74.5462	61.4327	61.3587	61.4327	61.3587	54.5260	54.6467
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	49.1543	47.1903	48.3808	48.4986	48.7076	53.6664	52.0568	51.3306	51.4250	51.3851	51.6270	51.9954	53.6578	47.2927	45.5862	45.5337	44.8458	42.1203	40.0407	40.8447	40.7926	46.3525	45.1588	47.2548
R073	835175.32	820822.66	835062.15	820684.25	18	0	1	39.8312	27.3051	27.0476	27.1335	27.1710	39.8762	39.5001	39.6518	39.6036	39.6518	45.6462	45.0106	39.6734	40.0275	40.0726	40.0275	44.8818	39.2909	39.4518	39.3943	39.4518	39.3943	45.2868	45.4075
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	105.6126	93.8679	98.0253	99.5316	104.6803	87.5425	104.0103	102.4016	104.6339	104.2070	103.1117	100.1625	102.9360	106.3351	101.0155	98.0181	91.5309	95.2778	101.3522	104.8684	104.2754	95.2471	101.1557	105.1644
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	60.0612	46.4090	46.0940	46.1998	45.3522	66.3939	67.0708	63.7473	63.6990	67.2337	64.1674	63.5723	67.6729	60.2791	60.3311	56.5435	54.7883	53.7502	51.4356	51.6703	51.4356	57.0702	57.6356	57.7393

Caline 4 input for 2050 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	34.2429	35.6681	35.4199	35.5037	37.1322	35.1536	35.9994	36.3012	35.6789	36.2215	35.0088	34.6205	35.0082	33.5776	33.4309	33.0230	31.4951	29.3766	27.0810	27.4792	28.5850	29.7988	30.9631	32.4364
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	46.1998	45.5034	54.5260	54.6467	54.7031	73.4928	71.1539	71.3163	71.2651	71.3163	71.3777	70.8431	73.1969	46.4090	46.4573	46.4090	46.0632	45.7131	46.2043	48.8770	46.2043	45.8146	48.9714	45.4602
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	32.9701	33.4702	33.9130	34.4947	34.7738	34.0840	34.1439	35.0852	34.2474	34.2271	34.3010	33.5100	33.3275	33.2835	32.5119	31.8588	31.4440	31.7306	30.8420	32.2132	32.4975	32.5168	32.0718	32.1960
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	163.7675	178.2091	160.1551	160.2555	182.8142	167.2635	172.2919	165.7741	168.4495	162.2361	164.8062	167.5707	170.9994	159.9614	152.3097	168.1970	168.0793	170.3564	163.0346	160.0056	163.8384	160.8715	167.6085	158.1096
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	32.1170	32.7350	33.2629	33.6574	33.0369	33.1154	32.7295	32.9491	32.9159	32.9132	32.6736	32.4099	32.1075	31.6174	31.1843	30.4835	29.5979	28.6047	28.0175	29.1328	29.3340	30.1776	30.7999	30.8300
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	83.3702	85.1309	89.5625	89.6943	89.7566	81.6301	79.3644	78.9746	79.8185	81.7812	80.0620	79.4269	81.3435	64.6277	59.2826	56.1747	54.6536	54.3755	51.7270	51.6703	52.5165	59.5258	60.5940	60.7051
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	71.2121	79.7060	79.3861	79.4948	79.5450	71.2644	71.0122	67.2337	67.1824	71.1850	68.1807	66.0134	70.9794	51.9083	45.0288	44.9859	44.2449	45.2627	42.2927	42.2417	42.2927	52.1052	55.7863	57.3812
R084	835334.32	820425.38	835123.33	820386.30	18	0	1	91.0415	79.3091	83.3809	84.2890	82.2426	94.1485	90.0648	91.1236	90.2122	90.2598	89.4788	88.8546	90.8101	81.8206	81.8812	78.9807	75.4814	70.0762	68.9874	75.6318	75.6148	78.7616	79.7579	79.8771
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	37.8604	38.4427	38.2130	38.2950	39.4329	38.9934	38.3322	39.2915	39.5104	38.6403	39.8616	39.7280	39.0730	35.5615	35.5105	34.8332	33.7465	32.5872	32.1316	32.6706	34.2468	33.3838	33.9296	34.0037
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	92.8303	93.4128	92.4441	92.5834	88.5416	93.3414	88.1320	84.7145	85.9229	104.5060	102.5783	101.5478	98.8172	89.3895	89.5659	83.9216	77.4793	63.7903	61.9628	66.7315	67.7177	71.2900	71.8201	72.7110
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	39.8167	40.0869	41.1186	41.2206	40.5171	43.1734	44.0858	44.0020	43.9555	42.6725	41.8385	42.7000	41.5587	39.1372	39.0532	40.9483	38.6773	37.1411	37.7224	38.2361	39.2032	39.1312	37.7863	38.6678
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	63.7585	62.8698	63.4488	62.5848	62.4685	66.2837	68.0453	68.6298	68.1051	66.0044	67.1053	66.3380	64.1816	63.8537	62.5750	62.5377	63.3654	61.6762	60.1704	60.5663	62.5670	62.1054	60.6284	61.5213
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	38.3425	40.0275	39.7314	39.8312	48.8314	37.2582	41.0690	41.2125	41.1683	44.5890	44.6475	44.1778	37.3303	38.5477	38.5960	38.5477	34.8247	35.0880	35.7595	35.7038	35.7595	35.1860	35.1860	38.4085
R090+R091	835479.99	820110.19	835462.39	820208.60	28	0	1	48.1634	48.8626	49.1897	49.4204	49.5889	50.2653	50.9730	51.4146	50.6764	50.1140	49.9617	49.1293	48.7501	48.3911	48.1529	47.5585	45.8154	45.2829	44.3254	44.6611	45.5734	45.0649	45.2974	45.5869
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	60.6979	57.5259	57.1164	58.8623	57.9163	62.9264	67.7634	67.6843	65.0701	63.6617	62.1053	60.6794	62.0109	61.2160	60.7202	58.2009	55.3438	50.5123	48.1193	50.6586	51.4756	52.4323	51.7603	52.7378
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	69.8146	65.5312	65.6074	66.3710	67.6492	73.3264	80.2212	85.1433	77.8119	74.9670	74.4879	70.9765	72.7148	73.8086	74.5007	70.2916	69.5933	70.2222	66.5332	64.7699	68.9824	67.1582	66.3906	67.2100
R093	835524.72	820220.82	835697.55	820258.15	16	0	1	69.8146	65.5312	65.6074	66.3710	67.6492	73.3264	80.2212	85.1433	77.8119	74.9670	74.4879	70.9765	72.7148	73.8086	74.5007	70.2916	69.5933	70.2222	66.5332	64.7699	68.9824	67.1582	66.3906	67.2100
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	42.0201	41.1424	41.7482	41.3202	41.8163	43.2156	45.8656	46.1331	44.9433	44.3606	42.5255	41.7502	41.9011	42.4747	43.2512	40.4710	40.5506	38.4220	37.1904	39.4370	41.1812	40.6369	40.3817	41.8662
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	65.6742	62.3150	64.5045	64.6472	64.1302	68.6605	72.2300	72.8631	72.3981	69.9473	69.0999	66.5088	68.1626	66.6771	67.6604	65.6389	63.4335	62.3070	59.3466	59.9025	60.5316	62.1304	61.3273	61.7297
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	41.5910	40.0693	43.7472	43.8545	43.9028	45.8832	46.9693	45.2616	45.8240	47.3680	43.7240	43.8616	44.8982	45.3218	43.6520	42.1766	40.7672	40.7509	39.5898	40.8522	39.5898	42.1072	43.2866	43.3932
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	86.2328	91.8106	94.1244	94.2557	96.8915	87.5322	91.7580	90.1692	93.2619	90.7352	86.0663	87.7852	82.2643	81.2380	79.3048	68.6458	65.1129	60.8967	57.5452	59.4734	62.0840	68.4292	70.6588	75.0152
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	61.8831	61.9732	60.9964	61.7337	62.5690	63.2311	69.6621	72.7582	69.8390	64.8905	63.7123	61.1860	61.6534	65.0851	63.8030	60.9989	59.6446	56.9590	54.3833	54.2978	54.4204	54.7762	52.9488	53.9762
R100	835820.57	820152.36	835812.79	820208.16	13	0	1	70.4758	71.8423	70.1161	70.2733	72.3247	77.7055	78.4167	82.1976	78.2601	78.4135	77.4817	73.1090	75.7455	72.8553	70.9989	67.3333	65.1952	63.7214	58.1368	58.2447	61.8368	64.0545	64.1925	65.0664
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	70.4758	71.8423	70.1161	70.2733	72.3247	77.7055	78.4167	82.1976	78.2601	78.4135	77.4817	73.1090	75.7455	72.8553	70.9989	67.3333	65.1952	63.7214	58.1368	58.2447	61.8368	64.0545	64.1925	65.0664
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	64.4412	38.9138	38.5517	38.6724	38.7288	86.4602	72.7422	72.9859	72.9836	75.3091	75.4003	74.6586	74.8477	78.9542	79.0401	69.0937	58.5076	56.8051	53.4816	68.4661	68.5465	77.0463	81.3408	81.5216
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	64.4412	38.9138	38.5517	38.6724	38.7288	86.4602	72.7422	72.9859	72.9836	75.3091	75.4003	74.6586	74.8477	78.9542	79.0401	69.0937	58.5076	56.8051	53.4816	68.4661	68.5465	77.0463	81.3408	81.5216
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R103+R104	836068.35	820219.28	836139.25	820234.91	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	35.1675	37.0847	37.6851	38.7158	36.6554	38.7368	41.7781	40.5887	39.2440	40.1928	39.6956	37.2393	38.3276	38.2989	38.7346	34.8204	34.6633	34.0764	32.8135	33.4890	32.4439	35.8809	34.7358	35.8833
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	26.4172	26.8244	26.5844	27.4637	27.4150	27.6218	27.8762	33.0311	32.5220	33.3420	31.9181	31.2336	30.7858	30.4420	29.9678	29.5603	28.8908	28.3169	28.5472	30.0940	28.1832	29.3142	29.5825	28.2338
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1	45.0080	27.3328	27.1052	27.1811	27.2132	41.7041	42.0799	40.2217	44.1955	49.2859	46.6805	49.1928	46.2920	39.3390	39.3809	39.1977	36.1058	35.9812	36.1127	36.0644	36.1127	39.1358	39.1358	39.2262
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	63.8141	55.4790	57.3061	59.8630	61.0540	76.2525	72.5972	72.2558	72.0745	73.3635	74.7270	75.5234	70.1956	67.8422	68.5553	57.0634	53.9187	50.9629	48.2717	68.8564	66.4993	78.8128	82.8060	83.2829
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	23.6316	23.5830	24.2655	23.7849	25.1437	27.3080	27.9515	33.6799	35.1843	33.1911	32.0335	30.7958	31.3470	31.2661	28.1716	27.4729	26.2497	25.9353	25.5781	26.2896	25.3387	25.6843	25.0618	23.9068
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	36.2891	33.9214	35.9832	35.0695	39.5484	35.1118	36.7911	42.2395	43.7864	47.5888	48.2598	49.2392	45.5693	43.0820	38.5140	36.8443	33.7611	34.4643	34.7713	34.3512	36.0338	35.9785	36.1569	35.5535
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	35.5314	32.7539	34.2639	36.8171	36.5508	37.0060	39.9374	38.9023	38.8780	35.8446	37.0756	34.2622	35.4825	33.7833	34.1965	36.6589	32.6379	31.5024	31.6316	32.4219	33.0007	32.5179	34.5825	34.7767
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	50.4985	43.6855	45.7837	45.8781	45.5249	50.5405	54.4449	53.1327	54.5430	48.1216	48.1355	47.4171	47.6739	45.4943	44.3226	46.8338	42.8292	39.1064	39.2266	40.1868	43.2568	44.3109	45.7046	50.0961
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	36.0750	18.5557	18.4302	18.4720	18.4849	36.7841	35.0128	35.1308	35.0954	36.8727	36.9236	39.4771	36.6152	34.3978	32.2661	35.5926	32.4325	29.4601	29.5774	29.5337	32.6760	35.3411	39.8128	42.3224
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	49.7010	50.4788	50.4239	49.0962	52.0802	53.7195	54.3469	54.2070	55.4803	51.6410	53.3135	51.8901	51.2071	50.1470	47.6349	49.2045	47.5059	42.5063	42.6321	43.5536	46.0011	48.0093	48.5532	52.3920
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	45.3071	35.1088	34.8513	34.9372	34.9747	57.9123	55.7733	55.9163	55.8716	61.9103	58.0572	65.8931	61.4627	61.9707	56.0165	55.9718	40.9028	41.2313	41.3761	41.3238	41.3761	55.6732	61.6407	61.7514
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	45.3071	35.1088	34.8513	34.9372	34.9747	57.9123	55.7733	55.9163	55.8716	61.9103	58.0572	65.8931	61.4627	61.9707	56.0165	55.9718	40.9028	41.2313	41.3761	41.3238	41.3761	55.6732	61.6407	61.7514
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	45.3071	35.1088	34.8513	34.9372	34.9747	57.9123	55.7733	55.9163	55.8716	61.9103	58.0572	65.8931	61.4627	61.9707	56.0165	55.9718	40.9028	41.2313	41.3761	41.3238	41.3761	55.6732	61.6407	61.7514
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	56.4272	50.7560	54.3345	54.4384	51.0310	56.4721	61.1679	59.3488	61.2738	56.9417	54.1899	56.0335	54.2612	52.7437	50.9215	51.6968	47.0597	42.7602	42.8866	44.1790	47.5057	48.9189	50.6063	57.5422
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	56.4272	50.7560	54.3345	54.4384	51.0310	56.4721	61.1679	59.3488	61.2738	56.9417	54.1899	56.0335	54.2612	52.7437	50.9215	51.6968	47.0597	42.7602	42.8866	44.1790	47.5057	48.9189	50.6063	57.5422
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	37.6995	39.2497	38.9948	39.0807	39.1182	61.5757	59.6969	56.5994	56.5571	61.5699	57.2422	61.2139	56.8570	56.0180	52.8542	54.8029	34.9718	35.3037	35.4238	37.3404	35.4238	46.2155	48.9500	45.9736
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	38.0997	41.6055	46.0940	46.1998	46.2481	60.4435	59.1204	56.5678	59.2224	60.6004	60.5929	59.9886	56.6084	57.0854	54.0556	56.6220	38.2453	35.3037	37.3863	37.3404	37.3863	46.2155	48.9500	49.0408
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	29.9878	31.0349	25.9964	25.9806	26.8589	31.0689	32.8103	34.5309	35.6511	32.9025	30.2540	29.4560	29.4342	29.4836	29.2042	30.3558	29.3838	27.9793	27.3403	32.0413	31.1031	30.9705	30.6727	31.9648
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	29.9878	31.0349	25.9964	25.9806	26.8589	31.0689	32.8103	34.5309	35.6511	32.9025	30.2540	29.4560	29.4342	29.4836	29.2042	30.3558	29.3838	27.9793	27.3403	32.0413	31.1031	30.9705	30.6727	31.9648
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	81.0997	72.4009	74.8902	75.0263	71.2340	86.8682	86.7127	86.2094	88.7126	88.0735	82.6206	86.3761	85.6804	81.6680	79.3161	75.4343	74.2151	71.1639	68.1667	72.6965	71.3589	71.5693	72.7799	71.3001
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	81.0997	72.4009	74.8902	75.0263	71.2340	86.8682	86.7127	86.2094	88.7126	88.0735	82.6206	86.3761	85.6804	81.6680	79.3161	75.4343	74.2151	71.1639	68.1667	72.6965	71.3589	71.5693	72.7799	71.3001
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	81.0997	72.4009	74.8902	75.0263	71.2340	86.8682	86.7127	86.2094	88.7126	88.0735	82.6206	86.3761	85.6804	81.6680	79.3161	75.4343	74.2151	71.1639	68.1667	72.6965	71.3589	71.5693	72.7799	71.3001
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	81.0997	72.4009	74.8902	75.0263	71.2340	86.8682	86.7127	86.2094	88.7126	88.0735	82.6206	86.3761	85.6804	81.6680	79.3161	75.4343	74.2151	71.1639	68.1667	72.6965	71.3589	71.5693	72.7799	71.3001
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	58.8777	4.0877	4.0394	4.0555	4.0555	58.9340	40.6036	40.7217	40.6841	52.9383	59.1111	52.7363	52.8454	35.5296	35.5618	40.7699	40.4588	40.4373	40.5661	40.5178	40.5661	40.5178	40.5178	40.6036
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	58.8777	4.0877	4.0394	4.0555	4.0555	58.9340	40.6036	40.7217	40.6841	52.9383	59.1111	52.7363	52.8454	35.5296	35.5618	40.7699	40.4588	40.4373	40.5661	40.5178	40.5661	40.5178	40.5178	40.6036
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	58.8777	4.0877	4.0394	4.0555	4.0555	58.9340	40.6036	40.7217	40.6841	52.9383	59.1111	52.7363	52.8454	35.5296	35.5618	40.7699	40.4588	40.4373	40.5661	40.5178	40.5661	40.5178	40.5178	40.6036
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	58.8777	4.0877	4.0394	4.0555	4.0555	58.9340	40.6036	40.7217	40.6841	52.9383	59.1111	52.7363	52.8454	35.5296	35.5618	40.7699	40.4588	40.4373	40.5661	40.5178	40.5661	40.5178	40.5178	40.6036
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	58.8777	4.0877	4.0394	4.0555	4.0555	58.9340	40.6036	40.7217	40.6841	52.9383	59.1111	52.7363	52.8454	35.5296	35.5618	40.7699	40.4588	40.4373	40.5661	40.5178	40.5661	40.5178	40.5178	40.6036
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	58.8777	4.0877	4.0394	4.0555	4.0555	58.9340	40.6036	40.7217	40.6841	52.9383	59.1111	52.7363	52.8454	35.5296	35.5618	40.7699	40.4588	40.4373	40.5661	40.5178	40.5661	40.5178	40.5178	40.6036
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	59.1265	51.1727	50.8991	50.9908	55.8180	72.7904	73.3618	71.1820	71.1405	83.0130	81.5771	79.5091	81.8394	76.5570	77.9833	75.1337	72.8987	57.0771	59.2626	73.9859	75.3279	90.0535	93.4725	92.4953
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	45.3071	54.8841	70.0573	48.4315	7.9485	54.7031	54.6467	54.8198	54.7634	54.8198	53.6419	52.9359	53.0614	75.1150	70.3725	70.3197	69.6199	65.7367	62.2768	80.6229	80.6797	84.4244	80.1252	73.0058
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	33.8686	40.0275	39.7314	48.7751	39.8762	33.9061	43.6424	42.5972	45.9114	45.9609	49.5113	45.5487	41.8616	43.9253	47.7472	43.9253	43.3460	41.9631	42.1130	46.1838	46.8715	43.0659	45.6926	45.0111
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	55.8395	57.2856	62.2225	60.5525	62.3714	65.1180	71.0279	70.9726	85.9586	83.5484	82.3311	82.2281	73.3322	90.0944	96.9819	91.3219	90.5872	87.8346	88.0520	124.6580	110.0056	107.7610	114.2824	123.2420
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	66.8917	39.2497	38.9948	39.0807	45.3522	64.9275	62.3251	59.2647	58.0990	67.1008	65.1843	64.6306	66.5877	68.2875	70.1234	60.9879	61.8931	59.3220	61.4894	78.2119	73.2426	61.4382	61.4382	61.5333
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	23.1968	23.1278	19.3201	22.6499	22.6756	27.1335	19.0957	26.7247	27.5759	25.2934	25.3282	24.3195	25.2832	26.4102	26.5394	27.2745	27.1824	27.0497	26.4768	31.6990	32.3634	29.5535	29.4438	31.4304
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	60.8620	7.9807	7.9324	7.9485	7.9485	60.9183	43.2242	43.3422	43.3047	50.4177	50.4724	43.1287	50.2899	34.5380	34.5662	43.3905	43.0375	43.0579	43.1866	43.1384	43.1866	43.1384	43.1384	43.2242
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	64.3099	39.2497	38.9948	39.0807	39.1182	68.6937	65.3516	62.3110	63.6790	68.7550	65.1327	66.1927	66.4886	68.5741	68.6229	56.1788	57.8359	56.5529	59.2626	69.8053	69.8597	62.0579	65.2418	65.3516
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	23.5929	25.8480	27.0369	25.2345	19.3952	24.4127	25.3093	33.3148	35.5859	34.5960	34.6851	34.2718	35.1040	35.0833	34.9051	34.9123	34.8982	34.8186	35.3177	32.6371	32.8078	31.6393	30.5567	30.3373
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	23.5929	25.8480	27.0369	25.2345	19.3952	24.4127	25.3093	33.3148	35.5859	34.5960	34.6851	34.2718	35.1040	35.0833	34.9051	34.9123	34.8982	34.8186	35.3177	32.6371	32.8078	31.6393	30.5567	30.3373

Caline 4 input for 2050 Q1

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
R001	835620.80	820845.25	835496.74	820838.92	14	3	4	1.8842	1.7271	1.4043	1.5250	1.6341	1.4806	2.0756	2.3469	2.5006	2.5438	2.5003	2.4648	2.4234	2.3652	2.5646	2.5113	2.4914	2.3190	2.2299	2.3294	2.4448	2.4208	2.4808	1.9491
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	1.8842	1.7271	1.4043	1.5250	1.6341	1.4806	2.0756	2.3469	2.5006	2.5438	2.5003	2.4648	2.4234	2.3652	2.5646	2.5113	2.4914	2.3190	2.2299	2.3294	2.4448	2.4208	2.4808	1.9491
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	1.8842	1.7271	1.4043	1.5250	1.6341	1.4806	2.0756	2.3469	2.5006	2.5438	2.5003	2.4648	2.4234	2.3652	2.5646	2.5113	2.4914	2.3190	2.2299	2.3294	2.4448	2.4208	2.4808	1.9491
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	1.8842	1.7271	1.4043	1.5250	1.6341	1.4806	2.0756	2.3469	2.5006	2.5438	2.5003	2.4648	2.4234	2.3652	2.5646	2.5113	2.4914	2.3190	2.2299	2.3294	2.4448	2.4208	2.4808	1.9491
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	1.8842	1.7271	1.4043	1.5250	1.6341	1.4806	2.0756	2.3469	2.5006	2.5438	2.5003	2.4648	2.4234	2.3652	2.5646	2.5113	2.4914	2.3190	2.2299	2.3294	2.4448	2.4208	2.4808	1.9491
R001	835226.82	820916.25	835124.41	821000.69	14	3	4	1.8842	1.7271	1.4043	1.5250	1.6341	1.4806	2.0756	2.3469	2.5006	2.5438	2.5003	2.4648	2.4234	2.3652	2.5646	2.5113	2.4914	2.3190	2.2299	2.3294	2.4448	2.4208	2.4808	1.9491
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	2.8839	3.0935	3.3557	3.7612	3.9745	3.8986	3.6147	4.5704	4.9785	4.6549	4.7058	4.6550	4.5101	4.3510	4.0404	3.8940	3.7709	3.6695	3.3947	3.9440	3.8975	4.0011	3.8928	3.5642
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	2.5244	2.5102	2.4318	2.4571	2.5808	2.6033	2.8195	3.4149	3.5053	3.4937	3.3963	3.1616	3.0326	3.0322	2.9737	2.8086	2.5523	2.3993	2.1803	2.1786	2.1798	2.2352	2.2941	2.2356
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	2.9845	3.2329	2.5507	2.7787	2.8288	2.7568	3.5705	4.3227	4.4298	4.4624	4.3370	4.1456	4.1082	3.9953	3.5281	3.4209	3.0611	2.8677	2.4729	2.8530	2.9011	2.9862	3.3757	2.8008
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	2.9845	3.2329	2.5507	2.7787	2.8288	2.7568	3.5705	4.3227	4.4298	4.4624	4.3370	4.1456	4.1082	3.9953	3.5281	3.4209	3.0611	2.8677	2.4729	2.8530	2.9011	2.9862	3.3757	2.8008
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	2.4876	2.3801	2.5968	2.2780	2.4594	2.5497	2.8759	4.1696	4.4529	4.1782	4.0690	3.8865	3.7358	3.5932	3.4624	3.2302	2.9963	2.8173	2.6304	2.9849	2.8340	2.8975	3.0043	2.8189
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1	2.4876	2.3801	2.5968	2.2780	2.4594	2.5497	2.8759	4.1696	4.4529	4.1782	4.0690	3.8865	3.7358	3.5932	3.4624	3.2302	2.9963	2.8173	2.6304	2.9849	2.8340	2.8975	3.0043	2.8189
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	1.6520	1.8286	1.7764	1.8423	1.9621	2.0646	2.1877	2.9766	3.2153	3.1747	3.0677	2.9876	2.8835	2.7691	2.6608	2.4210	2.3200	2.0534	1.8346	2.3385	2.1166	2.2485	2.3104	2.3746
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	1.6520	1.8286	1.7764	1.8423	1.9621	2.0646	2.1877	2.9766	3.2153	3.1747	3.0677	2.9876	2.8835	2.7691	2.6608	2.4210	2.3200	2.0534	1.8346	2.3385	2.1166	2.2485	2.3104	2.3746
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	1.6520	1.8286	1.7764	1.8423	1.9621	2.0646	2.1877	2.9766	3.2153	3.1747	3.0677	2.9876	2.8835	2.7691	2.6608	2.4210	2.3200	2.0534	1.8346	2.3385	2.1166	2.2485	2.3104	2.3746
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	1.6520	1.8286	1.7764	1.8423	1.9621	2.0646	2.1877	2.9766	3.2153	3.1747	3.0677	2.9876	2.8835	2.7691	2.6608	2.4210	2.3200	2.0534	1.8346	2.3385	2.1166	2.2485	2.3104	2.3746
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	1.6520	1.8286	1.7764	1.8423	1.9621	2.0646	2.1877	2.9766	3.2153	3.1747	3.0677	2.9876	2.8835	2.7691	2.6608	2.4210	2.3200	2.0534	1.8346	2.3385	2.1166	2.2485	2.3104	2.3746
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	1.6520	1.8286	1.7764	1.8423	1.9621	2.0646	2.1877	2.9766	3.2153	3.1747	3.0677	2.9876	2.8835	2.7691	2.6608	2.4210	2.3200	2.0534	1.8346	2.3385	2.1166	2.2485	2.3104	2.3746
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	4.2027	4.2371	4.3116	4.8469	4.7401	4.8264	4.8809	5.5977	6.1264	6.0991	5.9334	5.7400	5.5072	5.2762	4.9982	4.7195	4.5446	4.0062	3.7332	3.8910	3.9620	3.9336	3.8765	3.6438
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	0.2092	0.2092	0.2092	0.2092	0.2092	0.2092	3.3313	5.2679	5.4529	5.2679	5.2733	5.2545	5.0244	5.0340	5.0405	1.7743	0.2092	0.2092	0.2092	0.2092	0.2092	0.2092	0.2092	0.2092
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	3.8018	3.8307	4.1158	4.0440	4.3731	4.0825	4.3490	5.0764	5.4882	5.5974	5.3236	5.2660	5.1118	4.9194	4.7690	4.3769	4.2441	3.8357	3.4668	3.7403	4.0707	4.1966	4.1663	4.1385
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	5.0147	1.7743	2.2853	2.2906	2.2906	2.2906	6.6084	5.7445	6.6955	6.0518	5.7510	5.6886	5.7013	5.0413	5.0473	5.0413	4.2734	2.6653	2.4979	3.3188	2.8794	3.1177	4.6148	3.4150
R013	836078.87	820683.70	835961.87	820661.84	27	0	1	2.7941	3.0920	2.9569	3.0859	2.7815	3.1850	3.2111	3.7873	4.1607	4.2331	4.1360	4.0251	3.8014	3.7270	3.5885	3.4434	3.1807	2.9473	2.7095	3.0959	2.9013	2.9244	3.0089	2.8672
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	2.7941	3.0920	2.9569	3.0859	2.7815	3.1850	3.2111	3.7873	4.1607	4.2331	4.1360	4.0251	3.8014	3.7270	3.5885	3.4434	3.1807	2.9473	2.7095	3.0959	2.9013	2.9244	3.0089	2.8672
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	4.9651	6.2277	6.4760	6.4875	7.0628	6.8510	6.2314	6.0106	6.0212	7.4151	7.4322	7.1205	7.2670	6.1644	6.3061	5.7508	5.8976	3.8200	4.0457	6.9975	6.8898	7.4532	7.4772	7.7572
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	7.3007	7.9286	7.9025	7.9105	7.9165	7.9165	6.6107	6.6220	6.2401	7.3624	7.3681	7.3327	8.1377	6.2460	6.2489	7.3186	9.3803	1.4114	1.4114	1.4114	1.4114	12.5927	16.6567	12.6048
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	2.1964	1.8507	2.0136	2.0168	2.0200	6.0874	5.4426	5.1161	4.7800	5.7759	5.6596	5.4562	5.6746	4.1712	4.3546	4.4468	4.5357	1.9121	1.6443	1.6430	1.6443	1.5781	1.6851	1.6866
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	4.0388	4.8522	5.0959	5.1063	4.5770	6.7543	6.8517	6.9745	6.9841	9.2006	9.2483	8.7603	8.7607	6.5055	6.1629	5.5891	4.7890	2.2565	1.5375	1.5874	2.0983	2.7224	2.2879	3.4762
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	4.0388	4.8522	5.0959	5.1063	4.5770	6.7543	6.8517	6.9745	6.9841	9.2006	9.2483	8.7603	8.7607	6.5055	6.1629	5.5891	4.7890	2.2565	1.5375	1.5874	2.0983	2.7224	2.2879	3.4762
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	1.6635	2.0233	2.0136	2.0168	2.4249	8.1803	6.0830	6.0933	5.7873	9.0996	9.1045	8.0487	9.3027	5.7213	5.3145	4.9613	4.6308	1.5743	1.4939	1.5768	1.4939	1.5768	1.6069	1.6083
R019	835520.16	820540.46	835514.63	820570.32	11	0	1	1.6635	2.0233	2.0136	2.0168	2.4249	8.1803	6.0830	6.0933	5.7873	9.0996	9.1045	8.0487	9.3027	5.7213	5.3145	4.9613	4.6308	1.5743	1.4939	1.5768	1.4939	1.5768	1.6069	1.6083
R020	835568.73	820565.58	835478.35	820470.77	11	0	1	2.5092	1.3610	1.3541	1.5476	1.5503	2.7227	2.8126	2.6347	2.4432	2.7781	2.6626	2.6801	2.6530	2.7120	2.7150	1.9057	1.8198	1.7616	1.7666	1.8269	1.8289	1.8899	1.9160	1.9142
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	12.2913	16.0189	16.6261	16.6955	16.7321	14.7643	16.0925	15.6606	14.8592	18.1601	17.5904	17.0829	15.8548	15.9029	15.3544	12.8722	12.1029	9.0132	8.7054	9.0733	8.8483	9.9984	10.7359	10.9825
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	10.3541	10.4316	10.7245	10.6283	10.9991	10.8981	11.0935	11.6619	11.6682	11.4336	11.1166	10.9973	10.6860	10.4650	10.6950	10.5139	10.2744	9.9545	9.8396	10.3904	10.3091	10.4548	10.6346	10.8378
R023	835346.26	820830.29	835376.00	820680.43	16	0	1	9.0756	9.3830	9.5249	9.5441	9.8688	9.9222	10.1554	10.5931	10.4627	10.1857	10.0996	9.8401	9.7244	9.3516	9.3927	8.8268	8.4984	7.9763	7.4299	7.9308	8.1782	8.1645	8.6453	8.9859
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	9.4254	9.8108	9.8915	10.2461	10.3333	10.7390	11.3380	12.7209	13.4613	13.7868	13.4948	13.6479	12.6619	11.9103	10.0600	10.7134	8.3876	7.8600	8.0275	8.3368	8.2108	8.1961	8.4042	8.4297
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	4.8852	1.9242	1.9141	1.9161	2.0897	8.1754	6.9589	6.9707	6.2680	7.5296	7.0581	6.7597	6.9150	6.1487	6.0573	4.9381	4.8352	3.5300	3.4783	3.6054	3.4080	5.1128	5.5423	5.6770
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	6.7695	6.9904	7.3500	7.9468	7.8957	6.9862	8.5396	8.9512	12.2460	13.4579	13.0404	12.2145	11.8573	10.5364	9.7134	9.4820	7.5830	6.3218	5.9099	5.9837	6.1328	4.6665	4.8800	4.4063
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	21.2969	18.8671	20.0665	20.0792	22.6802	23.7172	22.9813	21.9509	23.3804	27.1659	26.0953	27.3921	26.1264	22.1174	20.5664	20.9216	19.2731	17.4179	16.0045	17.3947	17.6590	19.1056	18.9250	19.3202
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	4.1810	1.2120	1.2968	1.1581	1.2663	4.4351	3.7279	3.5748	3.4298	4.1271	4.0279	3.7858	4.0196	4.2584	4.3820	3.1619	3.0207	3.0194	3.1218	3.1571	3.1218	3.1350	3.4294	3.5840
R029	835524.13	820833.07	835569.38	820594.78	18	0	1	9.0363	10.6755	11.0419	11.2439	11.9733	12.5925	11.4810	11.7599	12.6761	18.7528	18.0501	17.2119	17.9360	12.7894	11.7695	10.9347	9.3030	4.0891	2.9518	3.5670	4.4031	7.9490	9.1655	9.3666
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	0.8047	0.2092	0.2092	0.2092	0.2092	2.2209	1.8153	1.8218	1.8218	1.4424	1.4424	1.4283	1.6093	1.6185	1.8561	1.8218	0.6478	0.8047	0.8047	0.8047	0.8047	0.8047	0.8047	0.8047
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	2.0553	2.2485	2.1670	2.2759	2.2765	2.2889	3.4556	3.6116	3.7990	3.7814	3.3582	3.0540	2.8265	2.5389	2.3802	2.2824	1.6612	1.2299	1.2064	1.0476	1.4165	1.5562	1.5583	1.8823
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	5.8180	6.2760	7.0155	6.7092	6.7669	6.2591	7.7479	7.5877	9.0748	9.1749	8.8690	8.5111	7.4233	7.3342	7.3271	6.7629	6.2503	5.3264	5.3400	5.9136	6.3220	5.9964	6.3584	5.4689
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	6.0281	5.9739	5.9401	5.9529	6.5947	9.0436	8.9634	8.5518	8.9801	10.4952	10.0379	9.9984	10.6868	8.0940	7.4794	7.7258	6.6333	3.3133	1.7267	2.9527	3.9900	5.1252	5.1252	6.9822
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	3.4296	3.5759	3.7856	3.8900	4.0632	3.8191	4.7478	5.0956	6.1432	6.1496	5.4084	5.3505	4.9624	4.7920	5.0928	4.3764	3.6055	2.8170	2.3463	2.8709	3.4885	3.8220	4.0827	4.6840
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1	6.4843	7.1315	7.2733	7.2837	7.6662	8.8362	8.6316	8.3635	8.3009	10.9110	10.4751	10.3828	10.9759	7.5856	7.9266	7.9381	7.5615	2.6407	2.4402	2.5024	3.1159	3.2051	3.3092	4.1136
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	8.3312	8.3207	8.9064	8.9925	9.1759	9.2874	9.5815	10.1232	10.4544	10.6071	10.2195	9.8678	9.6226	9.3921	8.9539	8.4545	8.0748	7.3885	6.6727	7.7022	7.9364	8.0985	8.2362	8.5525
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	8.3312	8.3207	8.9064	8.9925	9.1759	9.2874	9.5815	10.1232	10.4544	10.6071	10.2195	9.8678	9.6226	9.3921	8.9539	8.4545	8.0748	7.3885	6.6727	7.7022	7.9364	8.0985	8.2362	8.5525
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	15.1852	15.3489	15.6819	16.0381	17.7430	17.0397	16.8342	17.1552	16.7768	16.4747	16.0859	15.6495	15.6039	15.1058	14.8119	14.4115	14.2971	13.9042	13.9925	15.4860	15.1925	15.4471	15.5117	15.6485
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	3.0296	3.2963	3.7921	2.9379	3.1620	3.2210	3.7917	4.0337	4.1912	4.0865	3.8734	3.8902	3.6629	3.7492	3.6013	3.5751	3.1664	3.0572	2.7946	3.3549	3.1352	3.2525	3.3310	3.0902
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	6.6555	6.5866	6.7876	5.9980	6.3936	7.3201	7.2344	7.0609	6.9481	8.5118	8.7714	8.5587	8.3712	6.5832	7.0084	7.0126	6.3648	5.2387	5.2047	4.9069	5.6584	6.6331	6.4403	6.6919
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	2.0844	2.4289	2.4168	2.4208	2.4249	9.4769	7.3457	7.3583	6.2770	7.8482	7.5338	7.1107	7.5168	5.1981	5.2013	5.3952	5.1659	1.8405	1.8446	1.8432	1.8446	1.9296	1.9296	2.1013
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	6.4283	6.4623	6.6908	6.7033	7.1894	7.9922	7.0162	7.1642	7.2191	10.4024	10.8605	11.1665	10.3599	8.3970	8.9795	7.1377	6.2865	4.2561	3.4116	5.1875	5.2914	6.6339	7.2365	7.3969
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	22.0170	18.9482	20.4256	20.4403	22.2625	22.1461	19.7080	18.6482	18.3462	21.3939	20.6085	21.0130	21.3560	21.4849	19.1209	22.5558	20.5783	20.8983	22.8336	24.4328	23.6423	22.7718	26.0592	22.5818
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	3.2509	3.6854	3.6736	4.1211	1.7293	2.6418	3.1793	3.9961	3.8106	4.1088	4.2293	4.5535	4.3283	4.7683	4.6263	3.4607	3.4683	3.0270	3.3435	3.1508	2.6687	3.4264	3.4264	4.4954
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	6.7389	6.7119	6.4491	7.2854	7.6598	7.1687	7.9299	7.9701	8.0214	7.7090	7.8732	7.8205	7.7162	7.6210	7.3495	6.8645	6.4333	6.1427	5.8642	6.7504	6.8286	7.0996	7.2678	7.2807
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	15.9192	17.6398	13.5040	13.5281	12.1487	9.3385	7.9788	7.3145	7.6825	12.4358	16.7479	18.4528	17.6777	21.3720	20.3323	19.7182	20.5236	21.1637	21.9270	32.7198	32.6541	30.8523	29.5793	28.8696
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	2.2169	1.1104	1.1024	1.1024	0.2092	2.2209	2.2169	2.2249	2.2249	2.2249	2.2012	2.1815	2.1905	2.2012	2.2048	1.6677	1.6456	1.4949	1.4985	1.4967	1.4985	1.6093	1.6093	1.8454
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	7.4221	7.9991	7.5530	8.0325	8.5014	8.4113	9.2448	9.8041	10.7599	10.7751	10.3275	10.2223	9.4357	9.3164	8.2501	7.5864	6.7542	6.0975	5.9956	6.2055	6.7278	6.5980	6.9965	6.7605
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	3.4909	3.9011	3.9590	4.1029	4.2931	4.3943	4.8561	4.8292	5.1279	6.6636	6.4952	6.5521	6.1977	6.4943	6.0077	5.2890	4.8214	3.6484	3.2023	3.4323	3.7938	4.3389	4.6011	4.9936
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	3.4909	3.9011	3.9590	4.1029	4.2931	4.3943	4.8561	4.8292	5.1279	6.6636	6.4952	6.5521	6.1977	6.4943	6.0077	5.2890	4.8214	3.6484	3.2023	3.4323	3.7938	4.3389	4.6011	4.9936
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	3.4909	3.9011	3.9590	4.1029	4.2931	4.3943	4.8561	4.8292	5.1279	6.6636	6.4952	6.5521	6.1977	6.4943	6.0077	5.2890	4.8214	3.6484	3.2023	3.4323	3.7938	4.3389	4.6011	4.9936
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	3.4909	3.9011	3.9590	4.1029	4.2931	4.3943	4.8561	4.8292	5.1279	6.6636	6.4952	6.5521	6.1977	6.4943	6.0077	5.2890	4.8214	3.6484	3.2023	3.4323	3.7938	4.3389	4.6011	4.9936
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	2.8300	2.6218	2.7505	2.7875	3.0292	2.8427	3.5343	4.7225	4.6907	4.2281	4.1575	3.8727	3.7629	3.5952	3.2593	2.9363	2.7393	2.5876	2.4259	2.0568	2.0847	2.3307	2.3511	2.3197
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	2.8300	2.6218	2.7505	2.7875	3.0292	2.8427	3.5343	4.7225	4.6907	4.2281	4.1575	3.8727	3.7629	3.5952	3.2593	2.9363	2.7393	2.5876	2.4259	2.0568	2.0847	2.3307	2.3511	2.3197
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	33.8870	36.1987	40.5528	45.6869	45.4898	36.9152	35.2624	36.0089	35.9947	34.0666	32.1061	32.0342	31.1238	19.0138	19.0232	17.5820	13.9292	11.4670	5.1413	11.4774	13.0205	27.4117	29.8721	32.3646
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	3.9407	4.1623	4.3568	4.6093	4.8904	5.9479	5.5777	5.6414	5.7426	5.4808	5.2575	5.7883	5.5343	3.1839	2.6640	2.9214	2.6620	2.4255	2.2463	2.2911	2.2876	2.3539	2.0718	2.1265
R057	835305.88	820665.23	835365.16	820674.55	12	0	1	4.5909	5.6442	5.8115	5.7621	5.3604	6.2948	6.2658	6.0161	6.0723	8.5427	7.9963	8.3972	8.2417	5.8923	6.0251	5.7155	5.5348	3.2787	3.2598	4.7705	4.8301	5.3873	5.3844	5.6049
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	18.0120	17.8147	17.9480	17.7203	17.8826	17.4077	18.1526	18.1949	17.9334	18.1444	17.9637	17.9979	17.8327	17.5177	17.4821	17.4008	18.1659	18.2108	18.8789	18.2826	19.1804	18.5775	18.7832	18.1675
R059	835395.59	820548.47	835232.17	820516.97	16	0	1	3.3030	3.4582	3.5891	3.6254	3.8079	3.5818	3.7745	3.8679	3.7390	3.7696	3.6369	3.3574	3.3121	2.9394	2.8482	2.7837	2.6707	2.4918	2.1961	3.0484	3.2348	3.3644	3.5636	3.5942
R060	835740.08	820393.81	835672.32	820380.93	13	0	1	44.0897	39.1234	43.8280	46.4062	46.4251	47.4221	44.6884	48.0811	45.8561	43.5320	45.8286	42.2790	40.2631	40.3426	34.6084	35.2573	31.6451	30.2770	27.7065	29.5423	28.9824	30.7256	30.8396	31.5324
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1	5.4364	5.5837	5.6548	5.8004	5.7227	5.2078	5.5950	5.6621	5.5899	5.0509	5.3078	5.0372	5.1088	4.6565	4.4385	4.4654	4.3831	4.0445	3.6911	6.1095	6.4491	6.7180	6.8309	6.8796
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	5.4364	5.5837	5.6548	5.8004	5.7227	5.2078	5.5950	5.6621	5.5899	5.0509	5.3078	5.0372	5.1088	4.6565	4.4385	4.4654	4.3831	4.0445	3.6911	6.1095	6.4491	6.7180	6.8309	6.8796
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1	6.8193	7.3725	7.6920	7.5740	7.7945	9.5325	9.4479	9.4529	9.2896	10.1842	9.9648	10.1963	10.4786	8.0399	8.2988	7.0615	6.2709	3.6015	1.7625	4.7124	7.7829	10.0745	12.1423	13.9582
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	5.6090	1.8507	1.8415	1.8438	1.8484	8.5853	7.2109	6.8635	8.5899	8.0461	7.2712	7.2441	6.8528	7.2712	7.7046	5.0622	5.2816	5.5288	4.1617	4.3810	4.1617	6.6446	7.0119	7.7651
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	5.7648	5.8269	5.8624	5.9030	5.9497	5.6825	6.0132	6.1175	6.0934	5.9225	5.7200	5.7291	5.4803	5.2844	5.3809	5.2592	5.4265	5.1846	4.9659	6.4718	6.7903	6.7113	6.8011	6.8744
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	10.0414	10.2574	9.9989	10.1561	9.9460	9.7451	9.9210	10.1289	9.9341	10.2500	9.8958	9.8478	9.5413	9.8565	10.0041	9.8489	10.2104	10.2514	10.3769	11.2333	11.3926	11.4266	11.3203	11.4266
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	10.7572	10.7106	11.1355	10.7340	10.4477	10.5258	10.3974	10.2421	10.3386	10.3215	10.6076	10.6501	10.6377	10.4095	10.9039	10.9060	11.0350	11.2868	11.7204	12.2018	12.3207	12.2807	12.2999	12.2241
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	12.1853	16.0312	17.5396	15.9976	18.8010	18.0751	16.7095	16.1051	16.7275	17.8008	18.6019	19.4207	19.0048	5.6227	5.6264	6.0578	5.5939	5.3711	4.8841	4.8811	4.6204	13.0330	14.1080	14.1211
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	21.6854	2.6628	2.6499	2.4208	2.4249	23.2192	18.5663	18.5911	18.5849	18.5911	18.6010	18.5537	21.6960	23.2498	23.2595	23.2498	18.5376	23.3720	18.2164	29.4236	29.1734	30.4681	30.8080	32.2715
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	3.0942	1.4194	1.4114	0.4007	0.4007	3.0996	2.4208	2.4289	2.4289	3.1050	3.1050	2.9816	3.6303	2.9383	2.9423	2.9383	2.9028	2.9181	2.4211	2.4179	2.4211	2.4179	2.4168	2.4208
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	5.6142	5.4479	5.6017	5.6120	5.4840	7.5091	6.6660	6.3280	6.5799	6.3610	6.6685	6.7521	7.1681	4.4277	4.3787	4.3740	4.0605	3.6703	2.7817	3.2605	3.1186	5.4178	5.5000	6.2358
R073	835175.32	820822.66	835062.15	820684.25	18	0	1	1.8153	0.8100	0.8047	0.8047	0.8100	1.8186	1.6116	1.6185	1.6185	1.6185	1.8534	1.8346	1.8153	1.8218	1.8250	1.8218	1.8320	1.6070	1.6116	1.6093	1.6116	1.6093	1.8427	1.8454
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	19.9315	16.4173	17.8809	18.6453	19.6678	14.3319	19.4226	18.7033	19.1340	19.4512	18.4125	18.4699	19.0023	20.5038	18.5335	17.5505	15.6304	16.3409	17.8914	19.1555	18.9594	16.3968	18.6626	20.0959
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	5.6090	1.8507	1.8415	1.8438	2.0200	9.0581	7.9359	7.5040	7.5021	7.9479	8.0514	8.0244	8.5804	5.6227	5.6264	5.2497	4.7441	4.0821	3.6954	3.9106	3.6954	5.8759	6.6446	6.6500

Caline 4 input for 2050 Q1

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820248.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820384.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820208.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820258.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820208.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820234.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1
R108	836203.37	820871.38	836210.57	820716.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820994.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820594.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820578.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	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
5.4327	6.1900	6.1528	6.1638	6.6049	5.6796	5.8963	5.9619	5.8411	6.0594	5.4557	5.6007	5.6804	5.0527	4.9174	4.9548	4.4769	3.5938	3.0154	3.0638	3.4019	3.9048	4.2463	4.7337
1.8438	2.0233	2.4168	2.4208	2.4249	11.8791	10.3371	10.3517	10.3488	10.3517	10.3576	10.3286	11.8759	1.8507	1.8530	1.8507	1.7331	1.7298	1.6906	1.7815	1.6906	1.7323	1.8432	1.7921
5.1566	5.3146	5.5615	5.6887	5.7694	5.4125	5.4337	5.5959	5.4903	5.4857	5.5204	5.3556	5.2495	5.1702	4.9858	4.8321	4.7655	4.8082	4.5907	5.1496	5.2652	5.3932	5.5373	5.5937
41.5654	46.4985	40.8830	40.8968	48.0607	42.7825	43.7738	41.8442	42.7591	40.7049	41.7600	42.7982	43.9528	39.8642	37.4942	42.6226	42.6109	43.4700	41.1261	40.1902	41.1725	40.2403	42.6031	39.5804
4.5748	4.9482	5.0639	5.1765	5.0059	4.8243	4.7049	4.7485	4.7681	4.7267	4.6532	4.6859	4.5553	4.1860	4.0184	3.8926	3.6867	3.2966	3.1111	3.5754	3.6160	3.9118	4.1133	4.1995
13.3859	14.6760	15.5249	15.5390	15.5470	12.5965	11.7044	11.0146	11.4442	12.0773	11.4410	11.4092	12.5946	6.8256	4.7246	4.6228	4.2767	4.0214	3.9129	3.9106	3.8710	5.9006	6.3282	6.3343
9.7742	13.4770	13.4388	13.4509	13.4569	9.7796	8.4382	7.9479	7.9459	8.4511	8.5979	9.0447	9.7771	2.3430	1.8856	1.8838	1.8645	1.7877	1.6761	1.6748	1.6761	5.1727	5.5703	6.4086
16.2661	11.4564	12.1162	12.6959	13.1482	16.2099	14.7723	14.1417	14.4342	14.7941	14.4628	14.4278	15.6487	12.6139	12.6210	12.1441	11.1803	9.7454	9.2455	11.7612	11.1353	11.9406	13.1287	13.1413
6.2021	6.4619	6.5393	6.5525	6.7567	6.5467	6.1918	6.4386	6.7023	6.3642	6.6279	6.7838	6.6460	5.1548	5.0231	5.0965	4.8815	4.5325	4.4610	4.5419	4.9030	4.6920	5.0530	5.0634
14.9950	15.5916	15.9275	15.9444	14.7554	16.3402	14.0044	12.7860	13.3334	21.0862	20.4799	20.0069	19.1724	16.6480	16.8013	15.1221	11.8211	7.3504	6.3051	8.0080	7.7884	9.3660	10.0672	10.1936
2.9479	3.4986	3.5990	3.6055	3.2187	4.4485	4.5595	4.3579	4.3520	4.1275	3.9401	3.9667	4.0273	2.8929	2.9434	3.0917	2.8573	2.1036	2.0258	2.0934	2.4061	2.4980	2.5334	2.9168
12.8621	12.8140	13.1081	12.7894	12.5918	13.4259	13.7241	13.8425	13.7046	13.2789	13.4890	13.3936	12.8624	12.7408	12.4872	12.5238	12.6318	12.1611	11.8299	11.9357	12.3176	12.2958	12.0036	12.1861
1.5993	1.8218	1.8121	1.8153	2.2209	3.6029	3.1382	3.1476	3.1463	3.4147	3.4191	3.3972	3.0996	1.6073	1.6093	1.6073	1.3709	1.3782	1.3395	1.3382	1.3395	1.3811	1.3811	1.4999
9.4607	9.7090	9.7817	9.8186	9.8954	9.9782	10.1442	10.2172	10.0782	9.8903	9.8292	9.7161	9.5989	9.4579	9.3637	9.1599	8.7853	8.5653	8.2753	8.4740	8.6481	8.6089	8.6483	8.7970
7.6292	6.9935	6.9533	7.1708	7.2065	7.6655	8.6719	8.3094	8.2266	7.6739	7.7355	7.5030	7.6517	7.2448	7.0701	6.6136	6.2135	4.5118	4.4454	5.5187	5.2976	5.5002	5.7453	5.8589
14.3346	13.4604	13.5687	13.7487	14.0661	15.1860	16.6188	17.4974	16.1163	15.3934	15.3249	14.5768	14.9174	15.0393	15.0563	14.0530	13.8390	13.6280	12.6450	12.5208	13.3333	13.2169	13.1366	13.3093
14.3346	13.4604	13.5687	13.7487	14.0661	15.1860	16.6188	17.4974	16.1163	15.3934	15.3249	14.5768	14.9174	15.0393	15.0563	14.0530	13.8390	13.6280	12.6450	12.5208	13.3333	13.2169	13.1366	13.3093
5.0217	5.1878	5.2708	5.3704	5.6079	5.1906	5.8525	5.7461	5.7010	5.3457	5.0062	5.0847	4.8026	5.0441	4.9884	4.1955	4.0069	3.4743	3.0480	4.0895	4.2822	4.4382	4.6790	5.0759
13.4509	12.5864	13.3010	13.3268	13.4702	14.0529	14.7749	14.9158	14.8878	14.3522	14.1329	13.5697	13.9899	13.3740	13.5437	12.9463	12.4599	12.2687	11.4842	11.5663	11.7508	12.1433	12.1779	12.0984
4.9994	4.4724	4.9174	4.9264	4.9335	6.2386	5.9685	5.7355	6.1714	5.9427	5.9206	6.4866	5.6448	5.7418	5.5167	4.8287	5.0771	4.7803	4.6303	4.7893	4.6303	5.3712	5.4785	5.4885
16.8946	18.6687	19.2035	19.2211	20.9599	16.3255	17.3235	16.6652	17.8632	17.3253	16.0188	16.9327	15.1417	14.5049	14.3990	10.6164	9.8844	9.2023	8.8495	9.1835	9.7471	11.6359	12.6108	13.4507
11.7970	12.3863	12.2179	12.3607	12.5946	12.5026	13.6458	14.3014	13.7476	12.7076	12.4647	12.0365	11.9637	12.5836	12.2011	11.3777	11.0212	10.3825	9.6866	9.7076	9.4678	9.7496	9.4913	9.8246
13.5330	14.3571	13.5601	13.5847	14.3830	15.6166	15.6792	16.3317	15.5202	15.6999	15.4277	14.7361	15.3932	14.4227	14.0339	12.4337	11.9821	11.5818	10.4633	10.6380	11.1419	12.5672	12.4460	12.8178
13.5330	14.3571	13.5601	13.5847	14.3830	15.6166	15.6792	16.3317	15.5202	15.6999	15.4277	14.7361	15.3932	14.4227	14.0339	12.4337	11.9821	11.5818	10.4633	10.6380	11.1419	12.5672	12.4460	12.8178
14.3263	1.1104	1.1024	1.1024	1.1104	15.5945	11.4401	11.4769	10.2857	12.8331	12.8439	12.7782	12.8090	14.4772	14.4910	9.7081	9.4488	10.5113	9.8502	14.8712	14.8845	14.7487	15.6040	15.6324
14.3263	1.1104	1.1024	1.1024	1.1104	15.5945	11.4401	11.4769	10.2857	12.8331	12.8439	12.7782	12.8090	14.4772	14.4910	9.7081	9.4488	10.5113	9.8502	14.8712	14.8845	14.7487	15.6040	15.6324
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
2.6948	3.3436	3.4083	3.5034	3.0114	3.6922	3.8657	3.6811	3.5453	3.7860	3.5989	3.3773	3.6111	3.5129	3.4070	2.3685	2.3207	2.3037	1.9666	2.0382	1.9377	2.7697	2.6155	2.9264
3.3759	3.5255	3.4177	3.6809	3.6914	3.7517	3.8239	4.6025	4.6302	4.7176	4.4479	4.3315	4.1908	3.9902	3.8288	3.7242	3.5184	3.3598	3.2678	3.5962	3.3669	3.3076	3.3763	3.2441
1.9059	0.8398	0.8352	0.8352	0.8398	3.0550	2.6518	2.5317	2.7928	3.2343	3.2895	3.4884	3.2794	2.8717	2.8749	1.6658	1.5463	1.6262	1.6316	1.6289	1.6316	3.1253	3.1253	3.1315
11.7008	8.1599	8.4772	9.3276	8.8217	13.6181	12.1389	11.8391	12.0321	12.5480	13.3201	13.7317	12.1443	11.3878	11.4840	8.0995	7.4618	6.9665	6.1976	12.3389	12.3080	16.1839	17.5413	17.8624
2.2295	2.1692	2.4493	2.1448	2.6415	3.4835	3.4823	4.0095	3.9802	3.5224	3.3778	3.1166	3.2239	3.2062	2.7966	2.6984	2.4930	2.3862	2.2769	2.4421	2.4036	2.4619	2.3011	2.2345
3.1474	2.6370	3.2766	1.4363	1.6162	1.4404	3.1913	3.6251	3.8645	5.2016	5.5176	5.3942	4.4634	4.0297	3.3273	3.0451	2.2857	2.1684	2.1327	2.1547	2.2272	2.2254	2.2948	2.5696
2.8800	2.3146	2.4311	2.6600	2.9250	3.0065	3.3785	3.2926	3.2820	2.6163	2.7067	2.6319	2.6054	2.4569	2.3763	2.4986	2.2682	1.6941	1.7002	1.7415	2.2825	2.3467	2.5211	3.1993
5.5197	4.1689	4.4051	4.4094	4.8756	5.5246	6.1280	5.9606	6.1337	4.7365	4.9948	4.9660	4.7256	4.4501	4.3216	4.3590	4.1444	2.7892	2.7953	2.8720	4.1544	4.2702	4.6738	6.1439
3.2831	4.4096	4.3838	4.3935	4.3967	4.5196	5.0480	5.0608	5.0576	4.5263	4.5316	4.8968	4.5182	4.1991	3.9176	3.8423	2.6651	1.3518	1.3564	1.3541	2.6726	3.8202	4.3360	5.4642
5.3401	4.3103	4.6556	4.7325	5.0465	5.2759	5.8346	5.6014	5.7436	5.0208	5.1931	5.3759	5.0096	4.6420	4.3874	4.1569	4.0267	2.7958	2.8022	2.8748	3.9648	4.1527	4.4949	5.8069
2.0168	1.0799	1.0745	1.0745	1.0799	8.2446	6.7226	6.7333	6.7315	7.5249	8.2561	9.5375	7.5132	7.5289	6.7405	6.7369	1.6518	1.6594	1.6635	1.6614	1.6635	6.7154	7.5048	7.5128
2.0168	1.0799	1.0745	1.0745	1.0799	8.2446	6.7226	6.7333	6.7315	7.5249	8.2561	9.5375	7.5132	7.5289	6.7405	6.7369	1.6518	1.6594	1.6635	1.6614	1.6635	6.7154	7.5048	7.5128
2.0168	1.0799	1.0745	1.0745	1.0799	8.2446	6.7226	6.7333	6.7315	7.5249	8.2561	9.5375	7.5132	7.5289	6.7405	6.7369	1.6518	1.6594	1.6635	1.6614	1.6635	6.7154	7.5048	7.5128
6.5336	5.3226	5.7510	5.7569	6.0952	6.5387	7.1828	6.9447	7.1890	6.1584	6.2406	6.5238	5.8843	5.6591	5.4427	5.0219	4.7708	3.1867	3.1938	3.3006	4.7814	4.9419	5.4233	7.3972
6.5336	5.3226	5.7510	5.7569	6.0952	6.5387	7.1828	6.9447	7.1890	6.1584	6.2406	6.5238	5.8843	5.6591	5.4427	5.0219	4.7708	3.1867	3.1938	3.3006	4.7814	4.9419	5.4233	7.3972
1.5232	1.7528	1.7448	1.7475	1.7502	9.7921	7.8221	7.3694	7.3674	8.8208	9.0216	9.7778	9.0071	7.9355	7.4364	6.7763	1.4112	1.4178	1.4210	1.4928	1.4210	4.5364	4.8318	5.0221
1.6083	1.6695	1.8415	1.8438	1.8484	8.1525	6.8743	6.5437	6.8832	7.5682	8.1640	8.1361	7.6301	7.6464	7.1966	6.5480	1.4719	1.4178	1.4939	1.4928	1.4939	4.5364	4.8318	4.8364
3.6819	4.1099	2.5093	2.7117	2.8244	3.8540	4.2581	4.1706	4.3768	4.0937	3.6635	3.4626	3.5335	3.2311	3.1672	3.4509	3.3558	3.0877	2.8896	4.0480	3.9686	3.8995	3.9010	4.4685
3.6819	4.1099	2.5093	2.7117	2.8244	3.8540	4.2581	4.1706	4.3768	4.0937	3.6635	3.4626	3.5335	3.2311	3.1672	3.4509	3.3558	3.0877	2.8896	4.0480	3.9686	3.8995	3.9010	4.4685
11.6907	8.4711	8.7955	8.8043	9.8180	13.3365	13.9961	13.1312	14.3347	13.6829	12.6235	13.3085	13.3457	12.2817	11.4463	10.2903	9.4478	8.9293	8.0281	9.3410	8.9457	9.3154	10.2930	9.6194
11.6907	8.4711	8.7955	8.8043	9.8180	13.3365	13.9961	13.1312	14.3347	13.6829	12.6235	13.3085	13.3457	12.2817	11.4463	10.2903	9.4478	8.9293	8.0281	9.3410	8.9457	9.3154	10.2930	9.6194
11.6907	8.4711	8.7955	8.8043	9.8180	13.3365	13.9961	13.1312	14.3347	13.6829	12.6235	13.3085	13.3457	12.2817	11.4463	10.2903	9.4478	8.9293	8.0281	9.3410	8.9457	9.3154	10.2930	9.6194
11.6907	8.4711	8.7955	8.8043	9.8180	13.3365	13.9961	13.1312	14.3347	13.6829	12.6235	13.3085	13.3457	12.2817	11.4463	10.2903	9.4478	8.9293	8.0281	9.3410	8.9457	9.3154	10.2930	9.6194
3.3313	0.2092	0.2092	0.2092	0.2092	3.3313	2.2906	2.2960	2.2960	2.9916	3.3394	2.9844	2.9916	1.9979	2.0025	2.2960	2.2853	2.2799	2.2906	2.2853	2.2906	2.2853	2.2853	2.2906
3.3313	0.2092	0.2092	0.2092	0.2092	3.3313	2.2906	2.2960	2.2960	2.9916	3.3394	2.9844	2.9916	1.9979	2.0025	2.2960	2.2853	2.2799	2.2906	2.2853	2.2906	2.2853	2.2853	2.2906
3.3313	0.2092	0.2092	0.2092	0.2092	3.3313	2.2906	2.2960	2.2960	2.9916	3.3394	2.9844	2.9916	1.9979	2.0025	2.2960	2.2853	2.2799	2.2906	2.2853	2.2906	2.2853	2.2853	2.2906
3.3313	0.2092	0.2092	0.2092	0.2092	3.3313	2.2906	2.2960	2.2960	2.9916	3.3394	2.9844	2.9916	1.9979	2.0025	2.2960	2.2853	2.2799	2.2906	2.2853	2.2906	2.2853	2.2853	2.2906
3.3313	0.2092	0.2092	0.2092	0.2092	3.3313	2.2906	2.2960	2.2960	2.9916	3.3394	2.9844	2.9916	1.9979	2.0025	2.2960	2.2853	2.2799	2.2906	2.2853	2.2906	2.2853	2.2853	2.2906
3.3313	0.2092	0.2092	0.2092	0.2092	3.3313	2.2906	2.2960	2.2960	2.9916	3.3394	2.9844	2.9916	1.9979	2.0025	2.2960	2.2853	2.2799	2.2906	2.2853	2.2906	2.2853	2.2853	2.2906
8.5998	6.1033	6.0839	6.0904	6.7279	13.6188	12.5102	12.0967	11.5866	14.4331	14.1586	13.8500	14.2165	12.7293	13.3429	11.8298	12.4899	7.2098	8.0523	13.4080	14.2637	19.2218	20.0060	20.6033
2.0168	2.4289	3.0889	1.4114	0.4007	2.4249	2.4208	2.4289	2.4289	2.4289	2.2270	2.2074	2.2154	11.1462	10.3844	10.3786	10.3382	9.6748	9.1083	15.6005	15.6081	17.2698	16.2433	13.7190
1.5476	1.8218	1.8121	2.2169	1.8186	1.5503	6.1038	4.7777	5.6853	5.6933	6.1544	5.6674	4.3604	4.2712	5.9224	4.2712	4.2398	4.3571	4.3698	4.9700	5.5120	4.1828	4.4587	5.0673
6.7910	7.9212	9.1032	9.5583	9.1183	9.1265	12.0777	11.6884	16.4760	15.3148	14.3866	14.3498	12.0206	16.7733	18.3231	16.8049	16.7384	15.5551	15.0359	27.7333	24.2019	23.8233	25.8889	28.7245
10.7248	1.7528	1.7448	1.7475	2.0200	11.3495	9.1123	8.6131	7.8533	10.1408	9.8231	9.7838	10.5937	10.8703	11.7734	8.2745	9.0960	8.4842	9.7819	15.5267	14.4520	9.7775	9.7775	9.7863
2.6009	2.2016	0.8315	0.9656	0.9656	3.4427	1.9227	3.4638	3.9352	4.1007	4.1033	4.0631	4.0352	4.2241	4.0985	4.0206	3.9117	3.7622	3.3995	5.4978	5.8634	4.7013	4.6444	5.1270
3.4303	0.4007	0.4007	0.4007	0.4007	3.4303	2.4204	2.4258	2.4258	2.8308	2.8308	2.4204	2.8308	1.9195	1.9236	2.4258	2.4151	2.4097	2.4204	2.4151	2.4204	2.4151	2.4151	2.4204
10.2124	1.7528	1.7448	1.7475	1.7502	10.9733	8.9563	8.4944	8.1731	9.7461	9.1826	9.0848	9.4417	10.4593	10.4651	7.1191	7.4079	7.6576	8.0523	11.7710	11.7772	8.4720	8.9468	8.9563
2.6232	2.9189	3.4353	2.4158	0.8315	2.7463	2.8961	4.4991	4.7853	4.7419	4.8201	4.7236	4.7572	4.7787	4.7615	4.8314	4.7857	4.7292	4.6522	5.5899	5.8632	5.5284	4.9597	5.0307
2.6232	2.9189	3.4353	2.4158	0.8315	2.7463	2.8961	4.4991	4.7853	4.7419	4.8201	4.7236	4.7572	4.7787	4.7615	4.8314	4.7857	4.7292	4.6522	5.5899	5.8632	5.5284	4.9597	5.0307

Caline 4 input for 2050 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
R001	835620.80	820845.25	835496.74	820834.92	14	3	4	20.1111	20.0034	18.8739	19.3881	19.9911	18.8615	20.9803	23.6854	26.0175	26.5495	26.7250	26.3189	26.6136	25.7869	25.4485	25.2203	25.7781	24.0150	22.7927	22.8985	23.0459	22.7081	22.4075	20.2827
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	20.1111	20.0034	18.8739	19.3881	19.9911	18.8615	20.9803	23.6854	26.0175	26.5495	26.7250	26.3189	26.6136	25.7869	25.4485	25.2203	25.7781	24.0150	22.7927	22.8985	23.0459	22.7081	22.4075	20.2827
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	20.1111	20.0034	18.8739	19.3881	19.9911	18.8615	20.9803	23.6854	26.0175	26.5495	26.7250	26.3189	26.6136	25.7869	25.4485	25.2203	25.7781	24.0150	22.7927	22.8985	23.0459	22.7081	22.4075	20.2827
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	20.1111	20.0034	18.8739	19.3881	19.9911	18.8615	20.9803	23.6854	26.0175	26.5495	26.7250	26.3189	26.6136	25.7869	25.4485	25.2203	25.7781	24.0150	22.7927	22.8985	23.0459	22.7081	22.4075	20.2827
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	20.1111	20.0034	18.8739	19.3881	19.9911	18.8615	20.9803	23.6854	26.0175	26.5495	26.7250	26.3189	26.6136	25.7869	25.4485	25.2203	25.7781	24.0150	22.7927	22.8985	23.0459	22.7081	22.4075	20.2827
R001	835226.82	820916.25	835124.41	821000.69	14	3	4	20.1111	20.0034	18.8739	19.3881	19.9911	18.8615	20.9803	23.6854	26.0175	26.5495	26.7250	26.3189	26.6136	25.7869	25.4485	25.2203	25.7781	24.0150	22.7927	22.8985	23.0459	22.7081	22.4075	20.2827
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	23.6167	24.2009	25.4870	26.6450	27.9326	26.7120	26.5058	31.7982	34.5717	33.2932	32.9209	32.8220	32.7521	31.8096	29.8672	29.5832	29.3548	28.4330	26.9743	28.0869	28.2146	28.2288	27.2358	25.5825
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	22.7187	22.7871	22.7742	23.5119	24.3119	24.4246	25.0556	28.8787	30.2573	29.8117	29.5580	28.4706	28.1808	27.4274	26.4282	25.4895	24.9298	23.6297	21.9837	21.8916	21.8904	21.9516	21.9262	21.4089
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	22.7272	23.8502	20.5602	22.7554	23.4016	22.3975	25.1064	28.4509	29.9766	29.9209	29.8568	29.1351	29.0860	28.5103	26.6207	26.2973	25.3156	24.2565	22.0891	23.1323	23.1915	23.3269	24.6036	22.2485
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	22.7272	23.8502	20.5602	22.7554	23.4016	22.3975	25.1064	28.4509	29.9766	29.9209	29.8568	29.1351	29.0860	28.5103	26.6207	26.2973	25.3156	24.2565	22.0891	23.1323	23.1915	23.3269	24.6036	22.2485
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	21.6868	21.0196	21.7451	21.2444	22.2657	22.2859	23.9768	32.9516	35.6378	33.2223	32.8908	31.9444	31.7247	30.4730	28.8780	27.8210	27.2215	25.9547	24.7316	25.9008	24.6621	24.7045	24.8536	22.8760
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1	21.6868	21.0196	21.7451	21.2444	22.2657	22.2859	23.9768	32.9516	35.6378	33.2223	32.8908	31.9444	31.7247	30.4730	28.8780	27.8210	27.2215	25.9547	24.7316	25.9008	24.6621	24.7045	24.8536	22.8760
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	17.4657	17.3753	17.0799	17.9369	17.8724	18.0300	18.3349	22.8335	25.6045	25.6747	25.3952	25.0173	24.7249	23.8189	23.3913	22.8724	22.5653	21.3565	20.0527	21.5976	20.5990	19.9039	20.1519	19.6889
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	17.4657	17.3753	17.0799	17.9369	17.8724	18.0300	18.3349	22.8335	25.6045	25.6747	25.3952	25.0173	24.7249	23.8189	23.3913	22.8724	22.5653	21.3565	20.0527	21.5976	20.5990	19.9039	20.1519	19.6889
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	17.4657	17.3753	17.0799	17.9369	17.8724	18.0300	18.3349	22.8335	25.6045	25.6747	25.3952	25.0173	24.7249	23.8189	23.3913	22.8724	22.5653	21.3565	20.0527	21.5976	20.5990	19.9039	20.1519	19.6889
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	17.4657	17.3753	17.0799	17.9369	17.8724	18.0300	18.3349	22.8335	25.6045	25.6747	25.3952	25.0173	24.7249	23.8189	23.3913	22.8724	22.5653	21.3565	20.0527	21.5976	20.5990	19.9039	20.1519	19.6889
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	17.4657	17.3753	17.0799	17.9369	17.8724	18.0300	18.3349	22.8335	25.6045	25.6747	25.3952	25.0173	24.7249	23.8189	23.3913	22.8724	22.5653	21.3565	20.0527	21.5976	20.5990	19.9039	20.1519	19.6889
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	17.4657	17.3753	17.0799	17.9369	17.8724	18.0300	18.3349	22.8335	25.6045	25.6747	25.3952	25.0173	24.7249	23.8189	23.3913	22.8724	22.5653	21.3565	20.0527	21.5976	20.5990	19.9039	20.1519	19.6889
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	28.1606	28.2009	28.4036	30.0840	30.4403	30.3623	30.7885	34.3200	38.4937	39.0304	38.9525	38.1291	37.4592	36.3663	34.6890	34.0422	33.6993	31.1865	29.3889	28.9433	29.5787	28.4547	27.4857	25.9752
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	3.3313	3.3152	3.2991	3.3152	3.3635	3.3313	55.6832	48.1032	42.3325	49.1224	49.2994	49.1975	37.2627	36.9054	36.5513	30.1309	3.5084	3.4923	3.4440	3.4279	3.4923	3.3957	3.3957	3.3635
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	25.3269	25.4151	26.2680	26.1872	27.0232	26.3925	27.2665	30.9665	34.0451	34.5093	33.6351	33.6167	33.1108	32.0983	31.1251	29.9180	29.5251	27.9471	25.8409	26.2332	27.5719	27.1623	26.8057	26.1025
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	35.7660	29.3182	37.9161	38.0448	38.3667	38.1145	45.3492	45.2731	48.7053	45.0762	46.5035	42.9499	43.4607	39.2780	38.8766	38.9289	34.4473	28.9471	26.8484	30.6293	31.0200	33.1758	36.4341	35.8915
R013	836078.87	820683.70	835961.87	820666.84	27	0	1	21.4076	21.9351	21.5985	22.0266	21.6020	22.4193	22.6480	25.9706	29.0007	29.4502	29.4407	28.9365	28.3221	27.7100	26.9284	26.6883	25.8058	24.6863	23.4408	24.0689	25.0896	24.1826	24.3895	22.9659
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	21.4076	21.9351	21.5985	22.0266	21.6020	22.4193	22.6480	25.9706	29.0007	29.4502	29.4407	28.9365	28.3221	27.7100	26.9284	26.6883	25.8058	24.6863	23.4408	24.0689	25.0896	24.1826	24.3895	22.9659
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	45.4255	41.5671	43.2967	43.4714	45.1599	48.6483	47.8007	46.2645	49.4823	55.3421	58.0875	56.1364	56.2586	52.0468	52.3315	51.9104	52.6072	46.3301	46.6587	53.3566	52.0638	53.1654	49.8212	50.1945
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	64.5587	63.1235	63.0310	63.2080	63.6546	63.3006	58.8660	59.1331	61.3943	63.5819	64.3606	63.6737	67.2399	61.9663	61.3943	66.3250	67.1779	42.0400	41.5491	41.3882	41.9595	64.0135	82.9899	63.7158
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	44.1610	40.1735	40.1299	40.2747	40.6384	51.5529	54.1167	51.2001	53.9834	58.8842	60.1472	57.8522	58.5836	52.2144	53.8408	53.7694	53.2838	46.1410	41.4063	41.2553	41.7926	38.0921	40.8613	40.6155
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	38.0590	39.7444	41.8097	41.9564	43.6614	48.3378	50.0808	52.8616	53.0603	58.6670	57.8248	54.9707	54.8802	45.3285	42.5509	40.4813	37.0989	26.1933	20.7663	21.3600	22.8345	25.3297	22.9471	26.3192
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	38.0590	39.7444	41.8097	41.9564	43.6614	48.3378	50.0808	52.8616	53.0603	58.6670	57.8248	54.9707	54.8802	45.3285	42.5509	40.4813	37.0989	26.1933	20.7663	21.3600	22.8345	25.3297	22.9471	26.3192
R019	835422.47	820440.71	835520.16	820546.46	11	0	1	36.1902	40.2071	40.1299	40.2747	49.1034	53.1526	51.6992	51.9289	54.5564	68.7446	69.3886	65.2415	65.9434	57.1100	52.7679	49.9323	47.1290	35.6209	33.2453	35.1542	33.5246	34.9119	33.7642	33.5872
R019	835520.16	820546.46	835514.63	820578.32	11	0	1	36.1902	40.2071	40.1299	40.2747	49.1034	53.1526	51.6992	51.9289	54.5564	68.7446	69.3886	65.2415	65.9434	57.1100	52.7679	49.9323	47.1290	35.6209	33.2453	35.1542	33.5246	34.9119	33.7642	33.5872
R020	835568.73	820565.58	835478.35	820470.77	11	0	1	26.3275	26.2345	26.1748	30.1108	30.4219	28.3639	32.6659	30.7591	31.5048	31.7496	32.2124	34.8658	32.3734	32.8943	32.4884	28.2707	27.3279	26.3059	25.9828	26.7743	27.1669	26.2154	25.4064	23.2568
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	75.5109	84.1583	87.2785	88.0331	89.6416	85.3504	91.0187	92.1385	91.4595	104.2400	104.6696	103.8521	96.9819	95.3440	90.6332	83.6565	77.7807	67.2786	61.9784	62.9714	63.3484	64.7304	65.5189	66.5847
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	45.2229	45.2886	45.6487	46.0273	47.0669	46.9993	47.6043	49.7787	49.7881	48.6900	47.8822	47.9057	47.2959	46.2117	47.0363	46.8845	47.0559	46.2407	45.7962	45.2935	45.2129	45.1846	45.1436	45.2860
R023	835346.26	820830.29	835376.00	820689.43	16	0	1	43.6079	44.2007	44.6361	44.5044	46.2312	45.9214	46.6396	48.8205	48.5089	47.4961	47.5376	46.7702	46.9647	45.3877	45.2620	43.9539	43.2368	41.7825	39.6631	40.4480	41.3339	40.8353	41.7786	41.9644
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	43.4020	44.1275	44.4540	45.6874	46.4010	47.5228	50.0960	56.1420	58.7592	59.6624	58.3554	59.5564	55.9324	53.1859	47.5448	49.7199	42.8285	41.1006	40.8936	41.7859	41.0038	40.1244	40.7582	39.9544
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	53.8078	44.3329	44.2424	44.4154	46.2677	63.0331	60.2013	60.4715	62.3182	68.1255	69.1062	67.3259	68.2049	66.1017	65.8218	62.0242	62.5878	57.8722	55.0327	55.6486	52.9341	58.0839	57.2641	56.2497
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	42.8339	44.0972	45.4162	45.2874	46.4737	45.6827	51.1506	55.8892	64.0505	66.9358	64.4217	62.3863	60.4916	56.8577	54.7683	54.2892	48.3539	44.3027	42.7207	39.4991	40.0817	34.5965	35.0108	33.4000
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	94.9907	85.4006	89.2310	89.3901	95.5148	100.8751	99.5636	97.4655	100.8844	113.0506	109.9176	115.3883	111.2267	99.6571	94.7574	96.1490	92.0473	87.6714	82.9293	87.2688	87.9763	91.0138	88.4359	89.1742
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	33.4000	23.4687	25.2784	19.3356	21.3019	35.1362	33.1774	32.0575	31.2911	35.7807	35.4672	34.9520	35.3636	36.1253	36.7387	34.4565	31.6267	31.5440	32.1956	32.2493	32.4030	30.0155	30.0477	31.0840
R029	835524.13	820833.07	835569.38	820596.78	18	0	1	66.6549	69.3438	70.4909	70.5947	74.0219	77.3049	75.7831	77.0738	80.0275	96.6629	95.1136	92.4214	94.7404	78.8792	75.4749	74.5020	69.5440	54.4220	50.4115	52.0217	54.7003	63.3418	64.5691	64.8154
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	22.2947	3.3152	3.2991	3.3152	3.3635	43.6010	35.6887	35.9108	36.5642	31.7764	32.2009	31.8388	36.4263	35.9733	40.8585	36.7573	18.4833	23.3623	23.0189	22.9063	23.3086	22.7185	22.6649	22.4771
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	24.3239	24.6299	25.7600	25.8245	26.0981	26.5914	30.6768	33.6676	33.4611	32.7292	30.9513	29.7889	28.7937	27.6207	26.2472	26.3878	24.7544	22.6725	22.4455	20.4208	21.3853	21.0807	19.8147	21.2810
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	32.4036	33.1422	35.5569	35.5261	36.7335	35.7664	40.2573	40.7377	44.3683	43.5506	42.2495	41.8303	39.6899	38.7270	38.3516	35.7743	33.5479	30.4614	29.2595	30.2823	31.3654	31.1646	31.0798	29.0494
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	46.3490	47.1070	47.0249	47.1810	52.4877	54.2160	55.6295	55.9140	56.7279	60.3893	58.0021	57.8923	58.6081	52.1010	50.9145	45.3484	41.9574	27.0767	16.5175	20.5276	32.0810	34.5150	34.4592	41.4198
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	22.8670	22.7056	23.4468	23.8930	23.9296	23.7492	26.8009	29.3973	32.8065	32.8060	30.7719	30.8531	29.4547	28.9589	29.5680	27.4685	25.3390	23.2477	21.3788	21.6781	23.0830	23.8359	23.8126	24.8824
R036+R037	835405.93	820841.18	835324.17	821026.61	18	0	1	59.7747	60.7582	62.0111	62.2038	62.4560	69.8124	71.8854	73.2284	74.3014	77.3213	75.8901	75.3347	76.2134	66.8698	63.4227	63.6070	60.5868	45.7706	40.1385	41.0383	44.4708	44.6184	44.6823	47.1902
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	40.5279	40.7886	42.3023	42.7689	43.9084	44.2395	44.6896	47.0646	49.3961	50.1277	48.9537	47.7975	47.6415	46.4541	44.6672	43.0952	42.2835	39.9320	36.7937	41.0692	41.8399	41.8698	41.8715	42.4957
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	40.5279	40.7886	42.3023	42.7689	43.9084	44.2395	44.6896	47.0646	49.3961	50.1277	48.9537	47.7975	47.6415	46.4541	44.6672	43.0952	42.2835	39.9320	36.7937	41.0692	41.8399	41.8698	41.8715	42.4957
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	60.1072	59.5462	61.5986	61.2223	68.5887	63.9680	65.0748	65.4345	65.2582	64.6295	64.0945	62.6602	63.2870	61.2050	60.1861	59.1736	59.1084	58.0732	57.8193	62.8955	61.9591	62.1432	62.1243	62.2223
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	24.4142	24.7877	26.0726	23.9339	25.9149	25.7339	27.0738	27.8194	29.6997	29.2058	28.8911	28.7211	29.0167	28.5962	27.6269	27.7411	26.7194	26.1405	24.7949	27.9608	26.6136	26.4548	26.6616	25.4350
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	48.1482	47.8813	48.7504	46.8898	47.6979	49.6140	51.4513	51.4379	52.2079	55.3850	56.1004	54.2967	53.9327	48.9270	49.4271	49.6937	47.3324	44.0648	43.3506	41.6328	44.0614	46.6728	44.3499	44.3455
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	46.0049	48.5763	48.4838	48.6608	49.1034	60.8870	61.6851	61.9587	58.8910	63.6479	65.0406	61.3048	65.1644	58.6994	58.1468	57.2945	58.7049	43.8506	43.4000	43.2525	43.7782	43.3423	43.2698	47.0598
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	46.7108	46.0869	46.7199	46.9022	49.3767	51.9185	49.2435	51.4929	52.2797	59.4602	59.7849	60.1950	58.2299	52.9075	53.3379	48.9311	46.9648	41.6799	38.2957	42.2894	42.6327	45.2183	46.2757	46.0419
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	103.4585	93.1024	97.6101	97.8060	103.7918	104.4284	98.8645	97.2960	97.6134	106.1322	103.4670	105.1646	105.5151	106.9651	98.8560	109.8283	103.5484	105.8001	110.5399	115.3918	112.6277	108.0627	116.6971	105.1027
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	27.0087	27.3829	28.3523	29.3234	24.4912	24.7071	26.8549	28.2818	28.2003	29.1273	29.8916	30.1581	29.6997	30.7841	29.9120	28.4317	28.8465	27.6090	27.9767	26.9816	26.5877	26.5449	26.4805	28.9982
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	36.5843	36.8910	36.9586	38.9393	40.1699	38.9218	40.9360	40.9254	41.1288	39.4563	39.6161	38.9473	39.0749	38.1111	37.1836	36.5212	35.4397	34.2974	33.1247	36.2123	37.3967	37.5905	38.1410	38.2714
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	69.3171	72.1043	62.5969	62.8351	60.6185	50.6449	47.3781	46.1197	49.2907	62.1922	75.6253	81.2803	80.8282	87.4498	85.2384	82.8928	86.4847	89.8041	92.7297	115.3117	115.4862	108.4284	102.0651	99.7710
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	43.6855	31.5270	31.4385	31.6074	3.3635	43.6010	43.7740	44.0436	44.8402	45.1903	47.7259	47.2592	47.9405	47.3647	46.7835	39.2277	39.3021	35.1784	34.7313	34.5847	35.1069	35.0537	34.9825	39.9787
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	38.2656	39.1980	38.4060	40.0281	42.3704	42.4632	45.1187	48.4411	50.8326	49.9353	48.0501	47.2279	45.0936	43.4086	40.0936	38.2113	36.2373	33.9898	32.8057	32.4523	34.0891	33.2063	34.1331	33.3186
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	33.6527	34.1158	34.6440	35.9290	35.0694	37.3361	38.6481	39.6346	40.4692	45.3174	44.6012	44.1374	43.6377	42.9157	41.8169	39.0179	38.4051	34.6421	31.8068	32.3637	32.8524	34.6852	34.4933	34.9681
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	33.6527	34.1158	34.6440	35.9290	35.0694	37.3361	38.6481	39.6346	40.4692	45.3174	44.6012	44.1374	43.6377	42.9157	41.8169	39.0179	38.4051	34.6421	31.8068	32.3637	32.8524	34.6852	34.4933	34.9681
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	33.6527	34.1158	34.6440	35.9290	35.0694	37.3361	38.6481	39.6346	40.4692	45.3174	44.6012	44.1374	43.6377	42.9157	41.8169	39.0179	38.4051	34.6421	31.8068	32.3637	32.8524	34.6852	34.4933	34.9681
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	33.6527	34.1158	34.6440	35.9290	35.0694	37.3361	38.6481	39.6346	40.4692	45.3174	44.6012	44.1374	43.6377	42.9157	41.8169	39.0179	38.4051	34.6421	31.8068	32.3637	32.8524	34.6852	34.4933	34.9681
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	22.5082	21.7630	22.4781	22.8517	23.9191	23.3042	27.3358	33.4223	33.6477	30.9754	30.7444	29.5274	29.3695	28.2430	26.1612	24.8584	24.3142	23.7867	23.2444	22.0100	21.7699	22.5755	22.2332	21.3155
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	22.5082	21.7630	22.4781	22.8517	23.9191	23.3042	27.3358	33.4223	33.6477	30.9754	30.7444	29.5274	29.3695	28.2430	26.1612	24.8584	24.3142	23.7867	23.2444	22.0100	21.7699	22.5755	22.2332	21.3155
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	121.1022	128.4114	143.4908	151.0907	149.5369	131.1116	125.7510	128.4749	129.4197	129.8718	122.8922	122.7513	120.6604	90.9894	90.4570	84.0833	71.7626	60.1607	39.2386	59.7227	63.5188	101.9546	110.3164	118.4664
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	36.7629	36.4829	38.2460	40.4588	43.1977	44.7896	43.2184	46.4369	45.3714	44.2176	45.0128	43.6438	43.6623	35.3183	33.8906	32.2857	31.6326	30.3896	27.1087	27.6447	27.8629	28.1542	26.5410	26.9882
R057	835305.88	820665.23	835365.16	820676.55	12	0	1	44.5713	44.4477	45.8763	44.0291	45.0186	47.5483	47.5041	47.8663	48.9407	56.3227	54.5429	55.2480	56.3659	48.7973	49.2352	48.9233	49.8153	44.8103	45.4748	48.2621	47.3366	48.8719	45.6852	46.0560
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	82.6325	80.4285	81.5294	81.6418	83.2178	82.1657	86.0889	86.7271	86.6621	86.3443	85.9839	84.8767	85.1252	82.7047	81.2465	80.6068	83.8878	82.9590	83.5998	80.9851	84.7705	81.7706	81.0262	78.2382
R059	835395.59	820548.47	835232.17	820514.97	16	0	1	25.7523	25.7646	26.0112	26.3277	26.9498	27.1752	28.5186	29.4577	28.7155	28.9427	28.9964	27.5300	27.6435	26.1075	25.4416	25.5457	25.5730	25.1701	23.7483	25.7417	26.4821	26.0884	25.6319	25.5803
R060	835740.08	820393.81	835672.32	820380.93	13	0	1	176.3959	157.7875	174.0410	184.1346	184.7604	184.9478	178.6266	190.7125	184.6002	175.7564	183.9626	171.1833	166.1260	165.5935	144.1885	148.1578	135.6680	130.2781	120.4159	126.8081	124.7524	129.7345	129.4091	131.8348
R061+R062	835198.18	821137.62	835283.81	820944.88	22	0	1	31.6168	31.2591	31.4309	31.9334	32.3246	31.5984	33.7600	34.4835	34.4996	32.7523	33.9877	32.6535	33.0688	31.1439	29.8690	30.1474	30.2482	29.1811	27.3564	32.9039	34.2875	34.4882	34.0609	33.8717
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	31.6168	31.2591	31.4309	31.9334	32.3246	31.5984	33.7600	34.4835	34.4996	32.7523	33.9877	32.6535	33.0688	31.1439	29.8690	30.1474	30.2482	29.1811	27.3564	32.9039	34.2875	34.4882	34.0609	33.8717
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1	47.1593	47.6948	49.7102	50.5140	50.6244	58.0587	59.5686	60.6135	60.2262	62.3175	61.7283	60.8226	61.3226	54.7455	52.6941	50.1885	43.1849	31.0991	19.7906	31.4479	43.6307	52.8631	59.9859	67.0567
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	54.3319	40.1735	40.0930	40.2448	40.6264	62.2662	59.4296	56.9041	63.4410	59.9811	58.4101	57.9183	58.5999	58.0044	60.6930	53.9413	53.3031	51.1578	47.6760	49.9193	48.0470	52.3624	54.9680	56.6096
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	33.2004	32.3665	32.5494	32.8409	33.4376	33.5227	35.3979	36.3294	36.8595	36.1315	35.3611	35.1306	34.4442	32.8371	32.5526	32.5827	33.4544	32.2755	30.6834	34.1435	35.4367	34.7584	34.2945	34.3200
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	44.5620	44.6220	44.1844	44.9432	44.9521	44.0152	45.5727	46.9195	46.6902	47.6602	46.8095	46.3175	45.5380	45.8271	45.6171	45.0172	47.0276	46.4315	45.5477	47.3996	48.0679	47.8640	46.8642	46.9440
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	46.9474	46.2939	47.0062	45.9976	46.5657	46.2915	46.3382	46.1912	47.1248	47.4307	48.6083	48.4112	49.2606	48.0374	48.4770	49.0354	49.7319	50.4895	51.3169	51.4041	52.1296	51.2486	50.6203	49.8531
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	69.0514	80.0559	87.2774	80.1510	85.7626	87.5519	84.5796	81.8781	85.7756	85.5073	89.5923	93.0919	94.5695	55.8806	55.3941	59.8221	55.8280	57.2071	54.8163	54.6534	52.3925	75.7016	73.5657	73.2912
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	103.7063	51.7252	51.6350	48.6608	49.1034	103.1812	94.0627	94.3870	95.3502	95.7736	96.3806	95.8788	106.4773	105.2718	104.6457	104.9515	95.7753	105.0168	91.5189	121.7893	118.1372	122.4267	123.3207	123.8097
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	62.8683	40.0895	40.0010	6.7303	6.7785	62.7557	48.9264	49.1959	49.9925	64.8210	65.5313	66.6352	77.4981	68.0481	67.2837	67.8960	68.0087	67.7713	55.0243	54.8312	55.5168	54.5808	49.3729	49.1034
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	44.2769	42.0476	43.3401	43.5137	44.2099	48.7010	47.3956	46.8081	47.7901	47.9106	48.5234	49.0238	51.1431	43.8149	41.5447	41.7691	41.6118	38.4321	35.4587	36.2566	36.7760	41.8037	40.6251	42.3228
R073	835175.32	820822.66	835062.15	820686.25	18	0	1	35.6147	22.1231	22.0587	22.1767	22.4771	35.5471	34.5962	34.8284	35.5158	35.8170	41.7490	41.2876	37.4300	36.9987	36.5642	36.7573	41.2501	35.7159	35.2813	35.1388	35.6469	35.0537	40.2469	39.9787
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	99.4823	87.5217	92.1700	93.8229	99.1442	81.8159	98.3291	96.9120	100.0026	99.8842	99.0900	96.3835	99.6076	102.0209	95.8510	93.1511	87.4163	90.3146	95.3685	98.9127	98.8457	89.2265	95.1016	98.8426
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	54.3319	40.1735	40.0930	40.2448	40.6384	61.3812	61.8049	58.8123	59.5355	63.1618	60.5059	60.0572	64.4445	55.8806	55.3941	52.2757	51.0727	49.1511	46.2633	46.5705	46.6293	51.8342	52.2926	52.0620

Caline 4 input for 2050 Q2

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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	30.9044	32.0407	31.9721	32.1004	33.9713	31.6951	32.6877	33.0644	33.0785	33.8197	32.8437	32.6085	33.3160	31.2753	30.7065	30.4521	29.4554	27.0538	24.4089	24.6985	26.1237	27.0042	28.0234	29.2733
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	40.3965	40.2071	48.4838	48.6608	49.1034	68.0293	66.2344	66.4934	67.2556	67.5907	68.0555	67.6726	70.1912	41.8518	41.3943	41.7966	41.9365	41.0145	40.7221	42.9862	41.0826	40.1629	42.8685	39.7359
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	30.0497	30.2280	30.8527	31.4452	32.0051	31.0876	31.2973	32.2699	32.0512	32.2132	32.4630	31.7991	31.9139	31.2827	30.1476	29.6203	29.6040	29.6378	28.3108	29.6038	30.2017	29.9579	29.4853	29.3913
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	159.7239	173.9457	156.0877	156.2448	179.2062	163.3576	168.3823	162.0519	165.4515	159.3859	162.4052	165.2785	169.1155	157.1450	148.9790	165.0758	165.5268	167.4579	159.4770	156.3948	160.6031	157.2102	164.0350	154.1890
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	28.8475	29.2005	29.8474	30.2893	29.9447	29.7591	29.5479	29.8433	30.3745	30.5524	30.5469	30.4028	30.3991	29.2554	28.4208	27.8986	27.4969	26.2185	25.1780	26.2369	26.7744	27.2762	27.8353	27.6713
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	77.5024	79.1117	83.5339	83.7310	84.2259	75.7964	73.9615	73.5118	75.1681	77.6195	76.1666	75.7234	78.2780	60.6109	54.5868	51.8435	50.9396	49.9959	46.7123	46.5705	48.0557	54.3255	55.5235	55.2752
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	66.0146	74.3636	74.2791	74.4400	74.8484	65.9341	65.4744	62.0634	62.8268	66.9121	64.3245	62.8544	68.1054	47.6978	40.2314	40.6285	40.6857	40.8281	37.6307	37.5073	37.9485	47.2617	50.5629	52.2794
R084	835334.32	820425.38	835123.33	820386.30	18	0	1	85.3815	73.3513	77.4135	78.4902	76.8830	88.1513	84.5284	85.3924	85.5126	86.1572	85.6450	85.2211	87.8701	77.7070	77.1348	74.7087	71.8899	66.0509	64.1709	70.9019	71.2885	73.8513	74.9810	74.7130
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	34.3855	34.4886	34.5506	34.6852	36.0326	35.3047	34.8381	35.8515	36.7474	36.1522	37.5084	37.5802	37.3018	33.0622	32.5501	32.2143	31.6183	30.2166	29.3474	29.7612	31.6612	30.5359	31.0143	30.8336
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	86.5912	86.7601	86.3086	86.5224	83.1240	87.2590	81.9900	78.5981	80.8818	100.0384	98.5535	97.6126	95.5493	85.1428	84.5705	79.3399	73.4566	59.3791	56.6374	61.4021	62.7725	65.7526	66.4028	66.8303
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	35.5656	35.6072	36.7245	36.8730	36.6809	38.9921	40.0370	40.0232	40.7186	39.7392	39.1528	40.0237	39.3661	36.1422	35.4546	37.4484	35.8033	33.8351	33.5096	33.9364	35.4107	34.9546	33.6791	34.2527
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	58.8056	57.4716	58.3433	57.5764	57.9210	61.0814	63.0155	63.7170	64.3057	62.6418	63.9973	63.4503	61.9682	60.6401	58.6912	58.8322	60.2780	58.2898	56.0289	56.2933	58.8183	57.9143	56.4305	56.8423
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	33.4884	35.4023	35.3250	35.4699	43.9511	33.5185	37.0255	37.2535	37.9254	41.3761	41.7653	41.4537	35.0031	34.9287	34.4761	34.7396	31.7142	31.5811	31.4255	31.2880	31.7783	30.9359	30.8701	33.3793
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	44.2778	44.5508	45.0564	45.3554	45.9029	46.1895	47.0916	47.6177	47.7229	47.4524	47.5468	46.8807	46.9713	45.8363	45.0327	44.5784	43.4316	42.6356	41.0712	41.3387	42.6725	41.8286	41.9804	41.9626
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	54.6992	51.2314	51.1292	52.7912	52.3024	56.4801	61.4005	61.3732	60.0949	59.1172	58.1276	56.8687	58.7772	56.8917	55.6171	53.5392	51.6411	46.3600	43.4356	45.9114	47.1710	47.5208	46.8592	47.3474
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	64.3656	59.8024	60.1986	61.0014	62.7118	67.5547	74.3106	79.1262	73.4504	71.1396	71.0381	67.8375	70.2003	70.1130	69.8925	66.0644	66.1449	66.3463	61.8502	60.0903	64.7998	62.5568	61.7512	62.0518
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	64.3656	59.8024	60.1986	61.0014	62.7118	67.5547	74.3106	79.1262	73.4504	71.1396	71.0381	67.8375	70.2003	70.1130	69.8925	66.0644	66.1449	66.3463	61.8502	60.0903	64.7998	62.5568	61.7512	62.0518
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	37.3354	36.2420	36.9783	36.7734	37.6668	38.3966	41.0935	41.4143	41.1618	40.8185	39.4084	38.8289	39.3955	39.1025	39.1985	36.7970	37.4695	35.0259	33.2428	35.4711	37.5270	36.6060	36.3955	37.4558
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	60.5783	56.8737	59.3106	59.5227	59.5546	63.3092	66.8858	67.6370	68.3469	66.4194	65.9369	63.6079	65.8518	63.3284	63.4868	61.6769	60.2563	58.8464	55.1540	55.5589	56.8083	57.8397	57.0572	56.9448
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	36.9107	35.4940	38.9889	39.1463	39.5433	40.8810	42.2291	40.7877	42.3471	43.9485	40.6519	41.1850	42.5767	42.0178	39.9391	38.6815	38.0783	37.5930	35.9596	37.0202	36.3090	38.2850	39.3879	39.1465
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	80.8053	85.7551	88.2036	88.4009	91.6481	81.5536	85.8993	84.4469	88.5835	86.3989	82.2678	84.1500	79.2454	77.2039	74.7114	64.5437	61.7929	57.3352	53.6241	55.3572	58.3669	63.9764	66.1134	70.0570
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	56.7549	56.3972	55.7607	56.5674	57.8192	57.9798	64.2314	67.2884	65.6979	61.3003	60.5242	58.2825	59.2923	61.6031	59.6211	57.0944	56.4941	53.5627	50.3156	50.1417	50.7792	50.6570	48.8925	49.5084
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	64.5901	65.4675	64.0527	64.2912	66.9405	71.3781	72.2904	75.9993	73.5778	74.1285	73.6831	69.6777	73.0464	68.9425	66.3866	62.9704	61.7032	59.9307	53.7822	53.8199	57.8079	59.5318	59.5314	59.9935
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	64.5901	65.4675	64.0527	64.2912	66.9405	71.3781	72.2904	75.9993	73.5778	74.1285	73.6831	69.6777	73.0464	68.9425	66.3866	62.9704	61.7032	59.9307	53.7822	53.8199	57.8079	59.5318	59.5314	59.9935
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	59.0692	31.5270	31.4385	31.6074	32.0339	79.8329	66.3301	66.7117	67.1578	70.2182	70.8311	70.3456	71.2763	74.3576	73.5461	63.7128	54.2629	52.7611	48.9304	63.4241	64.2023	71.9286	75.8255	75.4089
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	59.0692	31.5270	31.4385	31.6074	32.0339	79.8329	66.3301	66.7117	67.1578	70.2182	70.8311	70.3456	71.2763	74.3576	73.5461	63.7128	54.2629	52.7611	48.9304	63.4241	64.2023	71.9286	75.8255	75.4089
R103+R104	835988.71	820192.14	836029.57	820256.82	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	30.8600	32.4362	33.1528	34.1265	32.5965	34.2980	37.1609	36.1165	35.5849	36.8503	36.6215	34.4057	35.8658	34.9875	34.9388	31.3048	31.8272	30.9957	29.2536	29.8256	29.2288	32.1167	30.9545	31.7628
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	23.5446	23.7009	23.5977	24.4934	24.6668	24.6818	25.0831	29.8997	29.9976	30.9298	29.8198	29.2403	29.1103	28.1482	27.2899	27.0642	26.8318	26.0217	25.7684	27.1600	25.7613	26.2926	26.5116	25.0766
R106+R107	836206.79	820799.16	836346.83	820804.49	14	0	1	39.7252	22.3705	22.3130	22.4165	22.6809	37.0203	36.9369	35.3893	39.6728	45.2627	43.5924	46.0836	43.8063	36.1499	35.7379	35.5681	33.3322	33.1959	32.8445	32.7291	33.1422	35.7729	35.7122	35.5092
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	60.0937	50.7526	52.6344	55.2424	56.0656	71.0238	67.4414	67.1303	67.8372	69.4659	71.3712	72.2774	67.4313	64.2880	64.5429	53.5823	51.1845	48.1030	45.1274	65.4404	63.7636	75.4820	79.4258	79.5880
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	20.7360	20.4404	21.2315	20.7938	22.3304	24.2966	24.9811	30.2143	32.0594	30.2921	29.5082	28.4049	29.2641	28.5064	25.2684	24.8176	24.1301	23.5863	22.8789	23.4962	22.9513	22.9429	22.3044	21.0975
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	32.2014	29.3544	31.7812	30.4849	34.7479	30.5573	32.7050	37.6352	39.9198	44.3258	45.4948	46.7316	43.2696	39.9189	34.9166	33.5130	31.0526	31.3770	31.0865	30.7007	32.3775	31.8100	31.9638	31.2105
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	31.2856	28.0782	29.5535	31.8258	32.2136	32.4904	35.3883	34.5701	35.2326	32.3098	33.8307	31.4515	32.8742	30.5329	30.3481	33.1069	29.8468	28.3277	27.9670	28.5843	29.6583	28.8550	30.6230	30.8427
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	45.5391	38.3836	40.4219	40.5560	40.9435	45.4762	49.3012	48.1896	50.1791	43.9625	44.6349	44.0604	44.5080	41.6236	40.1305	42.9539	39.7438	35.5692	35.2357	36.0350	39.5667	39.9890	41.3958	45.5363
R115+R116	836090.56	821174.58	836136.49	821144.24	14	0	1	32.0468	17.0172	16.9818	17.0397	17.1974	32.9378	31.7190	31.9089	32.4658	34.1261	34.4573	36.9797	34.6558	31.8959	29.5210	33.0538	30.3972	27.2001	26.8921	26.7909	30.2374	32.5509	36.6516	38.8441
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	44.7786	44.7996	45.3150	44.1896	47.2319	48.2600	49.3186	49.0857	50.9672	47.5484	49.5950	48.5579	48.1214	46.0629	43.2910	45.1185	44.2367	38.7590	38.4037	39.1654	42.1010	43.3454	43.9522	47.5352
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	40.4195	28.9697	28.9054	29.0234	29.3238	53.5616	50.7484	50.9719	51.6317	57.5482	55.2130	62.8769	58.2000	57.7152	51.6317	51.9531	37.5031	37.3763	36.9901	36.8633	37.3160	51.1883	56.6590	56.4096
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	40.4195	28.9697	28.9054	29.0234	29.3238	53.5616	50.7484	50.9719	51.6317	57.5482	55.2130	62.8769	58.2000	57.7152	51.6317	51.9531	37.5031	37.3763	36.9901	36.8633	37.3160	51.1883	56.6590	56.4096
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	40.4195	28.9697	28.9054	29.0234	29.3238	53.5616	50.7484	50.9719	51.6317	57.5482	55.2130	62.8769	58.2000	57.7152	51.6317	51.9531	37.5031	37.3763	36.9901	36.8633	37.3160	51.1883	56.6590	56.4096
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	51.2510	45.0865	48.4944	48.6436	46.4834	51.1833	55.6784	54.1021	56.6329	52.5101	50.7055	52.5487	51.0268	48.6986	46.5502	47.6110	43.8213	39.0384	38.6849	39.7848	43.6328	44.3608	46.0795	52.6201
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	51.2510	45.0865	48.4944	48.6436	46.4834	51.1833	55.6784	54.1021	56.6329	52.5101	50.7055	52.5487	51.0268	48.6986	46.5502	47.6110	43.8213	39.0384	38.6849	39.7848	43.6328	44.3608	46.0795	52.6201
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	32.9187	34.6276	34.5606	34.6840	34.9951	56.8870	54.8639	52.0738	52.7095	58.2548	54.2910	58.2051	54.3863	52.2830	48.8781	51.1587	31.9042	31.8023	31.4911	33.1372	31.7551	41.8683	44.3126	41.7792
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	33.4131	35.9931	40.0930	40.2448	40.6264	55.0516	53.8004	51.5450	54.7133	56.6640	56.8842	56.4150	53.5930	53.1885	49.9137	52.5324	34.7480	31.8023	33.2453	33.1372	33.5246	41.8683	44.3126	44.1103
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	26.7695	27.5071	22.7741	22.9847	23.8820	27.7044	29.4871	31.0862	32.7198	30.4119	28.1024	27.4128	27.7484	27.0887	26.5004	27.7341	27.2545	25.6702	24.6444	28.9767	28.4712	28.0328	27.6981	28.7000
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	26.7695	27.5071	22.7741	22.9847	23.8820	27.7044	29.4871	31.0862	32.7198	30.4119	28.1024	27.4128	27.7484	27.0887	26.5004	27.7341	27.2545	25.6702	24.6444	28.9767	28.4712	28.0328	27.6981	28.7000
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	74.5728	65.7558	68.3122	68.5171	65.7926	80.0358	80.5556	80.0357	83.6330	83.2351	78.4011	82.1762	82.2806	77.0491	73.8825	70.5313	69.9950	66.3642	62.6639	67.0485	66.2681	65.9178	67.1868	65.1931
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	74.5728	65.7558	68.3122	68.5171	65.7926	80.0358	80.5556	80.0357	83.6330	83.2351	78.4011	82.1762	82.2806	77.0491	73.8825	70.5313	69.9950	66.3642	62.6639	67.0485	66.2681	65.9178	67.1868	65.1931
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	74.5728	65.7558	68.3122	68.5171	65.7926	80.0358	80.5556	80.0357	83.6330	83.2351	78.4011	82.1762	82.2806	77.0491	73.8825	70.5313	69.9950	66.3642	62.6639	67.0485	66.2681	65.9178	67.1868	65.1931
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	74.5728	65.7558	68.3122	68.5171	65.7926	80.0358	80.5556	80.0357	83.6330	83.2351	78.4011	82.1762	82.2806	77.0491	73.8825	70.5313	69.9950	66.3642	62.6639	67.0485	66.2681	65.9178	67.1868	65.1931
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	55.5947	3.3152	3.2991	3.3152	3.3635	55.5061	38.2379	38.4364	39.0104	51.1860	57.3488	51.2646	51.8440	34.2651	33.9318	39.0050	39.0587	38.9407	38.5812	38.4632	38.8870	38.6188	38.5598	38.3667
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	55.5947	3.3152	3.2991	3.3152	3.3635	55.5061	38.2379	38.4364	39.0104	51.1860	57.3488	51.2646	51.8440	34.2651	33.9318	39.0050	39.0587	38.9407	38.5812	38.4632	38.8870	38.6188	38.5598	38.3667
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	55.5947	3.3152	3.2991	3.3152	3.3635	55.5061	38.2379	38.4364	39.0104	51.1860	57.3488	51.2646	51.8440	34.2651	33.9318	39.0050	39.0587	38.9407	38.5812	38.4632	38.8870	38.6188	38.5598	38.3667
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	55.5947	3.3152	3.2991	3.3152	3.3635	55.5061	38.2379	38.4364	39.0104	51.1860	57.3488	51.2646	51.8440	34.2651	33.9318	39.0050	39.0587	38.9407	38.5812	38.4632	38.8870	38.6188	38.5598	38.3667
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	55.5947	3.3152	3.2991	3.3152	3.3635	55.5061	38.2379	38.4364	39.0104	51.1860	57.3488	51.2646	51.8440	34.2651	33.9318	39.0050	39.0587	38.9407	38.5812	38.4632	38.8870	38.6188	38.5598	38.3667
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	55.5947	3.3152	3.2991	3.3152	3.3635	55.5061	38.2379	38.4364	39.0104	51.1860	57.3488	51.2646	51.8440	34.2651	33.9318	39.0050	39.0587	38.9407	38.5812	38.4632	38.8870	38.6188	38.5598	38.3667
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	54.5452	46.0859	46.0151	46.1470	50.8950	67.9591	68.2270	66.2766	66.7110	78.5113	77.6406	75.8008	78.6149	72.3941	73.3844	70.7820	69.5892	53.6775	55.5425	70.2380	72.1636	86.2431	89.4535	88.1318
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	40.4195	48.5763	62.4070	40.1699	6.7785	48.7533	48.9264	49.1959	49.9925	50.3426	49.2662	48.7168	49.3364	70.9881	65.9005	66.1869	66.2604	62.1594	58.2822	76.6049	77.1665	80.8091	76.1607	68.5755
R131	835512.46	820585.70	835432.93	820570.07	13	0	1	30.2341	35.4023	35.3250	43.5085	35.8336	30.1778	39.5488	38.5739	42.4358	42.7577	46.4402	42.8450	39.4664	40.8410	43.9929	40.5570	40.6238	39.2865	38.8689	42.4620	43.6447	39.4081	41.7420	40.8365
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	51.1244	52.3550	57.2319	56.2999	57.7619	59.9832	66.0335	66.1333	81.8322	79.5972	78.6625	78.6914	70.4714	86.0962	92.0854	86.9234	87.0206	83.7951	83.1281	119.6177	105.9522	103.3120	109.8314	118.2039
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	61.9718	34.6276	34.5606	34.6840	40.6384	60.3651	57.6100	54.8386	54.0078	63.0932	61.7181	61.3072	63.8858	64.3635	65.9504	56.9371	58.8526	55.5960	57.6657	74.3796	70.0368	57.4414	57.3771	57.1635
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	20.6675	20.1184	16.8471	19.8206	20.0331	24.4397	17.0056	24.1238	25.5940	23.8722	24.0358	23.2127	24.2947	24.9012	24.5986	25.2762	25.5258	25.1789	24.2099	29.3045	30.2976	27.1747	27.1162	28.7293
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	57.3368	6.7303	6.7142	6.7303	6.7785	57.2482	40.5377	40.7362	41.3101	48.4933	48.7115	41.6213	49.0920	32.9991	32.7014	41.3541	41.4078	41.2898	40.9303	40.8123	41.2361	40.9185	40.8595	40.6664
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	59.9888	34.6276	34.5606	34.6840	34.9951	64.0101	60.5793	57.8264	59.4449	64.8924	61.8442	63.0681	63.7462	65.0184	64.5247	52.5422	54.7746	53.5111	55.5425	66.0347	66.5497	58.0544	60.9911	60.7431
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	21.0588	22.8043	24.2986	22.1248	17.1073	21.6863	22.7104	30.2246	32.8623	32.0694	32.4618	32.1338	33.2787	32.5848	32.0280	32.2600	32.6861	32.4338	32.4486	30.1915	30.7737	29.3561	28.0868	27.7504
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	21.0588	22.8043	24.2986	22.1248	17.1073	21.6863	22.7104	30.2246	32.8623	32.0694	32.4618	32.1338	33.2787	32.5848	32.0280	32.2600	32.6861	32.4338	32.4486	30.1915	30.7737	29.3561	28.0868	27.7504

Caline 4 input for 2050 Q2

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R001	835620.80	820845.25	835496.74	820834.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820666.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.53	820578.32	11	0	1
R020	835568.73	820565.58	835478.35	820479.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820689.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820596.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821028.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820514.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820894.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	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
1.7260	1.5614	1.2636	1.3785	1.4961	1.3384	1.9096	2.1668	2.3506	2.4042	2.3753	2.3549	2.3370	2.2367	2.4177	2.3691	2.3793	2.2012	2.0833	2.1756	2.3188	2.2786	2.3285	1.8001
1.7260	1.5614	1.2636	1.3785	1.4961	1.3384	1.9096	2.1668	2.3506	2.4042	2.3753	2.3549	2.3370	2.2367	2.4177	2.3691	2.3793	2.2012	2.0833	2.1756	2.3188	2.2786	2.3285	1.8001
1.7260	1.5614	1.2636	1.3785	1.4961	1.3384	1.9096	2.1668	2.3506	2.4042	2.3753	2.3549	2.3370	2.2367	2.4177	2.3691	2.3793	2.2012	2.0833	2.1756	2.3188	2.2786	2.3285	1.8001
1.7260	1.5614	1.2636	1.3785	1.4961	1.3384	1.9096	2.1668	2.3506	2.4042	2.3753	2.3549	2.3370	2.2367	2.4177	2.3691	2.3793	2.2012	2.0833	2.1756	2.3188	2.2786	2.3285	1.8001
1.7260	1.5614	1.2636	1.3785	1.4961	1.3384	1.9096	2.1668	2.3506	2.4042	2.3753	2.3549	2.3370	2.2367	2.4177	2.3691	2.3793	2.2012	2.0833	2.1756	2.3188	2.2786	2.3285	1.8001
1.7260	1.5614	1.2636	1.3785	1.4961	1.3384	1.9096	2.1668	2.3506	2.4042	2.3753	2.3549	2.3370	2.2367	2.4177	2.3691	2.3793	2.2012	2.0833	2.1756	2.3188	2.2786	2.3285	1.8001
2.6815	2.8550	3.1147	3.5042	3.7370	3.6391	3.3839	4.2982	4.7552	4.4671	4.5337	4.4913	4.3933	4.1814	3.8335	3.6988	3.6236	3.5082	3.2027	3.7204	3.7142	3.7921	3.6916	3.3423
2.3398	2.3053	2.2403	2.2680	2.4056	2.4077	2.6240	3.2004	3.3349	3.3421	3.2602	3.0388	2.9395	2.8975	2.8131	2.6616	2.4390	2.2816	2.0440	2.0388	2.0622	2.0914	2.1448	2.0777
2.7795	2.9907	2.3594	2.5769	2.6448	2.5595	3.3454	4.0668	4.2314	4.2834	4.1741	4.0035	4.0023	3.8367	3.3436	3.2449	2.9355	2.7302	2.3179	2.6779	2.7589	2.8231	3.1938	2.6180
2.7795	2.9907	2.3594	2.5769	2.6448	2.5595	3.3454	4.0668	4.2314	4.2834	4.1741	4.0035	4.0023	3.8367	3.3436	3.2449	2.9355	2.7302	2.3179	2.6779	2.7589	2.8231	3.1938	2.6180
2.3056	2.1865	2.3990	2.1027	2.2930	2.3621	2.6788	3.9149	4.2450	4.0001	3.9094	3.7417	3.6283	3.4365	3.2746	3.0620	2.8701	2.6779	2.4656	2.7980	2.6961	2.7361	2.8300	2.6411
2.3056	2.1865	2.3990	2.1027	2.2930	2.3621	2.6788	3.9149	4.2450	4.0001	3.9094	3.7417	3.6283	3.4365	3.2746	3.0620	2.8701	2.6779	2.4656	2.7980	2.6961	2.7361	2.8300	2.6411
1.5189	1.6719	1.6287	1.6952	1.8233	1.9090	2.0340	2.7886	3.0654	3.0411	2.9481	2.8761	2.8016	2.6454	2.5089	2.2830	2.2185	1.9392	1.7092	2.1919	2.0040	2.1219	2.1748	2.2141
1.5189	1.6719	1.6287	1.6952	1.8233	1.9090	2.0340	2.7886	3.0654	3.0411	2.9481	2.8761	2.8016	2.6454	2.5089	2.2830	2.2185	1.9392	1.7092	2.1919	2.0040	2.1219	2.1748	2.2141
1.5189	1.6719	1.6287	1.6952	1.8233	1.9090	2.0340	2.7886	3.0654	3.0411	2.9481	2.8761	2.8016	2.6454	2.5089	2.2830	2.2185	1.9392	1.7092	2.1919	2.0040	2.1219	2.1748	2.2141
1.5189	1.6719	1.6287	1.6952	1.8233	1.9090	2.0340	2.7886	3.0654	3.0411	2.9481	2.8761	2.8016	2.6454	2.5089	2.2830	2.2185	1.9392	1.7092	2.1919	2.0040	2.1219	2.1748	2.2141
1.5189	1.6719	1.6287	1.6952	1.8233	1.9090	2.0340	2.7886	3.0654	3.0411	2.9481	2.8761	2.8016	2.6454	2.5089	2.2830	2.2185	1.9392	1.7092	2.1919	2.0040	2.1219	2.1748	2.2141
1.5189	1.6719	1.6287	1.6952	1.8233	1.9090	2.0340	2.7886	3.0654	3.0411	2.9481	2.8761	2.8016	2.6454	2.5089	2.2830	2.2185	1.9392	1.7092	2.1919	2.0040	2.1219	2.1748	2.2141
3.9333	3.9314	4.0176	4.5327	4.4658	4.5179	4.5877	5.2789	5.8678	5.8736	5.7351	5.5553	5.3757	5.0819	4.7545	4.4920	4.3719	3.8337	3.5180	3.6711	3.7795	3.7216	3.6623	3.4224
0.1770	0.1770	0.1770	0.1770	0.1770	0.1770	3.1543	5.0077	4.3751	5.1097	5.1231	5.1150	4.9342	4.8860	4.8409	1.6938	0.1770	0.1770	0.1770	0.1770	0.1770	0.1770	0.1770	0.1770
3.5571	3.5538	3.8366	3.7763	4.1214	3.8179	4.0854	4.7918	5.2528	5.3871	5.1385	5.0898	4.9949	4.7349	4.5387	4.1712	4.0796	3.6741	3.2766	3.5330	3.8904	3.9889	3.9449	3.8970
4.7443	1.6536	2.1458	2.1512	2.1672	2.1565	6.2684	5.4476	6.4488	5.8602	5.5772	5.5285	5.5929	4.8793	4.8341	4.8320	4.1199	2.5502	2.3611	3.1489	2.7466	2.9612	4.3948	3.2171
2.6022	2.8609	2.7434	2.8717	2.6041	2.9688	3.0052	3.5583	3.9729	4.0625	3.9884	3.8828	3.6976	3.5767	3.4008	3.2669	3.0528	2.8040	2.5424	2.9132	2.7481	2.7638	2.8411	2.6761
2.6022	2.8609	2.7434	2.8717	2.6041	2.9688	3.0052	3.5583	3.9729	4.0625	3.9884	3.8828	3.6976	3.5767	3.4008	3.2669	3.0528	2.8040	2.5424	2.9132	2.7481	2.7638	2.8411	2.6761
4.6235	5.7791	6.0374	6.0589	6.6543	6.4084	5.8420	5.6394	5.7396	7.1193	7.1608	6.8699	7.0789	5.9064	5.9820	5.4532	5.6512	3.6120	3.7867	6.6097	6.5691	7.0741	7.0880	7.3085
6.9484	7.5428	7.5388	7.5528	7.5850	7.5589	6.2935	6.3128	5.9764	7.1063	7.1358	7.1120	7.9475	6.0085	5.9764	7.0473	9.1309	1.2271	1.2110	1.2110	1.2271	12.2692	16.2313	12.2330
2.0020	1.6411	1.8272	1.8337	1.8466	5.8331	5.1971	4.8891	4.5911	5.5888	5.4907	5.2945	5.5392	4.0008	4.1501	4.2471	4.3660	1.7435	1.4614	1.4602	1.4775	1.4039	1.4981	1.4894
3.8071	4.5366	4.7873	4.8034	4.3302	6.3730	6.4852	6.6083	6.7246	8.9031	8.9752	8.5295	8.6070	6.2982	5.9054	5.3523	4.6305	2.1684	1.4406	1.4846	2.0051	2.5832	2.1576	3.2780
3.8071	4.5366	4.7873	4.8034	4.3302	6.3730	6.4852	6.6083	6.7246	8.9031	8.9752	8.5295	8.6070	6.2982	5.9054	5.3523	4.6305	2.1684	1.4406	1.4846	2.0051	2.5832	2.1576	3.2780
1.4878	1.8272	1.8272	1.8337	2.2205	7.9044	5.8419	5.8580	5.5848	8.8704	8.8932	7.8552	9.1402	5.5062	5.0849	4.7567	4.4695	1.4354	1.3464	1.4206	1.3579	1.4140	1.4515	1.4442
1.4878	1.8272	1.8272	1.8337	2.2205	7.9044	5.8419	5.8580	5.5848	8.8704	8.8932	7.8552	9.1402	5.5062	5.0849	4.7567	4.4695	1.4354	1.3464	1.4206	1.3579	1.4140	1.4515	1.4442
2.3242	1.2277	1.2277	1.4082	1.4189	2.5164	2.6207	2.4588	2.3004	2.6460	2.5451	2.5589	2.5654	2.5773	2.5535	1.7723	1.7130	1.6471	1.6310	1.6853	1.7053	1.7542	1.7669	1.7622
11.8824	15.4921	16.1136	16.2072	16.2872	14.2907	15.6051	15.1742	14.5060	17.7782	17.2409	16.7498	15.6350	15.5648	14.9560	12.5199	11.8337	8.7665	8.4122	8.7729	8.5892	9.6936	10.4213	10.6289
9.7811	9.7652	10.0869	10.0079	10.4387	10.2736	10.5002	11.0615	11.2472	11.0761	10.7966	10.7053	10.5028	10.1519	10.2773	10.0994	9.9491	9.6217	9.3911	9.8993	9.9187	10.0105	10.1618	10.2940
8.5605	8.7724	8.9460	8.9769	9.3568	9.3450	9.6041	10.0383	10.0673	9.8518	9.7987	9.5710	9.5492	9.0588	9.0030	8.4649	8.2166	7.6876	7.0706	7.5365	7.8505	7.7969	8.2407	8.5170
8.8953	9.1770	9.2941	9.6435	9.8006	10.1163	10.7233	12.0631	12.9694	13.3621	13.1109	13.2940	12.4400	11.5590	9.6561	10.2841	8.1110	7.5800	7.6422	7.9261	7.8896	7.8275	8.0126	7.9902
4.6134	1.6860	1.6860	1.6940	1.8776	7.8312	6.6576	6.6771	6.0283	7.2871	6.8426	6.5624	6.7515	5.9201	5.7821	4.7011	4.6339	3.3282	3.2498	3.3647	3.2004	4.8470	5.2748	5.3925
6.5283	6.7150	7.0882	7.6893	7.6547	6.7248	8.2627	8.6487	11.9895	13.2241	12.8430	12.0369	11.7254	10.3490	9.4774	9.2493	7.4062	6.1511	5.7022	5.7879	5.9611	4.5008	4.7183	4.2213
20.8427	18.3808	19.5880	19.6097	22.2374	23.1968	22.4885	21.4866	23.0112	26.7810	25.7513	27.0590	25.8980	21.8074	20.1855	20.5546	18.9842	17.1460	15.6800	17.0429	17.3605	18.7404	18.5583	18.9048
4.0178	1.0890	1.1711	1.0694	1.1790	4.2601	3.5767	3.4323	3.3163	4.0108	3.9211	3.6935	3.9466	4.1394	4.2392	3.0361	2.9138	2.9092	2.9891	3.0206	3.0010	3.0024	3.2973	3.4358
8.6593	10.2153	10.5967	10.8067	11.5626	12.1121	11.0533	11.3438	12.3507	18.3803	17.7163	16.9093	17.7102	12.5065	11.4263	10.6059	9.0516	3.8872	2.7256	3.3293	4.1830	7.6311	8.8252	8.9837
0.6652	0.1770	0.1770	0.1770	0.1770	2.0278	1.6608	1.6705	1.6962	1.3277	1.3378	1.3277	1.5128	1.4944	1.6979	1.6995	0.5673	0.6920	0.6813	0.6813	0.6920	0.6759	0.6759	0.6706
1.8965	2.0559	1.9888	2.1009	2.1163	2.1101	3.2447	3.3917	3.6223	3.6244	3.2230	2.9330	2.7441	2.4158	2.2333	2.1412	1.5683	1.1430	1.0905	0.9395	1.3089	1.4464	1.4456	1.7350
5.4711	5.8576	6.5796	6.2981	6.3958	5.8712	7.3134	7.1722	8.7295	8.8752	8.6064	8.2766	7.2769	7.0990	7.0174	6.4775	6.0372	5.1285	5.0780	5.6294	6.0768	5.7257	6.0613	5.1665
5.7063	5.6069	5.6005	5.6182	6.2711	8.5501	8.5080	8.1352	8.6676	10.1917	9.7643	9.7482	10.5178	7.8564	7.1797	7.4210	6.4165	3.1818	1.6226	2.7946	3.8222	4.8967	4.8881	6.6247
3.2233	3.3226	3.5353	3.6383	3.8313	3.5679	4.4750	4.8129	5.9121	5.9495	5.2391	5.1955	4.8604	4.6335	4.8663	4.1845	3.4700	2.6982	2.2012	2.7004	3.3368	3.6401	3.8857	4.4242
6.1655	6.7653	6.9212	6.9357	7.3483	8.4257	8.2224	7.9668	7.9778	10.5988	10.2035	10.1183	10.7730	7.3322	7.6401	7.6614	7.3457	2.4651	2.2619	2.3191	2.9332	2.9954	3.0905	3.8648
7.8537	7.7716	8.3605	8.4541	8.6960	8.7418	9.0582	9.5912	10.0636	10.2665	9.9105	9.5915	9.4420	9.0979	8.5737	8.0944	7.7995	7.1145	6.3442	7.3093	7.6137	7.7264	7.8437	8.0993
7.8537	7.7716	8.3605	8.4541	8.6960	8.7418	9.0582	9.5912	10.0636	10.2665	9.9105	9.5915	9.4420	9.0979	8.5737	8.0944	7.7995	7.1145	6.3442	7.3093	7.6137	7.7264	7.8437	8.0993
14.3710	14.3964	14.7776	15.1328	16.8712	16.1009	15.9647	16.3004	16.1838	15.9760	15.6394	15.2558	15.3531	14.6754	14.2365	13.8512	13.8580	13.4494	13.3752	14.7714	14.6375	14.8136	14.8442	14.8843
2.8216	3.0483	3.5312	2.7293	2.9638	3.0020	3.5569	3.7935	4.0031	3.9208	3.7297	3.7547	3.5698	3.6025	3.4141	3.3993	3.0332	2.9204	2.6331	3.1517	2.9746	3.0677	3.1351	2.8883
6.2394	6.2199	6.3429	5.6080	6.0235	6.8669	6.8122	6.6544	6.6544	8.2108	8.4865	8.3032	8.1952	6.3449	6.6859	6.6938	6.1189	5.0057	4.9000	4.6073	5.3880	6.2956	6.0948	6.2974
1.8668	2.1963	2.1963	2.2044	2.2205	9.1633	7.0621	7.0818	6.0606	7.6444	7.3391	6.9346	7.3682	4.9887	4.9619	5.1782	4.9807	1.6718	1.6557	1.6531	1.6718	1.7329	1.7313	1.8740
6.0300	6.0082	6.2551	6.2772	6.7862	7.5046	6.6060	6.7543	6.9202	10.0548	10.5277	10.8629	10.1609	8.1160	8.5923	6.8178	6.0453	4.0541	3.1843	4.8767	5.0293	6.2920	6.8619	6.9713
21.5109	18.4003	19.8876	19.9135	21.7624	21.6253	19.2343	18.1835	18.0043	21.0459	20.3005	20.7284	21.1435	21.1745	18.7420	22.1710	20.2808	20.5986	22.4403	24.0142	23.2890	22.3580	25.6089	22.1037
3.0242	3.4038	3.4086	3.8451	1.5903	2.4474	2.9695	3.7545	3.6346	3.9411	4.0758	4.4018	4.2269	4.5882	4.4032	3.2761	3.3209	2.8749	3.1431	2.9491	2.5183	3.2294	3.2194	4.2293
6.3505	6.2622	6.0475	6.8511	7.2598	6.7488	7.4948	7.5468	7.7157	7.4529	7.6392	7.6082	7.5792	7.3840	7.0429	6.5732	6.2144	5.9146	5.5779	6.4100	6.5511	6.7769	6.9220	6.8958
15.0445	16.5265	12.6816	12.7251	11.4943	8.7516	7.4897	6.8679	7.3301	12.0174	16.2627	17.9781	17.3773	20.7858	19.5598	18.9732	19.9117	20.5043	20.9954	31.2842	31.5173	29.6344	28.3646	27.4944
2.0278	0.9012	0.9012	0.9093	0.1770	2.0278	2.0318	2.0439	2.0760	2.0921	2.0653	2.0510	2.0796	2.0546	2.0349	1.5148	1.5208	1.3644	1.3483	1.3465	1.3644	1.4645	1.4622	1.6657
6.9978	7.4789	7.0857	7.5529	8.0494	7.9076	8.7404	9.2857	10.3582	10.4308	10.0195	9.9488	9.2671	9.0372	7.9115	7.2731	6.5216	5.8708	5.7042	5.9012	6.4665	6.3058	6.6757	6.3954
3.2479	3.6093	3.6775	3.8185	4.0308	4.0913	4.5460	4.5309	4.8981	6.4191	6.2753	6.3528	6.0604	6.2678	5.7273	5.0406	4.6363	3.4778	3.0079	3.2228	3.6040	4.1075	4.3473	4.6987
3.2479	3.6093	3.6775	3.8185	4.0308	4.0913	4.5460	4.5309	4.8981	6.4191	6.2753	6.3528	6.0604	6.2678	5.7273	5.0406	4.6363	3.4778	3.0079	3.2228	3.6040	4.1075	4.3473	4.6987
3.2479	3.6093	3.6775	3.8185	4.0308	4.0913	4.5460	4.5309	4.8981	6.4191	6.2753	6.3528	6.0604	6.2678	5.7273	5.0406	4.6363	3.4778	3.0079	3.2228	3.6040	4.1075	4.3473	4.6987
3.2479	3.6093	3.6775	3.8185	4.0308	4.0913	4.5460	4.5309	4.8981	6.4191	6.2753	6.3528	6.0604	6.2678	5.7273	5.0406	4.6363	3.4778	3.0079	3.2228	3.6040	4.1075	4.3473	4.6987
2.6353	2.4153	2.5457	2.5857	2.8376	2.6407	3.3065	4.4404	4.4803	4.0653	4.0086	3.7399	3.6693	3.4541	3.0900	2.7805	2.6147	2.4663	2.2812	1.9148	1.9626	2.1842	2.2118	2.1585
2.6353	2.4153	2.5457	2.5857	2.8376	2.6407	3.3065	4.4404	4.4803	4.0653	4.0086	3.7399	3.6693	3.4541	3.0900	2.7805	2.6147	2.4663	2.2812	1.9148	1.9626	2.1842	2.2118	2.1585
32.9887	35.0741	39.3824	44.4389	44.3854	35.9162	34.3802	35.1521	35.3925	33.5550	31.6509	31.6255	30.8656	18.7146	18.6234	17.2172	13.6769	11.2615	4.9855	11.2017	12.7731	26.8568	29.2537	31.5998
3.6760	3.8607	4.0609	4.3045	4.5987	5.5755	5.2464	5.3063	5.4980	5.2661	5.0745	5.6044	5.4060	3.0411	2.5063	2.7643	2.5456	2.2977	2.0999	2.1380	2.1536	2.2048	1.9261	1.9651
4.2710	5.2298	5.4062	5.3777	5.0265	5.8756	5.8683	5.6437	5.7961	8.2340	7.7236	8.1407	8.0582	5.6574	5.7179	5.4310	5.3059	3.0899	3.0240	4.4746	4.5773	5.0828	5.0734	5.2514
17.0359	16.7059	16.9058	16.7141	16.9831	16.4236	17.2038	17.2730	17.2918	17.5842	17.4560	17.5334	17.5305	17.0175	16.8032	16.7282	17.6087	17.6205	18.0446	17.4378	18.4700	17.8049	17.9716	17.2659
3.0827	3.2013	3.3387	3.3779	3.5816	3.3367	3.5348	3.6370	3.5741	3.6215	3.5040	3.2437	3.2237	2.8175	2.6920	2.6402	2.5544	2.3689	2.0555	2.8667	3.0790	3.1838	3.3587	3.3688
43.3385	38.3277	43.0358	45.5921	45.6906	46.5471	43.9110	47.2662	45.2908	43.0560	45.3817	41.8894	39.9963	39.9377	34.1376	34.7868	31.2881	29.9150	27.2579	29.0579	28.5902	30.2677	30.3625	30.9843
5.1030	5.2001	5.2881	5.4343	5.4026	4.8721	5.2654	5.3345	5.3538	4.8603	5.1271	4.8771	4.9930	4.4869	4.2240	4.2578	4.2184	3.8752	3.4905	5.8009	6.1874	6.4126	6.5075	6.5118
5.1030	5.2001	5.2881	5.4343	5.4026	4.8721	5.2654	5.3345	5.3538	4.8603	5.1271	4.8771	4.9930	4.4869	4.2240	4.2578	4.2184	3.8752	3.4905	5.8009	6.1874	6.4126	6.5075	6.5118
6.4988	7.0181	7.3551	7.2337	7.4860	9.1402	9.0679	9.0657	9.0014	9.9202	9.7245	9.9831	10.3134	7.8185	8.0456	6.8266	6.1058	3.4780	1.6659	4.5479	7.5896	9.8001	11.8247	13.5480
5.3408	1.6411	1.6411	1.6480	1.6595	8.2465	6.9154	6.5886	8.3419	7.8360	7.0800	7.0628	6.7122	7.0676	7.4511	4.8563	5.1031	5.3410	3.9474	4.1542	3.9688	6.3987	6.7498	7.4704
5.4157	5.4297	5.4866	5.5326	5.6212	5.3226	5.6608	5.7767	5.8428	5.7100	5.5310	5.5554	5.3592	5.1020	5.1353	5.0279	5.2360	4.9856	4.7158	6.1488	6.5193	6.4085	6.4744	6.5032
9.4827	9.6004	9.3977	9.5583	9.4330	9.1794	9.3776	9.5949	9.5638	9.9249	9.5999	9.5768	9.3694	9.5542	9.5965	9.4494	9.8815	9.9079	9.9055	10.7046	10.9701	10.9409	10.8214	10.8519
10.1650	10.0314	10.4791	10.1099	9.9159	9.9220	9.8404	9.7078	9.9533	9.9887	10.2969	10.3682	10.4536	10.0953	10.4681	10.4703	10.6851	10.9081	11.1941	11.6346	11.8637	11.7654	11.7634	11.6176
11.7510	15.4450	16.9415	15.4611	18.2535	17.5033	16.2123	15.6394	16.3649	17.4805	18.2931	19.1242	18.7856	5.4336	5.4052	5.8367	5.4209	5.1736	4.6541	4.6481	4.4246	12.6546	13.7101	13.6759
21.0838	2.3973	2.3973	2.2044	2.2205	22.5646	18.0359	18.0767	18.1956	18.2513	18.2880	18.2624	21.4715	22.8816	22.7866	22.7897	18.2150	22.9526	17.7538	28.7114	28.6046	29.7954	30.1289	31.4667
2.8276	1.1756	1.1756	0.3508	0.3508	2.8276	2.2124	2.2245	2.2567	2.9134	2.9338	2.7968	3.4710	2.7133	2.6892	2.7021	2.7101	2.6981	2.2061	2.2029	2.2286	2.1990	2.2326	2.2205
5.2570	5.0539	5.2212	5.2401	5.1563	7.0448	6.2726	5.9638	6.2998	6.1207	6.4377	6.5378	7.0068	4.2425	4.1487	4.1500	3.8820	3.4825	2.5770	3.0345	2.9332	5.1256	5.1975	5.8646
1.6576	0.6598	0.6598	0.6652	0.6706	1.6576	1.4461	1.4553	1.4806	1.4921	1.7247	1.7113	1.7316	1.7123	1.6962	1.6995	1.7086	1.4829	1.4668	1.4645	1.4829	1.4645	1.6764	1.6657
19.4909	15.9741	17.4467	18.2176	19.2603	13.9487	18.9887	18.2837	18.8172	19.1674	18.1614	18.2393	18.8263	20.2366	18.2157	17.2502	15.4001	16.0743	17.5375	18.7902	18.6399	16.0667	18.3089	19.6844
5.3408	1.6411	1.6411	1.6480	1.8466	8.7257	7.6319	7.2235	7.2784	7.7395	7.8582	7.8413	8.4270	5.4336	5.4052	5.0530	4.5808	3.9020	3.4940	3.7068	3.5143	5.6420	6.3943	6.3773

Caline 4 input for 2050 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	5.1055	5.7750	5.7644	5.7826	6.2494	5.3280	5.5554	5.6263	5.5995	5.8403	5.2750	5.4289	5.5640	4.8718	4.6897	4.7278	4.3109	3.4357	2.8392	2.8776	3.2371	3.7018	4.0180	4.4627
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	1.6503	1.8272	2.1963	2.2044	2.2205	11.4907	10.0040	10.0288	10.1005	10.1342	10.1555	10.1400	11.7196	1.7008	1.6870	1.6944	1.5959	1.5702	1.5095	1.5899	1.5245	1.5446	1.6427	1.5971
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	4.8532	4.9577	5.2144	5.3416	5.4614	5.0852	5.1262	5.2889	5.2700	5.2911	5.3468	5.1971	5.1466	4.9938	4.7636	4.6166	4.5969	4.6233	4.3577	4.8833	5.0530	5.1410	5.2684	5.2913
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	41.0951	45.9043	40.3709	40.3939	47.5660	42.2832	43.3005	41.3976	42.4312	40.4218	41.5064	42.5614	43.7931	39.6063	37.1670	42.2753	42.3361	43.1740	40.7521	39.8067	40.8535	39.8848	42.2200	39.1724
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	4.2895	4.6048	4.7328	4.8470	4.7224	4.5172	4.4213	4.4698	4.5611	4.5436	4.4928	4.5342	4.4531	4.0242	3.8197	3.7007	3.5404	3.1450	2.9279	3.3660	3.4423	3.7063	3.8900	3.9511
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	12.9624	14.1702	15.0249	15.0490	15.1044	12.1763	11.3279	10.6540	11.1648	11.8203	11.2140	11.1916	12.4267	6.6373	4.5205	4.4332	4.1182	3.8466	3.7114	3.7068	3.6939	5.6661	6.0861	6.0684
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	9.4303	13.0111	13.0031	13.0232	13.0695	9.4236	8.1173	7.6530	7.7114	8.2321	8.3944	8.8594	9.6248	2.1847	1.7122	1.7245	1.7281	1.6326	1.5124	1.5097	1.5258	4.9506	5.3299	6.1382
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	15.8113	11.0630	11.7275	12.3141	12.7994	15.7282	14.3476	13.7215	14.1249	14.5180	14.2157	14.1929	15.4716	12.3656	12.3089	11.8532	10.9462	9.5139	8.9553	11.4253	10.8616	11.6158	12.7841	12.7539
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	5.8332	6.0274	6.1262	6.1482	6.3856	6.1459	5.8352	6.0795	6.4393	6.1451	6.4174	6.5885	6.5133	4.9796	4.7943	4.8775	4.7073	4.3549	4.2338	4.2953	4.6938	4.4585	4.7992	4.7737
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	14.4761	14.9985	15.3710	15.3963	14.2990	15.7874	13.5116	12.3217	12.9842	20.6806	20.1170	19.6646	18.9491	16.3305	16.3950	14.7533	11.5555	7.1244	6.0320	7.7005	7.5295	9.0366	9.7284	9.8134
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	2.7306	3.2267	3.3361	3.3486	3.0054	4.1540	4.2769	4.0901	4.1526	3.9567	3.7838	3.8174	3.9140	2.7539	2.7698	2.9165	2.7155	1.9690	1.8628	1.9197	2.2479	2.3183	2.3533	2.7030
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	12.1551	12.0006	12.3315	12.0465	11.9437	12.6539	12.9913	13.1281	13.2036	12.8567	13.0957	13.0363	12.6368	12.3598	11.9892	12.0241	12.2248	11.7443	11.2842	11.3641	11.8431	11.7666	11.4630	11.5621
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	1.4283	1.6480	1.6480	1.6544	2.0398	3.3515	2.9196	2.9357	2.9786	3.2567	3.2713	3.2611	2.9934	1.4806	1.4645	1.4705	1.2626	1.2567	1.1946	1.1921	1.2095	1.2377	1.2363	1.3325
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	8.9341	9.0872	9.1966	9.2433	9.3893	9.4037	9.5986	9.6834	9.6997	9.5672	9.5387	9.4534	9.4299	9.1676	8.9802	8.7886	8.4997	8.2656	7.8868	8.0603	8.3134	8.2299	8.2502	8.3436
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	7.1484	6.4979	6.4852	6.6997	6.7814	7.1610	8.1596	7.8253	7.8763	7.3756	7.4636	7.2603	7.4690	6.9747	6.7326	6.2974	5.9714	4.2962	4.1781	5.2031	5.0406	5.2012	5.4269	5.4919
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	13.5430	12.6077	12.7603	12.9494	13.3488	14.3139	15.7358	16.6039	15.5279	14.9161	14.8854	14.1931	14.6577	14.5959	14.4558	13.4919	13.3919	13.1617	12.0624	11.9198	12.8212	12.6447	12.5461	12.6312
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	13.5430	12.6077	12.7603	12.9494	13.3488	14.3139	15.7358	16.6039	15.5279	14.9161	14.8854	14.1931	14.6577	14.5959	14.4558	13.4919	13.3919	13.1617	12.0624	11.9198	12.8212	12.6447	12.5461	12.6312
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	4.6910	4.7997	4.9050	5.0119	5.2743	4.8371	5.4875	5.3977	5.4429	5.1287	4.8110	4.9074	4.6682	4.8445	4.7353	3.9720	3.8341	3.3101	2.8491	3.8418	4.0743	4.1904	4.4165	4.7701
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	12.7099	11.7844	12.5132	12.5546	12.7825	13.2502	13.9858	14.1541	14.3438	13.9006	13.7200	13.2081	13.7357	12.9791	13.0031	12.4283	12.0566	11.8472	10.9517	11.0067	11.2943	11.6166	11.6324	11.4777
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	4.6699	4.1441	4.5777	4.5973	4.6313	5.8277	5.6005	5.3934	5.9055	5.7123	5.7033	6.2825	5.5080	5.5249	5.2532	4.5929	4.8802	4.5765	4.3774	4.5205	4.4130	5.0987	5.1935	5.1660
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	16.3769	18.0462	18.6036	18.6352	20.4036	15.7924	16.7939	16.1565	17.4743	16.9914	15.7356	16.6560	14.9543	14.2254	14.0454	10.3306	9.6583	8.9759	8.5777	8.8907	9.4914	11.3068	12.2538	13.0319
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	11.1366	11.5908	11.4819	11.6377	11.9420	11.7724	12.9130	13.5568	13.2395	12.3013	12.0915	11.7133	11.7471	12.2057	11.7074	10.9169	10.6643	10.0242	9.2308	9.2338	9.0873	9.3154	9.0539	9.3095
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	12.7722	13.4434	12.7455	12.7905	13.6402	14.7180	14.8388	15.4837	14.9434	15.1976	14.9677	14.3368	15.1242	13.9861	13.4622	11.9233	11.5910	11.1745	9.9705	10.1203	10.6982	12.0222	11.8832	12.1622
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	12.7722	13.4434	12.7455	12.7905	13.6402	14.7180	14.8388	15.4837	14.9434	15.1976	14.9677	14.3368	15.1242	13.9861	13.4622	11.9233	11.5910	11.1745	9.9705	10.1203	10.6982	12.0222	11.8832	12.1622
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	13.5378	0.9012	0.9012	0.9093	0.9173	14.7029	10.7941	10.8493	9.8471	12.3892	12.4335	12.4080	12.5488	14.0281	13.8978	9.2745	9.1028	10.1250	9.3739	14.1650	14.3165	14.1193	14.9148	14.8410
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	13.5378	0.9012	0.9012	0.9093	0.9173	14.7029	10.7941	10.8493	9.8471	12.3892	12.4335	12.4080	12.5488	14.0281	13.8978	9.2745	9.1028	10.1250	9.3739	14.1650	14.3165	14.1193	14.9148	14.8410
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	2.4827	3.0743	3.1465	3.2410	2.7968	3.4224	3.5973	3.4298	3.3563	3.6113	3.4390	3.2420	3.4946	3.3476	3.2117	2.2105	2.1939	2.1667	1.8151	1.8812	1.8042	2.5890	2.4359	2.7159
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	3.1534	3.2679	3.1782	3.4338	3.4708	3.5047	3.5872	4.3338	4.4270	4.5359	4.2883	4.1816	4.0846	3.8373	3.6362	3.5408	3.3727	3.2097	3.0817	3.3844	3.2014	3.1260	3.1885	3.0346
R106+R107	836206.79	820799.16	836346.83	820804.49	14	0	1	1.7218	0.6941	0.6941	0.6987	0.7033	2.8194	2.4308	2.3249	2.6081	3.0648	3.1445	3.3425	3.1701	2.7280	2.7034	1.5369	1.4432	1.5188	1.5054	1.5027	1.5188	2.9472	2.9422	2.9274
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	11.3683	7.8140	8.1400	8.9789	8.4981	13.1882	11.7477	11.4640	11.7548	12.2981	13.0832	13.5168	11.9969	11.1649	11.2033	7.8937	7.3106	6.8172	6.0144	12.0701	12.0862	15.8620	17.1938	17.4643
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	2.0614	1.9849	2.2580	1.9741	2.4655	3.2489	3.2576	3.7616	3.7852	3.3677	3.2410	2.9926	3.1279	3.0702	2.6409	2.5569	2.3821	2.2688	2.1371	2.2903	2.2649	2.3080	2.1499	2.0749
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	2.9167	2.4014	3.0304	1.2834	1.4530	1.2855	2.9636	3.3752	3.6679	4.9907	5.3282	5.2216	4.3502	3.8575	3.1292	2.8707	2.1702	2.0361	1.9732	1.9944	2.0750	2.0530	2.1113	2.3695
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	2.6596	2.0940	2.2118	2.4324	2.7077	2.7688	3.1355	3.0552	3.1029	2.4623	2.5690	2.5056	2.5019	2.3180	2.2123	2.3363	2.1501	1.5809	1.5544	1.5928	2.1400	2.1829	2.3402	2.9789
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	5.2738	3.9297	4.1662	4.1758	4.6559	5.2703	5.8671	5.7078	5.9299	4.5648	4.8385	4.8182	4.5975	4.2892	4.1419	4.1851	4.0009	2.6516	2.6380	2.7050	3.9907	4.0808	4.4789	5.9053
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	3.0497	4.1296	4.1231	4.1360	4.1682	4.2205	4.7476	4.7712	4.8409	4.3452	4.3627	4.7300	4.4029	4.0357	3.7256	3.6612	2.5470	1.2622	1.2507	1.2484	2.5363	3.6271	4.1130	5.1617
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	5.0988	4.0490	4.4062	4.4962	4.8141	5.0163	5.5811	5.3502	5.5409	4.8416	5.0350	5.2225	4.8847	4.4738	4.2015	3.9755	3.8881	2.6613	2.6337	2.6989	3.8027	3.9572	4.2921	5.5634
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	1.8369	0.9007	0.9007	0.9061	0.9114	7.9435	6.4502	6.4681	6.5200	7.3173	8.0810	9.3538	7.3696	7.3273	6.5200	6.5239	1.5305	1.5244	1.5104	1.5084	1.5244	6.4860	7.2469	7.2267
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	1.8369	0.9007	0.9007	0.9061	0.9114	7.9435	6.4502	6.4681	6.5200	7.3173	8.0810	9.3538	7.3696	7.3273	6.5200	6.5239	1.5305	1.5244	1.5104	1.5084	1.5244	6.4860	7.2469	7.2267
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	1.8369	0.9007	0.9007	0.9061	0.9114	7.9435	6.4502	6.4681	6.5200	7.3173	8.0810	9.3538	7.3696	7.3273	6.5200	6.5239	1.5305	1.5244	1.5104	1.5084	1.5244	6.4860	7.2469	7.2267
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	6.2606	5.0454	5.4693	5.4810	5.8516	6.2564	6.8916	6.6643	6.9640	5.9579	6.0706	6.3563	5.7499	5.4809	5.2409	4.8332	4.6156	3.0397	3.0248	3.1196	4.6041	4.7355	5.2074	7.1224
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	6.2606	5.0454	5.4693	5.4810	5.8516	6.2564	6.8916	6.6643	6.9640	5.9579	6.0706	6.3563	5.7499	5.4809	5.2409	4.8332	4.6156	3.0397	3.0248	3.1196	4.6041	4.7355	5.2074	7.1224
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	1.3615	1.5812	1.5812	1.5865	1.5973	9.4653	7.5408	7.1096	7.1619	8.6290	8.8414	9.5999	8.8774	7.7472	7.2230	6.5721	1.2951	1.2908	1.2801	1.3441	1.2908	4.3373	4.6186	4.8026
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	1.4383	1.4798	1.6411	1.6480	1.6595	7.8347	6.5943	6.2826	6.6622	7.3682	7.9684	7.9520	7.4871	7.4495	6.9747	6.3369	1.3466	1.2908	1.3464	1.3441	1.3579	4.3373	4.6186	4.6048
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	3.4454	3.8070	2.3148	2.5146	2.6348	3.5936	3.9932	3.9158	4.1769	3.9306	3.5227	3.3360	3.4382	3.0954	2.9994	3.2804	3.2203	2.9509	2.7223	3.8207	3.7780	3.6941	3.6898	4.2080
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	3.4454	3.8070	2.3148	2.5146	2.6348	3.5936	3.9932	3.9158	4.1769	3.9306	3.5227	3.3360	3.4382	3.0954	2.9994	3.2804	3.2203	2.9509	2.7223	3.8207	3.7780	3.6941	3.6898	4.2080
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	11.2078	8.0478	8.3852	8.4043	9.4502	12.7917	13.4772	12.6473	13.9511	13.3558	12.3363	13.0389	13.1410	11.9907	11.0818	9.9702	9.1890	8.6557	7.7092	8.9841	8.6485	8.9746	9.9247	9.2197
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	11.2078	8.0478	8.3852	8.4043	9.4502	12.7917	13.4772	12.6473	13.9511	13.3558	12.3363	13.0389	13.1410	11.9907	11.0818	9.9702	9.1890	8.6557	7.7092	8.9841	8.6485	8.9746	9.9247	9.2197
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	11.2078	8.0478	8.3852	8.4043	9.4502	12.7917	13.4772	12.6473	13.9511	13.3558	12.3363	13.0389	13.1410	11.9907	11.0818	9.9702	9.1890	8.6557	7.7092	8.9841	8.6485	8.9746	9.9247	9.2197
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	11.2078	8.0478	8.3852	8.4043	9.4502	12.7917	13.4772	12.6473	13.9511	13.3558	12.3363	13.0389	13.1410	11.9907	11.0818	9.9702	9.1890	8.6557	7.7092	8.9841	8.6485	8.9746	9.9247	9.2197
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	3.1463	0.1770	0.1770	0.1770	0.1770	3.1463	2.1619	2.1726	2.1994	2.8950	3.2428	2.8950	2.9308	1.9289	1.9105	2.1994	2.1994	2.1941	2.1780	2.1726	2.1941	2.1833	2.1780	2.1672
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	3.1463	0.1770	0.1770	0.1770	0.1770	3.1463	2.1619	2.1726	2.1994	2.8950	3.2428	2.8950	2.9308	1.9289	1.9105	2.1994	2.1994	2.1941	2.1780	2.1726	2.1941	2.1833	2.1780	2.1672
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	3.1463	0.1770	0.1770	0.1770	0.1770	3.1463	2.1619	2.1726	2.1994	2.8950	3.2428	2.8950	2.9308	1.9289	1.9105	2.1994	2.1994	2.1941	2.1780	2.1726	2.1941	2.1833	2.1780	2.1672
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	3.1463	0.1770	0.1770	0.1770	0.1770	3.1463	2.1619	2.1726	2.1994	2.8950	3.2428	2.8950	2.9308	1.9289	1.9105	2.1994	2.1994	2.1941	2.1780	2.1726	2.1941	2.1833	2.1780	2.1672
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	3.1463	0.1770	0.1770	0.1770	0.1770	3.1463	2.1619	2.1726	2.1994	2.8950	3.2428	2.8950	2.9308	1.9289	1.9105	2.1994	2.1994	2.1941	2.1780	2.1726	2.1941	2.1833	2.1780	2.1672
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	3.1463	0.1770	0.1770	0.1770	0.1770	3.1463	2.1619	2.1726	2.1994	2.8950	3.2428	2.8950	2.9308	1.9289	1.9105	2.1994	2.1994	2.1941	2.1780	2.1726	2.1941	2.1833	2.1780	2.1672
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	8.2938	5.8194	5.8162	5.8274	6.4628	13.1914	12.1161	11.7217	11.3008	14.1278	13.8845	13.5998	14.0252	12.4703	13.0104	11.5266	12.2424	7.0207	7.8072	13.0488	13.9608	18.8015	19.5542	20.0776
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	1.8369	2.1963	2.8115	1.1837	0.3508	2.2084	2.2124	2.2245	2.2567	2.2728	2.0791	2.0630	2.0888	10.9086	10.1062	10.1085	10.1177	9.4505	8.8405	15.2006	15.2803	16.8828	15.8579	13.3122
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	1.4109	1.6480	1.6480	2.0237	1.6673	1.4109	5.7439	4.4911	5.4396	5.4736	5.9438	5.4817	4.2388	4.0990	5.6501	4.0620	4.0692	4.1784	4.1411	4.7054	5.2729	3.9597	4.2173	4.7701
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	6.5107	7.5882	8.7610	9.2289	8.8123	8.7824	11.6959	11.3088	16.1171	15.0070	14.1172	14.0984	11.8488	16.4794	17.9008	16.4310	16.4415	15.2468	14.6374	27.1230	23.7704	23.3663	25.3862	28.1184
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	10.3831	1.5812	1.5812	1.5865	1.8466	10.9761	8.7973	8.3222	7.6301	9.9073	9.6127	9.5974	10.4492	10.6450	11.4879	8.0375	8.8968	8.2773	9.5197	15.1575	14.1666	9.5223	9.5150	9.4931
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	2.4247	2.0197	0.7376	0.8626	0.8723	3.2199	1.7868	3.2526	3.7674	3.9546	3.9753	3.9437	3.9571	4.0803	3.9151	3.8377	3.7697	3.6095	3.2174	5.2235	5.6305	4.4785	4.4173	4.8483
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	3.2332	0.3508	0.3508	0.3508	0.3508	3.2332	2.2778	2.2885	2.3153	2.7275	2.7365	2.3314	2.7597	1.8403	1.8242	2.3174	2.3174	2.3121	2.2960	2.2906	2.3121	2.2992	2.2938	2.2831
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	9.8769	1.5812	1.5812	1.5865	1.5973	10.6022	8.6405	8.2023	7.9402	9.5204	8.9907	8.9008	9.3013	10.2427	10.1938	6.9081	7.2272	7.4698	7.8072	11.4565	11.5163	8.2246	8.6793	8.6556
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	2.4443	2.6997	3.2038	2.2316	0.7483	2.5551	2.7074	4.2344	4.5857	4.5660	4.6564	4.5720	4.6491	4.6114	4.5376	4.6162	4.6143	4.5484	4.4122	5.3120	5.6302	5.2790	4.7171	4.7589
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	2.4443	2.6997	3.2038	2.2316	0.7483	2.5551	2.7074	4.2344	4.5857	4.5660	4.6564	4.5720	4.6491	4.6114	4.5376	4.6162	4.6143	4.5484	4.4122	5.3120	5.6302	5.2790	4.7171	4.7589

Caline 4 input for 2050 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
R001	835620.80	820845.25	835496.74	820838.92	14	3	4	15.3137	14.5549	13.8619	13.9374	14.3844	13.4482	15.2020	17.7172	19.7977	20.5230	20.5733	20.9237	21.4442	20.9005	20.1737	20.2893	20.6462	18.6929	17.3858	17.4596	17.6276	17.4714	16.9497	15.1451
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	15.3137	14.5549	13.8619	13.9374	14.3844	13.4482	15.2020	17.7172	19.7977	20.5230	20.5733	20.9237	21.4442	20.9005	20.1737	20.2893	20.6462	18.6929	17.3858	17.4596	17.6276	17.4714	16.9497	15.1451
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	15.3137	14.5549	13.8619	13.9374	14.3844	13.4482	15.2020	17.7172	19.7977	20.5230	20.5733	20.9237	21.4442	20.9005	20.1737	20.2893	20.6462	18.6929	17.3858	17.4596	17.6276	17.4714	16.9497	15.1451
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	15.3137	14.5549	13.8619	13.9374	14.3844	13.4482	15.2020	17.7172	19.7977	20.5230	20.5733	20.9237	21.4442	20.9005	20.1737	20.2893	20.6462	18.6929	17.3858	17.4596	17.6276	17.4714	16.9497	15.1451
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	15.3137	14.5549	13.8619	13.9374	14.3844	13.4482	15.2020	17.7172	19.7977	20.5230	20.5733	20.9237	21.4442	20.9005	20.1737	20.2893	20.6462	18.6929	17.3858	17.4596	17.6276	17.4714	16.9497	15.1451
R001	835226.82	820916.25	835124.41	821000.69	14	3	4	15.3137	14.5549	13.8619	13.9374	14.3844	13.4482	15.2020	17.7172	19.7977	20.5230	20.5733	20.9237	21.4442	20.9005	20.1737	20.2893	20.6462	18.6929	17.3858	17.4596	17.6276	17.4714	16.9497	15.1451
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	18.5496	18.3362	19.6484	20.3696	21.3265	20.3431	20.1795	25.0316	27.5523	26.7652	26.4105	26.9812	27.1784	26.4895	24.1840	24.3017	23.9234	22.5734	20.9677	22.0053	22.1096	22.2844	21.1670	19.7508
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	17.7488	17.1255	17.3211	17.6404	18.1985	18.2511	18.8174	22.4544	23.7567	23.6639	23.3593	23.0508	23.0473	22.5333	21.1261	20.6388	19.9771	18.4151	16.7271	16.6615	16.6987	16.9005	16.6478	16.2171
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	17.9410	18.1474	15.7101	17.1916	17.6768	16.8311	19.1342	22.4093	23.8403	24.0574	23.9542	23.9079	24.1095	23.7037	21.4631	21.5155	20.4587	19.0827	16.9280	17.8361	17.9491	18.2074	19.0346	17.0259
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	17.9410	18.1474	15.7101	17.1916	17.6768	16.8311	19.1342	22.4093	23.8403	24.0574	23.9542	23.9079	24.1095	23.7037	21.4631	21.5155	20.4587	19.0827	16.9280	17.8361	17.9491	18.2074	19.0346	17.0259
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	16.9625	15.7916	16.5930	15.9399	16.6666	16.6990	18.0555	25.8225	28.2246	26.5501	26.1882	26.0547	26.1286	25.1746	23.2027	22.6396	21.9333	20.3275	18.9330	19.9435	19.0038	19.2079	19.0873	17.4968
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1	16.9625	15.7916	16.5930	15.9399	16.6666	16.6990	18.0555	25.8225	28.2246	26.5501	26.1882	26.0547	26.1286	25.1746	23.2027	22.6396	21.9333	20.3275	18.9330	19.9435	19.0038	19.2079	19.0873	17.4968
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	13.5424	12.9441	12.8696	13.3970	13.2762	13.4594	13.7586	17.7843	20.1901	20.4351	20.1190	20.3317	20.3285	19.6383	18.7654	18.5579	18.1548	16.6868	15.2908	16.7145	15.8375	15.4582	15.4223	15.0498
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	13.5424	12.9441	12.8696	13.3970	13.2762	13.4594	13.7586	17.7843	20.1901	20.4351	20.1190	20.3317	20.3285	19.6383	18.7654	18.5579	18.1548	16.6868	15.2908	16.7145	15.8375	15.4582	15.4223	15.0498
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	13.5424	12.9441	12.8696	13.3970	13.2762	13.4594	13.7586	17.7843	20.1901	20.4351	20.1190	20.3317	20.3285	19.6383	18.7654	18.5579	18.1548	16.6868	15.2908	16.7145	15.8375	15.4582	15.4223	15.0498
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	13.5424	12.9441	12.8696	13.3970	13.2762	13.4594	13.7586	17.7843	20.1901	20.4351	20.1190	20.3317	20.3285	19.6383	18.7654	18.5579	18.1548	16.6868	15.2908	16.7145	15.8375	15.4582	15.4223	15.0498
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	13.5424	12.9441	12.8696	13.3970	13.2762	13.4594	13.7586	17.7843	20.1901	20.4351	20.1190	20.3317	20.3285	19.6383	18.7654	18.5579	18.1548	16.6868	15.2908	16.7145	15.8375	15.4582	15.4223	15.0498
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	13.5424	12.9441	12.8696	13.3970	13.2762	13.4594	13.7586	17.7843	20.1901	20.4351	20.1190	20.3317	20.3285	19.6383	18.7654	18.5579	18.1548	16.6868	15.2908	16.7145	15.8375	15.4582	15.4223	15.0498
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	22.4180	21.6634	22.0880	23.2483	23.3599	23.3479	23.7190	27.2754	30.9959	31.7881	31.6315	31.6392	31.3469	30.4930	28.2955	28.1252	27.5763	24.6929	22.6798	22.4239	22.9843	22.2781	21.3142	20.1174
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	2.3657	2.2209	2.2531	2.2209	2.2370	2.2048	45.8179	40.4052	35.8768	42.1996	42.4973	43.1062	32.8466	32.6245	31.6557	26.4817	2.5910	2.4784	2.3818	2.3657	2.4140	2.3818	2.3335	2.3014
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	20.1670	19.5022	20.4616	20.1470	20.7881	20.2422	20.9650	24.5772	27.3076	27.9839	27.1744	27.7801	27.6318	26.8435	25.3424	24.6537	24.1165	22.1457	19.9782	20.3581	21.5729	21.4317	20.8634	20.2937
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	30.4165	24.0194	31.5323	31.2856	31.4090	31.1622	37.2562	37.5242	40.9758	38.2664	39.5487	37.1021	37.9110	34.2126	33.1464	33.8233	29.5017	23.9928	21.8284	25.2362	25.2961	27.1657	29.6467	28.9649
R013	836078.87	820683.70	835961.87	820661.84	27	0	1	16.8814	16.7249	16.6262	16.7876	16.3153	17.0266	17.2340	20.3950	23.0527	23.6685	23.5754	23.7388	23.4432	23.0029	21.7609	21.8589	20.9189	19.4582	18.0614	18.6548	19.2698	18.7451	18.6374	17.4968
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	16.8814	16.7249	16.6262	16.7876	16.3153	17.0266	17.2340	20.3950	23.0527	23.6685	23.5754	23.7388	23.4432	23.0029	21.7609	21.8589	20.9189	19.4582	18.0614	18.6548	19.2698	18.7451	18.6374	17.4968
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	36.1180	31.9453	33.6780	33.3608	34.8099	37.5188	36.6228	36.3577	39.2654	44.5951	46.6501	46.1538	46.8013	43.1105	42.3356	42.6187	42.8303	36.2567	35.9647	41.9919	40.8841	42.1911	38.8632	39.1854
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	53.3062	51.6232	51.9451	51.6232	51.7841	51.4683	46.9472	48.0335	49.6552	52.3994	52.7147	53.3452	57.2017	52.1163	50.7264	55.9834	56.8486	30.7537	29.7881	29.6432	30.1437	55.3983	71.4821	54.6701
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	35.5083	30.3680	31.4819	31.2180	31.3499	42.1783	43.6714	42.0891	44.4749	49.3952	50.0060	49.0885	50.0260	44.1116	44.6318	44.7995	43.8273	35.6670	30.8840	30.7441	31.2264	29.0140	30.6756	30.4196
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	32.0091	32.2655	34.3111	34.0328	35.1941	39.3298	40.5986	43.8754	44.3353	49.4337	48.8389	47.2832	47.5937	39.2887	36.0729	34.9019	31.7237	21.6876	16.6398	17.1135	18.4199	20.6156	18.2048	21.0632
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	32.0091	32.2655	34.3111	34.0328	35.1941	39.3298	40.5986	43.8754	44.3353	49.4337	48.8389	47.2832	47.5937	39.2887	36.0729	34.9019	31.7237	21.6876	16.6398	17.1135	18.4199	20.6156	18.2048	21.0632
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	28.3646	31.2180	31.4819	31.2180	37.9169	44.7951	42.3129	43.2610	45.1063	58.2940	58.6233	55.6122	56.9981	48.0848	43.6335	41.5903	39.0609	27.7248	25.4396	26.8855	25.7302	27.1040	26.2309	26.0422
R019	835520.16	820540.46	835514.53	820570.32	11	0	1	28.3646	31.2180	31.4819	31.2180	37.9169	44.7951	42.3129	43.2610	45.1063	58.2940	58.6233	55.6122	56.9981	48.0848	43.6335	41.5903	39.0609	27.7248	25.4396	26.8855	25.7302	27.1040	26.2309	26.0422
R020	835568.73	820565.58	835478.35	820470.77	11	0	1	20.7350	20.0731	20.2708	23.0484	23.1611	21.3062	25.1664	24.2964	24.8029	25.5469	25.6493	28.5561	26.7746	27.2801	26.2853	22.7319	21.8265	20.4015	19.7212	20.3099	20.6330	20.2483	18.8623	17.4068
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	64.8616	72.1159	75.2885	75.3272	76.3789	72.1261	76.9450	78.6992	78.3151	90.2208	90.0521	90.5902	85.2637	83.9845	78.6475	72.7390	67.2262	56.4220	51.3242	52.3682	52.5196	54.5235	55.0298	55.8656
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	37.4040	36.1936	36.9407	36.7814	37.4884	37.3758	37.9042	40.6447	41.1971	40.7954	40.1725	40.9247	40.7872	39.9475	39.7662	40.3311	40.1881	38.5043	37.3775	37.1520	37.0958	37.1726	36.6433	36.7591
R023	835346.26	820830.29	835376.00	820680.43	16	0	1	35.7255	35.0459	35.7984	35.2826	36.5503	36.2806	36.9123	39.6082	39.8616	39.4976	39.5305	39.6643	40.2123	38.9137	37.9194	37.3580	36.4614	34.2180	31.7050	32.4806	33.2326	32.9844	33.3526	33.5198
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	35.6604	35.0845	35.7394	36.3658	36.7614	37.6442	39.7765	45.7230	48.6649	50.1388	49.1670	51.1013	48.4337	46.0591	39.9870	42.6324	36.0830	33.7056	32.8787	33.6493	33.1080	32.5474	32.6385	31.9771
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	43.7719	32.9995	33.3053	32.9995	34.7406	51.4283	48.6727	49.7815	51.1462	56.8980	57.1291	56.6891	57.8053	55.9439	54.5210	51.1615	51.2022	45.6753	42.5776	43.1768	40.8748	46.3543	45.3938	44.7606
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	36.5753	36.8728	38.3622	38.3211	39.0234	37.8588	42.8733	47.2370	55.9400	59.2879	57.1271	55.8042	54.4560	50.8882	48.0931	47.9621	42.0711	37.5609	35.5934	33.2256	33.7545	28.9647	29.0631	27.4419
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	86.3115	75.8668	79.9967	79.7066	85.9009	90.5907	89.1827	87.7212	91.5618	103.2563	100.1387	106.2547	102.7193	91.6886	85.9148	87.8869	83.4440	78.3201	72.9769	77.2241	78.0395	81.2749	78.6756	79.4336
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	28.5854	18.1421	19.7559	15.6168	17.1861	29.2033	27.4545	26.9616	26.5084	30.6851	30.3072	30.1342	31.0097	31.6708	31.7416	29.6417	26.9566	26.4094	26.6218	26.6746	26.8442	24.9662	25.1761	26.0332
R029	835524.13	820833.07	835569.38	820594.78	18	0	1	55.9703	57.4341	59.0346	58.8258	61.7173	64.4271	62.7344	65.0764	68.3437	84.9070	83.1864	81.7752	84.4471	69.4206	65.0280	64.3137	59.0051	43.2388	38.3849	40.0599	42.8225	51.7572	52.8534	53.0843
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	15.7286	2.2209	2.2531	2.2209	2.2370	33.3053	27.2139	28.1248	29.0196	24.7838	25.0152	25.4819	29.5383	29.3406	32.5033	30.5485	13.5828	16.5708	15.8949	15.7930	16.0880	15.9056	15.5462	15.3585
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	19.0927	18.5854	19.7404	19.7010	19.7969	20.1797	23.7795	26.7779	26.9233	26.6193	25.0380	24.4674	23.8411	22.8645	21.1056	21.4313	19.7188	17.1931	16.5178	14.9910	15.8451	15.9948	14.6804	15.9523
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	26.3376	26.0222	28.3696	27.8781	28.6897	27.7327	31.4969	32.6531	36.3018	36.1642	35.0950	35.4407	33.8312	33.1004	32.0866	30.3937	28.2990	24.9447	23.5396	24.4647	25.3840	25.2453	24.8750	22.9544
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	39.5461	38.9686	39.2695	38.9686	43.2161	44.6002	45.8132	47.0398	48.2534	51.9687	50.0710	50.7835	51.8980	45.7223	43.7016	39.6040	36.3607	22.5374	13.0603	16.5080	26.3368	28.5497	28.1270	33.9375
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	18.3930	17.6448	18.4267	18.6140	18.6193	18.4361	20.9740	23.5909	26.8300	27.1360	25.3367	25.9373	24.9588	24.5911	24.5187	23.0302	20.9308	18.4794	16.4655	16.8483	18.1745	18.9596	18.7223	19.6745
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1	48.9004	48.6428	50.0617	49.7294	49.8948	55.8081	57.0936	59.0162	60.3846	64.7320	63.1328	63.9244	65.4742	56.7031	53.1526	53.7570	50.9984	35.7802	31.0895	31.7755	34.7172	35.1879	34.7904	37.1065
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	33.0885	32.1398	33.8173	33.8002	34.6259	34.8079	35.2910	38.1356	40.4578	41.5162	40.5057	40.3269	40.5661	39.6498	37.1589	36.3883	35.4053	32.4834	29.2519	32.6891	33.4449	33.6613	33.2571	33.7584
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	33.0885	32.1398	33.8173	33.8002	34.6259	34.8079	35.2910	38.1356	40.4578	41.5162	40.5057	40.3269	40.5661	39.6498	37.1589	36.3883	35.4053	32.4834	29.2519	32.6891	33.4449	33.6613	33.2571	33.7584
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	50.3311	48.3338	50.5540	49.7165	55.5088	51.8690	52.6484	54.3046	54.7400	54.8273	54.4053	54.1183	55.1544	53.4276	51.3692	51.4268	51.0744	48.9359	47.8684	52.0807	51.4007	51.6715	50.9947	51.0390
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	19.2909	18.9150	20.2870	18.2595	19.6874	19.6977	20.8109	22.0330	23.7237	23.5461	23.1303	23.5813	24.0058	23.7468	22.3134	22.7218	21.6022	20.5735	19.0540	21.3829	20.4474	20.5385	20.4211	19.3974
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	38.8389	37.4671	38.5843	36.5941	37.0841	38.7625	40.1577	41.2068	42.2629	45.5879	46.2130	45.6568	45.7229	41.3439	40.7944	41.6031	39.0573	34.9652	33.3034	31.9387	34.0871	36.8193	34.3267	34.3995
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	36.0701	37.7559	38.0778	37.7559	37.9169	51.4192	50.5900	51.7237	48.7273	54.0206	54.4877	52.3831	56.1330	49.3864	48.0302	48.2124	48.7245	33.8299	32.9019	32.7637	33.2771	33.6560	33.1635	35.9934
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	37.7478	35.9546	37.0321	36.6970	38.6437	40.7147	38.4445	41.3001	42.4637	49.3688	49.7061	51.1078	49.8171	45.0437	44.4088	41.0561	38.8405	32.9154	28.9441	32.5724	32.8777	35.6488	36.0719	35.9118
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	93.0148	81.2771	86.2484	85.8888	91.5620	92.2842	86.4407	85.5528	86.2229	94.8663	92.1798	94.9106	95.7579	97.4444	88.5077	100.0037	93.1695	94.5017	98.3593	103.2369	100.6218	96.3919	104.6885	93.2010
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	21.2051	20.6792	21.8087	22.5605	18.1212	18.5842	20.4220	22.3069	22.4340	23.4273	23.9767	24.8422	24.6768	25.6986	24.3437	23.1483	23.2979	21.4665	21.2794	20.4316	20.1042	20.3773	20.0087	22.3902
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	29.9815	29.0619	29.6064	31.0672	31.8571	30.9604	32.4231	33.2976	33.8740	32.8764	33.0946	33.1358	33.5884	32.8284	31.2415	31.0832	29.8570	28.1237	26.5876	29.0200	30.0878	30.3809	30.4546	30.5706
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	57.5254	57.7665	50.1519	49.7125	47.3146	38.7379	35.7434	35.4884	38.4869	51.0965	63.2328	69.9149	70.1476	76.8167	73.0948	72.4586	75.4203	76.8909	78.4053	97.9655	98.0499	91.8976	85.2866	83.1262
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	34.9468	21.1065	21.3962	21.1065	2.2370	33.3053	33.4622	34.5726	35.6670	36.4435	37.7283	38.4006	39.4109	39.1463	37.7104	31.1226	30.9778	26.8992	25.9747	25.8371	26.2483	26.9518	26.4644	30.1993
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	31.3228	31.0720	30.6919	31.7387	33.4268	33.4092	35.6649	39.2350	41.8481	41.7044	40.1427	40.2703	38.7556	37.4462	33.7028	32.6240	30.6105	27.8961	26.3644	26.1613	27.5794	26.9021	27.3252	26.4554
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	26.7295	26.2742	26.9923	27.6277	26.9416	28.5092	29.6368	31.2359	32.3554	37.0261	36.4860	36.9323	36.8522	36.3312	34.4982	32.5591	31.8016	27.5936	24.6441	25.1515	25.5823	27.3677	26.7769	27.2256
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	26.7295	26.2742	26.9923	27.6277	26.9416	28.5092	29.6368	31.2359	32.3554	37.0261	36.4860	36.9323	36.8522	36.3312	34.4982	32.5591	31.8016	27.5936	24.6441	25.1515	25.5823	27.3677	26.7769	27.2256
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	26.7295	26.2742	26.9923	27.6277	26.9416	28.5092	29.6368	31.2359	32.3554	37.0261	36.4860	36.9323	36.8522	36.3312	34.4982	32.5591	31.8016	27.5936	24.6441	25.1515	25.5823	27.3677	26.7769	27.2256
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	26.7295	26.2742	26.9923	27.6277	26.9416	28.5092	29.6368	31.2359	32.3554	37.0261	36.4860	36.9323	36.8522	36.3312	34.4982	32.5591	31.8016	27.5936	24.6441	25.1515	25.5823	27.3677	26.7769	27.2256
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	17.7423	16.4612	17.2620	17.3012	18.0967	17.5724	20.7855	26.3468	26.8671	24.9928	24.7330	24.2880	24.4029	23.5236	21.1651	20.3470	19.6963	18.6717	17.7634	16.7499	16.6256	17.4509	16.9514	16.2101
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	17.7423	16.4612	17.2620	17.3012	18.0967	17.5724	20.7855	26.3468	26.8671	24.9928	24.7330	24.2880	24.4029	23.5236	21.1651	20.3470	19.6963	18.6717	17.7634	16.7499	16.6256	17.4509	16.9514	16.2101
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	111.4725	116.1711	130.5581	138.1214	136.0943	119.0236	114.2714	118.0237	119.4342	119.4427	113.1577	114.0154	112.4376	84.0277	82.5886	77.5259	65.5123	54.2883	33.9695	53.4066	57.2413	93.5128	100.8174	108.3889
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	29.5220	28.5395	30.2770	31.6358	33.6262	35.0253	33.7827	37.1774	36.8281	36.1423	36.8493	36.6705	36.8957	29.5740	27.5777	26.8201	25.8906	24.2472	21.0025	21.3953	21.6039	22.0018	20.2383	20.5269
R057	835305.88	820665.23	835365.16	820674.55	12	0	1	35.2638	34.1421	35.6594	33.9552	34.3668	36.4006	36.3926	37.6566	38.9334	46.0844	44.4068	45.9911	47.5520	40.7421	40.1230	40.3123	40.7119	34.8629	34.4334	37.1952	36.3762	38.1127	35.0026	35.3253
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	69.1873	65.2209	66.8618	66.1243	67.1236	66.1361	69.3675	71.5264	72.2581	72.8448	72.6653	73.0588	73.9666	72.0943	69.2760	70.0148	72.4997	70.0587	69.3630	67.1288	70.3539	67.9478	66.3932	63.9419
R059	835395.59	820548.47	835232.17	820516.97	16	0	1	20.4363	19.7266	20.2039	20.1734	20.6464	20.7195	21.8086	23.1557	22.8380	23.3326	23.3007	22.6012	22.9322	21.6592	20.5623	20.9048	20.7048	19.7013	18.0122	19.8173	20.4127	20.3157	19.6390	19.5689
R060	835740.08	820393.81	835672.32	820380.93	13	0	1	163.9918	144.2275	160.6148	169.2999	169.5328	169.7432	163.2072	175.8202	170.5843	162.7862	170.9044	159.7243	155.3434	155.4192	133.8019	138.2228	125.7710	119.6742	109.4486	115.5724	113.5449	118.9035	118.0536	120.2274
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1	25.3999	24.2630	24.6744	24.7981	24.9578	24.2062	25.9422	27.2062	27.5826	26.4498	27.4712	26.9899	27.6704	26.0672	24.3545	24.9984	24.9211	23.3005	21.3020	26.2996	27.4190	27.7592	27.0256	26.8078
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	25.3999	24.2630	24.6744	24.7981	24.9578	24.2062	25.9422	27.2062	27.5826	26.4498	27.4712	26.9899	27.6704	26.0672	24.3545	24.9984	24.9211	23.3005	21.3020	26.2996	27.4190	27.7592	27.0256	26.8078
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1	38.7476	38.5763	40.5469	40.6131	40.7933	47.1238	47.9769	49.5190	49.6824	52.2805	51.4974	52.0485	53.0222	46.7500	44.7018	42.5725	36.4597	25.3942	16.0128	26.3680	37.4697	46.0478	52.2888	58.4589
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	45.1603	30.3680	30.6393	30.3680	30.5037	51.4473	48.5201	47.2495	53.6911	51.1565	49.0497	49.6082	50.6816	50.1807	51.7165	45.3617	44.2339	42.2028	37.4745	39.2284	37.8316	43.2560	44.9853	46.8108
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	26.8160	25.2539	25.7007	25.5954	25.9569	25.8957	27.4091	28.8587	29.6529	29.4403	28.7581	29.2482	28.9549	27.6789	26.8241	27.2591	27.8305	26.0805	24.2226	27.3286	28.4229	28.0056	27.2283	27.2065
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	36.7598	35.6069	35.5796	35.7500	35.6290	34.7984	36.0164	37.9965	38.2797	39.6138	38.8714	39.2697	38.9880	39.4449	38.4144	38.5973	40.0882	38.6379	37.2413	38.9014	39.5223	39.4448	38.0850	38.0713
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	38.9361	37.1460	38.1902	36.8624	37.1538	36.8215	36.9023	37.6321	38.8677	39.6098	40.6432	41.3430	42.4394	41.4715	41.0232	42.2537	42.5785	42.2441	42.1546	42.4111	43.0167	42.3969	41.3413	40.6500
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	59.4342	68.6029	75.3541	68.6029	73.5263	75.0626	72.3683	71.0047	74.8943	75.7570	79.3081	83.5661	84.9180	47.8853	46.6647	50.9398	47.2996	47.0077	43.9309	43.7760	42.0350	64.5293	62.7640	62.4632
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	92.2790	40.5061	40.8151	37.7559	37.9169	90.1668	80.7314	82.0919	83.4413	84.3982	84.7808	85.5508	96.5556	95.8590	94.2465	95.2781	85.5508	93.5710	79.6627	108.4986	105.4599	109.5944	110.1490	110.8086
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	50.6384	28.2431	28.5328	5.0662	5.0823	48.4486	37.7559	38.8664	39.9607	52.5364	52.9387	54.3587	64.8693	55.7302	53.8674	55.0253	54.8121	53.2953	42.4618	42.2783	42.8976	42.5661	38.9971	38.6994
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	35.6520	32.5975	33.9996	33.6823	34.1708	38.0445	36.9448	37.3738	38.6822	39.1222	39.6410	40.9926	43.2683	36.7540	33.8618	34.6190	33.9590	30.0929	26.5086	27.3309	27.8818	32.7283	31.2788	32.7235
R073	835175.32	820822.66	835062.15	820684.25	18	0	1	28.4306	14.8113	15.0151	14.8113	14.9132	27.0852	25.4690	26.4024	27.3197	27.9680	32.5114	33.1122	31.1890	30.9798	29.8854	30.5485	33.1122	27.8370	26.9243	26.7886	27.1978	26.9518	30.4863	30.1993
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	89.2016	76.4175	81.5681	82.7996	87.2952	70.5550	86.3534	85.9226	89.1524	89.6928	88.4325	87.2731	90.6486	93.4905	86.3585	84.1129	77.9591	79.4795	83.3802	87.1083	86.8562	78.2368	83.6919	87.4100
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	45.1603	30.3680	30.6393	30.3680	31.3499	51.4692	51.0547	49.3691	50.3754	53.9485	51.4344	51.9944	56.2132	47.8853	46.6647	44.4416	42.7346	39.5885	36.4229	36.9207	36.7723	42.5877	42.7759	42.5309

Caline 4 input for 2050 Q3

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820244.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820384.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820250.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820200.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835763.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820804.49	14	0	1
R108	836203.37	820871.38	836210.57	820714.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820994.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820594.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820578.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	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
24.9430	25.1248	25.3505	25.1248	26.5844	24.5465	25.3889	26.3705	26.6860	27.6722	26.7534	27.2182	28.1125	26.4154	25.2939	25.4655	24.3985	21.5430	18.8276	19.0465	20.3179	21.2803	21.7890	22.8984
31.6670	31.2180	38.0778	37.7559	37.9169	57.6079	55.8495	56.9307	57.9987	58.7566	59.0594	59.6724	62.3465	34.1923	33.0726	33.7798	33.2200	31.6371	30.6417	32.3180	30.9940	30.8920	32.5315	30.3917
24.5564	23.8751	24.7286	24.9043	25.2752	24.4716	24.6523	26.0734	26.2092	26.6584	26.8593	26.8568	27.1790	26.7160	25.1211	25.0709	24.8294	24.1993	22.5509	23.7167	24.2210	24.1794	23.4586	23.3644
151.9989	165.1214	147.7438	147.4588	169.9271	154.3691	158.9991	153.6620	157.3461	151.6038	154.7899	158.4528	162.5789	150.7039	141.8963	158.5128	158.6948	159.8111	151.2828	148.2697	152.3116	149.2243	155.7385	145.9223
23.1169	22.6713	23.4694	23.5438	23.1050	22.9109	22.7406	23.6047	24.3265	24.7787	24.7283	25.2165	25.4216	24.4862	23.1534	23.0401	22.4918	20.6996	19.3173	20.3026	20.7736	21.4100	21.6006	21.4739
67.3463	67.8928	72.1846	71.8195	72.0016	64.0044	62.3200	62.5539	64.4835	67.4802	65.6830	66.3778	69.5237	52.7565	45.9057	43.8607	42.5226	40.5720	37.0548	36.9207	38.4646	44.7920	45.6782	45.4069
56.9971	64.3535	64.6532	64.3535	64.5023	55.3374	54.1206	52.1309	53.1941	57.1891	54.7246	55.1149	60.1574	39.9157	32.3281	32.9668	32.8506	31.7978	28.8084	28.6917	29.1359	38.7419	41.0462	43.1382
75.2355	62.2832	66.2193	66.8160	65.3691	75.5496	72.2034	73.5052	74.2797	75.7444	74.9050	75.6401	78.9047	69.1887	67.7190	66.2288	63.0422	56.5422	53.9362	60.7248	60.8171	63.6055	64.5745	64.2733
27.9546	26.9542	27.4129	27.1666	28.0815	27.4574	27.0735	28.6521	29.7900	29.6679	30.7128	31.5618	31.6414	27.8614	26.7518	27.0467	26.2651	24.3400	23.1799	23.4931	25.1517	24.3882	24.4583	24.2471
75.1230	73.8956	74.3284	73.9317	70.6923	74.3339	68.7319	66.4566	69.1260	88.3559	86.8221	86.9233	85.5635	76.2128	74.6545	70.3866	63.7507	49.4694	45.8741	50.6089	51.6013	55.0037	55.4092	55.6963
28.3175	27.4732	28.6802	28.4084	28.2258	30.2399	31.0792	31.8317	32.8051	32.3714	31.7306	33.1298	32.9445	30.1893	28.7449	30.8846	29.0829	26.4158	25.1977	25.5748	26.9573	26.9793	25.5567	26.0457
48.7883	46.1744	47.4114	46.1815	46.2101	48.7688	50.3577	52.1308	53.2515	52.4541	53.6407	54.2340	53.4691	52.4552	49.6298	50.6647	51.5662	48.5607	45.7436	45.9603	48.1260	47.5512	45.7059	45.9571
25.7132	27.2139	27.4779	27.2139	33.6231	25.6629	28.3432	29.2860	30.2154	33.4553	33.7405	34.3170	28.7187	28.3063	27.1918	27.8557	24.8687	24.0231	23.0965	22.9678	23.3627	23.2140	22.7619	24.5537
36.5860	35.6491	36.4381	36.2496	36.5541	36.7354	37.4983	38.8378	39.3612	39.6020	39.7080	39.9247	40.3928	39.5265	37.9441	38.1876	36.9145	35.2957	33.2652	33.5349	34.6750	34.1199	33.7864	33.7608
44.0470	39.7204	40.0896	40.8558	40.1475	43.4096	47.5231	48.6235	48.2127	48.0176	47.1416	47.1126	49.2927	47.9153	45.6504	44.5746	42.6271	36.7295	33.6339	35.9321	36.8969	37.4828	36.4623	36.7524
53.3981	47.9370	48.7932	48.8670	50.0436	53.9198	59.4182	64.8423	60.8051	59.5615	59.5604	57.9290	60.5664	60.6803	59.1407	56.8167	56.4970	55.2612	50.3908	48.9391	52.9731	51.2981	49.9811	50.1442
53.3981	47.9370	48.7932	48.8670	50.0436	53.9198	59.4182	64.8423	60.8051	59.5615	59.5604	57.9290	60.5664	60.6803	59.1407	56.8167	56.4970	55.2612	50.3908	48.9391	52.9731	51.2981	49.9811	50.1442
29.5106	27.6312	28.5297	28.1015	28.7572	29.0400	31.2549	32.3233	32.6112	32.7002	31.3768	31.7502	32.5758	32.5149	31.7145	30.0631	30.3425	27.3969	25.2795	27.4043	29.0601	28.6209	28.1112	28.9212
50.2668	45.6070	48.2030	47.8074	47.6341	50.6041	53.4601	55.3602	56.5818	55.6647	55.3242	54.3606	56.8758	54.7968	53.7081	53.0246	51.4134	48.9787	44.8888	45.2064	46.3512	47.3928	46.2001	45.9442
29.0912	27.3459	30.4273	30.1376	30.2824	31.0233	32.2819	32.0063	33.9747	35.6011	32.5382	34.1683	35.6807	35.2473	32.6944	32.0231	31.4729	30.0327	28.1468	28.9634	28.4284	30.3274	30.8497	30.5848
71.1084	74.3888	76.9915	76.6250	79.8019	69.4985	73.3506	72.9635	77.4216	75.9647	71.9931	74.9288	70.7100	68.9217	65.7961	56.6556	53.8153	49.0215	45.3353	46.8093	49.6256	55.0044	56.6240	60.1684
46.7508	45.0177	44.9625	45.1062	45.9115	45.9629	51.0045	54.7771	54.1136	51.0067	50.3867	49.5083	50.8482	53.0785	50.1951	48.8139	47.9610	44.2806	40.6668	40.5383	41.0271	41.1435	39.1640	39.6401
53.1852	52.3639	51.6186	51.1737	53.2812	56.7590	57.3953	61.8641	60.5571	61.7467	61.4779	59.2471	62.9073	59.3909	55.9266	53.7628	52.3159	49.5481	43.4579	43.5548	46.8601	48.6699	47.9876	48.3698
53.1852	52.3639	51.6186	51.1737	53.2812	56.7590	57.3953	61.8641	60.5571	61.7467	61.4779	59.2471	62.9073	59.3909	55.9266	53.7628	52.3159	49.5481	43.4579	43.5548	46.8601	48.6699	47.9876	48.3698
48.6825	21.1065	21.3962	21.1065	21.2513	63.9552	51.8989	53.5106	53.6836	57.4293	57.8973	58.8415	60.2671	63.7276	61.6400	53.2862	44.3252	42.7372	38.8581	51.5793	52.2695	59.2112	61.6141	61.1407
48.6825	21.1065	21.3962	21.1065	21.2513	63.9552	51.8989	53.5106	53.6836	57.4293	57.8973	58.8415	60.2671	63.7276	61.6400	53.2862	44.3252	42.7372	38.8581	51.5793	52.2695	59.2112	61.6141	61.1407
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
23.9409	24.4984	25.3515	25.7342	24.4210	25.8124	27.9509	27.8398	27.7637	29.3397	28.8922	27.8157	29.4206	28.7894	28.0532	25.0799	25.4316	24.1142	22.0948	22.5546	22.0551	24.7970	23.4410	24.0817
18.6667	18.1425	18.2727	18.7915	18.8209	18.8494	19.2152	23.6286	24.0234	25.0920	24.1037	24.1812	24.3072	23.5468	22.2189	22.3440	21.9298	20.6335	19.9360	21.0863	20.0280	20.4033	20.2907	19.1417
31.2851	15.4582	15.6375	15.4582	15.5478	28.1818	27.5026	27.0588	30.7631	36.4280	35.3760	38.3293	36.7976	30.1119	29.0809	29.0412	27.0415	26.6855	25.9265	25.8138	26.1797	28.7698	28.3303	28.1050
53.3372	42.4065	44.3239	46.4553	46.2112	60.7183	57.0413	57.4737	58.6010	60.7051	62.5470	64.3509	60.0561	57.3172	56.8180	47.0732	44.7217	41.4789	38.3468	57.8976	56.7748	67.8532	71.3248	71.4771
16.0874	15.2043	16.0911	15.4672	16.6952	18.4328	18.9290	23.5716	25.2109	23.9714	23.2307	22.9147	23.9165	23.3963	20.1515	20.0565	19.3027	18.3444	17.3892	17.9129	17.5311	17.6908	16.8761	15.9320
25.3678	21.7364	24.4893	22.5629	25.6046	22.4463	24.5481	29.0631	31.4078	36.0791	37.2946	39.3498	36.2440	33.3870	28.1474	27.3227	24.8587	24.4391	23.6040	23.3555	24.3360	24.1048	23.9064	23.3547
24.4025	20.5144	21.8991	23.3504	23.8491	24.1130	26.4694	26.5994	27.4818	25.0942	26.1768	25.1924	26.5328	24.7715	23.8565	26.7229	23.6292	21.5661	20.8036	21.2477	22.3096	22.0060	23.0158	23.4953
37.8547	30.1665	32.0802	31.8398	32.5095	36.5573	39.7721	39.5672	41.5668	36.0635	36.6911	37.0434	37.4671	35.1389	33.2662	36.0890	33.0416	28.3523	27.6548	28.2724	31.8694	32.5062	33.5689	37.5663
25.3616	13.7277	13.8435	13.7277	13.7856	25.2532	24.5768	25.3653	26.1410	27.6082	27.8429	30.6535	29.0191	26.8091	24.2068	27.9442	25.3310	21.7974	21.1329	21.0341	24.0983	26.3027	29.2509	31.1482
37.2177	35.5978	36.7666	35.5178	37.8251	38.5878	39.8430	40.1325	42.0498	39.4305	40.9458	41.2713	40.9099	39.0323	36.0251	37.8165	36.8919	31.0013	30.2398	30.8350	33.8564	35.1783	35.5134	38.9780
32.4823	20.5175	20.7213	20.5175	20.6194	44.8914	41.2901	42.2039	43.1033	48.5379	47.6595	55.2867	50.2498	49.9770	43.9362	44.6358	30.1242	29.3095	28.4988	28.3781	28.7971	42.7977	46.9563	46.6847
32.4823	20.5175	20.7213	20.5175	20.6194	44.8914	41.2901	42.2039	43.1033	48.5379	47.6595	55.2867	50.2498	49.9770	43.9362	44.6358	30.1242	29.3095	28.4988	28.3781	28.7971	42.7977	46.9563	46.6847
32.4823	20.5175	20.7213	20.5175	20.6194	44.8914	41.2901	42.2039	43.1033	48.5379	47.6595	55.2867	50.2498	49.9770	43.9362	44.6358	30.1242	29.3095	28.4988	28.3781	28.7971	42.7977	46.9563	46.6847
43.0644	36.0970	39.1871	38.9179	37.7884	41.6645	45.3194	44.7852	47.2841	43.7904	42.4980	44.9585	43.5583	41.6718	39.1699	40.2834	36.7034	31.3637	30.6192	31.4825	35.4560	36.3650	37.7160	43.8139
43.0644	36.0970	39.1871	38.9179	37.7884	41.6645	45.3194	44.7852	47.2841	43.7904	42.4980	44.9585	43.5583	41.6718	39.1699	40.2834	36.7034	31.3637	30.6192	31.4825	35.4560	36.3650	37.7160	43.8139
25.7961	26.8593	27.0847	26.8593	26.9720	48.0520	45.3976	43.7650	44.6391	50.5386	46.9925	51.2721	48.1391	45.6853	42.0561	44.3528	25.3882	24.7380	24.0921	25.3373	24.3680	34.2782	35.9276	34.3795
26.4182	27.2053	30.6393	30.3680	30.5037	45.4413	43.8309	42.6894	45.7022	48.2930	48.2163	48.7198	46.5455	46.3180	42.8087	45.0839	27.4256	24.7380	25.4396	25.3373	25.7302	34.2782	35.9276	35.7115
21.2771	21.1599	17.3165	17.4332	17.9013	21.0636	22.5427	24.3707	26.0097	24.5321	22.4674	22.4373	23.0403	22.4674	21.4717	22.8277	22.2160	20.2894	19.0074	22.5189	22.1580	22.0144	21.3952	22.2243
21.2771	21.1599	17.3165	17.4332	17.9013	21.0636	22.5427	24.3707	26.0097	24.5321	22.4674	22.4373	23.0403	22.4674	21.4717	22.8277	22.2160	20.2894	19.0074	22.5189	22.1580	22.0144	21.3952	22.2243
63.2584	53.8783	56.4467	56.0780	54.2749	66.2841	67.2883	67.6351	71.5873	71.5750	67.0388	71.5481	72.3610	67.6499	63.5108	61.1090	59.8606	55.3445	51.2044	55.3471	54.5731	54.8935	55.7939	53.6848
63.2584	53.8783	56.4467	56.0780	54.2749	66.2841	67.2883	67.6351	71.5873	71.5750	67.0388	71.5481	72.3610	67.6499	63.5108	61.1090	59.8606	55.3445	51.2044	55.3471	54.5731	54.8935	55.7939	53.6848
63.2584	53.8783	56.4467	56.0780	54.2749	66.2841	67.2883	67.6351	71.5873	71.5750	67.0388	71.5481	72.3610	67.6499	63.5108	61.1090	59.8606	55.3445	51.2044	55.3471	54.5731	54.8935	55.7939	53.6848
63.2584	53.8783	56.4467	56.0780	54.2749	66.2841	67.2883	67.6351	71.5873	71.5750	67.0388	71.5481	72.3610	67.6499	63.5108	61.1090	59.8606	55.3445	51.2044	55.3471	54.5731	54.8935	55.7939	53.6848
47.4836	2.2209	2.2531	2.2209	2.2370	45.6409	31.2856	32.1439	32.9861	43.9511	49.4792	44.8988	45.8304	30.2119	29.3061	34.4399	34.3219	33.4635	32.6213	32.4979	32.8949	32.6642	32.2136	31.9830
47.4836	2.2209	2.2531	2.2209	2.2370	45.6409	31.2856	32.1439	32.9861	43.9511	49.4792	44.8988	45.8304	30.2119	29.3061	34.4399	34.3219	33.4635	32.6213	32.4979	32.8949	32.6642	32.2136	31.9830
47.4836	2.2209	2.2531	2.2209	2.2370	45.6409	31.2856	32.1439	32.9861	43.9511	49.4792	44.8988	45.8304	30.2119	29.3061	34.4399	34.3219	33.4635	32.6213	32.4979	32.8949	32.6642	32.2136	31.9830
47.4836	2.2209	2.2531	2.2209	2.2370	45.6409	31.2856	32.1439	32.9861	43.9511	49.4792	44.8988	45.8304	30.2119	29.3061	34.4399	34.3219	33.4635	32.6213	32.4979	32.8949	32.6642	32.2136	31.9830
47.4836	2.2209	2.2531	2.2209	2.2370	45.6409	31.2856	32.1439	32.9861	43.9511	49.4792	44.8988	45.8304	30.2119	29.3061	34.4399	34.3219	33.4635	32.6213	32.4979	32.8949	32.6642	32.2136	31.9830
47.4836	2.2209	2.2531	2.2209	2.2370	45.6409	31.2856	32.1439	32.9861	43.9511	49.4792	44.8988	45.8304	30.2119	29.3061	34.4399	34.3219	33.4635	32.6213	32.4979	32.8949	32.6642	32.2136	31.9830
46.8576	37.6677	37.9091	37.6677	41.4224	58.3140	57.7668	56.9020	57.2139	68.2820	67.3637	66.8095	69.7683	64.2241	64.4947	62.3701	61.4832	45.6461	47.2429	61.5055	63.5993	77.0746	79.4190	78.3914
32.4823	37.7559	49.0709	28.2431	5.0823	37.5990	37.7559	38.8664	39.9607	40.7372	39.0704	39.6820	40.5993	62.8071	57.4141	58.2428	58.0922	53.5819	49.6253	67.4077	67.9424	72.0958	67.0928	59.5190
24.0865	27.2139	27.4779	33.4622	27.3459	22.9385	30.6652	30.5443	34.1360	34.8633	37.8691	35.7249	32.8466	34.4503	36.4187	33.9868	33.8492	32.2495	31.3245	34.1166	35.1738	31.5622	32.9542	32.2297
43.2900	43.7752	48.4072	47.9113	48.2684	50.0260	55.8858	56.6805	71.7705	69.8843	68.5659	69.5622	62.4503	77.6446	81.9345	78.0319	77.8534	73.5728	71.9008	107.4634	95.0624	93.2382	99.0106	107.0098
53.8120	26.8593	27.0847	26.8593	31.3499	51.4615	48.1306	46.5053	45.5901	54.3360	52.9753	53.5349	56.5883	56.9771	58.0773	49.4445	51.5102	47.3826	49.5457	65.8497	61.9763	49.6239	49.1630	48.9274
16.4135	15.0956	12.7487	14.8188	14.8993	18.9196	12.8565	19.0076	20.6853	19.8234	19.9763	19.7692	20.7971	21.3356	20.4792	21.2864	21.3099	20.4357	19.1674	23.7198	24.6014	21.8649	21.6718	22.9255
48.9529	5.0662	5.0984	5.0662	5.0823	47.0917	33.2012	34.0595	34.9018	41.5351	41.8184	36.2375	43.2443	28.8961	28.0874	36.3555	36.2375	35.3792	34.5370	34.4136	34.8352	34.6046	34.1539	33.9233
52.2910	26.8593	27.0847	26.8593	26.9720	54.3593	50.5624	49.0228	50.2679	55.9596	53.1814	55.1765	56.1571	57.7620	56.5090	45.6600	47.4428	46.0257	47.2429	57.4985	57.9913	49.6587	51.7220	51.4437
16.7192	17.4634	19.1784	16.5905	12.6923	16.4522	17.3259	23.9705	26.3742	25.9916	26.3311	26.6434	27.9077	27.4174	26.3290	27.0343	27.1567	26.3678	25.9105	24.4646	25.0774	23.9421	22.3495	22.1672
16.7192	17.4634	19.1784	16.5905	12.6923	16.4522	17.3259	23.9705	26.3742	25.9916	26.3311	26.6434	27.9077	27.4174	26.3290	27.0343	27.1567	26.3678	25.9105	24.4646	25.0774	23.9421	22.3495	22.1672

Caline 4 input for 2050 Q3

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
R001	835620.80	820845.25	835496.74	820838.92	14	3	4	1.4224	1.2282	0.9946	1.0727	1.1655	1.0348	1.5097	1.7585	1.9358	2.0068	1.9849	2.0065	2.0068	1.9322	2.0482	2.0482	2.0414	1.8499	1.7096	1.7879	1.9115	1.8823	1.8991	1.4598
R001	835496.74	820838.92	835393.93	820832.16	14	8	4	1.4224	1.2282	0.9946	1.0727	1.1655	1.0348	1.5097	1.7585	1.9358	2.0068	1.9849	2.0065	2.0068	1.9322	2.0482	2.0482	2.0414	1.8499	1.7096	1.7879	1.9115	1.8823	1.8991	1.4598
R001	835393.93	820832.16	835337.57	820834.61	14	9	4	1.4224	1.2282	0.9946	1.0727	1.1655	1.0348	1.5097	1.7585	1.9358	2.0068	1.9849	2.0065	2.0068	1.9322	2.0482	2.0482	2.0414	1.8499	1.7096	1.7879	1.9115	1.8823	1.8991	1.4598
R001	835337.57	820834.61	835300.08	820854.32	14	9	4	1.4224	1.2282	0.9946	1.0727	1.1655	1.0348	1.5097	1.7585	1.9358	2.0068	1.9849	2.0065	2.0068	1.9322	2.0482	2.0482	2.0414	1.8499	1.7096	1.7879	1.9115	1.8823	1.8991	1.4598
R001	835300.08	820854.32	835226.82	820916.25	14	6	4	1.4224	1.2282	0.9946	1.0727	1.1655	1.0348	1.5097	1.7585	1.9358	2.0068	1.9849	2.0065	2.0068	1.9322	2.0482	2.0482	2.0414	1.8499	1.7096	1.7879	1.9115	1.8823	1.8991	1.4598
R001	835226.82	820916.25	835124.41	821009.69	14	3	4	1.4224	1.2282	0.9946	1.0727	1.1655	1.0348	1.5097	1.7585	1.9358	2.0068	1.9849	2.0065	2.0068	1.9322	2.0482	2.0482	2.0414	1.8499	1.7096	1.7879	1.9115	1.8823	1.8991	1.4598
R002	835343.35	820837.42	835620.80	820853.65	14	0	1	2.2492	2.3165	2.5601	2.8553	3.0367	2.9511	2.7454	3.5763	4.0078	3.8051	3.8707	3.9009	3.8462	3.6691	3.2933	3.2329	3.1499	2.9800	2.6749	3.1203	3.1088	3.1756	3.0528	2.7606
R003	835621.42	820844.84	835778.53	820853.97	26	0	1	1.9565	1.8586	1.8238	1.8245	1.9298	1.9291	2.1124	2.6428	2.7845	2.8171	2.7545	2.6161	2.5578	2.5267	2.3912	2.3100	2.0985	1.9115	1.6778	1.6747	1.6972	1.7316	1.7569	1.6963
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1	2.3412	2.4362	1.9288	2.0863	2.1364	2.0629	2.7161	3.3853	3.5591	3.6443	3.5604	3.4718	3.5081	3.3684	2.8624	2.8316	2.5409	2.3085	1.9194	2.2257	2.2989	2.3559	2.6390	2.1589
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1	2.3412	2.4362	1.9288	2.0863	2.1364	2.0629	2.7161	3.3853	3.5591	3.6443	3.5604	3.4718	3.5081	3.3684	2.8624	2.8316	2.5409	2.3085	1.9194	2.2257	2.2989	2.3559	2.6390	2.1589
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1	1.9310	1.7631	1.9606	1.6918	1.8404	1.8972	2.1679	3.2457	3.5604	3.3889	3.3204	3.2365	3.1649	3.0054	2.7985	2.6596	2.4733	2.2576	2.0384	2.3241	2.2390	2.2770	2.3330	2.1691
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1	1.9310	1.7631	1.9606	1.6918	1.8404	1.8972	2.1679	3.2457	3.5604	3.3889	3.3204	3.2365	3.1649	3.0054	2.7985	2.6596	2.4733	2.2576	2.0384	2.3241	2.2390	2.2770	2.3330	2.1691
R008	835782.52	820630.02	835636.16	820602.53	14	3	4	1.2596	1.3384	1.3161	1.3576	1.4571	1.5289	1.6360	2.3058	2.5660	2.5705	2.4972	2.4760	2.4328	2.3085	2.1435	1.9778	1.9111	1.6314	1.3973	1.8130	1.6538	1.7581	1.7808	1.8198
R008	835636.16	820602.53	835398.38	820557.85	14	8	4	1.2596	1.3384	1.3161	1.3576	1.4571	1.5289	1.6360	2.3058	2.5660	2.5705	2.4972	2.4760	2.4328	2.3085	2.1435	1.9778	1.9111	1.6314	1.3973	1.8130	1.6538	1.7581	1.7808	1.8198
R008	835398.38	820557.85	835258.07	820526.53	14	10	4	1.2596	1.3384	1.3161	1.3576	1.4571	1.5289	1.6360	2.3058	2.5660	2.5705	2.4972	2.4760	2.4328	2.3085	2.1435	1.9778	1.9111	1.6314	1.3973	1.8130	1.6538	1.7581	1.7808	1.8198
R008	835258.07	820526.53	835216.95	820533.09	14	10	4	1.2596	1.3384	1.3161	1.3576	1.4571	1.5289	1.6360	2.3058	2.5660	2.5705	2.4972	2.4760	2.4328	2.3085	2.1435	1.9778	1.9111	1.6314	1.3973	1.8130	1.6538	1.7581	1.7808	1.8198
R008	835216.95	820533.09	835167.96	820571.19	14	7	4	1.2596	1.3384	1.3161	1.3576	1.4571	1.5289	1.6360	2.3058	2.5660	2.5705	2.4972	2.4760	2.4328	2.3085	2.1435	1.9778	1.9111	1.6314	1.3973	1.8130	1.6538	1.7581	1.7808	1.8198
R008	835167.96	820571.19	835092.30	820634.71	14	3	4	1.2596	1.3384	1.3161	1.3576	1.4571	1.5289	1.6360	2.3058	2.5660	2.5705	2.4972	2.4760	2.4328	2.3085	2.1435	1.9778	1.9111	1.6314	1.3973	1.8130	1.6538	1.7581	1.7808	1.8198
R009	835633.82	820592.99	835395.67	820547.64	15	0	1	3.3258	3.2159	3.3207	3.7152	3.6401	3.6810	3.7437	4.4084	4.9626	5.0217	4.9125	4.8381	4.7222	4.4731	4.0984	3.9394	3.8111	3.2647	2.9315	3.0655	3.1600	3.1210	3.0417	2.8349
R010	835781.18	820637.12	835628.13	820608.44	11	0	1	0.1287	0.1127	0.1127	0.1127	0.1127	0.1127	2.5910	4.2245	3.7291	4.4042	4.4337	4.4954	4.3806	4.3484	4.2165	1.4886	0.1287	0.1287	0.1287	0.1287	0.1287	0.1287	0.1287	0.1127
R011	835634.24	820591.19	835784.72	820619.12	16	0	1	3.0077	2.9055	3.1728	3.0884	3.3616	3.1056	3.3317	3.9987	4.4313	4.6065	4.4005	4.4336	4.3861	4.1707	3.9137	3.6644	3.5602	3.1326	2.7331	2.9513	3.2636	3.3505	3.2831	3.2356
R012	835781.38	820635.83	835962.83	820671.07	13	0	1	4.0620	1.3518	1.7810	1.7649	1.7703	1.7595	5.1720	4.5842	5.4939	5.0416	4.8143	4.8458	4.9534	4.3291	4.1964	4.2768	3.6198	2.1800	1.9829	2.6599	2.3121	2.4930	3.6773	2.6635
R013	836078.87	820683.70	835961.87	820661.84	27	0	1	2.1892	2.3300	2.2541	2.3369	2.1036	2.4042	2.4384	2.9571	3.3443	3.4604	3.4001	3.3691	3.2353	3.1366	2.9214	2.8535	2.6491	2.3803	2.1085	2.4251	2.2808	2.2992	2.3335	2.2003
R013	835962.88	820657.76	835783.32	820623.21	20	0	1	2.1892	2.3300	2.2541	2.3369	2.1036	2.4042	2.4384	2.9571	3.3443	3.4604	3.4001	3.3691	3.2353	3.1366	2.9214	2.8535	2.6491	2.3803	2.1085	2.4251	2.2808	2.2992	2.3335	2.2003
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1	3.8849	4.7295	4.9892	4.9493	5.4246	5.2132	4.7407	4.6822	4.8069	6.0564	6.0981	5.9539	6.2024	5.1681	5.1253	4.7560	4.8989	3.0159	3.1205	5.5409	5.5132	5.9488	5.8939	6.0664
R016	835489.04	820703.14	835545.53	820714.40	18	0	1	6.2716	6.7417	6.7699	6.7417	6.7518	6.7276	5.5596	5.6433	5.3357	6.4387	6.4614	6.5097	7.3366	5.4984	5.4018	6.4654	8.4501	0.9036	0.8795	0.8715	0.8892	11.3579	14.9620	11.2493
R017	835545.53	820714.40	835607.39	820726.29	18	0	1	1.6481	1.2723	1.4616	1.4487	1.4519	5.2081	4.5810	4.3645	4.0826	5.0458	4.9394	4.8261	5.0891	3.6252	3.7059	3.8388	3.9421	1.3897	1.1244	1.1170	1.1356	1.0966	1.1526	1.1350
R018	835619.42	820660.04	835926.89	820716.86	13	0	1	3.2483	3.7471	3.9940	3.9609	3.5491	5.2458	5.3347	5.5601	5.7144	7.6513	7.7418	7.4795	7.6160	5.5849	5.1240	4.7310	4.0680	1.8338	1.1934	1.2307	1.6675	2.1713	1.7843	2.7278
R018	835926.89	820716.86	835898.31	820659.19	13	0	1	3.2483	3.7471	3.9940	3.9609	3.5491	5.2458	5.3347	5.5601	5.7144	7.6513	7.7418	7.4795	7.6160	5.5849	5.1240	4.7310	4.0680	1.8338	1.1934	1.2307	1.6675	2.1713	1.7843	2.7278
R019	835422.47	820440.71	835520.16	820540.46	11	0	1	1.1963	1.4487	1.4616	1.4487	1.7510	7.1905	5.2184	5.2959	5.0402	8.1696	8.1969	7.2749	8.5621	5.0602	4.6151	4.3460	4.0701	1.1471	1.0604	1.1161	1.0703	1.1243	1.1524	1.1363
R019	835520.16	820540.46	835514.63	820578.32	11	0	1	1.1963	1.4487	1.4616	1.4487	1.7510	7.1905	5.2184	5.2959	5.0402	8.1696	8.1969	7.2749	8.5621	5.0602	4.6151	4.3460	4.0701	1.1471	1.0604	1.1161	1.0703	1.1243	1.1524	1.1363
R020	835568.73	820565.58	835478.35	820470.77	11	0	1	1.9393	0.9610	0.9702	1.1024	1.1051	2.0102	2.1070	2.0289	1.9030	2.2276	2.1327	2.1984	2.2197	2.2400	2.1643	1.4994	1.4413	1.3556	1.3190	1.3602	1.3802	1.4316	1.4111	1.4055
R021	835667.70	820378.34	835442.22	820335.48	17	0	1	10.9974	14.2714	14.9024	14.9544	14.9880	13.0400	14.2200	13.9187	13.3383	16.4091	15.8811	15.5319	14.6087	14.5734	13.8845	11.6788	11.0190	8.0281	7.6485	7.9952	7.8076	8.8742	9.5515	9.7321
R022	835364.93	820677.70	835334.56	820831.18	16	0	1	8.3584	8.0874	8.4331	8.2802	8.5982	8.4496	8.6479	9.3130	9.5667	9.5348	9.3270	9.3932	9.2980	9.0139	8.9385	8.9595	8.7864	8.3051	7.9741	8.4142	8.4423	8.5123	8.5441	8.6348
R023	835346.26	820830.29	835376.00	820680.43	16	0	1	7.3024	7.2545	7.4670	7.4161	7.6957	7.6769	7.9012	8.4417	8.5616	8.4703	8.4512	8.3849	8.4421	8.0314	7.8237	7.4877	7.2319	6.6167	5.9852	6.3837	6.6570	6.6068	6.9098	7.1244
R024	835375.99	820680.46	835467.79	820201.74	16	0	1	7.5939	7.5948	7.7630	7.9743	8.0654	8.3201	8.8313	10.1468	11.0356	11.5082	11.3301	11.6759	11.0314	10.2703	8.3977	9.1224	7.1439	6.5329	6.4723	6.7103	6.6893	6.6387	6.7192	6.6867
R025	835407.27	820826.73	835432.34	820695.75	18	0	1	4.1170	1.2891	1.3012	1.2891	1.4444	7.0193	5.9203	6.0076	5.4020	6.6126	6.1667	5.9721	6.1818	5.4029	5.2091	4.2251	4.1468	2.8585	2.7577	2.8710	2.7274	4.2854	4.6738	4.7836
R026	835459.60	820559.44	835526.49	820211.42	16	0	1	6.0132	6.1076	6.5101	7.0700	6.9830	6.0938	7.5342	7.8860	11.1394	12.3828	12.0571	11.3512	11.1207	9.7861	8.8548	8.6925	6.8961	5.6351	5.1579	5.2975	5.4655	4.0908	4.2744	3.8082
R027	835512.27	820586.45	835466.19	820829.26	18	0	1	19.7764	17.2185	18.4175	18.3748	20.8807	21.7617	21.0621	20.2000	21.6741	25.2443	24.2899	25.6785	24.6547	20.7986	19.1064	19.6301	18.0573	16.2580	14.7887	16.0817	16.4017	17.6673	17.4536	17.7734
R028	835581.96	820221.86	835526.68	820516.62	18	0	1	3.6673	0.8523	0.9257	0.8576	0.9458	3.8119	3.1684	3.0826	2.9914	3.6520	3.5546	3.3774	3.6448	3.8421	3.8868	2.7683	2.6557	2.6109	2.6605	2.6924	2.6727	2.6938	2.9618	3.0754
R029	835524.13	820833.07	835569.38	820596.78	18	0	1	7.8506	9.1688	9.5694	9.7111	10.3821	10.8798	9.8809	10.2657	11.2496	16.9538	16.3501	15.7249	16.5489	11.6707	10.5366	9.8371	8.3221	3.4022	2.2721	2.8337	3.6413	6.8453	7.9384	8.0807
R030	835613.19	820367.70	835575.40	820566.18	18	0	1	0.4721	0.1127	0.1127	0.1127	0.1127	1.5892	1.3003	1.3486	1.3840	1.0662	1.0742	1.0923	1.2691	1.2576	1.3867	1.4452	0.4144	0.4935	0.4774	0.4721	0.4828	0.4774	0.4667	0.4506
R031	835627.58	820608.26	835585.00	820835.44	16	0	1	1.5767	1.6516	1.6081	1.6898	1.6938	1.6893	2.6311	2.8141	3.0417	3.0778	2.7409	2.5333	2.3893	2.1014	1.8921	1.8495	1.3206	0.9134	0.8519	0.7262	1.0429	1.1716	1.1546	1.3989
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1	4.6564	4.8310	5.4834	5.1869	5.2464	4.8015	5.9980	6.0097	7.4116	7.6256	7.4201	7.2469	6.4284	6.2874	6.0924	5.7307	5.3137	4.4074	4.2955	4.7640	5.1546	4.8536	5.0807	4.3068
R034	835775.34	820688.71	835784.69	820637.47	18	0	1	4.8924	4.6558	4.6944	4.6558	5.1785	7.0605	7.0288	6.8719	7.4030	8.7993	8.4637	8.5807	9.3479	6.9855	6.2493	5.6588	5.6649	2.7330	1.3528	2.3544	3.2371	4.1564	4.0985	5.5488
R035	835959.87	820670.83	836042.82	820834.29	17	0	1	2.7239	2.7256	2.9279	2.9848	3.1327	2.9115	3.6556	4.0292	5.0127	5.1021	4.5011	4.5347	4.2768	4.0855	4.2145	3.6773	3.0260	2.2856	1.8211	2.2521	2.8027	3.0634	3.2356	3.6934
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1	5.5518	6.0583	6.2263	6.2030	6.5935	7.4831	7.2484	7.0743	7.1216	9.6688	9.3010	9.3074	9.9872	6.7323	6.9854	7.0595	6.7561	2.0786	1.8878	1.9325	2.5058	2.5701	2.6407	3.3567
R038	835266.41	820906.57	835318.32	820867.68	18	0	1	6.6953	6.4177	6.9743	6.9788	7.1485	7.1752	7.4486	8.0638	8.5444	8.8146	8.5395	8.3974	8.3434	8.0552	7.4417	7.1610	6.8618	6.1158	5.3643	6.1780	6.4458	6.5434	6.5701	6.7670
R038	835318.32	820867.68	835342.60	820834.56	18	0	1	6.6953	6.4177	6.9743	6.9788	7.1485	7.1752	7.4486	8.0638	8.5444	8.8146	8.5395	8.3974	8.3434	8.0552	7.4417	7.1610	6.8618	6.1158	5.3643	6.1780	6.4458	6.5434	6.5701	6.7670
R039	835330.03	820826.61	835240.76	820893.84	13	0	1	12.3053	11.9574	12.3835	12.5539	13.9355	13.2867	13.1837	13.7559	13.8071	13.7809	13.5359	13.4070	13.6177	13.0517	12.4076	12.3148	12.2618	11.6431	11.3971	12.5753	12.4796	12.6163	12.5020	12.5039
R040	835085.07	820818.77	835326.93	820828.95	22	0	1	2.3720	2.4815	2.9142	2.2161	2.3966	2.4313	2.8939	3.1643	3.3740	3.3369	3.1749	3.2526	3.1177	3.1515	2.9290	2.9603	2.6201	2.4664	2.1767	2.6142	2.4743	2.5587	2.5857	2.3725
R041	835297.46	820696.17	835147.25	820821.39	18	0	1	5.2865	5.1067	5.2583	4.5870	4.9101	5.6083	5.5610	5.5561	5.6149	7.0197	7.2834	7.2533	7.2177	5.5914	5.7684	5.8924	5.3499	4.2542	4.0822	3.8343	4.5027	5.2905	5.0605	5.2251
R042	835317.58	820604.32	835080.01	820802.19	18	0	1	1.5045	1.7469	1.7630	1.7469	1.7510	8.3463	6.3211	6.4123	5.4737	7.0118	6.7133	6.4011	6.8402	4.5493	4.4667	4.7243	4.5096	1.3253	1.2931	1.2864	1.3062	1.3800	1.3591	1.4638
R043	835329.95	820537.58	835299.79	820697.63	18	0	1	5.1092	4.9303	5.1889	5.1467	5.5470	6.1376	5.3918	5.6416	5.8456	8.6225	9.0640	9.5078	8.9755	7.1754	7.4415	6.0062	5.2869	3.4271	2.6093	4.0668	4.1991	5.2902	5.7117	5.7958
R044	835300.41	820544.27	835181.94	820644.09	18	0	1	20.3565	17.1270	18.5937	18.5440	20.2539	20.2126	17.8690	16.9738	16.8456	19.7568	19.0957	19.6271	20.0966	20.2484	17.7494	21.2242	19.3428	19.6512	21.3624	22.8825	22.1664	21.1749	24.2601	20.8286
R045	835218.40	820528.99	835327.37	820549.87	13	0	1	2.5387	2.7665	2.8045	3.1432	1.2509	1.9683	2.4018	3.1280	3.0566	3.3510	3.4720	3.8206	3.6980	4.0363	3.7924	2.8571	2.8800	2.4240	2.6120	2.4487	2.0788	2.6914	2.6546	3.5084
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1	5.4120	5.1643	5.0357	5.6610	5.9683	5.5449	6.1618	6.3445	6.5594	6.4066	6.5897	6.6638	6.6999	6.5487	6.1179	5.8190	5.4691	5.0901	4.7192	5.4250	5.5513	5.7403	5.8016	5.7635
R048	835347.98	820431.38	835410.33	820443.30	13	0	1	12.8605	13.6955	10.5830	10.5009	9.4218	7.1390	6.0896	5.7003	6.1536	10.3027	14.0370	15.7911	15.4008	18.5017	17.0571	16.8815	17.6326	17.7785	17.9280	26.7245	26.9548	25.3118	23.9367	23.1515
R049	835613.04	820367.64	835639.28	820232.25	18	0	1	1.6697	0.6035	0.6115	0.6035	0.1127	1.5892	1.5973	1.6536	1.6979	1.7300	1.6862	1.7148	1.7631	1.7470	1.6827	1.2372	1.2352	1.0818	1.0496	1.0425	1.0604	1.1656	1.1449	1.2955
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1	5.9666	6.1815	5.9063	6.2334	6.6179	6.4938	7.1807	7.7980	8.8036	8.9732	8.6505	8.7268	8.2027	8.0210	6.8717	6.4463	5.7446	5.0491	4.8245	4.9939	5.4828	5.3433	5.5937	5.3415
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1	2.7228	2.9320	3.0202	3.0996	3.2679	3.3090	3.6911	3.7608	4.1144	5.4846	5.3785	5.5324	5.3262	5.5288	4.9414	4.4247	4.0411	2.9405	2.4864	2.6688	3.0060	3.4338	3.5967	3.8867
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1	2.7228	2.9320	3.0202	3.0996	3.2679	3.3090	3.6911	3.7608	4.1144	5.4846	5.3785	5.5324	5.3262	5.5288	4.9414	4.4247	4.0411	2.9405	2.4864	2.6688	3.0060	3.4338	3.5967	3.8867
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1	2.7228	2.9320	3.0202	3.0996	3.2679	3.3090	3.6911	3.7608	4.1144	5.4846	5.3785	5.5324	5.3262	5.5288	4.9414	4.4247	4.0411	2.9405	2.4864	2.6688	3.0060	3.4338	3.5967	3.8867
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1	2.7228	2.9320	3.0202	3.0996	3.2679	3.3090	3.6911	3.7608	4.1144	5.4846	5.3785	5.5324	5.3262	5.5288	4.9414	4.4247	4.0411	2.9405	2.4864	2.6688	3.0060	3.4338	3.5967	3.8867
R054	836043.62	820835.62	836097.69	820867.42	18	0	1	2.2163	1.9564	2.0872	2.0957	2.2950	2.1301	2.6785	3.6945	3.7714	3.4561	3.4185	3.2385	3.2033	3.0235	2.6510	2.4228	2.2646	2.0755	1.8841	1.5775	1.6154	1.8073	1.8081	1.7685
R054	836097.69	820867.42	836208.52	820871.64	18	0	1	2.2163	1.9564	2.0872	2.0957	2.2950	2.1301	2.6785	3.6945	3.7714	3.4561	3.4185	3.2385	3.2033	3.0235	2.6510	2.4228	2.2646	2.0755	1.8841	1.5775	1.6154	1.8073	1.8081	1.7685
R055	836015.56	820780.76	836206.72	820789.75	14	0	1	30.6806	32.1314	36.2425	40.8183	40.6177	32.9026	31.5221	32.5454	32.9061	31.1947	29.4742	29.6702	29.0516	17.6346	17.3838	16.2148	12.8071	10.5138	4.5506	10.3862	11.8716	24.9443	27.0506	29.2179
R056	835426.47	820416.94	835476.69	820469.61	11	0	1	3.0955	3.1560	3.3528	3.5140	3.7387	4.5472	4.2768	4.4249	4.6418	4.4921	4.3300	4.8895	4.7480	2.6549	2.1222	2.4064	2.1854	1.9171	1.7172	1.7556	1.7647	1.8186	1.5594	1.5850
R057	835305.88	820665.23	835365.16	820674.55	12	0	1	3.5747	4.2642	4.4543	4.3885	4.0703	4.7705	4.7703	4.6902	4.8596	7.0434	6.6168	7.0914	7.0901	4.9603	4.9118	4.7453	4.6013	2.5675	2.4554	3.6999	3.8016	4.2350	4.1756	4.3191
R058	835456.45	820199.52	835364.90	820677.66	16	0	1	14.5805	13.8621	14.1627	13.8440	14.0086	13.5315	14.1826	14.5534	14.7261	15.1460	15.0858	15.4007	15.5354	15.1234	14.6297	14.8670	15.5708	15.2449	15.3654	14.8447	15.7434	15.1639	15.1200	14.9980
R059	835395.59	820548.47	835232.17	820514.97	16	0	1	2.5970	2.6101	2.7531	2.7546	2.9120	2.7097	2.8763	3.0178	2.9977	3.0740	2.9793	2.8013	2.8181	2.4557	2.3035	2.2900	2.2105	1.9857	1.6833	2.3784	2.5610	2.6561	2.7810	2.7803
R060	835740.08	820393.81	835672.32	820380.93	13	0	1	41.5270	36.3951	41.0600	43.3788	43.4167	44.0802	41.5772	44.9879	43.2219	41.1842	43.4788	40.2802	38.5409	38.6007	32.7666	33.5729	30.1237	28.6308	25.9413	27.6649	27.2156	28.8639	28.8663	29.4467
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1	4.3309	4.2744	4.3892	4.4646	4.4158	3.9724	4.2981	4.4501	4.5159	4.1414	4.3826	4.2445	4.3877	3.9472	3.6389	3.7357	3.6878	3.3000	2.9165	4.9009	5.2344	5.4279	5.4426	5.4341
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1	4.3309	4.2744	4.3892	4.4646	4.4158	3.9724	4.2981	4.4501	4.5159	4.1414	4.3826	4.2445	4.3877	3.9472	3.6389	3.7357	3.6878	3.3000	2.9165	4.9009	5.2344	5.4279	5.4426	5.4341
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1	5.8707	6.2827	6.6248	6.4634	6.6929	8.2214	8.0991	8.1707	8.1657	9.1098	8.9378	9.2755	9.6314	7.2892	7.4481	6.3112	5.6338	3.1342	1.4576	4.1440	6.9450	9.0148	10.8500	12.3902
R065	835276.00	820966.04	835153.25	821068.73	18	0	1	4.8194	1.2723	1.2838	1.2723	1.2746	7.4214	6.1711	5.9453	7.6237	7.1926	6.4745	6.5199	6.2138	6.5703	6.8553	4.4275	4.6545	4.8527	3.4890	3.6687	3.5070	5.8209	6.1056	6.7765
R066	835125.84	821009.37	835152.02	820987.68	14	0	1	4.6016	4.4685	4.5593	4.5485	4.5999	4.3514	4.6329	4.8239	4.9358	4.8739	4.7381	4.8469	4.7170	4.4943	4.4415	4.4235	4.5912	4.2658	3.9674	5.1949	5.5174	5.4216	5.4207	5.4311
R067	835152.02	820987.68	835260.71	820898.31	14	0	1	8.1009	7.9504	7.8516	7.9025	7.7620	7.5427	7.7168	8.0645	8.1206	8.2257	8.2758	8.3915	8.2832	8.4776	8.3459	8.3840	8.7203	8.5576	8.4280	9.1051	9.3367	9.3099	9.0998	9.1081
R068	835241.00	820894.04	835120.28	820994.00	13	0	1	8.6881	8.3121	8.7649	8.3668	8.1655	8.1584	8.1014	8.1653	8.4645	8.5911	8.8869	9.0921	9.2503	8.9593	9.1078	9.2940	9.4390	9.4302	9.5255	9.8970	10.1048	10.0151	9.8983	9.7513
R069	835102.33	820927.83	835142.10	820975.75	18	0	1	10.7767	14.0225	15.4571	14.0225	16.5719	15.9459	14.7747	14.3877	15.1204	16.2621	17.0416	17.9520	17.6712	5.0011	4.9157	5.3571	4.9597	4.6565	4.1281	4.1180	3.9221	11.5875	12.5294	12.4831
R070	835237.65	820896.62	835175.32	820822.66	18	0	1	19.6679	1.9164	1.9325	1.7469	1.7510	20.7827	16.5280	16.7125	16.8883	17.0133	17.0641	17.1668	20.2993	21.6994	21.4371	21.6035	17.1668	21.4199	16.3879	26.5720	26.4997	27.6077	27.8237	29.0647
R071	835200.61	820852.55	835105.37	820931.57	18	0	1	2.3362	0.8312	0.8393	0.2559	0.2559	2.2332	1.7469	1.8033	1.8475	2.4156	2.4317	2.3427	2.9763	2.2824	2.2060	2.2519	2.2478	2.1915	1.7593	1.7497	1.7767	1.7638	1.8041	1.7840
R072	835146.14	820821.33	835093.88	820865.98	18	0	1	4.4453	4.1338	4.3130	4.2774	4.1894	5.7563	5.1200	4.9783	5.3204	5.2194	5.5124	5.6932	6.1706	3.7176	3.5494	3.6197	3.3536	2.9290	2.0939	2.4841	2.4056	4.2938	4.2987	4.8490
R073	835175.32	820822.66	835062.15	820686.25	18	0	1	1.3615	0.4399	0.4453	0.4399	0.4399	1.2939	1.1012	1.1449	1.1771	1.2001	1.3894	1.4135	1.4838	1.4709	1.4162	1.4452	1.4135	1.1978	1.1633	1.1564	1.1748	1.1656	1.3143	1.2955
R074	835181.76	820644.19	835254.65	820731.86	18	0	1	18.5166	14.9732	16.4269	17.1134	18.0678	12.9553	17.7467	17.1859	17.7425	18.1442	17.2156	17.4305	18.0316	19.4381	17.3814	16.5403	14.6987	15.2689	16.6046	17.8298	17.6442	15.1866	17.3243	18.6102
R075	835090.02	820719.98	835181.89	820644.44	18	0	1	4.8194	1.2723	1.2838	1.2723	1.4519	7.8853	6.8386	6.5432	6.6246	7.0830	7.2162	7.2655	7.8501	5.0011	4.9157	4.6306	4.1628	3.4675	3.0601	3.2594	3.0772	5.0957	5.7816	5.7556

Caline 4 input for 2050 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	4.3387	4.7611	4.7971	4.7611	5.1257	4.3543	4.5478	4.7130	4.7406	5.0020	4.5222	4.7355	4.8964	4.2998	4.0523	4.1672	3.7745	2.9268	2.3680	2.4017	2.7115	3.1103	3.3433	3.7097
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	1.3284	1.4487	1.7630	1.7469	1.7510	10.4832	9.0759	9.1915	9.2969	9.3715	9.4022	9.4637	11.0268	1.4277	1.3771	1.4033	1.2959	1.2443	1.1699	1.2271	1.1817	1.2180	1.2767	1.2442
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	4.1316	4.0873	4.3432	4.4042	4.4813	4.1658	4.2045	4.4349	4.4707	4.5390	4.5975	4.5416	4.5322	4.4164	4.1249	4.0766	4.0370	3.9689	3.6795	4.1258	4.2673	4.3519	4.4112	4.4190
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	39.9481	44.4174	39.0650	39.0159	45.9450	40.8469	41.8500	40.1348	41.2076	39.3079	40.3883	41.5380	42.8052	38.7359	36.2169	41.3706	41.4007	42.0907	39.6263	38.6994	39.7182	38.7700	40.9880	37.9921
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	3.6349	3.7826	3.9269	3.9798	3.8562	3.6815	3.6064	3.7330	3.8506	3.8782	3.8424	3.9454	3.9040	3.5394	3.2860	3.2457	3.0856	2.6707	2.4390	2.8176	2.8842	3.1114	3.2345	3.2763
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	12.0148	12.9825	13.8251	13.7779	13.7970	11.0748	10.2673	9.7328	10.2571	10.9317	10.3514	10.4280	11.6702	6.1584	4.0621	4.0292	3.7142	3.4111	3.2678	3.2594	3.2433	5.1043	5.4652	5.4391
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	8.6825	11.9302	11.9705	11.9302	11.9463	8.5211	7.2774	6.9351	7.0217	7.5371	7.7122	8.2406	8.9985	1.8670	1.4039	1.4278	1.4261	1.3062	1.1919	1.1865	1.2034	4.4417	4.7516	5.5031
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	14.7664	10.1715	10.8264	11.3377	11.7992	14.4180	13.1222	12.6155	13.0790	13.5212	13.2362	13.3239	14.6042	11.6303	11.4694	11.1353	10.2382	8.7800	8.1778	10.5005	9.9559	10.6725	11.7438	11.7086
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	4.9635	4.9648	5.0948	5.0587	5.2319	5.0289	4.7749	5.0884	5.4521	5.2611	5.5144	5.7546	5.7408	4.3834	4.1349	4.2903	4.1178	3.7211	3.5614	3.6139	3.9578	3.7640	4.0032	3.9690
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	13.2700	13.5744	14.0298	13.9792	12.9593	14.3080	12.1200	11.1360	11.7999	19.0774	18.5760	18.2850	17.7155	15.3121	15.2305	13.8274	10.6988	6.4533	5.3690	6.9288	6.7428	8.1551	8.7548	8.8245
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	2.2788	2.6163	2.7329	2.7091	2.4147	3.3688	3.4688	3.3983	3.4873	3.3563	3.2137	3.3045	3.4223	2.3979	2.3492	2.5217	2.3357	1.6223	1.4884	1.5419	1.8248	1.8940	1.8997	2.1854
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	10.3864	9.9471	10.3186	9.9703	9.8393	10.4163	10.6967	11.0476	11.2356	11.0631	11.3067	11.4408	11.1914	10.9734	10.4285	10.6682	10.7977	10.1466	9.5872	9.6508	10.0696	9.9984	9.6235	9.6882
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	1.1285	1.3003	1.3132	1.3003	1.6013	2.6956	2.3362	2.4113	2.4757	2.7388	2.7578	2.8003	2.5894	1.2311	1.1809	1.2070	1.0153	0.9861	0.9087	0.9025	0.9198	0.9583	0.9393	1.0042
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	7.6320	7.5263	7.6869	7.6463	7.7305	7.7330	7.9029	8.1466	8.2519	8.2299	8.2309	8.2860	8.3408	8.1351	7.8092	7.7885	7.4946	7.1290	6.6934	6.8367	7.0564	6.9869	6.9235	6.9860
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	6.0540	5.3203	5.3638	5.4781	5.5239	5.8318	6.6538	6.5166	6.6319	6.2874	6.3836	6.3086	6.5538	6.1361	5.7968	5.5254	5.2023	3.6315	3.4679	4.3439	4.2078	4.3510	4.4940	4.5386
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	11.5752	10.4430	10.6761	10.7113	11.0032	11.7849	12.9611	13.9801	13.2153	12.8380	12.8556	12.4505	12.9791	12.9575	12.5787	11.9733	11.8198	11.3684	10.2427	10.1193	10.9009	10.7454	10.5278	10.5803
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	11.5752	10.4430	10.6761	10.7113	11.0032	11.7849	12.9611	13.9801	13.2153	12.8380	12.8556	12.4505	12.9791	12.9575	12.5787	11.9733	11.8198	11.3684	10.2427	10.1193	10.9009	10.7454	10.5278	10.5803
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	3.9502	3.9245	4.0449	4.0946	4.2935	3.9215	4.4617	4.4862	4.5739	4.3593	4.0901	4.2508	4.0832	4.2507	4.0682	3.4656	3.3180	2.7842	2.3404	3.1982	3.3893	3.5014	3.6552	3.9407
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	10.8601	9.7653	10.4711	10.3913	10.5361	10.9120	11.5262	11.9107	12.2054	11.9663	11.8509	11.5918	12.1715	11.5225	11.3165	11.0320	10.6431	10.2328	9.2990	9.3403	9.5985	9.8659	9.7683	9.6129
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	3.9296	3.3828	3.7766	3.7462	3.7587	4.7324	4.5537	4.4859	4.9821	4.8653	4.8683	5.4687	4.8361	4.8651	4.5222	4.0192	4.2609	3.8988	3.6681	3.7837	3.6980	4.2877	4.3124	4.2775
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	15.1652	16.5390	17.1214	17.0643	18.6792	14.3347	15.2375	14.7889	16.0942	15.7450	14.5775	15.5885	14.0192	13.3479	13.0550	9.6346	8.9766	8.2394	7.8191	8.1090	8.6638	10.3470	11.1708	11.8820
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	9.5033	9.5994	9.5965	9.6238	9.8353	9.6835	10.6221	11.3995	11.2570	10.5738	10.4323	10.2646	10.3934	10.8307	10.1742	9.6788	9.4002	8.6366	7.8197	7.8247	7.7050	7.9000	7.5829	7.7821
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	10.9066	11.1331	10.6486	10.5653	11.2292	12.1103	12.2106	13.0248	12.7034	13.0637	12.9183	12.5793	13.3905	12.4092	11.7060	10.5645	10.2182	9.6321	8.4463	8.5793	9.0793	10.2086	9.9724	10.1874
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	10.9066	11.1331	10.6486	10.5653	11.2292	12.1103	12.2106	13.0248	12.7034	13.0637	12.9183	12.5793	13.3905	12.4092	11.7060	10.5645	10.2182	9.6321	8.4463	8.5793	9.0793	10.2086	9.9724	10.1874
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	11.5647	0.6035	0.6115	0.6035	0.6035	12.1022	8.8491	9.0928	8.3122	10.6163	10.6941	10.8456	11.0790	12.4402	12.0716	8.1736	7.9703	8.7111	7.9351	12.0360	12.1780	12.0057	12.5282	12.4383
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	11.5647	0.6035	0.6115	0.6035	0.6035	12.1022	8.8491	9.0928	8.3122	10.6163	10.6941	10.8456	11.0790	12.4402	12.0716	8.1736	7.9703	8.7111	7.9351	12.0360	12.1780	12.0057	12.5282	12.4383
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	2.0505	2.4771	2.5628	2.6085	2.2311	2.7490	2.8896	2.8152	2.7822	3.0466	2.8983	2.7758	3.0325	2.9112	2.7283	1.8836	1.8596	1.7965	1.4573	1.5084	1.4545	2.1240	1.9668	2.1979
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	2.6613	2.6681	2.6200	2.8042	2.8213	2.8467	2.9201	3.6100	3.7294	3.8767	3.6724	3.6409	3.5853	3.3742	3.1319	3.1029	2.9377	2.7294	2.5756	2.8350	2.6743	2.6039	2.6253	2.4992
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1	1.3978	0.4787	0.4833	0.4787	0.4787	2.2532	1.9199	1.8850	2.1381	2.5684	2.6555	2.8774	2.7596	2.3742	2.2948	1.2864	1.2014	1.2554	1.2232	1.2179	1.2342	2.4651	2.4292	2.4032
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	10.5951	7.0212	7.3513	8.0908	7.6041	12.0458	10.6898	10.5205	10.8305	11.4101	12.1705	12.6805	11.2785	10.5030	10.4412	7.4210	6.8518	6.3254	5.5271	11.3213	11.3429	14.8411	16.0629	16.3084
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	1.7183	1.5912	1.8393	1.5811	1.9826	2.6336	2.6415	3.1240	3.1685	2.8415	2.7393	2.5690	2.7105	2.6686	2.2451	2.2075	2.0425	1.8985	1.7592	1.8869	1.8809	1.9094	1.7514	1.6930
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	2.4355	1.9105	2.4768	0.9777	1.1035	0.9716	2.3706	2.7655	3.0430	4.2446	4.5489	4.5442	3.7925	3.3655	2.6569	2.4771	1.8387	1.6827	1.5903	1.6048	1.6664	1.6541	1.6890	1.9044
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	2.2090	1.6510	1.7632	1.9266	2.1538	2.1997	2.5036	2.5030	2.5729	2.0427	2.1291	2.1287	2.1439	1.9977	1.8502	1.9951	1.8176	1.2695	1.2349	1.2641	1.7321	1.7820	1.8940	2.4373
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	4.7907	3.4591	3.6887	3.6726	4.1159	4.6901	5.2210	5.1427	5.3674	4.1223	4.3853	4.4120	4.2234	3.9455	3.7595	3.8273	3.6551	2.3327	2.2965	2.3587	3.5684	3.6583	4.0112	5.3350
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	2.5572	3.4150	3.4408	3.4150	3.4279	3.4266	3.8764	3.9890	4.0909	3.6988	3.7256	4.1097	3.8664	3.5566	3.2060	3.2147	2.2069	1.0415	1.0139	1.0093	2.1179	3.0557	3.4233	4.2969
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	4.6275	3.5338	3.8897	3.9567	4.2280	4.4296	4.9491	4.7964	4.9909	4.3712	4.5391	4.7842	4.4770	4.1017	3.8004	3.6022	3.5109	2.3064	2.2716	2.3326	3.3615	3.5150	3.8170	5.0037
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	1.5105	0.6394	0.6448	0.6394	0.6394	7.1560	5.7613	5.8453	5.9186	6.6828	7.4434	8.6977	6.8357	6.8107	5.9859	6.0438	1.2599	1.2317	1.2016	1.1955	1.2124	5.8925	6.5468	6.5166
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	1.5105	0.6394	0.6448	0.6394	0.6394	7.1560	5.7613	5.8453	5.9186	6.6828	7.4434	8.6977	6.8357	6.8107	5.9859	6.0438	1.2599	1.2317	1.2016	1.1955	1.2124	5.8925	6.5468	6.5166
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	1.5105	0.6394	0.6448	0.6394	0.6394	7.1560	5.7613	5.8453	5.9186	6.6828	7.4434	8.6977	6.8357	6.8107	5.9859	6.0438	1.2599	1.2317	1.2016	1.1955	1.2124	5.8925	6.5468	6.5166
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	5.7104	4.4808	4.8854	4.8649	5.2188	5.5954	6.1545	6.0231	6.3229	5.4183	5.5441	5.8622	5.3015	5.0674	4.7878	4.4356	4.2326	2.6897	2.6486	2.7369	4.1345	4.2626	4.6812	6.4633
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	5.7104	4.4808	4.8854	4.8649	5.2188	5.5954	6.1545	6.0231	6.3229	5.4183	5.5441	5.8622	5.3015	5.0674	4.7878	4.4356	4.2326	2.6897	2.6486	2.7369	4.1345	4.2626	4.6812	6.4633
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	1.0936	1.2499	1.2606	1.2499	1.2526	8.6237	6.8006	6.4781	6.5535	7.9716	8.2080	8.9836	8.3421	7.2639	6.7001	6.1080	1.0519	1.0304	1.0079	1.0558	1.0171	3.8857	4.1116	4.2922
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	1.1612	1.1452	1.2838	1.2723	1.2746	7.0787	5.9037	5.6852	6.0584	6.7600	7.3408	7.3879	6.9875	6.9644	6.4515	5.8699	1.0851	1.0304	1.0604	1.0558	1.0703	3.8857	4.1116	4.0886
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	2.9049	3.1166	1.8862	2.0373	2.1234	2.9100	3.2494	3.2447	3.5089	3.3464	2.9955	2.8866	3.0054	2.7100	2.5709	2.8653	2.7964	2.4982	2.2577	3.1872	3.1613	3.0930	3.0497	3.4862
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	2.9049	3.1166	1.8862	2.0373	2.1234	2.9100	3.2494	3.2447	3.5089	3.3464	2.9955	2.8866	3.0054	2.7100	2.5709	2.8653	2.7964	2.4982	2.2577	3.1872	3.1613	3.0930	3.0497	3.4862
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	10.1290	7.1073	7.4531	7.4173	8.3892	11.3606	12.0072	11.3761	12.6503	12.1564	11.2314	11.9888	12.1535	11.0948	10.1291	9.1839	8.3987	7.8013	6.8524	8.0184	7.7209	8.0485	8.8742	8.2060
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	10.1290	7.1073	7.4531	7.4173	8.3892	11.3606	12.0072	11.3761	12.6503	12.1564	11.2314	11.9888	12.1535	11.0948	10.1291	9.1839	8.3987	7.8013	6.8524	8.0184	7.7209	8.0485	8.8742	8.2060
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	10.1290	7.1073	7.4531	7.4173	8.3892	11.3606	12.0072	11.3761	12.6503	12.1564	11.2314	11.9888	12.1535	11.0948	10.1291	9.1839	8.3987	7.8013	6.8524	8.0184	7.7209	8.0485	8.8742	8.2060
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	10.1290	7.1073	7.4531	7.4173	8.3892	11.3606	12.0072	11.3761	12.6503	12.1564	11.2314	11.9888	12.1535	11.0948	10.1291	9.1839	8.3987	7.8013	6.8524	8.0184	7.7209	8.0485	8.8742	8.2060
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	2.6956	0.1127	0.1127	0.1127	0.1127	2.5830	1.7649	1.8239	1.8668	2.4891	2.8003	2.5392	2.5982	1.7082	1.6507	1.9419	1.9366	1.8937	1.8454	1.8400	1.8615	1.8507	1.8239	1.8025
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	2.6956	0.1127	0.1127	0.1127	0.1127	2.5830	1.7649	1.8239	1.8668	2.4891	2.8003	2.5392	2.5982	1.7082	1.6507	1.9419	1.9366	1.8937	1.8454	1.8400	1.8615	1.8507	1.8239	1.8025
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	2.6956	0.1127	0.1127	0.1127	0.1127	2.5830	1.7649	1.8239	1.8668	2.4891	2.8003	2.5392	2.5982	1.7082	1.6507	1.9419	1.9366	1.8937	1.8454	1.8400	1.8615	1.8507	1.8239	1.8025
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	2.6956	0.1127	0.1127	0.1127	0.1127	2.5830	1.7649	1.8239	1.8668	2.4891	2.8003	2.5392	2.5982	1.7082	1.6507	1.9419	1.9366	1.8937	1.8454	1.8400	1.8615	1.8507	1.8239	1.8025
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	2.6956	0.1127	0.1127	0.1127	0.1127	2.5830	1.7649	1.8239	1.8668	2.4891	2.8003	2.5392	2.5982	1.7082	1.6507	1.9419	1.9366	1.8937	1.8454	1.8400	1.8615	1.8507	1.8239	1.8025
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	2.6956	0.1127	0.1127	0.1127	0.1127	2.5830	1.7649	1.8239	1.8668	2.4891	2.8003	2.5392	2.5982	1.7082	1.6507	1.9419	1.9366	1.8937	1.8454	1.8400	1.8615	1.8507	1.8239	1.8025
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	7.6177	5.2107	5.2316	5.2107	5.7702	12.0477	11.0063	10.7557	10.3805	13.0455	12.8312	12.6692	13.1211	11.6831	12.0910	10.7883	11.4778	6.4273	7.1244	12.0041	12.8720	17.4264	18.0339	18.5262
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	1.5105	1.7469	2.2654	0.8312	0.2559	1.7389	1.7469	1.8033	1.8475	1.8797	1.6958	1.7215	1.7666	10.2156	9.3628	9.4508	9.4371	8.7231	8.0963	14.0267	14.1043	15.6126	14.5954	12.1576
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	1.1560	1.3003	1.3132	1.5973	1.3036	1.0970	4.6920	3.7387	4.5885	4.6714	5.0842	4.7779	3.7095	3.6025	4.8782	3.5558	3.5454	3.5770	3.4863	3.9594	4.4504	3.3221	3.4948	3.9515
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	5.9225	6.8450	7.9645	8.3695	7.9464	7.8957	10.6223	10.3331	14.8296	13.8448	13.0126	13.0857	11.0577	15.5447	16.6673	15.4549	15.4306	14.1643	13.4648	25.3014	22.2109	21.9061	23.7154	26.3517
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	9.6269	1.2499	1.2606	1.2499	1.4519	9.9794	7.9343	7.5840	6.9612	9.1082	8.8453	8.9108	9.7732	9.9961	10.7036	7.4840	8.2914	7.6613	8.7949	14.0911	13.1712	8.8013	8.7487	8.7150
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	2.0439	1.6270	0.5713	0.6630	0.6663	2.6220	1.4378	2.7110	3.1849	3.3931	3.4178	3.4510	3.4843	3.6098	3.3882	3.3844	3.3059	3.0932	2.7074	4.4265	4.7793	3.7875	3.7003	4.0513
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	2.7673	0.2559	0.2559	0.2559	0.2559	2.6546	1.8604	1.9194	1.9623	2.3390	2.3519	2.0321	2.4388	1.6202	1.5679	2.0374	2.0321	1.9891	1.9409	1.9355	1.9570	1.9462	1.9194	1.8979
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	9.1059	1.2499	1.2606	1.2499	1.2526	9.6005	7.7658	7.4523	7.2281	8.7474	8.2611	8.2515	8.6687	9.5925	9.4471	6.4134	6.6959	6.8679	7.1244	10.5575	10.6170	7.5119	7.8809	7.8478
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	2.0575	2.1998	2.6542	1.7989	0.5686	2.0656	2.1936	3.5299	3.8640	3.8914	3.9850	3.9751	4.0777	4.0558	3.9197	4.0610	4.0353	3.8929	3.7172	4.5021	4.7829	4.4782	3.9475	3.9775
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	2.0575	2.1998	2.6542	1.7989	0.5686	2.0656	2.1936	3.5299	3.8640	3.8914	3.9850	3.9751	4.0777	4.0558	3.9197	4.0610	4.0353	3.8929	3.7172	4.5021	4.7829	4.4782	3.9475	3.9775

Caline 4 input for 2050 Q4

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R001	835620.80	820845.25	835496.74	820838.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820834.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820724.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.53	820570.32	11	0	1
R020	835568.73	820565.58	835478.35	820470.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821020.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820674.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820514.97	16	0	1
R060	835740.08	820393.81	835672.32	820380.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820980.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820898.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820684.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	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
19.1920	19.2087	18.0269	18.4003	18.6306	17.9962	20.0665	22.5625	24.0145	23.8428	24.0507	23.6217	23.8240	23.9592	24.0914	23.9430	24.5106	22.7993	21.6849	22.1704	22.3010	22.1765	21.8408	19.7070
19.1920	19.2087	18.0269	18.4003	18.6306	17.9962	20.0665	22.5625	24.0145	23.8428	24.0507	23.6217	23.8240	23.9592	24.0914	23.9430	24.5106	22.7993	21.6849	22.1704	22.3010	22.1765	21.8408	19.7070
19.1920	19.2087	18.0269	18.4003	18.6306	17.9962	20.0665	22.5625	24.0145	23.8428	24.0507	23.6217	23.8240	23.9592	24.0914	23.9430	24.5106	22.7993	21.6849	22.1704	22.3010	22.1765	21.8408	19.7070
19.1920	19.2087	18.0269	18.4003	18.6306	17.9962	20.0665	22.5625	24.0145	23.8428	24.0507	23.6217	23.8240	23.9592	24.0914	23.9430	24.5106	22.7993	21.6849	22.1704	22.3010	22.1765	21.8408	19.7070
19.1920	19.2087	18.0269	18.4003	18.6306	17.9962	20.0665	22.5625	24.0145	23.8428	24.0507	23.6217	23.8240	23.9592	24.0914	23.9430	24.5106	22.7993	21.6849	22.1704	22.3010	22.1765	21.8408	19.7070
19.1920	19.2087	18.0269	18.4003	18.6306	17.9962	20.0665	22.5625	24.0145	23.8428	24.0507	23.6217	23.8240	23.9592	24.0914	23.9430	24.5106	22.7993	21.6849	22.1704	22.3010	22.1765	21.8408	19.7070
22.8157	23.5504	24.7529	25.8278	26.5952	25.9647	25.7089	30.7981	32.5999	30.6214	30.3283	30.1110	29.8613	29.9442	28.4729	28.3104	28.0956	27.1883	25.8348	27.4281	27.5085	27.6933	26.7162	25.0419
21.8828	22.0967	22.0036	22.6190	22.9617	23.5914	24.1929	27.8462	28.3191	27.1910	26.9719	25.8371	25.4490	25.6376	25.0685	24.2415	23.6959	22.4319	20.8869	21.1774	21.1603	21.4273	21.3745	20.8419
21.9874	23.2222	19.9070	21.9652	22.1796	21.6630	24.3485	27.5545	28.2356	27.5100	27.4899	26.6784	26.4912	26.8001	25.3277	25.1030	24.1344	23.0986	21.0238	22.4535	22.5065	22.8260	24.0927	21.7153
21.9874	23.2222	19.9070	21.9652	22.1796	21.6630	24.3485	27.5545	28.2356	27.5100	27.4899	26.6784	26.4912	26.8001	25.3277	25.1030	24.1344	23.0986	21.0238	22.4535	22.5065	22.8260	24.0927	21.7153
20.9021	20.3779	21.0325	20.4321	21.0325	21.5392	23.1675	31.8557	33.4902	30.4234	30.1446	29.1313	28.7676	28.5532	27.4411	26.5106	25.9222	24.6769	23.5392	25.1284	23.8963	24.1561	24.2941	22.3234
20.9021	20.3779	21.0325	20.4321	21.0325	21.5392	23.1675	31.8557	33.4902	30.4234	30.1446	29.1313	28.7676	28.5532	27.4411	26.5106	25.9222	24.6769	23.5392	25.1284	23.8963	24.1561	24.2941	22.3234
16.7767	16.7989	16.4542	17.2226	16.8333	17.4081	17.7026	22.0294	24.0205	23.4597	23.2164	22.7641	22.4057	22.3034	22.2211	21.7669	21.4814	20.3003	19.0677	20.9897	19.9612	19.4571	19.6886	19.2148
16.7767	16.7989	16.4542	17.2226	16.8333	17.4081	17.7026	22.0294	24.0205	23.4597	23.2164	22.7641	22.4057	22.3034	22.2211	21.7669	21.4814	20.3003	19.0677	20.9897	19.9612	19.4571	19.6886	19.2148
16.7767	16.7989	16.4542	17.2226	16.8333	17.4081	17.7026	22.0294	24.0205	23.4597	23.2164	22.7641	22.4057	22.3034	22.2211	21.7669	21.4814	20.3003	19.0677	20.9897	19.9612	19.4571	19.6886	19.2148
16.7767	16.7989	16.4542	17.2226	16.8333	17.4081	17.7026	22.0294	24.0205	23.4597	23.2164	22.7641	22.4057	22.3034	22.2211	21.7669	21.4814	20.3003	19.0677	20.9897	19.9612	19.4571	19.6886	19.2148
16.7767	16.7989	16.4542	17.2226	16.8333	17.4081	17.7026	22.0294	24.0205	23.4597	23.2164	22.7641	22.4057	22.3034	22.2211	21.7669	21.4814	20.3003	19.0677	20.9897	19.9612	19.4571	19.6886	19.2148
16.7767	16.7989	16.4542	17.2226	16.8333	17.4081	17.7026	22.0294	24.0205	23.4597	23.2164	22.7641	22.4057	22.3034	22.2211	21.7669	21.4814	20.3003	19.0677	20.9897	19.9612	19.4571	19.6886	19.2148
27.3162	27.5461	27.6541	29.2385	29.0360	29.5675	29.9576	33.3312	36.4627	36.1571	36.1060	35.1641	34.3122	34.3216	33.1305	32.6174	32.2676	29.7551	28.0340	28.1267	28.7268	27.8523	26.9232	25.4222
3.0899	3.0899	3.0738	3.0738	3.0256	3.1060	55.2808	47.5962	41.1025	47.0437	47.3307	47.0437	35.2864	35.7467	35.6565	29.5716	3.2348	3.2026	3.1704	3.2187	3.2670	3.2670	3.2348	3.2026
24.5686	24.8120	25.5936	25.4134	25.8056	25.6849	26.5147	30.0660	32.1959	31.8930	31.0927	30.9225	30.2768	30.2522	29.7072	28.6389	28.2508	26.6709	24.6662	25.5075	26.8362	26.6232	26.2848	25.5741
35.6179	29.2779	37.8356	37.8356	37.5620	37.8088	45.0012	44.5884	47.1181	42.8450	44.2858	40.6756	40.8764	37.7612	37.7088	38.0297	33.5523	28.0632	26.0564	30.3021	30.5439	32.7325	36.0787	35.4489
20.6921	21.3724	20.9564	21.3088	20.4780	21.7591	21.9581	25.1216	27.3039	27.0622	27.0714	26.4916	25.7648	26.0294	25.6418	25.4866	24.6292	23.5298	22.3578	23.4008	24.2907	23.6372	23.8112	22.3920
20.6921	21.3724	20.9564	21.3088	20.4780	21.7591	21.9581	25.1216	27.3039	27.0622	27.0714	26.4916	25.7648	26.0294	25.6418	25.4866	24.6292	23.5298	22.3578	23.4008	24.2907	23.6372	23.8112	22.3920
43.9719	40.5412	42.0940	42.0940	43.0936	47.3611	46.3652	44.7217	46.5007	50.9026	53.4614	51.4237	51.3352	48.8162	49.8164	49.5773	50.2209	43.9639	44.4137	51.9888	50.6269	52.1186	48.7918	49.1323
62.0379	61.2847	61.0473	61.0473	60.6872	61.3643	56.6845	56.7907	57.2567	58.2203	58.9716	58.2203	61.8040	58.1425	58.4705	63.4075	64.2054	38.5879	38.1937	38.6845	39.1834	63.0089	81.5710	62.5281
42.5320	38.3876	38.7059	38.7059	38.4066	50.2297	52.5812	49.5857	51.0578	54.8462	55.8742	53.5869	54.0373	49.1873	51.4360	51.2469	50.6110	43.3011	38.6407	39.1075	39.5791	36.8706	39.2824	39.0015
37.7287	39.5603	41.5068	41.5068	42.4694	47.8772	49.4826	52.0996	51.1545	55.4905	54.8327	51.9059	51.4099	43.4844	41.2004	39.4445	36.1184	25.4047	20.0660	20.9576	22.4313	24.9796	22.6055	25.9536
37.7287	39.5603	41.5068	41.5068	42.4694	47.8772	49.4826	52.0996	51.1545	55.4905	54.8327	51.9059	51.4099	43.4844	41.2004	39.4445	36.1184	25.4047	20.0660	20.9576	22.4313	24.9796	22.6055	25.9536
34.3604	38.8958	38.7059	38.7059	46.4818	52.0235	50.3263	50.4140	51.5075	64.0686	64.7160	60.3239	61.0566	53.5858	50.2438	47.4591	44.8107	33.4482	31.2504	33.5237	31.9275	33.8814	32.6570	32.4522
34.3604	38.8958	38.7059	38.7059	46.4818	52.0235	50.3263	50.4140	51.5075	64.0686	64.7160	60.3239	61.0566	53.5858	50.2438	47.4591	44.8107	33.4482	31.2504	33.5237	31.9275	33.8814	32.6570	32.4522
25.4115	25.5701	25.4299	29.1559	28.8984	27.4114	31.7647	29.7877	29.5002	29.1753	29.4938	31.8542	29.4056	30.8779	30.9464	26.8036	25.9335	24.9188	24.6563	25.8602	26.2052	25.6060	24.6475	22.5951
73.6462	82.7049	85.6176	86.1483	86.8259	83.6241	89.1318	89.9929	87.5587	98.4034	98.7412	97.6107	90.8959	91.2939	87.6367	80.8544	75.1026	64.6771	59.6110	61.3276	61.5962	63.5822	64.2359	65.2293
44.5479	44.8610	45.1077	45.2988	45.5836	46.2472	46.7916	48.8016	47.7970	45.9186	45.2483	45.0549	44.1767	44.2761	45.5013	45.6476	45.8103	44.9479	44.5406	44.7820	44.6435	44.6312	44.7020	44.8078
42.7861	43.6470	43.9529	43.6644	44.6308	45.0882	45.7502	47.7519	46.4019	44.5784	44.6843	43.7702	43.6604	43.3040	43.6382	42.5831	41.8748	40.3556	38.2940	39.7223	40.5579	40.1962	41.2017	41.3588
42.6239	43.6051	43.8004	44.8785	44.8282	46.6865	49.1876	54.9768	56.4193	56.3553	55.2657	56.1578	52.3670	50.9924	45.8980	48.3275	41.4555	39.7009	39.5365	41.0567	40.2748	39.5263	40.2079	39.3816
51.5168	42.0971	41.8718	41.8718	43.1751	61.1611	58.3107	58.4174	58.6600	63.0983	63.8921	61.9631	62.6009	62.2707	62.8028	58.8929	59.3903	54.6437	51.9381	53.3408	50.5529	56.5991	55.5154	54.5435
41.5314	42.9633	44.1442	43.9869	44.6465	44.4210	49.8248	54.3402	61.5975	63.7002	61.4180	59.2328	57.3534	54.7051	53.0811	52.6587	46.7563	42.6828	41.1654	38.4750	38.9896	33.9130	34.1769	32.5113
93.6222	84.2503	88.0181	88.0181	93.5379	99.6359	98.2747	96.0084	98.3463	109.2982	106.2409	111.4042	107.0490	96.9797	92.6528	94.1508	90.0226	85.5233	80.7684	85.8112	86.4621	90.0026	87.3473	88.0535
32.5984	22.5330	24.2384	18.8126	20.4761	34.3457	32.4349	31.2362	29.9053	33.7128	33.4194	32.6678	33.1562	34.5770	35.5381	33.2614	30.4524	30.3513	31.0108	31.4264	31.5621	29.4372	29.4870	30.4918
64.6493	67.7562	68.8025	68.8018	71.3842	75.6233	73.9826	75.1435	76.6196	92.0317	90.4826	87.5414	89.5326	75.5209	72.8498	71.8381	66.7751	51.4268	47.2976	49.6867	52.3828	61.9525	63.0208	63.2255
20.6264	3.0899	3.0738	3.0738	3.0256	42.3498	34.5944	34.6781	34.3723	28.6402	29.0687	28.6402	32.6811	33.4674	38.6644	35.2703	16.9906	21.4310	21.1575	21.5008	21.8495	21.8012	21.5759	21.3667
23.4701	23.9264	24.9646	25.0118	24.7926	25.7986	29.9029	32.7152	31.6889	30.3058	28.6245	27.2947	26.2012	25.9065	24.9370	25.1197	23.4559	21.3073	21.0899	19.5326	20.4882	20.5223	19.2036	20.6707
31.6932	32.6174	34.9400	34.7270	35.2758	34.9131	39.3485	39.6776	42.3528	40.8372	39.6897	39.1186	36.7815	36.8899	36.9515	34.6494	32.4921	29.4219	28.3016	29.7910	30.8332	30.6889	30.6675	28.5583
46.2225	47.2116	46.9976	46.9976	51.5168	53.8887	55.2446	55.3619	55.1816	57.8995	55.7344	55.4037	55.6687	50.2777	49.5043	44.3941	41.0590	26.2928	15.8766	20.1565	31.6569	34.1191	34.1491	41.0646
22.2764	22.2726	22.9120	23.2926	22.9471	23.1933	26.1904	28.6390	31.3179	30.6924	28.7611	28.7093	27.2144	27.5038	28.4154	26.4848	24.3552	22.2253	20.3937	21.0886	22.5142	23.4057	23.3963	24.4703
57.2563	58.5857	59.6338	59.6338	59.0249	67.4321	69.2955	70.3507	69.6129	71.5837	70.2376	69.5484	70.4705	63.0173	60.6684	60.8327	57.9617	43.0233	37.8577	39.2543	42.5364	43.3931	43.1622	45.6255
39.7100	40.1940	41.6004	41.9203	42.3399	43.3859	43.8113	46.0142	47.1817	46.9263	45.8784	44.5712	44.1283	44.2231	42.9563	41.6407	40.8422	38.4695	35.4533	40.2262	40.9800	41.1855	41.2415	41.8223
39.7100	40.1940	41.6004	41.9203	42.3399	43.3859	43.8113	46.0142	47.1817	46.9263	45.8784	44.5712	44.1283	44.2231	42.9563	41.6407	40.8422	38.4695	35.4533	40.2262	40.9800	41.1855	41.2415	41.8223
59.5080	59.2917	61.1817	60.6289	66.8292	63.2889	64.2701	64.4971	63.0562	61.4230	60.9850	59.3699	59.5188	58.9319	58.4177	57.8535	57.8052	56.6969	56.5057	62.3604	61.3878	61.5045	61.6775	61.7215
23.6328	24.1663	25.4085	23.1650	24.6306	25.0356	26.3304	26.9931	28.0362	26.9031	26.5784	26.3239	26.4057	26.8772	26.3148	26.5110	25.4845	24.9108	23.6465	27.0983	25.7841	25.8737	26.0515	24.8098
46.9449	47.0592	47.7600	45.7434	45.7284	48.5440	50.2522	50.0977	49.5865	51.6737	52.4679	50.5587	49.8327	46.3576	47.4156	47.8551	45.4594	42.0759	41.2740	40.3133	42.7204	45.7446	43.4135	43.3894
43.7571	47.0772	46.8439	46.8439	46.4818	59.6526	60.1176	60.2249	55.6305	59.4696	60.4824	56.8600	60.3546	55.1264	55.4140	54.7637	55.9536	41.0635	40.6974	41.1574	41.6201	42.0818	41.7469	45.3671
45.5820	45.2508	45.8002	45.8002	47.4677	50.8577	48.1075	50.1737	49.7393	55.7752	56.2173	56.4064	54.1173	50.3152	51.3250	47.1656	45.1483	39.7370	36.2656	41.0028	41.3071	44.3106	45.3772	45.1098
101.7276	91.5911	96.0663	96.0663	101.2928	102.9068	97.2355	95.4506	94.3208	101.5869	98.9431	100.4025	100.5359	103.6048	96.2892	107.3817	100.9252	103.0828	107.7985	113.5027	110.7019	106.7711	115.3102	103.6356
26.0606	26.6032	27.4671	28.4321	23.0004	23.8863	26.0325	27.4009	26.5666	26.8080	27.5457	27.7252	27.0995	29.0013	28.5523	27.0842	27.4794	26.1697	26.5471	26.0265	25.6151	25.8912	25.7885	28.3297
35.9018	36.3559	36.3495	38.2706	38.8082	38.2776	40.1575	40.0607	39.3821	37.0816	37.3466	36.5369	36.4190	36.4485	35.8842	35.3991	34.3125	33.1412	32.0201	35.5376	36.6983	37.0021	37.6138	37.7107
68.3875	71.5191	61.6747	61.6747	58.2867	49.2673	45.8644	44.3598	46.0661	57.9816	71.3474	76.8149	75.8160	84.4490	82.8786	81.2172	84.8700	88.1787	91.2900	115.2132	115.2265	107.6896	101.7567	99.3438
42.4302	29.3946	29.1773	29.1773	3.0256	42.3498	42.4624	42.5670	42.1969	41.5813	43.5201	42.9408	43.3896	44.3516	44.4750	36.9625	37.0691	33.1202	32.7572	33.2132	33.6728	34.1847	34.0421	38.8656
37.5288	38.7051	37.7695	39.2861	40.8644	41.6348	44.2350	47.3532	48.6677	46.9890	45.2788	44.3447	42.0148	41.5376	38.6951	37.0800	35.1148	32.8423	31.7175	31.8940	33.4996	32.7005	33.6754	32.7881
32.6118	33.3630	33.7642	34.8794	33.4817	36.2753	37.5446	38.3927	38.1953	42.0731	41.5393	40.9478	40.2184	40.7058	40.1114	37.5386	36.9502	33.1398	30.3905	31.4853	31.9335	34.0018	33.8056	34.2609
32.6118	33.3630	33.7642	34.8794	33.4817	36.2753	37.5446	38.3927	38.1953	42.0731	41.5393	40.9478	40.2184	40.7058	40.1114	37.5386	36.9502	33.1398	30.3905	31.4853	31.9335	34.0018	33.8056	34.2609
32.6118	33.3630	33.7642	34.8794	33.4817	36.2753	37.5446	38.3927	38.1953	42.0731	41.5393	40.9478	40.2184	40.7058	40.1114	37.5386	36.9502	33.1398	30.3905	31.4853	31.9335	34.0018	33.8056	34.2609
32.6118	33.3630	33.7642	34.8794	33.4817	36.2753	37.5446	38.3927	38.1953	42.0731	41.5393	40.9478	40.2184	40.7058	40.1114	37.5386	36.9502	33.1398	30.3905	31.4853	31.9335	34.0018	33.8056	34.2609
21.7504	21.1351	21.7755	22.0424	22.6746	22.5568	26.4885	32.3735	31.7467	28.5298	28.3494	27.0756	26.7819	26.5715	24.9185	23.7320	23.1910	22.6370	22.1097	21.2686	21.0233	22.0409	21.6828	20.7588
21.7504	21.1351	21.7755	22.0424	22.6746	22.5568	26.4885	32.3735	31.7467	28.5298	28.3494	27.0756	26.7819	26.5715	24.9185	23.7320	23.1910	22.6370	22.1097	21.2686	21.0233	22.0409	21.6828	20.7588
120.8652	128.5448	143.4795	150.8151	148.1133	130.6592	125.2309	127.7774	127.5463	126.7728	120.0800	119.6697	117.0585	89.0515	88.9657	83.0166	70.7536	59.1935	38.3550	59.2716	63.0565	101.4938	110.0305	118.1346
35.7895	35.8349	37.4565	39.4790	41.4113	43.8146	42.2130	45.1956	43.1234	41.0316	41.9215	40.5919	40.2381	33.3300	32.3649	31.0143	30.3130	29.1054	25.9162	26.8832	27.0652	27.5616	25.9011	26.3036
43.1417	43.4177	44.6622	42.7824	42.8561	46.2509	46.1531	46.3529	46.1063	52.3338	50.6564	51.0570	51.9003	45.9549	47.0059	46.8164	47.6744	42.4830	43.0932	46.8150	45.8101	47.8012	44.6296	44.9508
81.7857	80.0506	80.9404	80.7431	80.9828	81.1250	84.9069	85.2913	83.4895	81.7917	81.6202	80.2482	79.9049	79.5817	78.8425	78.7796	82.0274	81.0328	81.7409	80.3007	83.9825	80.9153	80.3889	77.5315
24.9616	25.1380	25.3176	25.5181	25.6914	26.4035	27.6855	28.5121	27.0473	26.6462	26.7181	25.2109	25.1818	24.5136	24.2287	24.3901	24.3971	23.9248	22.5370	24.9763	25.6653	25.5124	25.0433	24.9606
174.6085	156.2582	172.3760	182.1538	181.6369	183.2286	176.7083	188.5010	180.6799	170.4672	178.9303	165.8992	160.6652	162.0860	141.6930	145.7959	133.3647	128.0155	118.2624	125.4366	123.2404	128.6745	128.2747	130.6212
30.7971	30.6582	30.7200	31.1106	30.9301	30.7540	32.8303	33.4248	32.5878	30.2008	31.4357	30.0531	30.3041	29.3766	28.5380	28.9374	29.0524	27.9457	26.1943	32.2804	33.5992	33.9336	33.5510	33.3200
30.7971	30.6582	30.7200	31.1106	30.9301	30.7540	32.8303	33.4248	32.5878	30.2008	31.4357	30.0531	30.3041	29.3766	28.5380	28.9374	29.0524	27.9457	26.1943	32.2804	33.5992	33.9336	33.5510	33.3200
45.1106	45.9148	47.7607	48.3190	47.8642	56.0523	57.3822	58.2000	56.5077	57.5115	56.9798	56.1965	56.7601	51.5800	50.4856	47.9942	41.2629	29.5126	18.8423	30.5208	42.6344	52.1399	59.1837	66.1798
52.4593	38.3876	38.1899	38.1899	37.8795	60.6307	57.7291	55.1170	60.3781	56.1163	54.3183	53.7477	54.4538	55.1042	58.3646	51.5414	50.7130	48.8317	45.0568	47.8080	45.9643	51.2218	53.5546	55.2465
32.4038	31.7904	31.8701	32.0268	32.0480	32.6980	34.4943	35.2889	34.9072	33.4949	32.8140	32.4748	31.6458	31.0728	31.2082	31.3760	32.2410	31.0298	29.5066	33.5071	34.7499	34.1997	33.7818	33.7668
43.8381	44.1572	43.5644	44.1462	43.4436	43.2225	44.6823	45.8688	44.6191	44.7128	43.9585	43.3304	42.3262	43.8028	44.0507	43.7565	45.7221	45.0952	44.2934	46.8400	47.4697	47.2865	46.3924	46.4271
46.3199	45.9377	46.5375	45.3456	45.1536	45.5744	45.5673	45.2709	45.1910	44.6637	45.8665	45.5459	45.9991	46.0133	46.9188	47.7861	48.4701	49.1716	50.0257	50.9193	51.5727	50.6834	50.2041	49.3919
67.3900	79.0142	86.0105	78.7509	83.2202	86.0093	83.0009	80.1665	82.6730	81.5761	85.5769	88.7720	89.7039	52.9343	53.1393	57.4435	53.6184	54.6579	52.2428	52.7538	50.5135	74.5090	72.3180	71.9971
102.1752	49.9198	49.6945	46.8439	46.4818	101.5469	92.2567	92.3891	91.8778	91.0773	91.7330	91.0773	101.5710	102.0812	102.1997	102.6970	93.4389	102.7556	89.3097	120.6151	116.8706	121.3773	122.4388	122.8119
60.7129	37.1170	36.8998	6.1541	6.1058	60.7043	47.2031	47.3078	46.8439	59.5171	60.2515	60.4358	70.8908	63.3106	63.6591	64.2505	64.4034	64.1016	52.0811	52.6863	53.2946	53.1362	48.2315	47.9137
43.1393	41.2063	42.3366	42.3366	42.2986	47.6467	46.2800	45.5294	45.3849	44.4636	45.1455	45.4451	47.1680	41.3501	39.6656	40.0548	39.8040	36.5233	33.4704	34.9463	35.4489	40.9157	39.7217	41.3968
34.5622	20.6264	20.4762	20.4762	20.2348	34.5010	33.1800	33.2674	32.8880	32.3041	37.7390	37.1892	34.1727	34.8712	34.9323	35.2703	39.1767	33.8559	33.5019	33.9479	34.3962	34.1847	39.1767	38.8656
97.6645	86.0379	90.6878	92.2453	96.6320	80.2986	96.7314	95.1979	96.9092	95.6898	94.7699	92.0410	94.9664	99.0119	93.4645	90.7844	84.9526	87.6351	92.6251	97.0131	96.8719	87.9557	93.6684	97.4150
52.4593	38.3876	38.1899	38.1899	38.4066	60.0187	60.2549	57.1756	56.7661	59.2706	56.6558	56.1163	60.1493	52.9343	53.1393	50.1558	48.8164	46.6194	43.8175	44.7961	44.7138	50.7117	50.9374	50.6719

Caline 4 input for 2050 Q4

Road Pair	Coordinate (m)				Width (Including mixing zone)	Height (m)	Road Type (caline 4)
	X1	Y1	X2	Y2			
R076	835061.55	820671.39	835223.54	820534.84	13	0	1
R077	835181.76	820644.19	835145.98	820601.33	18	0	1
R078	835090.16	820632.06	835061.93	820655.38	22	0	1
R079	835211.26	820522.60	835086.95	820628.61	13	0	1
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1
R082	835170.87	820506.04	835220.38	820248.55	18	0	1
R083	835216.81	820521.01	835259.16	820300.13	15	0	1
R084	835334.32	820425.38	835123.33	820386.30	18	0	1
R085	835276.42	820481.74	835337.27	820161.28	19	0	1
R086	835186.25	820286.54	835430.66	820333.73	18	0	1
R087	835370.09	820321.95	835394.81	820191.16	15	0	1
R088	835461.22	820202.28	835311.87	820175.97	21	0	1
R089	835406.99	820130.26	835395.23	820191.29	15	0	1
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1
R092	835479.87	820139.09	835705.63	820183.64	13	0	1
R093	835461.18	820203.04	835525.57	820215.84	16	0	1
R093	835524.72	820220.82	835697.55	820250.15	16	0	1
R094	835699.92	820237.76	835528.90	820205.04	10	0	1
R095	835529.05	820205.05	835547.39	820102.02	13	0	1
R096	835581.96	820222.00	835605.44	820102.25	18	0	1
R097	835639.63	820232.41	835663.35	820109.11	18	0	1
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1
R100	835820.57	820152.36	835812.79	820200.16	13	0	1
R100	835812.79	820200.16	835743.10	820393.40	13	0	1
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1
R103+R104	836068.35	820219.28	836139.25	820234.91	14	0	1
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1
R105	836397.65	820745.03	836078.85	820683.53	28	0	1
R106+R107	836206.79	820799.16	836346.83	820806.49	14	0	1
R108	836203.37	820871.38	836210.57	820716.44	18	0	1
R109	836208.65	820872.04	836366.51	820879.54	18	0	1
R110	836245.24	820955.74	836203.01	820871.17	13	0	1
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1
R117	836014.74	821108.14	835837.56	821171.01	14	0	1
R118	835970.40	821123.86	835855.29	820994.26	14	0	1
R118	835855.29	820996.26	835831.79	821005.04	14	0	1
R118	835831.79	821005.04	835835.81	821250.00	14	0	1
R119	835839.57	821170.41	835864.89	821239.68	14	0	1
R119	835864.89	821239.68	835883.88	821331.74	14	0	1
R120	835817.16	821257.79	836050.56	821174.58	14	0	1
R121	836075.15	821245.26	835820.45	821335.01	14	0	1
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1
R124	835772.56	821151.58	835650.16	821145.75	13	0	1
R124	835650.16	821145.75	835650.03	821217.65	13	0	1
R124	835650.03	821217.65	835602.48	821285.86	13	0	1
R124	835602.48	821285.86	835602.34	821331.44	13	0	1
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1
R129	835627.77	820607.32	835569.14	820594.35	13	0	1
R130	835569.14	820596.35	835512.46	820585.70	13	0	1
R131	835512.46	820585.70	835432.93	820578.07	13	0	1
R132	835329.95	820537.58	835351.40	820426.62	18	0	1
R133	835274.13	820826.69	835299.79	820697.63	18	0	1
R134	835333.92	820831.55	835260.16	820897.87	12	0	1
R135	835225.72	821076.55	835192.38	821035.93	18	0	1
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1
R138	835347.39	820824.94	835407.56	820827.01	13	0	1
R138	835407.54	820828.24	835621.22	820838.53	12	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
30.1313	31.5147	31.3457	31.3457	32.6630	30.9262	31.8806	32.1489	31.3571	31.4205	30.4988	30.1967	30.6748	29.6093	29.4233	29.3054	28.3363	25.8685	23.2784	23.9582	25.3744	26.4581	27.4673	28.7036
38.3876	38.8958	46.8439	46.8439	46.4818	66.5328	64.8647	64.9672	64.5815	63.9644	64.4659	63.9644	66.0863	38.8764	39.1182	39.4700	39.3920	38.3981	38.0758	40.8041	38.9524	38.9176	41.2540	38.2846
29.4499	29.8071	30.3644	30.8342	30.8820	30.4861	30.6554	31.5149	30.5808	30.1365	30.4189	29.6745	29.5636	29.7839	29.0127	28.6479	28.6164	28.5940	27.3026	29.0640	29.6150	29.4921	29.0573	28.9328
158.8000	173.4046	155.3655	155.3655	177.7165	162.5465	167.4526	161.0108	163.4056	156.4436	159.6705	162.3822	165.9392	155.0448	147.3714	163.6533	164.1007	165.9505	157.9525	155.4548	159.6141	156.4828	163.3653	153.4456
28.0573	28.6237	29.1759	29.5058	28.6308	28.9968	28.7448	28.9411	28.6992	28.2368	28.2640	28.0357	27.8386	27.5800	27.1354	26.7248	26.3231	24.9936	23.9687	25.4773	25.9888	26.7070	27.2691	27.0814
75.8525	77.9163	82.1339	82.1339	81.7295	74.2954	72.4803	71.7980	72.0747	73.5349	71.9683	71.3821	73.8298	57.8311	52.4148	49.7040	48.6994	47.6032	44.3531	44.7961	46.3595	53.2266	54.3392	54.0488
64.5151	73.2340	73.0147	73.0147	72.6828	64.4995	63.8542	60.3575	59.9293	62.8207	60.2643	59.2137	64.0618	44.8653	38.0831	38.3978	38.4818	38.3636	35.3953	35.7815	36.1691	46.2183	49.2541	51.0864
83.8990	72.1553	76.0189	77.0137	74.4566	86.7052	83.0716	83.6634	82.3736	82.0651	81.4630	80.8767	83.3816	74.7847	74.8945	72.6964	69.8104	63.9052	62.0268	69.5912	69.8804	72.8755	74.0161	73.6902
33.6484	33.9142	33.9210	33.9210	34.6134	34.5066	33.9805	34.8897	34.9297	33.6556	34.9434	34.9435	34.4651	31.2710	31.1683	31.0571	30.4557	29.0106	28.2161	29.0853	30.9574	29.9917	30.5030	30.2807
85.0523	85.6226	85.0397	85.0397	80.7273	85.8077	80.3145	76.6827	77.5196	95.5234	94.1081	92.8492	90.5513	82.1107	82.2120	77.1774	71.1151	57.0117	54.2114	59.7656	61.0285	64.6118	65.2125	65.5791
34.5006	34.8434	35.8221	35.8221	35.0394	38.0684	39.0525	38.8843	38.5909	36.8381	36.2649	36.8610	36.0702	34.0403	33.7911	35.8436	34.1827	32.1200	31.6804	32.6951	34.1824	34.1244	32.8218	33.3754
57.9886	57.0182	57.7171	56.7405	56.1221	60.1617	61.9936	62.4963	61.7393	59.0429	60.4313	59.6760	57.8924	58.1073	56.7669	57.2862	58.7048	56.6501	54.4761	55.5584	58.0200	57.1793	55.8380	56.1825
32.1104	34.5622	34.3723	34.3723	41.8348	32.6837	36.0009	36.0894	35.7931	38.2233	38.6578	38.2233	31.7137	32.4825	32.6032	32.9532	29.9176	29.7435	29.5264	29.9548	30.3856	30.0756	29.9176	32.3107
43.5885	44.1328	44.4937	44.6281	44.4403	45.4390	46.2800	46.6550	45.7284	44.6301	44.8005	43.9926	43.7837	43.8526	43.5026	43.3182	42.1881	41.3359	39.8275	40.7244	42.0030	41.2495	41.4735	41.4216
53.3087	50.1944	49.9222	51.3404	49.8923	54.9947	59.8181	59.5483	56.8305	54.6698	53.8370	52.3815	53.9102	53.7960	53.2272	51.4394	49.5958	44.2293	41.4654	44.7334	45.8856	46.5743	45.9277	46.3427
63.4672	59.2734	59.4955	60.0765	60.7653	66.5223	73.1071	77.6439	70.4993	67.0360	67.0853	63.7565	65.5630	67.1910	67.6086	64.2904	64.3650	64.4642	60.0865	59.2494	63.8860	61.7450	61.0814	61.3175
63.4672	59.2734	59.4955	60.0765	60.7653	66.5223	73.1071	77.6439	70.4993	67.0360	67.0853	63.7565	65.5630	67.1910	67.6086	64.2904	64.3650	64.4642	60.0865	59.2494	63.8860	61.7450	61.0814	61.3175
36.1118	35.3254	35.9134	35.6195	35.8683	37.2175	39.8374	39.9871	38.6941	37.4368	36.1263	35.4725	35.8198	36.7523	37.3271	35.0975	35.7212	33.2715	31.5490	34.4321	36.4039	35.8205	35.6062	36.6231
59.7412	56.3826	58.6715	58.6715	57.7580	62.3713	65.8024	66.3467	65.6060	62.6334	62.3013	59.8185	61.5498	60.6866	61.4131	60.0142	58.6169	57.1586	53.5642	54.7721	55.9866	57.0807	56.4529	56.2564
35.6876	34.6797	37.9822	37.9822	37.6550	39.6788	41.0009	39.4547	40.0618	40.6036	37.3939	38.0086	39.0514	39.6667	38.2017	37.0876	36.6003	35.9837	34.4663	36.0731	35.3371	37.5511	38.6677	38.3868
79.3825	84.6171	86.8829	86.8829	89.3184	80.0357	84.2852	82.6660	85.4538	82.1604	78.1689	79.8800	74.8882	74.3435	72.5570	62.5795	59.8452	55.4340	51.8613	54.1060	57.1122	63.0702	65.1425	69.0542
55.8137	55.8277	55.0209	55.6299	55.9168	56.9857	63.0670	65.8913	62.9172	57.5467	56.9228	54.5891	55.1669	58.9114	57.5733	55.4312	54.8420	51.8984	48.7406	49.3338	49.8827	49.9131	48.2424	48.8174
63.4885	64.8443	63.1765	63.1765	64.7981	70.2036	70.9728	74.4159	70.4321	69.6364	69.3775	65.2985	68.1458	65.9244	64.1184	61.1057	59.8747	58.0739	52.0958	52.9701	56.8462	58.7214	58.8267	59.2485
63.4885	64.8443	63.1765	63.1765	64.7981	70.2036	70.9728	74.4159	70.4321	69.6364	69.3775	65.2985	68.1458	65.9244	64.1184	61.1057	59.8747	58.0739	52.0958	52.9701	56.8462	58.7214	58.8267	59.2485
58.0682	29.3946	29.1773	29.1773	28.8394	78.6871	64.8035	64.9622	63.3497	65.1769	65.8703	65.1769	65.6906	70.8968	70.8876	61.2912	51.8791	50.7218	47.0947	62.4878	63.1950	71.0327	75.0568	74.5626
58.0682	29.3946	29.1773	29.1773	28.8394	78.6871	64.8035	64.9622	63.3497	65.1769	65.8703	65.1769	65.6906	70.8968	70.8876	61.2912	51.8791	50.7218	47.0947	62.4878	63.1950	71.0327	75.0568	74.5626
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
29.6544	31.5007	32.0837	32.8882	30.7945	33.1895	35.9019	34.7350	33.2076	33.6806	33.4019	31.2080	32.4471	32.7215	33.1987	29.6489	30.2050	29.4026	27.7212	28.8059	28.1678	31.3747	30.1779	30.9418
22.8046	23.1242	22.9405	23.7468	23.4800	23.9903	24.3660	28.9876	28.3474	28.5860	27.5632	26.9024	26.6176	26.5310	26.0479	25.9216	25.6766	24.8430	24.6100	26.4096	25.0258	25.6933	25.8873	24.4515
38.1735	20.7676	20.6366	20.6366	20.4228	35.7890	35.3712	33.7569	36.7438	41.4691	40.2950	42.4689	40.1855	33.9599	34.0594	33.8288	31.7240	31.7314	31.4444	31.8091	32.1739	35.1153	35.0358	34.7981
59.1138	49.6577	51.4041	53.8977	53.6998	69.6342	65.9192	65.4525	65.0206	65.7502	67.7695	68.5283	63.5948	61.8209	62.6627	51.8837	49.5425	46.5700	43.7115	64.5066	62.9136	74.8425	78.8128	78.9226
19.9262	19.7522	20.4884	19.9467	21.0853	23.5686	24.1895	29.1748	30.0321	27.5791	26.8769	25.7185	26.4181	26.6263	23.9531	23.5859	22.9159	22.3736	21.7220	22.7343	22.1885	22.3987	21.7294	20.5257
31.1246	28.3646	30.8189	29.1612	32.5776	29.3363	31.5921	36.2228	37.4127	41.0974	42.4513	43.5817	39.7096	37.6654	33.2444	31.9719	29.5129	29.7815	29.5070	29.7075	31.1540	30.9717	31.0710	30.3076
30.1205	26.9990	28.3163	30.3499	30.2596	31.3258	34.1314	33.2218	32.8788	29.0813	30.4994	28.3430	29.4268	28.3539	28.6181	31.4506	28.2306	26.6739	26.3714	27.4622	28.5437	28.1288	29.7789	30.0586
43.8787	36.8613	38.7314	38.7314	38.7459	43.9499	47.6710	46.4595	47.3250	40.2274	41.0492	40.4375	40.6517	39.1071	38.2521	41.0154	37.8472	33.6204	33.3383	34.5598	38.1369	39.0564	40.3277	44.4706
30.9943	16.9045	16.8240	16.8240	16.6889	32.0326	30.9025	30.9755	30.7373	31.4693	31.8327	34.0580	31.7415	30.1231	28.2382	31.9353	29.2911	26.0437	25.7931	26.1127	29.5636	32.0359	36.1228	38.3077
43.0793	43.1945	43.7731	42.6182	44.9228	46.6100	47.7337	47.2853	48.0099	43.8200	45.7479	44.8943	44.2390	43.3757	41.3343	43.0745	42.2336	36.6993	36.3990	37.6071	40.5807	42.3493	42.8244	46.3939
38.8958	26.8014	26.6512	26.6512	26.4098	52.4148	49.1752	49.2610	48.8433	53.5108	52.1592	59.3533	53.9582	54.8487	49.6279	49.9695	35.4244	35.2574	34.9436	35.3399	35.7382	50.2497	55.5106	55.2209
38.8958	26.8014	26.6512	26.6512	26.4098	52.4148	49.1752	49.2610	48.8433	53.5108	52.1592	59.3533	53.9582	54.8487	49.6279	49.9695	35.4244	35.2574	34.9436	35.3399	35.7382	50.2497	55.5106	55.2209
38.8958	26.8014	26.6512	26.6512	26.4098	52.4148	49.1752	49.2610	48.8433	53.5108	52.1592	59.3533	53.9582	54.8487	49.6279	49.9695	35.4244	35.2574	34.9436	35.3399	35.7382	50.2497	55.5106	55.2209
49.5347	43.4777	46.6717	46.6717	44.2992	49.6007	53.9524	52.2768	53.5862	48.4843	47.0913	48.7236	46.9951	46.0304	44.5776	45.5732	41.8301	36.9854	36.6850	38.2268	42.1388	43.3782	44.9739	51.4796
49.5347	43.4777	46.6717	46.6717	44.2992	49.6007	53.9524	52.2768	53.5862	48.4843	47.0913	48.7236	46.9951	46.0304	44.5776	45.5732	41.8301	36.9854	36.6850	38.2268	42.1388	43.3782	44.9739	51.4796
31.2282	33.4415	33.2806	33.2806	33.0231	55.5721	53.4058	50.5420	50.1661	55.0497	51.1851	54.8220	51.0952	49.7982	47.0710	49.3597	29.9798	29.8435	29.5924	31.5884	30.2308	40.9287	43.1386	40.7772
31.6831	34.3604	38.1899	38.1899	37.8795	53.4145	52.1048	49.7769	51.7445	52.9852	53.0470	52.5114	49.8263	50.6134	48.0368	50.4955	32.5518	29.8435	31.2504	31.5884	31.9275	40.9287	43.1386	42.9052
25.9552	26.8900	21.9921	22.1957	22.5594	26.9040	28.6252	30.0568	30.8013	28.0089	25.8251	25.0627	25.2986	25.4327	25.2503	26.5396	26.0604	24.4852	23.5111	28.2087	27.6908	27.4663	27.1256	28.0989
25.9552	26.8900	21.9921	22.1957	22.5594	26.9040	28.6252	30.0568	30.8013	28.0089	25.8251	25.0627	25.2986	25.4327	25.2503	26.5396	26.0604	24.4852	23.5111	28.2087	27.6908	27.4663	27.1256	28.0989
72.7783	64.3219	66.6623	66.6623	63.3317	78.2970	78.8789	78.1270	80.2355	78.4995	73.8530	77.2452	77.2454	73.7856	71.3379	68.2121	67.5344	63.8050	60.2060	65.4090	64.5193	64.7563	65.9684	63.8854
72.7783	64.3219	66.6623	66.6623	63.3317	78.2970	78.8789	78.1270	80.2355	78.4995	73.8530	77.2452	77.2454	73.7856	71.3379	68.2121	67.5344	63.8050	60.2060	65.4090	64.5193	64.7563	65.9684	63.8854
72.7783	64.3219	66.6623	66.6623	63.3317	78.2970	78.8789	78.1270	80.2355	78.4995	73.8530	77.2452	77.2454	73.7856	71.3379	68.2121	67.5344	63.8050	60.2060	65.4090	64.5193	64.7563	65.9684	63.8854
72.7783	64.3219	66.6623	66.6623	63.3317	78.2970	78.8789	78.1270	80.2355	78.4995	73.8530	77.2452	77.2454	73.7856	71.3379	68.2121	67.5344	63.8050	60.2060	65.4090	64.5193	64.7563	65.9684	63.8854
55.4659	3.0899	3.0738	3.0738	3.0256	55.1601	37.8946	37.9697	37.8356	49.0062	55.0877	49.0062	49.1904	33.1478	33.0696	38.3559	38.4364	38.2701	37.9697	38.3559	38.7368	38.3398	38.4364	38.2004
55.4659	3.0899	3.0738	3.0738	3.0256	55.1601	37.8946	37.9697	37.8356	49.0062	55.0877	49.0062	49.1904	33.1478	33.0696	38.3559	38.4364	38.2701	37.9697	38.3559	38.7368	38.3398	38.4364	38.2004
55.4659	3.0899	3.0738	3.0738	3.0256	55.1601	37.8946	37.9697	37.8356	49.0062	55.0877	49.0062	49.1904	33.1478	33.0696	38.3559	38.4364	38.2701	37.9697	38.3559	38.7368	38.3398	38.4364	38.2004
55.4659	3.0899	3.0738	3.0738	3.0256	55.1601	37.8946	37.9697	37.8356	49.0062	55.0877	49.0062	49.1904	33.1478	33.0696	38.3559	38.4364	38.2701	37.9697	38.3559	38.7368	38.3398	38.4364	38.2004
55.4659	3.0899	3.0738	3.0738	3.0256	55.1601	37.8946	37.9697	37.8356	49.0062	55.0877	49.0062	49.1904	33.1478	33.0696	38.3559	38.4364	38.2701	37.9697	38.3559	38.7368	38.3398	38.4364	38.2004
55.4659	3.0899	3.0738	3.0738	3.0256	55.1601	37.8946	37.9697	37.8356	49.0062	55.0877	49.0062	49.1904	33.1478	33.0696	38.3559	38.4364	38.2701	37.9697	38.3559	38.7368	38.3398	38.4364	38.2004
53.1965	44.7498	44.5744	44.5744	48.5429	66.6730	66.7235	64.6603	63.7767	74.2008	73.4331	71.5346	74.0755	69.5051	71.2278	68.7118	67.6617	51.8724	53.9507	69.3827	71.3218	85.5371	88.8065	87.4010
38.8958	47.0772	60.4071	36.8998	6.1058	47.0905	47.2031	47.3078	46.8439	46.1426	44.7360	44.1107	44.6169	68.1021	63.8134	64.2146	64.3181	60.2646	56.5418	75.6664	76.1763	80.1388	75.4098	67.7245
29.3168	34.5622	34.3723	42.1969	34.0729	29.2685	38.5335	37.3930	40.1580	39.6176	43.1229	39.6176	36.0036	38.6338	42.2169	39.0458	39.1416	37.9533	37.6052	41.6824	42.8320	38.7161	41.0314	40.1155
49.6686	51.1475	55.9355	55.1549	55.6237	58.5870	64.5660	64.5872	79.0637	75.6995	74.6752	74.4997	66.3722	83.2214	89.7379	84.8926	85.0138	81.6958	81.0614	118.5689	104.8319	102.4622	109.0556	117.3256
60.4986	33.4415	33.2806	33.2806	38.4066	59.1398	56.2240	53.3704	51.3117	59.3106	58.0438	57.5374	60.0984	61.6776	64.0067	54.9574	57.0840	53.5762	55.9736	73.4058	69.0506	56.6202	56.4725	56.2238
20.0095	19.4698	16.2221	19.0160	18.8518	23.8356	16.4436	23.3566	24.2803	22.3841	22.5855	21.7892	22.5811	23.7507	23.6699	24.3990	24.6288	24.2383	23.2879	28.8390	29.8153	26.7281	26.7383	28.2897
57.0374	6.1702	6.1541	6.1541	6.1058	56.7630	40.0109	40.0860	39.9100	46.2454	46.5550	39.5409	46.4488	31.7716	31.7579	40.5173	40.5977	40.4314	40.1310	40.5173	40.8982	40.5495	40.5977	40.3617
58.8526	33.4415	33.2806	33.2806	33.0231	62.8426	59.2404	56.3903	56.6416	61.1727	58.3194	59.4056	59.8354	62.4985	62.5958	50.7824	52.9864	51.9045	53.9507	65.1156	65.5800	57.2574	60.1321	59.8396
20.4145	22.2270	23.7662	21.2522	16.0827	21.0208	22.0341	29.3347	31.0716	29.6125	30.0693	29.6125	30.5292	30.7993	30.6698	31.0756	31.4752	31.2394	31.3003	29.7228	30.3133	28.9503	27.6777	27.3326
20.4145	22.2270	23.7662	21.2522	16.0827	21.0208	22.0341	29.3347	31.0716	29.6125	30.0693	29.6125	30.5292	30.7993	30.6698	31.0756	31.4752	31.2394	31.3003	29.7228	30.3133	28.9503	27.6777	27.3326

Caline 4 input for 2050 Q4

Road Pair	Coordinate (m) X1	Y1	X2	Y2	Width (Including mixing zone)	Height (m)	Road Type (caline 4)
R001	835620.80	820845.25	835496.74	820838.92	14	3	4
R001	835496.74	820838.92	835393.93	820832.16	14	8	4
R001	835393.93	820832.16	835337.57	820834.61	14	9	4
R001	835337.57	820834.61	835300.08	820854.32	14	9	4
R001	835300.08	820854.32	835226.82	820916.25	14	6	4
R001	835226.82	820916.25	835124.41	821000.69	14	3	4
R002	835343.35	820837.42	835620.80	820853.65	14	0	1
R003	835621.42	820844.84	835778.53	820853.97	26	0	1
R004+R005	835780.45	820853.95	835775.84	820964.99	28	0	1
R004+R005	835779.74	820965.55	835772.69	821151.01	19	0	1
R006+R007	835780.78	820849.56	835983.04	820858.15	28	0	1
R006+R007	835983.04	820858.15	836039.91	820836.25	21	0	1
R008	835782.52	820630.02	835636.16	820602.53	14	3	4
R008	835636.16	820602.53	835398.38	820557.85	14	8	4
R008	835398.38	820557.85	835258.07	820526.53	14	10	4
R008	835258.07	820526.53	835216.95	820533.09	14	10	4
R008	835216.95	820533.09	835167.96	820571.19	14	7	4
R008	835167.96	820571.19	835092.30	820634.71	14	3	4
R009	835633.82	820592.99	835395.67	820547.64	15	0	1
R010	835781.18	820637.12	835628.13	820608.44	11	0	1
R011	835634.24	820591.19	835784.72	820619.12	16	0	1
R012	835781.38	820635.83	835962.83	820671.07	13	0	1
R013	836078.87	820683.70	835961.87	820661.84	27	0	1
R013	835962.88	820657.76	835783.32	820623.21	20	0	1
R014+R015	835377.20	820682.14	835488.95	820703.52	18	0	1
R016	835489.04	820703.14	835545.53	820714.40	18	0	1
R017	835545.53	820714.40	835607.39	820726.29	18	0	1
R018	835619.42	820660.04	835926.89	820716.86	13	0	1
R018	835926.89	820716.86	835898.31	820659.19	13	0	1
R019	835422.47	820440.71	835520.16	820540.46	11	0	1
R019	835520.16	820540.46	835514.53	820578.32	11	0	1
R020	835568.73	820565.58	835478.35	820478.77	11	0	1
R021	835667.70	820378.34	835442.22	820335.48	17	0	1
R022	835364.93	820677.70	835334.56	820831.18	16	0	1
R023	835346.26	820830.29	835376.00	820680.43	16	0	1
R024	835375.99	820680.46	835467.79	820201.74	16	0	1
R025	835407.27	820826.73	835432.34	820695.75	18	0	1
R026	835459.60	820559.44	835526.49	820211.42	16	0	1
R027	835512.27	820586.45	835466.19	820829.26	18	0	1
R028	835581.96	820221.86	835526.68	820516.62	18	0	1
R029	835524.13	820833.07	835569.38	820594.78	18	0	1
R030	835613.19	820367.70	835575.40	820566.18	18	0	1
R031	835627.58	820608.26	835585.00	820835.44	16	0	1
R032+R033	835631.90	820590.56	835672.12	820379.01	22	0	1
R034	835775.34	820688.71	835784.69	820637.47	18	0	1
R035	835959.87	820670.83	836042.82	820834.29	17	0	1
R036+R037	835405.93	820841.18	835324.17	821026.61	18	0	1
R038	835266.41	820906.57	835318.32	820867.68	18	0	1
R038	835318.32	820867.68	835342.60	820834.56	18	0	1
R039	835330.03	820826.61	835240.76	820893.84	13	0	1
R040	835085.07	820818.77	835326.93	820828.95	22	0	1
R041	835297.46	820696.17	835147.25	820821.39	18	0	1
R042	835317.58	820604.32	835080.01	820802.19	18	0	1
R043	835329.95	820537.58	835299.79	820697.63	18	0	1
R044	835300.41	820544.27	835181.94	820644.09	18	0	1
R045	835218.40	820528.99	835327.37	820549.87	13	0	1
R046+R047	835217.86	820528.50	835432.25	820357.34	26	0	1
R048	835347.98	820431.38	835410.33	820443.30	13	0	1
R049	835613.04	820367.64	835639.28	820232.25	18	0	1
R050+R051	835672.77	820379.38	835698.57	820245.09	22	0	1
R052+R053	835777.66	820921.15	835865.56	820924.78	16	0	1
R052+R053	835865.56	820924.78	835974.45	821047.40	16	0	1
R052+R053	835974.45	821047.40	836041.87	821149.61	16	0	1
R052+R053	836041.87	821149.61	836081.24	821262.75	16	0	1
R054	836043.62	820835.62	836097.69	820867.42	18	0	1
R054	836097.69	820867.42	836208.52	820871.64	18	0	1
R055	836015.56	820780.76	836206.72	820789.75	14	0	1
R056	835426.47	820416.94	835476.69	820469.61	11	0	1
R057	835305.88	820665.23	835365.16	820676.55	12	0	1
R058	835456.45	820199.52	835364.90	820677.66	16	0	1
R059	835395.59	820548.47	835232.17	820514.97	16	0	1
R060	835740.08	820393.81	835672.32	820389.93	13	0	1
R061+R062	835198.18	821137.62	835283.81	820948.88	22	0	1
R061+R062	835283.81	820948.88	835267.58	820892.36	22	0	1
R063+R064	835281.71	820953.29	835342.46	820989.26	18	0	1
R065	835276.00	820966.04	835153.25	821068.73	18	0	1
R066	835125.84	821009.37	835152.02	820987.68	14	0	1
R067	835152.02	820987.68	835260.71	820894.31	14	0	1
R068	835241.00	820894.04	835120.28	820994.00	13	0	1
R069	835102.33	820927.83	835142.10	820975.75	18	0	1
R070	835237.65	820896.62	835175.32	820822.66	18	0	1
R071	835200.61	820852.55	835105.37	820931.57	18	0	1
R072	835146.14	820821.33	835093.88	820865.98	18	0	1
R073	835175.32	820822.66	835062.15	820686.25	18	0	1
R074	835181.76	820644.19	835254.65	820731.86	18	0	1
R075	835090.02	820719.98	835181.89	820644.44	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
1.6965	1.5378	1.2346	1.3424	1.4354	1.3052	1.8709	2.1178	2.2498	2.2635	2.2358	2.2135	2.1799	2.1433	2.3350	2.3067	2.3183	2.1442	2.0292	2.1585	2.2908	2.2462	2.3070	1.7839
1.6965	1.5378	1.2346	1.3424	1.4354	1.3052	1.8709	2.1178	2.2498	2.2635	2.2358	2.2135	2.1799	2.1433	2.3350	2.3067	2.3183	2.1442	2.0292	2.1585	2.2908	2.2462	2.3070	1.7839
1.6965	1.5378	1.2346	1.3424	1.4354	1.3052	1.8709	2.1178	2.2498	2.2635	2.2358	2.2135	2.1799	2.1433	2.3350	2.3067	2.3183	2.1442	2.0292	2.1585	2.2908	2.2462	2.3070	1.7839
1.6965	1.5378	1.2346	1.3424	1.4354	1.3052	1.8709	2.1178	2.2498	2.2635	2.2358	2.2135	2.1799	2.1433	2.3350	2.3067	2.3183	2.1442	2.0292	2.1585	2.2908	2.2462	2.3070	1.7839
1.6965	1.5378	1.2346	1.3424	1.4354	1.3052	1.8709	2.1178	2.2498	2.2635	2.2358	2.2135	2.1799	2.1433	2.3350	2.3067	2.3183	2.1442	2.0292	2.1585	2.2908	2.2462	2.3070	1.7839
1.6965	1.5378	1.2346	1.3424	1.4354	1.3052	1.8709	2.1178	2.2498	2.2635	2.2358	2.2135	2.1799	2.1433	2.3350	2.3067	2.3183	2.1442	2.0292	2.1585	2.2908	2.2462	2.3070	1.7839
2.6556	2.8421	3.0936	3.4725	3.6460	3.6019	3.3424	4.2385	4.6026	4.2567	4.3247	4.2739	4.1443	4.0351	3.7256	3.6242	3.5565	3.4408	3.1447	3.7062	3.6971	3.7619	3.6689	3.3230
2.3129	2.2888	2.2163	2.2356	2.3335	2.3734	2.5847	3.1467	3.2172	3.1685	3.0950	2.8740	2.7615	2.7887	2.7237	2.5946	2.3801	2.2205	1.9894	2.0125	2.0352	2.0681	2.1326	2.0588
2.7636	2.9869	2.3473	2.5534	2.5738	2.5341	3.3130	4.0103	4.0950	4.0820	3.9884	3.8054	3.7781	3.7023	3.2478	3.1745	2.8701	2.6668	2.2627	2.6532	2.7323	2.7897	3.1698	2.6018
2.7636	2.9869	2.3473	2.5534	2.5738	2.5341	3.3130	4.0103	4.0950	4.0820	3.9884	3.8054	3.7781	3.7023	3.2478	3.1745	2.8701	2.6668	2.2627	2.6532	2.7323	2.7897	3.1698	2.6018
2.2843	2.1704	2.3769	2.0721	2.2251	2.3294	2.6477	3.8560	4.1004	3.8025	3.7236	3.5496	3.4149	3.3084	3.1780	2.9941	2.8020	2.6134	2.4076	2.7805	2.6694	2.7071	2.8132	2.6175
2.2843	2.1704	2.3769	2.0721	2.2251	2.3294	2.6477	3.8560	4.1004	3.8025	3.7236	3.5496	3.4149	3.3084	3.1780	2.9941	2.8020	2.6134	2.4076	2.7805	2.6694	2.7071	2.8132	2.6175
1.4945	1.6545	1.6064	1.6668	1.7664	1.8797	2.0020	2.7414	2.9599	2.8785	2.7961	2.7163	2.6252	2.5448	2.4342	2.2368	2.1636	1.8954	1.6619	2.1786	1.9898	2.0908	2.1557	2.1994
1.4945	1.6545	1.6064	1.6668	1.7664	1.8797	2.0020	2.7414	2.9599	2.8785	2.7961	2.7163	2.6252	2.5448	2.4342	2.2368	2.1636	1.8954	1.6619	2.1786	1.9898	2.0908	2.1557	2.1994
1.4945	1.6545	1.6064	1.6668	1.7664	1.8797	2.0020	2.7414	2.9599	2.8785	2.7961	2.7163	2.6252	2.5448	2.4342	2.2368	2.1636	1.8954	1.6619	2.1786	1.9898	2.0908	2.1557	2.1994
1.4945	1.6545	1.6064	1.6668	1.7664	1.8797	2.0020	2.7414	2.9599	2.8785	2.7961	2.7163	2.6252	2.5448	2.4342	2.2368	2.1636	1.8954	1.6619	2.1786	1.9898	2.0908	2.1557	2.1994
1.4945	1.6545	1.6064	1.6668	1.7664	1.8797	2.0020	2.7414	2.9599	2.8785	2.7961	2.7163	2.6252	2.5448	2.4342	2.2368	2.1636	1.8954	1.6619	2.1786	1.9898	2.0908	2.1557	2.1994
1.4945	1.6545	1.6064	1.6668	1.7664	1.8797	2.0020	2.7414	2.9599	2.8785	2.7961	2.7163	2.6252	2.5448	2.4342	2.2368	2.1636	1.8954	1.6619	2.1786	1.9898	2.0908	2.1557	2.1994
3.9071	3.9239	3.9987	4.5005	4.3625	4.4767	4.5395	5.2126	5.6890	5.6057	5.4831	5.2902	5.0805	4.9104	4.6263	4.4063	4.2874	3.7533	3.4436	3.6446	3.7510	3.6874	3.6490	3.4045
0.1609	0.1609	0.1609	0.1609	0.1609	0.1609	3.1302	4.9594	4.2625	4.9085	4.9353	4.9085	4.6928	4.7476	4.7315	1.6616	0.1609	0.1609	0.1609	0.1609	0.1770	0.1770	0.1609	0.1609
3.5327	3.5455	3.8196	3.7458	4.0274	3.7809	4.0410	4.7296	5.0927	5.1447	4.9098	4.8517	4.7210	4.5788	4.4159	4.0901	4.0023	3.5982	3.2074	3.5097	3.8646	3.9473	3.9314	3.8790
4.7347	1.6496	2.1404	2.1404	2.1243	2.1351	6.2281	5.3913	6.2804	5.6217	5.3631	5.2947	5.3117	4.7335	4.7194	4.7576	4.0543	2.4994	2.3140	3.1346	2.7372	2.9407	4.3787	3.1961
2.5780	2.8499	2.7240	2.8427	2.5341	2.9354	2.9672	3.5065	3.8429	3.8676	3.8009	3.6888	3.4859	3.4491	3.3072	3.2072	2.9872	2.7475	2.4940	2.8990	2.7293	2.7288	2.8162	2.6578
2.5780	2.8499	2.7240	2.8427	2.5341	2.9354	2.9672	3.5065	3.8429	3.8676	3.8009	3.6888	3.4859	3.4491	3.3072	3.2072	2.9872	2.7475	2.4940	2.8990	2.7293	2.7288	2.8162	2.6578
4.5807	5.7670	6.0094	6.0094	6.5082	6.3453	5.7697	5.5552	5.5375	6.7698	6.8236	6.5248	6.6807	5.6933	5.8095	5.3383	5.5283	3.5141	3.6923	6.5720	6.5274	7.0138	7.0574	7.2693
6.8663	7.4933	7.4792	7.4792	7.4490	7.4788	6.2100	6.2196	5.8046	6.8461	6.8859	6.8461	7.6510	5.8377	5.8448	6.9295	8.9973	1.1249	1.1169	1.1330	1.1491	12.2185	16.1867	12.1843
1.9455	1.5827	1.7793	1.7793	1.7664	5.7761	5.1349	4.8222	4.4659	5.3921	5.2947	5.0939	5.3191	3.8731	4.0459	4.1584	4.2699	1.6524	1.3778	1.3952	1.4150	1.3669	1.4443	1.4355
3.7922	4.5428	4.7826	4.7826	4.2454	6.3340	6.4364	6.5391	6.5375	8.5317	8.6195	8.1601	8.1682	6.1065	5.7623	5.2672	4.5564	2.1214	1.4175	1.4788	1.9865	2.5645	2.1513	3.2680
3.7922	4.5428	4.7826	4.7826	4.2454	6.3340	6.4364	6.5391	6.5375	8.5317	8.6195	8.1601	8.1682	6.1065	5.7623	5.2672	4.5564	2.1214	1.4175	1.4788	1.9865	2.5645	2.1513	3.2680
1.4243	1.7825	1.7793	1.7793	2.1292	7.8499	5.7819	5.7907	5.4492	8.6206	8.6548	7.6115	8.8597	5.3533	4.9729	4.6648	4.3785	1.3575	1.2755	1.3637	1.3089	1.3792	1.4071	1.3998
1.4243	1.7825	1.7793	1.7793	2.1292	7.8499	5.7819	5.7907	5.4492	8.6206	8.6548	7.6115	8.8597	5.3533	4.9729	4.6648	4.3785	1.3575	1.2755	1.3637	1.3089	1.3792	1.4071	1.3998
2.2920	1.2047	1.2024	1.3760	1.3653	2.4769	2.5811	2.4152	2.2088	2.5065	2.4033	2.4119	2.3991	2.4712	2.4694	1.7173	1.6576	1.5914	1.5784	1.6550	1.6808	1.7346	1.7381	1.7345
11.8268	15.4689	16.0721	16.1418	16.1204	14.2125	15.5091	15.0670	14.2512	17.3334	16.8105	16.2833	15.1636	15.2833	14.7420	12.3741	11.6961	8.6437	8.3037	8.7198	8.5284	9.6351	10.3836	10.5808
9.7604	9.7915	10.0856	9.9749	10.2450	10.2105	10.4241	10.9567	10.9413	10.6193	10.3758	10.2475	9.9747	9.8591	10.0365	9.9541	9.8088	9.4734	9.2547	9.8936	9.9041	9.9490	10.1475	10.2658
8.5361	8.7912	8.9385	8.9419	9.1764	9.2838	9.5306	9.9384	9.7915	9.4398	9.4075	9.1512	9.0614	8.7912	8.7981	8.3317	8.0931	7.5629	6.9621	7.5232	7.8297	7.7444	8.2243	8.4880
8.8717	9.1981	9.2883	9.6087	9.6139	10.0578	10.6524	11.9400	12.6211	12.8185	12.6095	12.7348	11.8287	11.2265	9.4301	10.1312	7.9872	7.4566	7.5239	7.9141	7.8645	7.7740	7.9980	7.9636
4.5376	1.6162	1.6142	1.6142	1.7778	7.7558	6.5826	6.5928	5.8707	7.0379	6.5985	6.3048	6.4701	5.7527	5.6617	4.5952	4.5273	3.2244	3.1444	3.3038	3.1318	4.7974	5.2184	5.3354
6.4798	6.6836	7.0543	7.6489	7.5526	6.6697	8.1992	8.5701	11.8092	12.9434	12.5873	11.7676	11.4445	10.1837	9.3502	9.1552	7.3215	6.0656	5.6218	5.7594	5.9292	4.4596	4.6796	4.1912
20.7926	18.3622	19.5522	19.5522	22.0747	23.1220	22.4156	21.3807	22.7497	26.3029	25.3217	26.5539	25.3529	21.5307	19.9803	20.4137	18.8450	17.0157	15.5646	16.9923	17.3057	18.6695	18.5120	18.8516
3.9809	1.0490	1.1287	1.0384	1.1348	4.2160	3.5333	3.3847	3.2390	3.8852	3.7928	3.5542	3.8009	4.0423	4.1617	2.9892	2.8695	2.8614	2.9310	2.9850	2.9751	2.9762	3.2667	3.4034
8.5943	10.1826	10.5485	10.7411	11.4074	12.0408	10.9674	11.2415	12.1189	17.9309	17.3041	16.4670	17.1945	12.2644	11.2487	10.4732	8.9188	3.7787	2.6249	3.2563	4.1051	7.5644	8.7806	8.9361
0.6115	0.1609	0.1609	0.1609	0.1609	1.9835	1.6222	1.6287	1.6190	1.2231	1.2352	1.2231	1.3863	1.4093	1.6201	1.6480	0.5190	0.6330	0.6276	0.6384	0.6545	0.6545	0.6384	0.6330
1.8745	2.0464	1.9702	2.0760	2.0532	2.0875	3.2046	3.3418	3.5046	3.4519	3.0762	2.7801	2.5794	2.3174	2.1616	2.0921	1.5162	1.0936	1.0424	0.9073	1.2764	1.4170	1.4208	1.7195
5.4552	5.8684	6.5763	6.2690	6.2663	5.8294	7.2585	7.0901	8.4839	8.5034	8.2640	7.9146	6.9020	6.8814	6.8487	6.3753	5.9468	5.0414	4.9967	5.6137	6.0569	5.6852	6.0500	5.1496
5.6982	5.6263	5.6053	5.6053	6.1656	8.5072	8.4571	8.0634	8.4517	9.7955	9.4088	9.3576	10.0125	7.6311	7.0167	7.3159	6.3257	3.1250	1.5847	2.7785	3.8153	4.8688	4.8731	6.6017
3.1997	3.3271	3.5300	3.6225	3.7590	3.5448	4.4325	4.7649	5.7329	5.6857	5.0132	4.9527	4.5958	4.4854	4.7528	4.1094	3.4038	2.6376	2.1598	2.6783	3.3136	3.6037	3.8646	4.4082
6.0817	6.7061	6.8478	6.8478	7.2067	8.3347	8.1295	7.8519	7.7631	10.2662	9.8881	9.7807	10.4022	7.1345	7.4949	7.5399	7.2282	2.3684	2.1818	2.2530	2.8752	2.9429	3.0337	3.8056
7.8291	7.7842	8.3514	8.4189	8.5261	8.6824	8.9878	9.4953	9.7811	9.8264	9.5108	9.1673	8.9536	8.8242	8.3754	7.9714	7.6834	6.9959	6.2445	7.2918	7.5913	7.6699	7.8263	8.0688
7.8291	7.7842	8.3514	8.4189	8.5261	8.6824	8.9878	9.4953	9.7811	9.8264	9.5108	9.1673	8.9536	8.8242	8.3754	7.9714	7.6834	6.9959	6.2445	7.2918	7.5913	7.6699	7.8263	8.0688
14.3528	14.4495	14.7883	15.0996	16.5762	16.0162	15.8626	16.1601	15.7662	15.3400	15.0458	14.6168	14.5991	14.2600	13.9288	13.6633	13.6767	13.2617	13.2015	14.7683	14.6214	14.7258	14.8273	14.8492
2.7964	3.0375	3.5126	2.7001	2.8859	2.9698	3.5160	3.7460	3.8760	3.7335	3.5540	3.5646	3.3556	3.4757	3.3246	3.3256	2.9675	2.8513	2.5692	3.1226	2.9532	3.0370	3.1203	2.8659
6.2063	6.2158	6.3223	5.5668	5.8922	6.8092	6.7418	6.5692	6.4498	7.8422	8.1288	7.9237	7.7584	6.1324	6.5114	6.5806	6.0133	4.9042	4.8031	4.5798	5.3511	6.2415	6.0704	6.2667
1.7939	2.1493	2.1453	2.1453	2.1292	9.1056	6.9967	7.0074	5.9159	7.4211	7.1212	6.7135	7.1127	4.8384	4.8450	5.0821	4.8772	1.5777	1.5670	1.5857	1.6059	1.6916	1.6779	1.8178
5.9933	6.0032	6.2366	6.2366	6.6457	7.4448	6.5404	6.6690	6.7109	9.6217	10.1028	10.3819	9.6379	7.8580	8.3803	6.7036	5.9418	3.9646	3.0971	4.8503	4.9947	6.2439	6.8382	6.9400
21.4585	18.3749	19.8485	19.8485	21.5790	21.5463	19.1427	18.0840	17.7564	20.6297	19.9229	20.3081	20.6659	20.9041	18.5578	22.0202	20.1360	20.4570	22.2981	23.9568	23.2292	22.2841	25.5657	22.0484
2.9954	3.3901	3.3850	3.8129	1.5274	2.4140	2.9296	3.7057	3.5144	3.7512	3.8863	4.1852	3.9851	4.4402	4.2936	3.2124	3.2573	2.8089	3.0754	2.9290	2.4924	3.1995	3.2026	4.2057
6.3288	6.2696	6.0364	6.8235	7.1170	6.7046	7.4348	7.4711	7.5025	7.1405	7.3355	7.2749	7.1903	7.1689	6.8846	6.4765	6.1241	5.8212	5.4935	6.3973	6.5326	6.7314	6.9080	6.8699
15.0142	16.5747	12.6752	12.6752	11.2707	8.6765	7.4110	6.7729	7.0896	11.4987	15.6297	17.2205	16.5166	20.1995	19.1268	18.7209	19.6558	20.2239	20.7374	31.3042	31.5123	29.4757	28.3416	27.4469
1.9875	0.8369	0.8369	0.8369	0.1609	1.9835	1.9875	1.9956	1.9835	1.9594	1.9223	1.9044	1.9187	1.9491	1.9509	1.4484	1.4504	1.2982	1.2875	1.3054	1.3268	1.4415	1.4300	1.6308
6.9784	7.4979	7.0823	7.5235	7.8958	7.8626	8.6755	9.1889	10.0753	9.9998	9.6324	9.5233	8.8004	8.7713	7.7256	7.1615	6.4306	5.7795	5.6119	5.8823	6.4444	6.2602	6.6577	6.3760
3.2151	3.5954	3.6532	3.7802	3.9361	4.0447	4.4968	4.4679	4.7342	6.1215	6.0051	6.0499	5.7324	6.0641	5.5839	4.9452	4.5478	3.3993	2.9399	3.1938	3.5721	4.0652	4.3232	4.6684
3.2151	3.5954	3.6532	3.7802	3.9361	4.0447	4.4968	4.4679	4.7342	6.1215	6.0051	6.0499	5.7324	6.0641	5.5839	4.9452	4.5478	3.3993	2.9399	3.1938	3.5721	4.0652	4.3232	4.6684
3.2151	3.5954	3.6532	3.7802	3.9361	4.0447	4.4968	4.4679	4.7342	6.1215	6.0051	6.0499	5.7324	6.0641	5.5839	4.9452	4.5478	3.3993	2.9399	3.1938	3.5721	4.0652	4.3232	4.6684
3.2151	3.5954	3.6532	3.7802	3.9361	4.0447	4.4968	4.4679	4.7342	6.1215	6.0051	6.0499	5.7324	6.0641	5.5839	4.9452	4.5478	3.3993	2.9399	3.1938	3.5721	4.0652	4.3232	4.6684
2.6156	2.4008	2.5247	2.5553	2.7621	2.6073	3.2634	4.3763	4.3362	3.8646	3.8195	3.5464	3.4524	3.3331	3.0087	2.7282	2.5637	2.4070	2.2247	1.8956	1.9460	2.1636	2.1882	2.1431
2.6156	2.4008	2.5247	2.5553	2.7621	2.6073	3.2634	4.3763	4.3362	3.8646	3.8195	3.5464	3.4524	3.3331	3.0087	2.7282	2.5637	2.4070	2.2247	1.8956	1.9460	2.1636	2.1882	2.1431
32.9758	35.1464	39.4158	44.4059	44.0281	35.8337	34.2857	35.0091	34.9637	32.8807	31.0528	30.9647	30.0861	18.4354	18.4117	17.0857	13.5680	11.1688	4.9231	11.1792	12.7597	26.7822	29.2357	31.5638
3.6471	3.8514	4.0412	4.2695	4.4941	5.5245	5.1906	5.2341	5.3274	5.0221	4.8450	5.3420	5.1076	2.9243	2.4242	2.7098	2.4850	2.2386	2.0445	2.1202	2.1260	2.1808	1.9113	1.9451
4.2271	5.2166	5.3764	5.3343	4.9051	5.8170	5.8121	5.5706	5.5964	7.8616	7.3845	7.7554	7.6202	5.4614	5.5709	5.3151	5.1927	2.9967	2.9388	4.4277	4.5280	5.0283	5.0341	5.2068
17.0166	16.7625	16.9158	16.6681	16.6858	16.3320	17.0883	17.1136	16.8275	16.8695	16.7878	16.7935	16.6633	16.5253	16.4202	16.5011	17.3740	17.3677	17.8032	17.4332	18.4502	17.6960	17.9467	17.2255
3.0612	3.1915	3.3197	3.3476	3.4951	3.3084	3.5004	3.5824	3.4552	3.4413	3.3446	3.0684	3.0368	2.7136	2.6199	2.5791	2.4970	2.3085	1.9987	2.8408	3.0506	3.1450	3.3448	3.3491
43.2811	38.3244	43.0048	45.5159	45.4317	46.4434	43.7930	47.1063	44.8920	42.4764	44.8204	41.3051	39.3472	39.5719	33.8819	34.6139	31.1308	29.7555	27.1181	29.0247	28.5458	30.1960	30.3285	30.9398
5.0801	5.2007	5.2730	5.4024	5.2859	4.8334	5.2141	5.2668	5.1884	4.6309	4.8994	4.6401	4.7195	4.3394	4.1179	4.1803	4.1443	3.7989	3.4212	5.7855	6.1667	6.3648	6.4903	6.4846
5.0801	5.2007	5.2730	5.4024	5.2859	4.8334	5.2141	5.2668	5.1884	4.6309	4.8994	4.6401	4.7195	4.3394	4.1179	4.1803	4.1443	3.7989	3.4212	5.7855	6.1667	6.3648	6.4903	6.4846
6.4324	6.9737	7.2962	7.1616	7.3579	9.0695	8.9803	8.9600	8.8021	9.6223	9.4578	9.6896	9.9881	7.6446	7.9153	6.7266	6.0151	3.4078	1.6312	4.5197	7.5511	9.7573	11.7988	13.5111
5.2758	1.5827	1.5804	1.5804	1.5689	8.1760	6.8443	6.5099	8.1769	7.6082	6.8695	6.8369	6.4747	6.9108	7.3241	4.7647	5.0026	5.2440	3.8540	4.0892	3.9068	6.3532	6.7009	7.4197
5.3947	5.4320	5.4723	5.5007	5.5014	5.2855	5.6137	5.7039	5.6667	5.4520	5.2978	5.2926	5.0713	4.9373	5.0119	4.9392	5.1478	4.8935	4.6311	6.1301	6.4964	6.3553	6.4604	6.4812
9.4610	9.6254	9.3932	9.5239	9.2537	9.1197	9.3127	9.5010	9.2958	9.5018	9.2146	9.1585	8.8904	9.2753	9.3828	9.3151	9.7435	9.7569	9.7709	10.6988	10.9491	10.8733	10.8067	10.8248
10.1460	10.0611	10.4800	10.0794	9.7327	9.8620	9.7691	9.6141	9.6818	9.5748	9.8916	9.9212	9.9261	9.8017	10.2363	10.3237	10.5408	10.7508	11.0432	11.6297	11.8490	11.6935	11.7479	11.5881
11.6923	15.4383	16.9151	15.4061	18.0543	17.4200	16.1255	15.5347	16.1152	17.0965	17.9158	18.6953	18.2850	5.2921	5.2962	5.7402	5.3284	5.0717	4.5572	4.5884	4.3677	12.5926	13.6655	13.6223
21.0317	2.3358	2.3294	2.1453	2.1292	22.4748	17.9419	17.9605	17.9305	17.8520	17.9095	17.8520	20.9469	22.5584	22.5386	22.6191	18.0626	22.7639	17.5976	28.6817	28.5684	29.6987	30.0956	31.4116
2.7606	1.0831	1.0831	0.3154	0.3154	2.7573	2.1509	2.1589	2.1453	2.7187	2.7445	2.5869	3.2238	2.5564	2.5653	2.5935	2.5975	2.5814	2.1134	2.1391	2.1649	2.1552	2.1919	2.1799
5.2198	5.0439	5.1982	5.1982	5.0385	6.9866	6.2115	5.8888	6.1097	5.8389	6.1603	6.2314	6.6308	4.0902	4.0289	4.0649	3.7954	3.3940	2.5001	2.9966	2.8981	5.0830	5.1653	5.8269
1.6222	0.6115	0.6115	0.6115	0.6062	1.6190	1.4001	1.4070	1.3955	1.3748	1.5932	1.5772	1.6093	1.6319	1.6319	1.6480	1.6415	1.4208	1.4093	1.4277	1.4507	1.4415	1.6415	1.6308
19.4364	15.9420	17.4053	18.1600	19.1067	13.8786	18.9017	18.1835	18.5945	18.8317	17.8572	17.9242	18.4612	20.0029	18.0458	17.1336	15.2806	15.9463	17.4076	18.7312	18.5726	16.0032	18.2662	19.6319
5.2758	1.5827	1.5804	1.5804	1.7664	8.6608	7.5630	7.1461	7.1298	7.5109	7.6421	7.6082	8.1551	5.2921	5.2962	4.9662	4.4911	3.8074	3.4065	3.6498	3.4576	5.5985	6.3465	6.3260

Caline 4 input for 2050 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
R076	835061.55	820671.39	835223.54	820534.84	13	0	1	5.0813	5.7801	5.7521	5.7521	6.1221	5.2837	5.5032	5.5637	5.4322	5.5821	5.0454	5.1762	5.2636	4.7212	4.5781	4.6520	4.2421	3.3702	2.7836	2.8626	3.2179	3.6725	4.0043	4.4404
R077	835181.76	820644.19	835145.98	820601.33	18	0	1	1.5827	1.7825	2.1453	2.1453	2.1292	11.4235	9.9384	9.9501	9.9314	9.8834	9.9182	9.8834	11.3988	1.5960	1.6038	1.6199	1.5135	1.4811	1.4239	1.5211	1.4604	1.5046	1.5871	1.5458
R078	835090.16	820632.06	835061.93	820655.38	22	0	1	4.8330	4.9616	5.2042	5.3158	5.3508	5.0470	5.0803	5.2331	5.1179	5.0625	5.1226	4.9613	4.8703	4.8439	4.6542	4.5463	4.5280	4.5457	4.2888	4.8726	5.0305	5.1041	5.2568	5.2717
R079	835211.26	820522.60	835086.95	820628.61	13	0	1	41.0648	45.9215	40.3586	40.3586	47.3903	42.2269	43.2312	41.3112	42.2016	40.0827	41.1777	42.1952	43.3546	39.3743	37.0005	42.1524	42.2168	43.0475	40.6347	39.7820	40.8229	39.8288	42.1980	39.1382
R080+R081	835085.46	820497.33	835225.19	820522.52	29	0	1	4.2648	4.6028	4.7175	4.8163	4.6172	4.4765	4.3744	4.4158	4.4185	4.3336	4.2910	4.3161	4.2032	3.8946	3.7242	3.6362	3.4788	3.0814	2.8688	3.3509	3.4220	3.6762	3.8760	3.9290
R082	835170.87	820506.04	835220.38	820248.55	18	0	1	12.9066	14.1516	14.9892	14.9892	14.9399	12.1056	11.2525	10.5687	10.9677	11.5286	10.9371	10.8939	12.0798	6.4886	4.4189	4.3488	4.0312	3.7553	3.6245	3.6498	3.6431	5.6230	6.0438	6.0231
R083	835216.81	820521.01	835259.16	820300.13	15	0	1	9.3767	12.9904	12.9663	12.9663	12.9240	9.3563	8.0462	7.5731	7.5558	7.9910	8.1654	8.6168	9.3351	2.0717	1.6322	1.6465	1.6483	1.5458	1.4345	1.4506	1.4707	4.9094	5.2829	6.0920
R084	835334.32	820425.38	835123.33	820384.30	18	0	1	15.7606	11.0368	11.6877	12.2625	12.6660	15.6543	14.2693	13.6225	13.9055	14.1975	13.9097	13.8620	15.0807	12.1545	12.1459	11.7388	10.8396	9.4050	8.8551	11.3884	10.8159	11.5578	12.7555	12.7188
R085	835276.42	820481.74	835337.27	820161.28	19	0	1	5.8165	6.0373	6.1199	6.1199	6.2558	6.1042	5.7860	6.0175	6.2513	5.8679	6.1451	6.2835	6.1671	4.8138	4.6694	4.7888	4.6255	4.2702	4.1575	4.2792	4.6697	4.4257	4.7851	4.7563
R086	835186.25	820286.54	835430.66	820333.73	18	0	1	14.4267	14.9890	15.3459	15.3459	14.1334	15.7169	13.4247	12.2238	12.7328	20.1846	19.6550	19.1573	18.3968	16.0495	16.1731	14.6124	11.4225	7.0140	5.9240	7.6541	7.4715	8.9827	9.6936	9.7660
R087	835370.09	820321.95	835394.81	820191.16	15	0	1	2.6948	3.2106	3.3117	3.3117	2.9256	4.1098	4.2258	4.0324	4.0140	3.7645	3.6062	3.6195	3.6870	2.6460	2.6812	2.8476	2.6548	1.9034	1.7950	1.8917	2.2157	2.2920	2.3231	2.6708
R088	835461.22	820202.28	835311.87	820175.97	21	0	1	12.1278	12.0410	12.3379	12.0089	11.7292	12.5825	12.9044	12.9992	12.8488	12.3294	12.5876	12.4833	12.0045	11.9988	11.7123	11.8480	12.0586	11.5696	11.1233	11.3503	11.8226	11.6925	11.4392	11.5259
R089	835406.99	820130.26	835395.23	820191.29	15	0	1	1.3820	1.6222	1.6190	1.6190	1.9674	3.3112	2.8754	2.8834	2.8700	3.0841	3.1075	3.0841	2.8019	1.3941	1.3961	1.4122	1.2026	1.1938	1.1340	1.1513	1.1711	1.2143	1.2026	1.2971
R090+R091	835479.99	820110.19	835462.39	820200.60	28	0	1	8.9132	9.1112	9.1932	9.2118	9.2123	9.3452	9.5332	9.5903	9.4353	9.1700	9.1601	9.0419	8.9502	8.9003	8.7796	8.6582	8.3781	8.1379	7.7738	8.0504	8.2929	8.1756	8.2361	8.3164
R092	835479.87	820139.09	835705.63	820183.64	13	0	1	7.1072	6.4904	6.4587	6.6495	6.6305	7.0981	8.0767	7.7203	7.6290	7.0277	7.1277	6.9053	7.0601	6.7416	6.5507	6.1799	5.8544	4.1935	4.0867	5.1696	4.9976	5.1481	5.4023	5.4628
R093	835461.18	820203.04	835525.57	820215.84	16	0	1	13.5148	12.6417	12.7613	12.9078	13.1051	14.2337	15.6268	16.4465	15.1098	14.2976	14.3044	13.5828	13.9210	14.1687	14.1239	13.2970	13.2028	12.9594	11.8854	11.9042	12.8003	12.5598	12.5184	12.5902
R093	835524.72	820220.82	835697.55	820250.15	16	0	1	13.5148	12.6417	12.7613	12.9078	13.1051	14.2337	15.6268	16.4465	15.1098	14.2976	14.3044	13.5828	13.9210	14.1687	14.1239	13.2970	13.2028	12.9594	11.8854	11.9042	12.8003	12.5598	12.5184	12.5902
R094	835699.92	820237.76	835528.90	820205.04	10	0	1	4.6526	4.7932	4.8853	4.9749	5.1595	4.7873	5.4250	5.3202	5.2659	4.8808	4.5854	4.6549	4.3998	4.6697	4.6090	3.8907	3.7485	3.2279	2.7831	3.8176	4.0367	4.1528	4.3985	4.7393
R095	835529.05	820205.05	835547.39	820102.02	13	0	1	12.6825	11.8229	12.5196	12.5196	12.5576	13.1727	13.8904	14.0170	13.9563	13.3275	13.1912	12.6478	13.0539	12.5984	12.7029	12.2522	11.8907	11.6715	10.7933	10.9959	11.2734	11.5424	11.6109	11.4347
R096	835581.96	820222.00	835605.44	820102.25	18	0	1	4.6302	4.1328	4.5544	4.5544	4.5240	5.7709	5.5405	5.3199	5.7231	5.4455	5.4476	5.9867	5.2030	5.3409	5.1137	4.5055	4.7926	4.4817	4.2918	4.4942	4.3872	5.0574	5.1687	5.1358
R097	835639.63	820232.41	835663.35	820109.11	18	0	1	16.3327	18.0409	18.5753	18.5753	20.2065	15.7147	16.7007	16.0436	17.2003	16.5956	15.3798	16.2578	14.5303	13.9750	13.8559	10.2227	9.5560	8.8729	8.4769	8.8591	9.4540	11.2531	12.2244	12.9963
R098+R099	835722.39	820119.98	835698.57	820245.09	22	0	1	11.1072	11.6264	11.4786	11.5942	11.7230	11.7030	12.8187	13.4208	12.8750	11.7835	11.6174	11.1999	11.1509	11.8418	11.4321	10.7592	10.5090	9.8658	9.0900	9.2190	9.0620	9.2518	9.0273	9.2752
R100	835820.57	820152.36	835812.79	820200.16	13	0	1	12.7444	13.4800	12.7408	12.7408	13.3932	14.6307	14.7281	15.3349	14.5342	14.5614	14.3806	13.7189	14.3625	13.5726	13.1578	11.7429	11.4223	10.9979	9.8189	10.1060	10.6724	11.9422	11.8613	12.1243
R100	835812.79	820200.16	835743.10	820393.40	13	0	1	12.7444	13.4800	12.7408	12.7408	13.3932	14.6307	14.7281	15.3349	14.5342	14.5614	14.3806	13.7189	14.3625	13.5726	13.1578	11.7429	11.4223	10.9979	9.8189	10.1060	10.6724	11.9422	11.8613	12.1243
R101+R102	835753.73	820348.35	835782.70	820198.69	14	0	1	13.5056	0.8369	0.8369	0.8369	0.8288	14.6160	10.7021	10.7297	9.5434	11.8474	11.9198	11.8474	11.8944	13.6074	13.5706	9.1183	8.9439	9.9526	9.2247	14.1489	14.2938	14.0299	14.8836	14.7965
R101+R102	835782.70	820198.69	835817.08	820173.71	14	0	1	13.5056	0.8369	0.8369	0.8369	0.8288	14.6160	10.7021	10.7297	9.5434	11.8474	11.9198	11.8474	11.8944	13.6074	13.5706	9.1183	8.9439	9.9526	9.2247	14.1489	14.2938	14.0299	14.8836	14.7965
R103+R104	835988.71	820192.14	836029.57	820254.82	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R103+R104	836029.57	820256.82	836068.35	820219.28	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R103+R104	836068.35	820219.28	836139.25	820230.91	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R103+R104	836139.25	820230.91	836282.58	820301.75	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R103+R104	836282.58	820301.75	836304.40	820357.77	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R103+R104	836304.40	820357.77	836126.14	820588.43	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R103+R104	836126.14	820588.43	836092.30	820605.75	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R103+R104	836092.30	820605.75	836079.73	820672.60	14	0	1	2.4430	3.0531	3.1160	3.1981	2.7144	3.3766	3.5434	3.3678	3.2222	3.4175	3.2551	3.0529	3.2745	3.2189	3.1096	2.1457	2.1270	2.1008	1.7582	1.8441	1.7673	2.5529	2.4046	2.6820
R105	836397.65	820745.03	836078.85	820683.53	28	0	1	3.1290	3.2586	3.1598	3.4040	3.3868	3.4688	3.5460	4.2737	4.2894	4.3300	4.1005	3.9845	3.8581	3.7050	3.5390	3.4798	3.3118	3.1489	3.0245	3.3690	3.1844	3.0995	3.1636	3.0154
R106+R107	836206.79	820799.16	836346.83	820804.49	14	0	1	1.6711	0.6396	0.6396	0.6396	0.6350	2.7694	2.3740	2.2651	2.4886	2.8876	2.9824	3.1603	2.9760	2.6170	2.6155	1.4791	1.3873	1.4642	1.4535	1.4696	1.4937	2.9207	2.9151	2.8978
R108	836203.37	820871.38	836210.57	820716.44	18	0	1	11.3311	7.7866	8.1018	8.9261	8.3691	13.1185	11.6817	11.3815	11.5492	12.0009	12.7945	13.1941	11.6634	10.9749	11.0535	7.8072	7.2287	6.7368	5.9415	12.0347	12.0526	15.8039	17.1725	17.4339
R109	836208.65	820872.04	836366.51	820879.54	18	0	1	2.0399	1.9663	2.2345	1.9424	2.3948	3.2131	3.2263	3.7100	3.6541	3.1849	3.0713	2.8210	2.9301	2.9496	2.5589	2.4913	2.3230	2.2071	2.0816	2.2647	2.2473	2.2869	2.1355	2.0585
R110	836245.24	820955.74	836203.01	820871.17	13	0	1	2.8846	2.3749	3.0046	1.2412	1.3840	1.2432	2.9169	3.3124	3.5316	4.7539	5.0911	4.9721	4.0911	3.7176	3.0432	2.7963	2.1086	1.9711	1.9145	1.9570	2.0316	2.0152	2.0895	2.3416
R111+R112	836281.89	821028.66	836245.24	820955.74	13	0	1	2.6204	2.0637	2.1756	2.3853	2.6232	2.7227	3.0819	2.9949	2.9809	2.3111	2.4116	2.3534	2.3266	2.2128	2.1289	2.2696	2.0852	1.5194	1.5043	1.5635	2.1059	2.1551	2.3186	2.9567
R113+R114	836244.40	820954.05	836329.58	820957.79	14	0	1	5.2152	3.8829	4.1143	4.1143	4.5621	5.2072	5.7966	5.6349	5.7886	4.3922	4.6738	4.6434	4.4116	4.1718	4.0516	4.1137	3.9327	2.5863	2.5657	2.6651	3.9493	4.0461	4.4380	5.8624
R115+R116	836050.56	821174.58	836136.49	821144.24	14	0	1	3.0143	4.1360	4.1199	4.1199	4.0909	4.1762	4.7014	4.7111	4.6961	4.1414	4.1682	4.5032	4.1588	3.9008	3.6256	3.5929	2.4923	1.2185	1.2093	1.2231	2.5224	3.6029	4.0923	5.1359
R117	836014.74	821108.14	835837.56	821171.01	14	0	1	5.0380	3.9984	4.3548	4.4407	4.7147	4.9496	5.5113	5.2762	5.3999	4.6619	4.8511	5.0372	4.6839	4.3443	4.1058	3.8930	3.8073	2.5827	2.5675	2.6560	3.7514	3.9150	4.2592	5.5286
R118	835970.40	821123.86	835855.29	820994.26	14	0	1	1.7825	0.8272	0.8272	0.8272	0.8218	7.8867	6.3844	6.3934	6.3776	7.0924	7.8789	9.1056	7.1153	7.1672	6.4055	6.4341	1.4597	1.4516	1.4416	1.4577	1.4798	6.4467	7.2062	7.1821
R118	835855.29	820996.26	835831.79	821005.04	14	0	1	1.7825	0.8272	0.8272	0.8272	0.8218	7.8867	6.3844	6.3934	6.3776	7.0924	7.8789	9.1056	7.1153	7.1672	6.4055	6.4341	1.4597	1.4516	1.4416	1.4577	1.4798	6.4467	7.2062	7.1821
R118	835831.79	821005.04	835835.81	821250.00	14	0	1	1.7825	0.8272	0.8272	0.8272	0.8218	7.8867	6.3844	6.3934	6.3776	7.0924	7.8789	9.1056	7.1153	7.1672	6.4055	6.4341	1.4597	1.4516	1.4416	1.4577	1.4798	6.4467	7.2062	7.1821
R119	835839.57	821170.41	835864.89	821239.68	14	0	1	6.1999	4.9981	5.4150	5.4150	5.7489	6.1894	6.8159	6.5858	6.8070	5.7548	5.8864	6.1498	5.5309	5.3413	5.1367	4.7557	4.5425	2.9699	2.9472	3.0779	4.5603	4.6976	5.1750	7.0865
R119	835864.89	821239.68	835883.88	821331.74	14	0	1	6.1999	4.9981	5.4150	5.4150	5.7489	6.1894	6.8159	6.5858	6.8070	5.7548	5.8864	6.1498	5.5309	5.3413	5.1367	4.7557	4.5425	2.9699	2.9472	3.0779	4.5603	4.6976	5.1750	7.0865
R120	835817.16	821257.79	836050.56	821174.58	14	0	1	1.3011	1.5380	1.5353	1.5353	1.5246	9.4038	7.4761	7.0376	7.0224	8.4104	8.6373	9.3614	8.6279	7.5975	7.1107	6.4855	1.2259	1.2195	1.2119	1.2893	1.2441	4.2998	4.5742	4.7604
R121	836075.15	821245.26	835820.45	821335.01	14	0	1	1.3734	1.4243	1.5804	1.5804	1.5689	7.7640	6.5229	6.2047	6.5152	7.1520	7.7535	7.7194	7.2490	7.2975	6.8626	6.2464	1.2708	1.2195	1.2755	1.2893	1.3089	4.2998	4.5742	4.5581
R122+R123	835772.69	821151.01	835770.00	821245.96	18	0	1	3.4196	3.8065	2.3000	2.4937	2.5692	3.5560	3.9504	3.8573	4.0390	3.7419	3.3567	3.1641	3.2398	2.9802	2.9183	3.2111	3.1539	2.8836	2.6614	3.7947	3.7552	3.6603	3.6650	4.1804
R122+R123	835770.00	821245.96	835716.97	821335.52	18	0	1	3.4196	3.8065	2.3000	2.4937	2.5692	3.5560	3.9504	3.8573	4.0390	3.7419	3.3567	3.1641	3.2398	2.9802	2.9183	3.2111	3.1539	2.8836	2.6614	3.7947	3.7552	3.6603	3.6650	4.1804
R124	835772.56	821151.58	835650.16	821145.75	13	0	1	11.1479	8.0135	8.3371	8.3371	9.3073	12.7062	13.3881	12.5366	13.6868	12.9680	11.9851	12.6403	12.6945	11.7299	10.8920	9.8397	9.0610	8.5258	7.5888	8.9294	8.5899	8.9171	9.8890	9.1660
R124	835650.16	821145.75	835650.03	821217.65	13	0	1	11.1479	8.0135	8.3371	8.3371	9.3073	12.7062	13.3881	12.5366	13.6868	12.9680	11.9851	12.6403	12.6945	11.7299	10.8920	9.8397	9.0610	8.5258	7.5888	8.9294	8.5899	8.9171	9.8890	9.1660
R124	835650.03	821217.65	835602.48	821285.86	13	0	1	11.1479	8.0135	8.3371	8.3371	9.3073	12.7062	13.3881	12.5366	13.6868	12.9680	11.9851	12.6403	12.6945	11.7299	10.8920	9.8397	9.0610	8.5258	7.5888	8.9294	8.5899	8.9171	9.8890	9.1660
R124	835602.48	821285.86	835602.34	821331.44	13	0	1	11.1479	8.0135	8.3371	8.3371	9.3073	12.7062	13.3881	12.5366	13.6868	12.9680	11.9851	12.6403	12.6945	11.7299	10.8920	9.8397	9.0610	8.5258	7.5888	8.9294	8.5899	8.9171	9.8890	9.1660
R125+R126	836144.36	820331.80	836123.95	820458.70	12	0	1	3.1382	0.1609	0.1609	0.1609	0.1609	3.1221	2.1404	2.1458	2.1404	2.7788	3.1221	2.7788	2.7859	1.8668	1.8622	2.1619	2.1672	2.1565	2.1404	2.1619	2.1941	2.1726	2.1672	2.1565
R125+R126	836123.95	820458.70	836188.26	820507.79	12	0	1	3.1382	0.1609	0.1609	0.1609	0.1609	3.1221	2.1404	2.1458	2.1404	2.7788	3.1221	2.7788	2.7859	1.8668	1.8622	2.1619	2.1672	2.1565	2.1404	2.1619	2.1941	2.1726	2.1672	2.1565
R127+R128	836225.20	820460.09	836297.06	820514.76	14	0	1	3.1382	0.1609	0.1609	0.1609	0.1609	3.1221	2.1404	2.1458	2.1404	2.7788	3.1221	2.7788	2.7859	1.8668	1.8622	2.1619	2.1672	2.1565	2.1404	2.1619	2.1941	2.1726	2.1672	2.1565
R127+R128	836297.06	820514.76	836298.10	820608.44	14	0	1	3.1382	0.1609	0.1609	0.1609	0.1609	3.1221	2.1404	2.1458	2.1404	2.7788	3.1221	2.7788	2.7859	1.8668	1.8622	2.1619	2.1672	2.1565	2.1404	2.1619	2.1941	2.1726	2.1672	2.1565
R127+R128	836298.10	820608.44	836227.30	820594.78	14	0	1	3.1382	0.1609	0.1609	0.1609	0.1609	3.1221	2.1404	2.1458	2.1404	2.7788	3.1221	2.7788	2.7859	1.8668	1.8622	2.1619	2.1672	2.1565	2.1404	2.1619	2.1941	2.1726	2.1672	2.1565
R127+R128	836227.30	820594.78	836241.90	820558.00	14	0	1	3.1382	0.1609	0.1609	0.1609	0.1609	3.1221	2.1404	2.1458	2.1404	2.7788	3.1221	2.7788	2.7859	1.8668	1.8622	2.1619	2.1672	2.1565	2.1404	2.1619	2.1941	2.1726	2.1672	2.1565
R129	835627.77	820607.32	835569.14	820594.35	13	0	1	8.2458	5.7811	5.7714	5.7714	6.3526	13.1222	12.0359	11.6323	11.1022	13.7700	13.5573	13.2422	13.6209	12.2445	12.8326	11.4067	12.1324	6.9349	7.7192	13.0307	13.9372	18.7410	19.5350	20.0464
R130	835569.14	820596.35	835512.46	820585.70	13	0	1	1.7825	2.1493	2.7552	1.0831	0.3154	2.1469	2.1509	2.1589	2.1453	2.1163	1.9248	1.9035	1.9216	10.7084	9.9587	10.0024	10.0127	9.3452	8.7451	15.1751	15.2548	16.8253	15.8307	13.2746
R131	835512.46	820585.70	835432.93	820578.07	13	0	1	1.3787	1.6222	1.6190	1.9835	1.6061	1.3760	5.6883	4.4287	5.2681	5.2211	5.6810	5.2211	3.9938	3.9566	5.5027	3.9831	3.9912	4.0987	4.0657	4.6884	5.2528	3.9291	4.1928	4.7411
R132	835329.95	820537.58	835351.40	820426.62	18	0	1	6.4616	7.5566	8.7243	9.1826	8.6932	8.7172	11.6173	11.2268	15.8623	14.6394	13.7722	13.7178	11.4936	16.2208	17.6729	16.2834	16.3002	15.1047	14.5042	27.0923	23.7325	23.2941	25.3590	28.0794
R133	835274.13	820826.69	835299.79	820697.63	18	0	1	10.3323	1.5380	1.5353	1.5353	1.7664	10.9144	8.7316	8.2469	7.4774	9.6362	9.3630	9.3253	10.1380	10.4507	11.3323	7.9413	8.8014	8.1787	9.4261	15.1290	14.1427	9.4802	9.4802	9.4524
R134	835333.92	820831.55	835260.16	820897.87	12	0	1	2.4024	2.0020	0.7135	0.8336	0.8272	3.1890	1.7576	3.2116	3.6512	3.7838	3.8071	3.7685	3.7439	3.9614	3.8239	3.7781	3.7119	3.5486	3.1643	5.2150	5.6184	4.4473	4.4066	4.8306
R135	835225.72	821076.55	835192.38	821035.93	18	0	1	3.2155	0.3154	0.3154	0.3154	0.3154	3.1994	2.2434	2.2488	2.2434	2.6058	2.6226	2.2230	2.6161	1.7695	1.7703	2.2692	2.2745	2.2638	2.2477	2.2692	2.3014	2.2799	2.2745	2.2638
R136+R137	835192.38	821035.93	835152.11	820987.52	18	0	1	9.8355	1.5380	1.5353	1.5353	1.5246	10.5428	8.5767	8.1285	7.7818	9.2637	8.7560	8.6500	9.0092	10.0530	10.0462	6.8215	7.1386	7.3807	7.7192	11.4275	11.4911	8.1833	8.6472	8.6188
R138	835347.39	820824.94	835407.56	820827.01	13	0	1	2.4221	2.6886	3.1902	2.1994	0.7081	2.5238	2.6719	4.1876	4.4407	4.3478	4.4467	4.3478	4.3880	4.4558	4.4275	4.5345	4.5329	4.4626	4.3364	5.3042	5.6197	5.2429	4.7056	4.7410
R138	835407.54	820828.24	835621.22	820838.53	12	0	1	2.4221	2.6886	3.1902	2.1994	0.7081	2.5238	2.6719	4.1876	4.4407	4.3478	4.4467	4.3478	4.3880	4.4558	4.4275	4.5345	4.5329	4.4626	4.3364	5.3042	5.6197	5.2429	4.7056	4.7410

APPENDIX 3-4
EMISSION INVENTORY FOR MAJOR EMISSION SOURCE

Emission for Ocean Terminal

Table 1 - Source strength of Hotelling OGV for Ocean Terminal

Source	ID	Easting (m)	Northing (m)	Individual Source Strength			Emission Height	Temp	Exhaust Velocity	Diameter	Operation hour	Remark
				NOx (g/s)	RSP (g/s)	FSP (g/s) [2]	(mPD)	(K)	(m/s)	(m)		
Ocean Terminal Berth 1	Ship1_1	835175.4	817276.3	6.75	0.18	0.18	50	448.2	21.12	0.6	24 hours / day	4 emission sources per vessel
	Ship1_2											
	Ship1_3											
	Ship1_4											
Ocean Terminal Berth 2	Ship2_1	835170.5	817393.3	6.75	0.18	0.18			21.12	0.6	24 hours / day	
	Ship2_2											
	Ship2_3											
	Ship2_4											

Note/Referrence:

1 Source data extracted from Section 4.3, Tables 4.3 & 4.4 in Appendix 3.7 of the Revised Austin Road Flyover EIA (EIA-267/2020)

2 The emission rate of FSP is assumed to be same as that of RSP, for conservative assessment.

3 Emission rate of particulate is assumed to be 100% FSP (i.e. RSP = FSP). The averaged particale size is assumpted to be 1.25um.

Emission for To Kwa Wan Gas Plant

Table 2 - Source strength of To Kwa Wan Gas Plant

Source	ID	Easting (m)	Northing (m)	Individual Source Strength			Emission Height	Temp	Exhaust Velocity	Diameter	Operation hour	Remark
				NOx (g/s)	RSP (g/s)	FSP (g/s)	(mAG)	(K)	(m/s)	(m)		
To Kwa Wan Gas Plant	1049	837837.0	820081.0	0.1667	0.0000	0.0000	44.5	450	20.4	0.5	24 hours / day	Load Factor 07:00-19:00 - 41% 19:00-07:00 - 23%
	1054	837904.0	820141.0	0.3472	0.0000	0.0000	34	473	5.5	1		
	1055	837913.0	820136.0	0.3472	0.0000	0.0000	34	473	5.5	1		
	1056	837921.0	820133.0	0.3472	0.0000	0.0000	34	473	5.5	1		
	1057	837928.0	820130.0	0.3472	0.0000	0.0000	34	473	5.5	1		

Note/Referrence:

1 Chimney Information extracted from Appendix 3.5 of the approved AEIAR-204/2017

2 General load factors of 41% during day time and 23% during night time are recommended by EPD and were employed for this assessment. (Comprehensive Feasibility Study for The Revised Scheme of South East Kowloon Development EIA 2001; Planning and Engineering Feasibility Study for Sham Tseng Development EIA 2002; Construction of Cycle Tracks and the associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River 2008)

3 The corresponding Emission Point in the of the SP Licence No: L-8-004(6) are:

- ID 1049 - Emission Point No. 16
- ID 1054 to 1057 - Emission Points No. 1 to 4

APPENDIX 3-5
PREDICTED POLLUTANT CONCENTRATION (AIR QUALITY)

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	25	–	200	40
A1-PP-01	[40,34]	835575.08	820617.48	1.5	7.50	93.1	62.4	28.0	75.8	24.2	15.4	191.5	135.2	36.8
A1-PP-01	[40,34]	835575.08	820617.48	7.5	13.50	92.9	62.3	27.9	75.7	24.2	15.3	191.5	133.5	32.0
A1-PP-01	[40,34]	835575.08	820617.48	12	18.00	92.9	62.3	27.8	75.6	24.1	15.3	191.4	132.1	29.8
A1-PP-01	[40,34]	835575.08	820617.48	16.5	22.50	92.8	62.3	27.7	75.6	24.1	15.2	191.3	131.2	27.9
A1-PP-01	[40,34]	835575.08	820617.48	21.5	27.50	89.3	61.6	27.3	72.4	23.8	14.7	188.1	122.1	23.8
A1-PP-02	[40,34]	835584.89	820619.34	1.5	7.50	93.1	62.4	28.0	75.8	24.2	15.4	191.6	135.1	35.4
A1-PP-02	[40,34]	835584.89	820619.34	7.5	13.50	92.9	62.3	27.9	75.7	24.2	15.3	191.5	133.6	32.0
A1-PP-02	[40,34]	835584.89	820619.34	12	18.00	92.9	62.3	27.8	75.6	24.1	15.3	191.4	132.1	29.6
A1-PP-02	[40,34]	835584.89	820619.34	16.5	22.50	92.8	62.3	27.7	75.6	24.1	15.2	191.3	131.2	27.8
A1-PP-02	[40,34]	835584.89	820619.34	21.5	27.50	89.3	61.6	27.3	72.4	23.8	14.7	188.1	121.8	23.7
A1-PP-03	[40,34]	835596.89	820632.01	1.5	7.50	93.0	62.4	27.9	75.7	24.2	15.4	191.6	135.9	33.6
A1-PP-03	[40,34]	835596.89	820632.01	7.5	13.50	92.9	62.3	27.8	75.7	24.1	15.3	191.5	133.8	31.3
A1-PP-03	[40,34]	835596.89	820632.01	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	132.3	29.3
A1-PP-03	[40,34]	835596.89	820632.01	16.5	22.50	92.8	62.3	27.7	75.6	24.1	15.2	191.3	131.1	27.8
A1-PP-03	[40,34]	835596.89	820632.01	21.5	27.50	89.3	61.6	27.3	72.4	23.8	14.7	188.1	121.8	23.8
A1-PP-04	[40,34]	835608.90	820644.68	1.5	7.50	93.0	62.4	27.9	75.7	24.2	15.3	191.8	138.1	33.1
A1-PP-04	[40,34]	835608.90	820644.68	7.5	13.50	92.9	62.3	27.8	75.6	24.1	15.3	191.5	134.5	30.6
A1-PP-04	[40,34]	835608.90	820644.68	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	132.4	29.1
A1-PP-04	[40,34]	835608.90	820644.68	16.5	22.50	92.8	62.2	27.7	75.5	24.1	15.2	191.3	131.0	27.7
A1-PP-04	[40,34]	835608.90	820644.68	21.5	27.50	89.3	61.6	27.3	72.4	23.8	14.7	188.1	121.8	23.8
A1-PP-05	[40,34]	835605.36	820662.65	1.5	7.50	92.9	62.4	27.9	75.7	24.2	15.3	191.7	136.7	32.6
A1-PP-05	[40,34]	835605.36	820662.65	7.5	13.50	92.9	62.3	27.8	75.6	24.1	15.3	191.5	132.8	30.2
A1-PP-05	[40,34]	835605.36	820662.65	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	132.2	28.8
A1-PP-05	[40,34]	835605.36	820662.65	16.5	22.50	92.8	62.2	27.7	75.5	24.1	15.2	191.3	130.9	27.7
A1-PP-05	[40,34]	835605.36	820662.65	21.5	27.50	89.3	61.5	27.3	72.4	23.8	14.7	188.1	121.8	23.9
A1-PP-06	[40,34]	835601.53	820682.17	1.5	7.50	92.9	62.3	27.8	75.7	24.2	15.3	191.7	137.4	31.9
A1-PP-06	[40,34]	835601.53	820682.17	7.5	13.50	92.8	62.3	27.8	75.6	24.1	15.3	191.5	133.1	29.8
A1-PP-06	[40,34]	835601.53	820682.17	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	132.4	28.6
A1-PP-06	[40,34]	835601.53	820682.17	16.5	22.50	92.8	62.2	27.7	75.5	24.1	15.2	191.3	131.5	27.6
A1-PP-06	[40,34]	835601.53	820682.17	21.5	27.50	89.3	61.5	27.3	72.4	23.8	14.7	188.0	121.8	23.8
A1-PP-07	[40,34]	835584.28	820678.89	1.5	7.50	92.9	62.3	27.8	75.7	24.2	15.3	191.6	135.3	31.9
A1-PP-07	[40,34]	835584.28	820678.89	7.5	13.50	92.9	62.3	27.8	75.6	24.1	15.3	191.5	133.7	30.1
A1-PP-07	[40,34]	835584.28	820678.89	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	132.3	28.7
A1-PP-07	[40,34]	835584.28	820678.89	16.5	22.50	92.8	62.2	27.7	75.5	24.1	15.2	191.2	131.6	27.6
A1-PP-07	[40,34]	835584.28	820678.89	21.5	27.50	89.3	61.5	27.3	72.4	23.8	14.7	188.0	121.7	23.8
A1-PP-08	[40,34]	835585.51	820672.54	1.5	7.50	92.9	62.3	27.9	75.7	24.2	15.3	191.6	135.0	32.0
A1-PP-08	[40,34]	835585.51	820672.54	7.5	13.50	92.9	62.3	27.8	75.6	24.1	15.3	191.5	133.4	30.2
A1-PP-08	[40,34]	835585.51	820672.54	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	132.3	28.7
A1-PP-08	[40,34]	835585.51	820672.54	16.5	22.50	92.8	62.2	27.7	75.5	24.1	15.2	191.2	131.4	27.6
A1-PP-08	[40,34]	835585.51	820672.54	21.5	27.50	89.3	61.5	27.3	72.4	23.8	14.7	188.0	121.7	23.9
A1-PP-09	[40,34]	835565.39	820668.72	1.5	7.50	93.0	62.3	27.9	75.7	24.2	15.3	191.6	139.1	33.8
A1-PP-09	[40,34]	835565.39	820668.72	7.5	13.50	92.9	62.3	27.8	75.6	24.2	15.3	191.5	133.5	30.1
A1-PP-09	[40,34]	835565.39	820668.72	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	132.5	28.8
A1-PP-09	[40,34]	835565.39	820668.72	16.5	22.50	92.8	62.2	27.7	75.5	24.1	15.2	191.3	131.5	27.7
A1-PP-09	[40,34]	835565.39	820668.72	21.5	27.50	89.3	61.5	27.3	72.4	23.8	14.7	188.0	121.7	23.9
A1-PP-10	[40,34]	835570.36	820642.45	1.5	7.50	93.0	62.3	27.9	75.8	24.2	15.4	191.5	139.4	34.6
A1-PP-10	[40,34]	835570.36	820642.45	7.5	13.50	92.9	62.3	27.8	75.6	24.2	15.3	191.5	133.7	30.7
A1-PP-10	[40,34]	835570.36	820642.45	12	18.00	92.8	62.3	27.8	75.6	24.1	15.2	191.4	131.9	29.2
A1-PP-10	[40,34]	835570.36	820642.45	16.5	22.50	92.8	62.3	27.7	75.6	24.1	15.2	191.3	131.0	27.8
A1-PP-10	[40,34]	835570.36	820642.45	21.5	27.50	89.3	61.6	27.3	72.4	23.8	14.7	188.0	121.7	23.9
A1-T1-01	[40,34]	835579.47	820653.49	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	188.0	122.4	23.2
A1-T1-01	[40,34]	835579.47	820653.49	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.7	22.8
A1-T1-02	[40,34]	835580.39	820648.64	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	188.0	122.5	23.2
A1-T1-02	[40,34]	835580.39	820648.64	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.7	22.8
A1-T1-03	[40,34]	835581.44	820643.34	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	188.0	122.5	23.2
A1-T1-03	[40,34]	835581.44	820643.34	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.7	22.7
A1-T1-04	[40,34]	835585.46	820635.97	25	31.00	89.3	61.5	27.3	72.4	23.7	14.7	188.0	122.3	23.2
A1-T1-04	[40,34]	835585.46	820635.97	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.5	22.7
A1-T1-05	[40,34]	835591.36	820635.00	25	31.00	89.3	61.5	27.3	72.4	23.7	14.7	188.0	122.1	23.2
A1-T1-05	[40,34]	835591.36	820635.00	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.4	22.7
A1-T1-06	[40,34]	835597.72	820634.60	25	31.00	89.3	61.5	27.3	72.4	23.7	14.7	188.0	121.7	23.2
A1-T1-06	[40,34]	835597.72	820634.60	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.3	22.7
A1-T1-07	[40,34]	835576.25	820624.33	25	31.00	89.3	61.5	27.3	72.4	23.7	14.7	188.0	122.2	23.1
A1-T1-07	[40,34]	835576.25	820624.33	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.5	22.7
A1-T2-01	[40,34]	835601.60	820675.45	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	187.9	122.4	23.3
A1-T2-01	[40,34]	835601.60	820675.45	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.7	22.8
A1-T2-02	[40,34]	835600.99	820667.45	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	188.0	122.4	23.3
A1-T2-02	[40,34]	835600.99	820667.45	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.7	22.8
A1-T2-03	[40,34]	835592.29	820664.45	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	188.0	122.4	23.3
A1-T2-03	[40,34]	835592.29	820664.45	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.7	22.8
A1-T2-04	[40,34]	835582.79	820661.86	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	187.9	122.4	23.3
A1-T2-04	[40,34]	835582.79	820661.86	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.7	22.8
A1-T2-05	[40,34]	835570.47	820668.18	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	187.9	122.3	23.3
A1-T2-05	[40,34]	835570.47	820668.18	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.4	22.8
A1-T2-06	[40,34]	835588.39	820675.86	25	31.00	89.3	61.5	27.3	72.4	23.8	14.7	187.9	122.4	23.3
A1-T2-06	[40,34]	835588.39	820675.86	28.15	34.15	89.3	61.5	27.3	72.4	23.7	14.7	187.9	121.5	22.8
A2-OA-01	[40,34]	835768.82	820672.77	1.5	8.30	92.9	62.4	27.9	75.7	24.2	15.3	192.0	136.7	31.9
A2-OA-02	[40,34]	835770.57	820662.93	1.5	8.30	92.9	62.4	27.9	75.7	24.2	15.3	191.9	135.6	32.6
A2-OA-03	[40,34]	835749.02	820658.81	1.5	8.30	92.9	62.3	27.9	75.7	24.2	15.3	191.9	136.4	32.1
A2-OA-04	[40,34]	835747.23	820668.55	1.5	8.30	92.9	62.3	27.9	75.6	24.2	15.3	192.1	136.7	31.5
A3-OA-01	[40,34]	835809.14	820674.73	1.5	8.30	92.9	62.3	27.9	75.6	24.2	15.3	191.6	134.8	31.7
A3-OA-02	[40,34]	835809.84	820669.90	1.5	8.30	92.9	62.3	27.9	75.7	24.2	15.3	191.5	134.6	32.1
A3-OA-03	[40,34]	835789.11	820666.00	1.5	8.30	92.9	62.3	27.9	75.7	24.2	15.3	191.6	135.8	32.3
A3-OA-04	[40,34]	835788.21	820670.52	1.5	8.30	92.9	62.3	27.9	75.7	24.2	15.3	191.7	135.8	31.9
A4-SR-01	[40,34]	835871.27	820700.57	1.5	8.60	92.9	62.4	27.9	75.7	24.2	15.3	191.6	137.3	31.9
A4-SR-01	[40,34]	835871.27	820700.57	5.5	12.60	92.8	62.3	27.8	75.6	24.1	15.3	191.3	134.7	30.3
A4-SR-02	[40,34]	835874.58	820683.06	1.5	8.60	92.9	62.3	27.9	75.7	24.2	15.3	191.4	134.4	32.4
A4-SR-02	[40,34]	835874.58	820683.06	5.5	12.60	92.9	62.3	27.8	75.6	24.1	15.3	191.3	133.8	31.1
A4-SR-03	[40,34]	835864.56	820680.75	1.5	8.60	92.9	62.3	27.9	75.7	24.2	15.3	191.4	134.3	32.3
A4-SR-03	[40,34]	835864.56	820680.75	5.5	12.60	92.9	62.3	27.8	75.6	24.1	15.3	191.3	133.7	31.1
A4-SR-04	[40,34]	835861.13	820698.68	1.5	8.60	92.9	62.4	27.9	75.7	24.2	15.3	191.6	137.0	31.8
A4-SR-04	[40,34]	835861.13	820698.68	5.5	12.60	92.8	62.3	27.8	75.6	24.1	15.3	191.3	134.4	30.3
A5-SR-01	[40,34]	835899.16	820705.87	1.5	8.60	92.9	62.4	27.9	75.7	24.2	15.3	191.5	137.9	32.3
A5-SR-01	[40,34]	835899.16	820705.87	5.5	12.60	92.8	62.3	27.8	75.6	24.1	15.3	191.3	135.4	30.4
A5-SR-02	[40,34]	835889.04	820685.58	1.5	8.60	92.9	62.4	27.9	75.7	24.2	15.3	191.4	135.0	32.7
A5-SR-02	[40,34]	835889.04	820685.58	5.5	12.60	92.9	62.3	27.8	75.6	24.2	15.3	191.3	134.4	31.2
A5-SR-03	[40,34]	835885.16	820684.97	1.5	8.60	92.9	62.4	27.9	75.7	24.2	15.3	191.4	134.8	32.6
A5-SR-03	[40,34]	835885.16	820684.97	5.5	12.60	92.9	62.3	27.8	75.6	24.1	15.3	191.3	134.2	31.2
A5-SR-04	[40,34]	835881.73	820702.60	1.5	8.60	92.9	62.4	27.9	75.7	24.2	15.3	191.6	137.2	32.0
A5-SR-04	[40,34]	835881.73	820702.60	5.5	12.60	92.8	62.3	27.8	75.6	24.1	15.3	191.3	135.0	30.4
BR-PP-01	[40,34]	835686.41	820727.93	1.5	7.90	92.8	62.3	27.8	75.6	24.2	15.2	191.9	135.2	29.2
BR-PP-01	[40,34]	835686.41	820727.93	10	16.40	92.8	62.3	27.8	75.5	24.1	15.2	191.7	133.9	28.4

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	25	–	200	40
BR-PP-01	[40,34]	835686.41	820727.93	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.4	132.4	27.3
BR-PP-02	[40,34]	835651.45	820726.28	1.5	7.90	92.8	62.3	27.8	75.6	24.2	15.2	191.7	134.6	29.4
BR-PP-02	[40,34]	835651.45	820726.28	10	16.40	92.8	62.3	27.8	75.6	24.1	15.2	191.6	133.5	28.5
BR-PP-02	[40,34]	835651.45	820726.28	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.3	132.1	27.4
BR-PP-03	[40,34]	835616.49	820724.63	1.5	7.90	92.9	62.3	27.8	75.6	24.2	15.3	191.6	134.8	30.3
BR-PP-03	[40,34]	835616.49	820724.63	10	16.40	92.8	62.3	27.8	75.6	24.1	15.2	191.5	133.9	28.6
BR-PP-03	[40,34]	835616.49	820724.63	16.5	22.90	92.8	62.2	27.7	75.5	24.1	15.2	191.3	132.5	27.4
BR-PP-04	[40,34]	835613.99	820777.57	1.5	7.90	92.8	62.3	27.8	75.6	24.2	15.2	191.8	136.7	29.7
BR-PP-04	[40,34]	835613.99	820777.57	10	16.40	92.8	62.3	27.7	75.5	24.1	15.2	191.5	136.2	28.3
BR-PP-04	[40,34]	835613.99	820777.57	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.2	132.9	27.2
BR-PP-05	[40,34]	835611.49	820830.51	1.5	7.90	93.0	62.5	27.9	75.7	24.3	15.3	193.1	143.5	33.2
BR-PP-05	[40,34]	835611.49	820830.51	10	16.40	92.8	62.3	27.8	75.5	24.1	15.2	191.2	134.9	28.7
BR-PP-05	[40,34]	835611.49	820830.51	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.0	129.5	27.2
BR-PP-06	[40,34]	835681.35	820835.06	1.5	7.90	93.0	62.6	27.9	75.7	24.4	15.4	193.4	145.0	34.4
BR-PP-06	[40,34]	835681.35	820835.06	10	16.40	92.8	62.3	27.8	75.5	24.1	15.2	191.2	135.3	28.6
BR-PP-06	[40,34]	835681.35	820835.06	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.0	128.9	27.2
BR-PP-06	[40,34]	835681.35	820835.06	24	30.40	89.3	61.5	27.3	72.4	23.8	14.7	187.8	120.3	23.3
BR-PP-06	[40,34]	835681.35	820835.06	31.5	37.90	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.4
BR-PP-06	[40,34]	835681.35	820835.06	37.5	43.90	85.9	60.9	27.0	69.3	23.2	14.4	183.9	119.9	20.3
BR-PP-07	[40,34]	835702.18	820836.05	1.5	7.90	93.0	62.6	27.9	75.7	24.4	15.4	193.5	144.7	34.4
BR-PP-07	[40,34]	835702.18	820836.05	10	16.40	92.8	62.3	27.8	75.5	24.1	15.2	191.2	135.6	28.6
BR-PP-07	[40,34]	835702.18	820836.05	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.0	128.4	27.1
BR-PP-07	[40,34]	835702.18	820836.05	24	30.40	89.3	61.5	27.3	72.4	23.8	14.7	187.7	120.2	23.2
BR-PP-07	[40,34]	835702.18	820836.05	31.5	37.90	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.4
BR-PP-07	[40,34]	835702.18	820836.05	37.5	43.90	85.9	60.9	27.0	69.3	23.2	14.4	183.7	119.9	20.3
BR-PP-08	[40,34]	835732.35	820792.14	1.5	7.90	92.8	62.3	27.8	75.6	24.2	15.2	192.4	137.8	29.1
BR-PP-08	[40,34]	835732.35	820792.14	10	16.40	92.8	62.3	27.7	75.5	24.2	15.2	191.8	135.9	28.0
BR-PP-08	[40,34]	835732.35	820792.14	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.2	132.4	27.0
BR-PP-08	[40,34]	835732.35	820792.14	24	30.40	89.3	61.5	27.3	72.4	23.8	14.7	187.7	121.0	23.2
BR-PP-08	[40,34]	835732.35	820792.14	31.5	37.90	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.4
BR-PP-08	[40,34]	835732.35	820792.14	37.5	43.90	85.9	60.9	27.0	69.3	23.2	14.4	183.6	118.7	20.3
BR-PP-09	[40,34]	835706.88	820760.38	1.5	7.90	92.8	62.3	27.8	75.6	24.2	15.2	192.1	136.3	28.8
BR-PP-09	[40,34]	835706.88	820760.38	10	16.40	92.8	62.3	27.7	75.5	24.2	15.2	191.8	134.6	28.1
BR-PP-09	[40,34]	835706.88	820760.38	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.3	132.4	27.1
BR-PP-09	[40,34]	835706.88	820760.38	24	30.40	89.3	61.5	27.3	72.4	23.8	14.7	187.9	121.3	23.3
BR-PP-09	[40,34]	835706.88	820760.38	31.5	37.90	89.3	61.5	27.3	72.4	23.7	14.7	187.7	120.6	22.5
BR-PP-09	[40,34]	835706.88	820760.38	37.5	43.90	85.9	60.9	27.0	69.3	23.2	14.4	183.9	119.2	20.3
BR-PP-10	[40,34]	835683.91	820780.87	1.5	7.90	92.8	62.3	27.8	75.6	24.2	15.2	192.0	137.5	29.0
BR-PP-10	[40,34]	835683.91	820780.87	10	16.40	92.8	62.3	27.7	75.5	24.1	15.2	191.6	135.2	28.1
BR-PP-10	[40,34]	835683.91	820780.87	16.5	22.90	92.7	62.2	27.7	75.5	24.1	15.2	191.2	132.2	27.1
BR-PP-10	[40,34]	835683.91	820780.87	24	30.40	89.3	61.5	27.3	72.4	23.8	14.7	187.8	121.3	23.3
BR-PP-10	[40,34]	835683.91	820780.87	31.5	37.90	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.5
BR-PP-10	[40,34]	835683.91	820780.87	37.5	43.90	85.9	60.9	27.0	69.3	23.2	14.4	183.9	119.0	20.3
BR-T3-01	[40,34]	835731.14	820788.06	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	192.2	121.7	19.8
BR-T3-01	[40,34]	835731.14	820788.06	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	195.1	127.1	19.7
BR-T3-02	[40,34]	835725.54	820781.92	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.8	121.8	19.8
BR-T3-02	[40,34]	835725.54	820781.92	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	194.6	127.4	19.7
BR-T3-03	[40,34]	835720.28	820776.66	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.4	122.0	19.8
BR-T3-03	[40,34]	835720.28	820776.66	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	194.1	127.7	19.7
BR-T3-04	[40,34]	835714.55	820770.50	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.0	122.1	19.8
BR-T3-04	[40,34]	835714.55	820770.50	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	193.6	124.5	19.7
BR-T3-05	[40,34]	835708.89	820764.70	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.7	122.2	19.8
BR-T3-05	[40,34]	835708.89	820764.70	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	193.1	123.5	19.7
BR-T3-06	[40,34]	835703.19	820758.44	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.3	121.9	19.8
BR-T3-06	[40,34]	835703.19	820758.44	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.6	123.6	19.7
BR-T3-07	[40,34]	835699.32	820754.53	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.0	121.9	19.8
BR-T3-07	[40,34]	835699.32	820754.53	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.3	123.6	19.7
BR-T3-08	[40,34]	835689.85	820744.75	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	189.3	120.6	19.8
BR-T3-08	[40,34]	835689.85	820744.75	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	191.5	127.1	19.7
BR-T3-09	[40,34]	835686.30	820762.01	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	189.3	120.4	19.8
BR-T3-09	[40,34]	835686.30	820762.01	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	191.2	127.7	19.7
BR-T3-10	[40,34]	835691.98	820767.99	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	189.6	120.4	19.8
BR-T3-10	[40,34]	835691.98	820767.99	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	191.7	127.2	19.7
BR-T3-11	[40,34]	835696.82	820773.05	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.0	120.4	19.8
BR-T3-11	[40,34]	835696.82	820773.05	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.1	126.9	19.7
BR-T3-12	[40,34]	835698.58	820774.74	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.1	120.4	19.8
BR-T3-12	[40,34]	835698.58	820774.74	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.2	125.6	19.7
BR-T3-13	[40,34]	835703.76	820780.31	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.4	121.8	19.8
BR-T3-13	[40,34]	835703.76	820780.31	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.7	123.7	19.7
BR-T3-14	[40,34]	835709.26	820785.93	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.8	122.3	19.8
BR-T3-14	[40,34]	835709.26	820785.93	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	193.1	123.6	19.7
BR-T3-15	[40,34]	835712.23	820789.21	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.0	122.4	19.8
BR-T3-15	[40,34]	835712.23	820789.21	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	193.4	123.6	19.7
BR-T3-16	[40,34]	835719.00	820793.12	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.4	122.2	19.8
BR-T3-16	[40,34]	835719.00	820793.12	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	194.0	125.0	19.7
BR-T4-01	[40,34]	835683.24	820833.57	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	189.6	121.0	19.8
BR-T4-01	[40,34]	835683.24	820833.57	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	191.2	129.0	19.7
BR-T4-02	[40,34]	835698.09	820834.55	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.4	120.7	19.8
BR-T4-02	[40,34]	835698.09	820834.55	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.2	127.7	19.7
BR-T4-03	[40,34]	835702.63	820827.98	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.6	120.5	19.8
BR-T4-03	[40,34]	835702.63	820827.98	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.6	127.2	19.7
BR-T4-04	[40,34]	835706.61	820825.08	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.8	120.5	19.8
BR-T4-04	[40,34]	835706.61	820825.08	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.9	124.4	19.7
BR-T4-05	[40,34]	835710.36	820822.36	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.0	120.7	19.8
BR-T4-05	[40,34]	835710.36	820822.36	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	193.2	123.7	19.7
BR-T4-06	[40,34]	835714.42	820819.41	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.2	122.2	19.8
BR-T4-06	[40,34]	835714.42	820819.41	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	193.5	123.7	19.7
BR-T4-07	[40,34]	835720.16	820809.91	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.5	122.4	19.8
BR-T4-07	[40,34]	835720.16	820809.91	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	194.0	123.6	19.7
BR-T4-08	[40,34]	835715.07	820804.36	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	191.2	122.4	19.8
BR-T4-08	[40,34]	835715.07	820804.36	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	193.6	123.6	19.7
BR-T4-09	[40,34]	835705.59	820807.86	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.7	120.4	19.8
BR-T4-09	[40,34]	835705.59	820807.86	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.8	123.7	19.7
BR-T4-10	[40,34]	835701.34	820810.69	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.4	120.5	19.8
BR-T4-10	[40,34]	835701.34	820810.69	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.5	127.1	19.7
BR-T4-11	[40,34]	835697.72	820813.40	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.3	120.5	19.8
BR-T4-11	[40,34]	835697.72	820813.40	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	192.2	127.4	19.7
BR-T4-12	[40,34]	835693.54	820816.64	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	190.1	120.5	19.8
BR-T4-12	[40,34]	835693.54	820816.64	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	191.9	127.8	19.7
BR-T4-13	[40,34]	835686.97	820821.13	47	53.40	85.8	60.9	27.0	69.3	23.2	14.4	189.8	120.5	19.8
BR-T4-13	[40,34]	835686.97	820821.13	50.15	56.55	85.8	60.9	27.0	69.2	23.2	14.4	191.4	128.5	19.7
BH-PP-01	[40,34]	835759.41	820838.70	1.5	8.40	93.0	62.7	27.9	75.8	24.5	15.4	194.4	144.7	35.4

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	25	--	200	40
BH-PP-01	[40,34]	835759.41	820838.70	9	15.90	92.8	62.3	27.8	75.6	24.1	15.2	191.4	136.5	28.9
BH-PP-01	[40,34]	835759.41	820838.70	11	17.90	92.8	62.3	27.7	75.5	24.1	15.2	191.2	135.7	28.2
BH-PP-01	[40,34]	835759.41	820838.70	19	25.90	89.3	61.5	27.3	72.4	23.8	14.7	187.7	121.1	23.8
BH-PP-02	[40,34]	835764.46	820820.35	1.5	8.40	92.9	62.5	27.8	75.6	24.3	15.3	192.9	138.6	30.7
BH-PP-02	[40,34]	835764.46	820820.35	9	15.90	92.8	62.3	27.8	75.5	24.2	15.2	191.6	136.1	28.5
BH-PP-02	[40,34]	835764.46	820820.35	11	17.90	92.8	62.3	27.7	75.5	24.1	15.2	191.3	135.6	27.9
BH-PP-02	[40,34]	835764.46	820820.35	19	25.90	89.3	61.5	27.3	72.4	23.8	14.7	187.7	121.6	23.7
BH-PP-03	[40,34]	835743.35	820812.27	1.5	8.40	92.8	62.4	27.8	75.6	24.3	15.2	192.8	138.4	29.8
BH-PP-03	[40,34]	835743.35	820812.27	9	15.90	92.8	62.3	27.7	75.5	24.2	15.2	191.9	135.8	28.4
BH-PP-03	[40,34]	835743.35	820812.27	11	17.90	92.8	62.3	27.7	75.5	24.1	15.2	191.6	135.7	28.0
BH-PP-03	[40,34]	835743.35	820812.27	19	25.90	89.3	61.5	27.3	72.4	23.8	14.7	187.8	121.6	23.8
BH-PP-04	[40,34]	835733.20	820817.04	1.5	8.40	92.8	62.4	27.8	75.6	24.3	15.3	193.0	138.6	30.2
BH-PP-04	[40,34]	835733.20	820817.04	9	15.90	92.8	62.3	27.8	75.5	24.2	15.2	191.9	135.8	28.5
BH-PP-04	[40,34]	835733.20	820817.04	11	17.90	92.8	62.3	27.7	75.5	24.1	15.2	191.6	135.3	28.0
BH-PP-04	[40,34]	835733.20	820817.04	19	25.90	89.3	61.5	27.3	72.4	23.8	14.7	187.8	121.9	23.8
BH-PP-05	[40,34]	835725.61	820829.81	1.5	8.40	92.9	62.5	27.8	75.7	24.3	15.3	193.2	142.9	31.8
BH-PP-05	[40,34]	835725.61	820829.81	9	15.90	92.8	62.3	27.8	75.5	24.1	15.2	191.6	136.7	28.7
BH-PP-05	[40,34]	835725.61	820829.81	11	17.90	92.8	62.3	27.7	75.5	24.1	15.2	191.4	135.1	28.2
BH-PP-05	[40,34]	835725.61	820829.81	19	25.90	89.3	61.5	27.3	72.4	23.8	14.7	187.8	121.1	23.9
BH-PP-06	[40,34]	835729.27	820837.32	1.5	8.40	93.0	62.6	27.9	75.7	24.4	15.4	193.8	144.3	34.6
BH-PP-06	[40,34]	835729.27	820837.32	9	15.90	92.8	62.3	27.8	75.6	24.1	15.2	191.5	136.0	29.0
BH-PP-06	[40,34]	835729.27	820837.32	11	17.90	92.8	62.3	27.7	75.5	24.1	15.2	191.3	134.7	28.3
BH-PP-06	[40,34]	835729.27	820837.32	19	25.90	89.3	61.5	27.3	72.4	23.8	14.7	187.8	120.9	23.9
BH-TT-01	[40,34]	835762.62	820838.90	28	34.90	89.3	61.5	27.3	72.4	23.8	14.7	187.6	119.9	22.7
BH-TT-01	[40,34]	835762.62	820838.90	32.2	39.10	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.1	22.3
BH-TT-02	[40,34]	835768.93	820825.01	28	34.90	89.3	61.5	27.3	72.4	23.8	14.7	187.6	119.9	22.6
BH-TT-02	[40,34]	835768.93	820825.01	32.2	39.10	89.3	61.5	27.3	72.4	23.7	14.7	187.6	119.8	22.3
BH-TT-03	[40,34]	835756.26	820811.80	28	34.90	89.3	61.5	27.3	72.4	23.8	14.7	187.6	119.9	22.7
BH-TT-03	[40,34]	835756.26	820811.80	32.2	39.10	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.3
BH-TT-04	[40,34]	835740.18	820810.99	28	34.90	89.3	61.5	27.3	72.4	23.8	14.7	187.6	120.1	22.7
BH-TT-04	[40,34]	835740.18	820810.99	32.2	39.10	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.3
BH-TT-05	[40,34]	835732.73	820827.40	28	34.90	89.3	61.5	27.3	72.4	23.8	14.7	187.6	119.9	22.7
BH-TT-05	[40,34]	835732.73	820827.40	32.2	39.10	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.3
BH-TT-06	[40,34]	835742.87	820837.97	28	34.90	89.3	61.5	27.3	72.4	23.8	14.7	187.6	119.9	22.7
BH-TT-06	[40,34]	835742.87	820837.97	32.2	39.10	89.3	61.5	27.3	72.4	23.7	14.7	187.6	120.7	22.3
BB-SR-01	[40,34]	835743.88	820689.03	1.5	8.40	92.9	62.3	27.9	75.6	24.2	15.3	192.1	134.4	32.0
BB-SR-01	[40,34]	835743.88	820689.03	5.5	12.40	92.8	62.3	27.8	75.6	24.1	15.3	192.0	133.6	30.0
BB-SR-02	[40,34]	835708.07	820682.32	1.5	8.40	92.9	62.3	27.9	75.6	24.2	15.3	191.9	134.4	32.0
BB-SR-02	[40,34]	835708.07	820682.32	5.5	12.40	92.8	62.3	27.8	75.6	24.1	15.3	191.8	133.3	30.1
BB-SR-03	[40,34]	835705.35	820687.34	1.5	8.40	92.9	62.3	27.8	75.6	24.2	15.3	191.8	133.4	31.0
BB-SR-03	[40,34]	835705.35	820687.34	5.5	12.40	92.8	62.3	27.8	75.6	24.1	15.3	191.8	133.2	30.0
BB-SR-04	[40,34]	835723.22	820704.36	1.5	8.40	92.8	62.3	27.8	75.6	24.2	15.3	192.0	134.2	29.9
BB-SR-04	[40,34]	835723.22	820704.36	5.5	12.40	92.8	62.3	27.8	75.6	24.2	15.2	191.9	134.0	29.4
BB-SR-05	[40,34]	835740.32	820707.61	1.5	8.40	92.8	62.3	27.8	75.6	24.2	15.3	192.1	134.2	29.9
BB-SR-05	[40,34]	835740.32	820707.61	5.5	12.40	92.8	62.3	27.8	75.6	24.2	15.2	192.0	134.1	29.4

APPENDIX 3-6
SUMMARY OF ANNUAL AVERAGED NO2 CONCENTRATION (AIR QUALITY)

Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point	mAG	1.5	7.5	12	16.5	21.5		
		mPD	7.5	13.5	18	22.5	27.5		
Site A1 - Podium	A1-PP-01		36.8	32.0	29.8	27.9	23.8		
	A1-PP-02		35.4	32.0	29.6	27.8	23.7		
	A1-PP-03		33.6	31.3	29.3	27.8	23.8		
	A1-PP-04		33.1	30.6	29.1	27.7	23.8		
	A1-PP-05		32.6	30.2	28.8	27.7	23.9		
	A1-PP-06		31.9	29.8	28.6	27.6	23.8		
	A1-PP-07		31.9	30.1	28.7	27.6	23.8		
	A1-PP-08		32.0	30.2	28.7	27.6	23.9		
	A1-PP-09		33.8	30.1	28.8	27.7	23.9		
	A1-PP-10		34.6	30.7	29.2	27.8	23.9		

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	25	28.15					
		mPD	31	34.15					
Site A1 - Residential Towers	A1-T1-01		23.2	22.8					
	A1-T1-02		23.2	22.8					
	A1-T1-03		23.2	22.7					
	A1-T1-04		23.2	22.7					
	A1-T1-05		23.2	22.7					
	A1-T1-06		23.2	22.7					
	A1-T1-07		23.1	22.7					
	A1-T2-01		23.3	22.8					
	A1-T2-02		23.3	22.8					
	A1-T2-03		23.3	22.8					
	A1-T2-04		23.3	22.8					
	A1-T2-05		23.3	22.8					
	A1-T2-06		23.3	22.8					

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5						
		mPD	8.3						
Sites A2 & A3 - Open Space	A2-OA-01		31.9						
	A2-OA-02		32.6						
	A2-OA-03		32.1						
	A2-OA-04		31.5						
	A3-OA-01		31.7						
	A3-OA-02		32.1						
	A3-OA-03		32.3						
	A3-OA-04		31.9						

Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	5.5					
		mPD	8.6	12.6					
Sites A4 & A5 - Single Storey Retail Block	A4-SR-01		31.9	30.3					
	A4-SR-02		32.4	31.1					
	A4-SR-03		32.3	31.1					
	A4-SR-04		31.8	30.3					
	A5-SR-01		32.3	30.4					
	A5-SR-02		32.7	31.2					
	A5-SR-03		32.6	31.2					
	A5-SR-04		32.0	30.4					

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	10	16.5	24	31.5	37.5	
		mPD	7.9	16.4	22.9	30.4	37.9	43.9	
Site B - Podium (Western Portion)	BR-PP-01		29.2	28.4	27.3				
	BR-PP-02		29.4	28.5	27.4				
	BR-PP-03		30.3	28.6	27.4				
	BR-PP-04		29.7	28.3	27.2				
	BR-PP-05		33.2	28.7	27.2				
	BR-PP-06		34.4	28.6	27.2	23.3	22.4	20.3	
	BR-PP-07		34.4	28.6	27.1	23.2	22.4	20.3	
	BR-PP-08		29.1	28.0	27.0	23.2	22.4	20.3	
	BR-PP-09		28.8	28.1	27.1	23.3	22.5	20.3	
	BR-PP-10		29.0	28.1	27.1	23.3	22.5	20.3	

Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	47	50.15					
		mPD	53.9	57.05					
Site B - Residential Towers	BR-T3-01		19.8	19.7					
	BR-T3-02		19.8	19.7					
	BR-T3-03		19.8	19.7					
	BR-T3-04		19.8	19.7					
	BR-T3-05		19.8	19.7					
	BR-T3-06		19.8	19.7					
	BR-T3-07		19.8	19.7					
	BR-T3-08		19.8	19.7					
	BR-T3-09		19.8	19.7					
	BR-T3-10		19.8	19.7					
	BR-T3-11		19.8	19.7					
	BR-T3-12		19.8	19.7					
	BR-T3-13		19.8	19.7					
	BR-T3-14		19.8	19.7					
	BR-T3-15		19.8	19.7					
	BR-T3-16		19.8	19.7					
	BR-T4-01		19.8	19.7					
	BR-T4-02		19.8	19.7					
	BR-T4-03		19.8	19.7					
	BR-T4-04		19.8	19.7					
	BR-T4-05		19.8	19.7					
	BR-T4-06		19.8	19.7					
	BR-T4-07		19.8	19.7					
	BR-T4-08		19.8	19.7					
	BR-T4-09		19.8	19.7					
	BR-T4-10		19.8	19.7					
	BR-T4-11		19.8	19.7					
	BR-T4-12		19.8	19.7					
	BR-T4-13		19.8	19.7					

Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	9	11	19			
		mPD	8.4	15.9	17.9	25.9			
Site B - Podium (Eastern Portion)	BH-PP-01		35.4	28.9	28.2	23.8			
	BH-PP-02		30.7	28.5	27.9	23.7			
	BH-PP-03		29.8	28.4	28.0	23.8			
	BH-PP-04		30.2	28.5	28.0	23.8			
	BH-PP-05		31.8	28.7	28.2	23.9			
	BH-PP-06		34.6	29.0	28.3	23.9			

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	28	32.2					
		mPD	34.9	39.1					
Site B - Hotel / Office Tower	BH-TT-01		22.7	22.3					
	BH-TT-02		22.6	22.3					
	BH-TT-03		22.7	22.3					
	BH-TT-04		22.7	22.3					
	BH-TT-05		22.7	22.3					
	BH-TT-06		22.7	22.3					

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	5.5					
		mPD	7.4	12.4					
Site B -Single Storey Retails	BB-SR-01		32.0	30.0					
	BB-SR-02		32.0	30.1					
	BB-SR-03		31.0	30.0					
	BB-SR-04		29.9	29.4					
	BB-SR-05		29.9	29.4					

Annual Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point	mAG	1.5	7.5	12	16.5	21.5		
		mPD	7.5	13.5	18	22.5	27.5		
Site A1 - Podium	A1-PP-01		28.0	27.9	27.8	27.7	27.3		
	A1-PP-02		28.0	27.9	27.8	27.7	27.3		
	A1-PP-03		27.9	27.8	27.8	27.7	27.3		
	A1-PP-04		27.9	27.8	27.8	27.7	27.3		
	A1-PP-05		27.9	27.8	27.8	27.7	27.3		
	A1-PP-06		27.8	27.8	27.8	27.7	27.3		
	A1-PP-07		27.8	27.8	27.8	27.7	27.3		
	A1-PP-08		27.9	27.8	27.8	27.7	27.3		
	A1-PP-09		27.9	27.8	27.8	27.7	27.3		
	A1-PP-10		27.9	27.8	27.8	27.7	27.3		

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	25	28.15					
		mPD	31	34.15					
Site A1 - Residential Towers	A1-T1-01		27.3	27.3					
	A1-T1-02		27.3	27.3					
	A1-T1-03		27.3	27.3					
	A1-T1-04		27.3	27.3					
	A1-T1-05		27.3	27.3					
	A1-T1-06		27.3	27.3					
	A1-T1-07		27.3	27.3					
	A1-T2-01		27.3	27.3					
	A1-T2-02		27.3	27.3					
	A1-T2-03		27.3	27.3					
	A1-T2-04		27.3	27.3					
	A1-T2-05		27.3	27.3					
	A1-T2-06		27.3	27.3					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5						
		mPD	8.3						
Sites A2 & A3 - Open Space	A2-OA-01		27.9						
	A2-OA-02		27.9						
	A2-OA-03		27.9						
	A2-OA-04		27.9						
	A3-OA-01		27.9						
	A3-OA-02		27.9						
	A3-OA-03		27.9						
	A3-OA-04		27.9						

Annual Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	8.6	12.6					
Sites A4 & A5 - Single Storey Retail Block	A4-SR-01		27.9	27.8					
	A4-SR-02		27.9	27.8					
	A4-SR-03		27.9	27.8					
	A4-SR-04		27.9	27.8					
	A5-SR-01		27.9	27.8					
	A5-SR-02		27.9	27.8					
	A5-SR-03		27.9	27.8					
	A5-SR-04		27.9	27.8					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	10	16.5	24	31.5	37.5	
		mPD	7.9	16.4	22.9	30.4	37.9	43.9	
Site B - Podium (Western Portion)	BR-PP-01		27.8	27.8	27.7				
	BR-PP-02		27.8	27.8	27.7				
	BR-PP-03		27.8	27.8	27.7				
	BR-PP-04		27.8	27.7	27.7				
	BR-PP-05		27.9	27.8	27.7				
	BR-PP-06		27.9	27.8	27.7	27.3	27.3	27.0	
	BR-PP-07		27.9	27.8	27.7	27.3	27.3	27.0	
	BR-PP-08		27.8	27.7	27.7	27.3	27.3	27.0	
	BR-PP-09		27.8	27.7	27.7	27.3	27.3	27.0	
	BR-PP-10		27.8	27.7	27.7	27.3	27.3	27.0	

Annual Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	47	50.15					
		mPD	53.9	57.05					
Site B - Residential Towers	BR-T3-01		27.0	27.0					
	BR-T3-02		27.0	27.0					
	BR-T3-03		27.0	27.0					
	BR-T3-04		27.0	27.0					
	BR-T3-05		27.0	27.0					
	BR-T3-06		27.0	27.0					
	BR-T3-07		27.0	27.0					
	BR-T3-08		27.0	27.0					
	BR-T3-09		27.0	27.0					
	BR-T3-10		27.0	27.0					
	BR-T3-11		27.0	27.0					
	BR-T3-12		27.0	27.0					
	BR-T3-13		27.0	27.0					
	BR-T3-14		27.0	27.0					
	BR-T3-15		27.0	27.0					
	BR-T3-16		27.0	27.0					
	BR-T4-01		27.0	27.0					
	BR-T4-02		27.0	27.0					
	BR-T4-03		27.0	27.0					
	BR-T4-04		27.0	27.0					
	BR-T4-05		27.0	27.0					
	BR-T4-06		27.0	27.0					
	BR-T4-07		27.0	27.0					
	BR-T4-08		27.0	27.0					
	BR-T4-09		27.0	27.0					
	BR-T4-10		27.0	27.0					
	BR-T4-11		27.0	27.0					
	BR-T4-12		27.0	27.0					
	BR-T4-13		27.0	27.0					

Annual Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	9	11	19			
		mPD	8.4	15.9	17.9	25.9			
Site B - Podium (Eastern Portion)	BH-PP-01		27.9	27.8	27.7	27.3			
	BH-PP-02		27.8	27.8	27.7	27.3			
	BH-PP-03		27.8	27.7	27.7	27.3			
	BH-PP-04		27.8	27.8	27.7	27.3			
	BH-PP-05		27.8	27.8	27.7	27.3			
	BH-PP-06		27.9	27.8	27.7	27.3			

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	28	32.2					
		mPD	34.9	39.1					
Site B - Hotel / Office Tower	BH-TT-01		27.3	27.3					
	BH-TT-02		27.3	27.3					
	BH-TT-03		27.3	27.3					
	BH-TT-04		27.3	27.3					
	BH-TT-05		27.3	27.3					
	BH-TT-06		27.3	27.3					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	7.4	12.4					
Site B -Single Storey Retails	BB-SR-01		27.9	27.8					
	BB-SR-02		27.9	27.8					
	BB-SR-03		27.8	27.8					
	BB-SR-04		27.8	27.8					
	BB-SR-05		27.8	27.8					

Annual Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point	mAG	1.5	7.5	12	16.5	21.5		
		mPD	7.5	13.5	18	22.5	27.5		
Site A1 - Podium	A1-PP-01		15.4	15.3	15.3	15.2	14.7		
	A1-PP-02		15.4	15.3	15.3	15.2	14.7		
	A1-PP-03		15.4	15.3	15.2	15.2	14.7		
	A1-PP-04		15.3	15.3	15.2	15.2	14.7		
	A1-PP-05		15.3	15.3	15.2	15.2	14.7		
	A1-PP-06		15.3	15.3	15.2	15.2	14.7		
	A1-PP-07		15.3	15.3	15.2	15.2	14.7		
	A1-PP-08		15.3	15.3	15.2	15.2	14.7		
	A1-PP-09		15.3	15.3	15.2	15.2	14.7		
	A1-PP-10		15.4	15.3	15.2	15.2	14.7		

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	25	28.15					
		mPD	31	34.15					
Site A1 - Residential Towers	A1-T1-01		14.7	14.7					
	A1-T1-02		14.7	14.7					
	A1-T1-03		14.7	14.7					
	A1-T1-04		14.7	14.7					
	A1-T1-05		14.7	14.7					
	A1-T1-06		14.7	14.7					
	A1-T1-07		14.7	14.7					
	A1-T2-01		14.7	14.7					
	A1-T2-02		14.7	14.7					
	A1-T2-03		14.7	14.7					
	A1-T2-04		14.7	14.7					
	A1-T2-05		14.7	14.7					
	A1-T2-06		14.7	14.7					

Annual Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5						
		mPD	8.3						
Sites A2 & A3 - Open Space	A2-OA-01		15.3						
	A2-OA-02		15.3						
	A2-OA-03		15.3						
	A2-OA-04		15.3						
	A3-OA-01		15.3						
	A3-OA-02		15.3						
	A3-OA-03		15.3						
	A3-OA-04		15.3						

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	8.6	12.6					
Sites A4 & A5 - Single Storey Retail Block	A4-SR-01		15.3	15.3					
	A4-SR-02		15.3	15.3					
	A4-SR-03		15.3	15.3					
	A4-SR-04		15.3	15.3					
	A5-SR-01		15.3	15.3					
	A5-SR-02		15.3	15.3					
	A5-SR-03		15.3	15.3					
	A5-SR-04		15.3	15.3					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	10	16.5	24	31.5	37.5	
		mPD	7.9	16.4	22.9	30.4	37.9	43.9	
Site B - Podium (Western Portion)	BR-PP-01		15.2	15.2	15.2				
	BR-PP-02		15.2	15.2	15.2				
	BR-PP-03		15.3	15.2	15.2				
	BR-PP-04		15.2	15.2	15.2				
	BR-PP-05		15.3	15.2	15.2				
	BR-PP-06		15.4	15.2	15.2	14.7	14.7	14.4	
	BR-PP-07		15.4	15.2	15.2	14.7	14.7	14.4	
	BR-PP-08		15.2	15.2	15.2	14.7	14.7	14.4	
	BR-PP-09		15.2	15.2	15.2	14.7	14.7	14.4	
	BR-PP-10		15.2	15.2	15.2	14.7	14.7	14.4	

Annual Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	47	50.15					
		mPD	53.9	57.05					
Site B - Residential Towers	BR-T3-01		14.4	14.4					
	BR-T3-02		14.4	14.4					
	BR-T3-03		14.4	14.4					
	BR-T3-04		14.4	14.4					
	BR-T3-05		14.4	14.4					
	BR-T3-06		14.4	14.4					
	BR-T3-07		14.4	14.4					
	BR-T3-08		14.4	14.4					
	BR-T3-09		14.4	14.4					
	BR-T3-10		14.4	14.4					
	BR-T3-11		14.4	14.4					
	BR-T3-12		14.4	14.4					
	BR-T3-13		14.4	14.4					
	BR-T3-14		14.4	14.4					
	BR-T3-15		14.4	14.4					
	BR-T3-16		14.4	14.4					
	BR-T4-01		14.4	14.4					
	BR-T4-02		14.4	14.4					
	BR-T4-03		14.4	14.4					
	BR-T4-04		14.4	14.4					
	BR-T4-05		14.4	14.4					
	BR-T4-06		14.4	14.4					
	BR-T4-07		14.4	14.4					
	BR-T4-08		14.4	14.4					
	BR-T4-09		14.4	14.4					
	BR-T4-10		14.4	14.4					
	BR-T4-11		14.4	14.4					
	BR-T4-12		14.4	14.4					
	BR-T4-13		14.4	14.4					

Annual Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	9	11	19			
		mPD	8.4	15.9	17.9	25.9			
Site B - Podium (Eastern Portion)	BH-PP-01		15.4	15.2	15.2	14.7			
	BH-PP-02		15.3	15.2	15.2	14.7			
	BH-PP-03		15.2	15.2	15.2	14.7			
	BH-PP-04		15.3	15.2	15.2	14.7			
	BH-PP-05		15.3	15.2	15.2	14.7			
	BH-PP-06		15.4	15.2	15.2	14.7			

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	28	32.2					
		mPD	34.9	39.1					
Site B - Hotel / Office Tower	BH-TT-01		14.7	14.7					
	BH-TT-02		14.7	14.7					
	BH-TT-03		14.7	14.7					
	BH-TT-04		14.7	14.7					
	BH-TT-05		14.7	14.7					
	BH-TT-06		14.7	14.7					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	7.4	12.4					
Site B -Single Storey Retails	BB-SR-01		15.3	15.3					
	BB-SR-02		15.3	15.3					
	BB-SR-03		15.3	15.3					
	BB-SR-04		15.3	15.2					
	BB-SR-05		15.3	15.2					

The 19th Highest Hourly NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point	mAG	1.5	7.5	12	16.5	21.5		
		mPD	7.5	13.5	18	22.5	27.5		
Site A1 - Podium	A1-PP-01		135.2	133.5	132.1	131.2	122.1		
	A1-PP-02		135.1	133.6	132.1	131.2	121.8		
	A1-PP-03		135.9	133.8	132.3	131.1	121.8		
	A1-PP-04		138.1	134.5	132.4	131.0	121.8		
	A1-PP-05		136.7	132.8	132.2	130.9	121.8		
	A1-PP-06		137.4	133.1	132.4	131.5	121.8		
	A1-PP-07		135.3	133.7	132.3	131.6	121.7		
	A1-PP-08		135.0	133.4	132.3	131.4	121.7		
	A1-PP-09		139.1	133.5	132.5	131.5	121.7		
	A1-PP-10		139.4	133.7	131.9	131.0	121.7		

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	25	28.15					
		mPD	31	34.15					
Site A1 - Residential Towers	A1-T1-01		122.4	121.7					
	A1-T1-02		122.5	121.7					
	A1-T1-03		122.5	121.7					
	A1-T1-04		122.3	121.5					
	A1-T1-05		122.1	121.4					
	A1-T1-06		121.7	121.3					
	A1-T1-07		122.2	121.5					
	A1-T2-01		122.4	121.7					
	A1-T2-02		122.4	121.7					
	A1-T2-03		122.4	121.7					
	A1-T2-04		122.4	121.7					
	A1-T2-05		122.3	121.4					
	A1-T2-06		122.4	121.5					

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5						
		mPD	8.3						
Sites A2 & A3 - Open Space	A2-OA-01		136.7						
	A2-OA-02		135.6						
	A2-OA-03		136.4						
	A2-OA-04		136.7						
	A3-OA-01		134.8						
	A3-OA-02		134.6						
	A3-OA-03		135.8						
	A3-OA-04		135.8						

The 19th Highest Hourly NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	5.5					
		mPD	8.6	12.6					
Sites A4 & A5 - Single Storey Retail Block	A4-SR-01		137.3	134.7					
	A4-SR-02		134.4	133.8					
	A4-SR-03		134.3	133.7					
	A4-SR-04		137.0	134.4					
	A5-SR-01		137.9	135.4					
	A5-SR-02		135.0	134.4					
	A5-SR-03		134.8	134.2					
	A5-SR-04		137.2	135.0					

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	10	16.5	24	31.5	37.5	
		mPD	7.9	16.4	22.9	30.4	37.9	43.9	
Site B - Podium (Western Portion)	BR-PP-01		135.2	133.9	132.4				
	BR-PP-02		134.6	133.5	132.1				
	BR-PP-03		134.8	133.9	132.5				
	BR-PP-04		136.7	136.2	132.9				
	BR-PP-05		143.5	134.9	129.5				
	BR-PP-06		145.0	135.3	128.9	120.3	120.7	119.9	
	BR-PP-07		144.7	135.6	128.4	120.2	120.7	119.9	
	BR-PP-08		137.8	135.9	132.4	121.0	120.7	118.7	
	BR-PP-09		136.3	134.6	132.4	121.3	120.6	119.2	
	BR-PP-10		137.5	135.2	132.2	121.3	120.7	119.0	

The 19th Highest Hourly NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	47	50.15					
		mPD	53.9	57.05					
Site B - Residential Towers	BR-T3-01		121.7	127.1					
	BR-T3-02		121.8	127.4					
	BR-T3-03		122.0	127.7					
	BR-T3-04		122.1	124.5					
	BR-T3-05		122.2	123.5					
	BR-T3-06		121.9	123.6					
	BR-T3-07		121.9	123.6					
	BR-T3-08		120.6	127.1					
	BR-T3-09		120.4	127.7					
	BR-T3-10		120.4	127.2					
	BR-T3-11		120.4	126.9					
	BR-T3-12		120.4	125.6					
	BR-T3-13		121.8	123.7					
	BR-T3-14		122.3	123.6					
	BR-T3-15		122.4	123.6					
	BR-T3-16		122.2	125.0					
	BR-T4-01		121.0	129.0					
	BR-T4-02		120.7	127.7					
	BR-T4-03		120.5	127.2					
	BR-T4-04		120.5	124.4					
	BR-T4-05		120.7	123.7					
	BR-T4-06		122.2	123.7					
	BR-T4-07		122.4	123.6					
	BR-T4-08		122.4	123.6					
	BR-T4-09		120.4	123.7					
	BR-T4-10		120.5	127.1					
	BR-T4-11		120.5	127.4					
	BR-T4-12		120.5	127.8					
	BR-T4-13		120.5	128.5					

The 19th Highest Hourly NO_2 Concentration ($\mu g/m^3$) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	9	11	19			
		mPD	8.4	15.9	17.9	25.9			
Site B - Podium (Eastern Portion)	BH-PP-01		144.7	136.5	135.7	121.1			
	BH-PP-02		138.6	136.1	135.6	121.6			
	BH-PP-03		138.4	135.8	135.7	121.6			
	BH-PP-04		138.6	135.8	135.3	121.9			
	BH-PP-05		142.9	136.7	135.1	121.1			
	BH-PP-06		144.3	136.0	134.7	120.9			

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	28	32.2					
		mPD	34.9	39.1					
Site B - Hotel / Office Tower	BH-TT-01		119.9	120.1					
	BH-TT-02		119.9	119.8					
	BH-TT-03		119.9	120.7					
	BH-TT-04		120.1	120.7					
	BH-TT-05		119.9	120.7					
	BH-TT-06		119.9	120.7					

	Assessment Point		Annual Averaged NO_2 Concentration ($\mu g/m^3$) at different Height						
		mAG	1.5	5.5					
		mPD	7.4	12.4					
Site B -Single Storey Retails	BB-SR-01		134.4	133.6					
	BB-SR-02		134.4	133.3					
	BB-SR-03		133.4	133.2					
	BB-SR-04		134.2	134.0					
	BB-SR-05		134.2	134.1					

The 10th Highest Daily Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point	mAG	1.5	7.5	12	16.5	21.5		
		mPD	7.5	13.5	18	22.5	27.5		
Site A1 - Podium	A1-PP-01		62.4	62.3	62.3	62.3	61.6		
	A1-PP-02		62.4	62.3	62.3	62.3	61.6		
	A1-PP-03		62.4	62.3	62.3	62.3	61.6		
	A1-PP-04		62.4	62.3	62.3	62.2	61.6		
	A1-PP-05		62.4	62.3	62.3	62.2	61.5		
	A1-PP-06		62.3	62.3	62.3	62.2	61.5		
	A1-PP-07		62.3	62.3	62.3	62.2	61.5		
	A1-PP-08		62.3	62.3	62.3	62.2	61.5		
	A1-PP-09		62.3	62.3	62.3	62.2	61.5		
	A1-PP-10		62.3	62.3	62.3	62.3	61.6		

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	25	28.15					
		mPD	31	34.15					
Site A1 - Residential Towers	A1-T1-01		61.5	61.5					
	A1-T1-02		61.5	61.5					
	A1-T1-03		61.5	61.5					
	A1-T1-04		61.5	61.5					
	A1-T1-05		61.5	61.5					
	A1-T1-06		61.5	61.5					
	A1-T1-07		61.5	61.5					
	A1-T2-01		61.5	61.5					
	A1-T2-02		61.5	61.5					
	A1-T2-03		61.5	61.5					
	A1-T2-04		61.5	61.5					
	A1-T2-05		61.5	61.5					
	A1-T2-06		61.5	61.5					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5						
		mPD	8.3						
Sites A2 & A3 - Open Space	A2-OA-01		62.4						
	A2-OA-02		62.4						
	A2-OA-03		62.3						
	A2-OA-04		62.3						
	A3-OA-01		62.3						
	A3-OA-02		62.3						
	A3-OA-03		62.3						
	A3-OA-04		62.3						

The 10th Highest Daily Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	8.6	12.6					
Sites A4 & A5 - Single Storey Retail Block	A4-SR-01		62.4	62.3					
	A4-SR-02		62.3	62.3					
	A4-SR-03		62.3	62.3					
	A4-SR-04		62.4	62.3					
	A5-SR-01		62.4	62.3					
	A5-SR-02		62.4	62.3					
	A5-SR-03		62.4	62.3					
	A5-SR-04		62.4	62.3					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	10	16.5	24	31.5	37.5	
		mPD	7.9	16.4	22.9	30.4	37.9	43.9	
Site B - Podium (Western Portion)	BR-PP-01		62.3	62.3	62.2				
	BR-PP-02		62.3	62.3	62.2				
	BR-PP-03		62.3	62.3	62.2				
	BR-PP-04		62.3	62.3	62.2				
	BR-PP-05		62.5	62.3	62.2				
	BR-PP-06		62.6	62.3	62.2	61.5	61.5	60.9	
	BR-PP-07		62.6	62.3	62.2	61.5	61.5	60.9	
	BR-PP-08		62.3	62.3	62.2	61.5	61.5	60.9	
	BR-PP-09		62.3	62.3	62.2	61.5	61.5	60.9	
	BR-PP-10		62.3	62.3	62.2	61.5	61.5	60.9	

The 10th Highest Daily Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	47	50.15					
		mPD	53.9	57.05					
Site B - Residential Towers	BR-T3-01		60.9	60.9					
	BR-T3-02		60.9	60.9					
	BR-T3-03		60.9	60.9					
	BR-T3-04		60.9	60.9					
	BR-T3-05		60.9	60.9					
	BR-T3-06		60.9	60.9					
	BR-T3-07		60.9	60.9					
	BR-T3-08		60.9	60.9					
	BR-T3-09		60.9	60.9					
	BR-T3-10		60.9	60.9					
	BR-T3-11		60.9	60.9					
	BR-T3-12		60.9	60.9					
	BR-T3-13		60.9	60.9					
	BR-T3-14		60.9	60.9					
	BR-T3-15		60.9	60.9					
	BR-T3-16		60.9	60.9					
	BR-T4-01		60.9	60.9					
	BR-T4-02		60.9	60.9					
	BR-T4-03		60.9	60.9					
	BR-T4-04		60.9	60.9					
	BR-T4-05		60.9	60.9					
	BR-T4-06		60.9	60.9					
	BR-T4-07		60.9	60.9					
	BR-T4-08		60.9	60.9					
	BR-T4-09		60.9	60.9					
	BR-T4-10		60.9	60.9					
	BR-T4-11		60.9	60.9					
	BR-T4-12		60.9	60.9					
	BR-T4-13		60.9	60.9					

The 10th Highest Daily Averaged RSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	9	11	19			
		mPD	8.4	15.9	17.9	25.9			
Site B - Podium (Eastern Portion)	BH-PP-01		62.7	62.3	62.3	61.5			
	BH-PP-02		62.5	62.3	62.3	61.5			
	BH-PP-03		62.4	62.3	62.3	61.5			
	BH-PP-04		62.4	62.3	62.3	61.5			
	BH-PP-05		62.5	62.3	62.3	61.5			
	BH-PP-06		62.6	62.3	62.3	61.5			

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	28	32.2					
		mPD	34.9	39.1					
Site B - Hotel / Office Tower	BH-TT-01		61.5	61.5					
	BH-TT-02		61.5	61.5					
	BH-TT-03		61.5	61.5					
	BH-TT-04		61.5	61.5					
	BH-TT-05		61.5	61.5					
	BH-TT-06		61.5	61.5					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	7.4	12.4					
Site B -Single Storey Retails	BB-SR-01		62.3	62.3					
	BB-SR-02		62.3	62.3					
	BB-SR-03		62.3	62.3					
	BB-SR-04		62.3	62.3					
	BB-SR-05		62.3	62.3					

The 36th Highest Daily Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point	mAG	1.5	7.5	12	16.5	21.5		
		mPD	7.5	13.5	18	22.5	27.5		
Site A1 - Podium	A1-PP-01		24.2	24.2	24.1	24.1	23.8		
	A1-PP-02		24.2	24.2	24.1	24.1	23.8		
	A1-PP-03		24.2	24.1	24.1	24.1	23.8		
	A1-PP-04		24.2	24.1	24.1	24.1	23.8		
	A1-PP-05		24.2	24.1	24.1	24.1	23.8		
	A1-PP-06		24.2	24.1	24.1	24.1	23.8		
	A1-PP-07		24.2	24.1	24.1	24.1	23.8		
	A1-PP-08		24.2	24.1	24.1	24.1	23.8		
	A1-PP-09		24.2	24.2	24.1	24.1	23.8		
	A1-PP-10		24.2	24.2	24.1	24.1	23.8		

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	25	28.15					
		mPD	31	34.15					
Site A1 - Residential Towers	A1-T1-01		23.8	23.7					
	A1-T1-02		23.8	23.7					
	A1-T1-03		23.8	23.7					
	A1-T1-04		23.7	23.7					
	A1-T1-05		23.7	23.7					
	A1-T1-06		23.7	23.7					
	A1-T1-07		23.7	23.7					
	A1-T2-01		23.8	23.7					
	A1-T2-02		23.8	23.7					
	A1-T2-03		23.8	23.7					
	A1-T2-04		23.8	23.7					
	A1-T2-05		23.8	23.7					
	A1-T2-06		23.8	23.7					

The 36th Highest Daily Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5						
		mPD	8.3						
Sites A2 & A3 - Open Space	A2-OA-01		24.2						
	A2-OA-02		24.2						
	A2-OA-03		24.2						
	A2-OA-04		24.2						
	A3-OA-01		24.2						
	A3-OA-02		24.2						
	A3-OA-03		24.2						
	A3-OA-04		24.2						

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	8.6	12.6					
Sites A4 & A5 - Single Storey Retail Block	A4-SR-01		24.2	24.1					
	A4-SR-02		24.2	24.1					
	A4-SR-03		24.2	24.1					
	A4-SR-04		24.2	24.1					
	A5-SR-01		24.2	24.1					
	A5-SR-02		24.2	24.2					
	A5-SR-03		24.2	24.1					
	A5-SR-04		24.2	24.1					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	10	16.5	24	31.5	37.5	
		mPD	7.9	16.4	22.9	30.4	37.9	43.9	
Site B - Podium (Western Portion)	BR-PP-01		24.2	24.1	24.1				
	BR-PP-02		24.2	24.1	24.1				
	BR-PP-03		24.2	24.1	24.1				
	BR-PP-04		24.2	24.1	24.1				
	BR-PP-05		24.3	24.1	24.1				
	BR-PP-06		24.4	24.1	24.1	23.8	23.7	23.2	
	BR-PP-07		24.4	24.1	24.1	23.8	23.7	23.2	
	BR-PP-08		24.2	24.2	24.1	23.8	23.7	23.2	
	BR-PP-09		24.2	24.2	24.1	23.8	23.7	23.2	
	BR-PP-10		24.2	24.1	24.1	23.8	23.7	23.2	

The 36th Highest Daily Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	47	50.15					
		mPD	53.9	57.05					
Site B - Residential Towers	BR-T3-01		23.2	23.2					
	BR-T3-02		23.2	23.2					
	BR-T3-03		23.2	23.2					
	BR-T3-04		23.2	23.2					
	BR-T3-05		23.2	23.2					
	BR-T3-06		23.2	23.2					
	BR-T3-07		23.2	23.2					
	BR-T3-08		23.2	23.2					
	BR-T3-09		23.2	23.2					
	BR-T3-10		23.2	23.2					
	BR-T3-11		23.2	23.2					
	BR-T3-12		23.2	23.2					
	BR-T3-13		23.2	23.2					
	BR-T3-14		23.2	23.2					
	BR-T3-15		23.2	23.2					
	BR-T3-16		23.2	23.2					
	BR-T4-01		23.2	23.2					
	BR-T4-02		23.2	23.2					
	BR-T4-03		23.2	23.2					
	BR-T4-04		23.2	23.2					
	BR-T4-05		23.2	23.2					
	BR-T4-06		23.2	23.2					
	BR-T4-07		23.2	23.2					
	BR-T4-08		23.2	23.2					
	BR-T4-09		23.2	23.2					
	BR-T4-10		23.2	23.2					
	BR-T4-11		23.2	23.2					
	BR-T4-12		23.2	23.2					
	BR-T4-13		23.2	23.2					

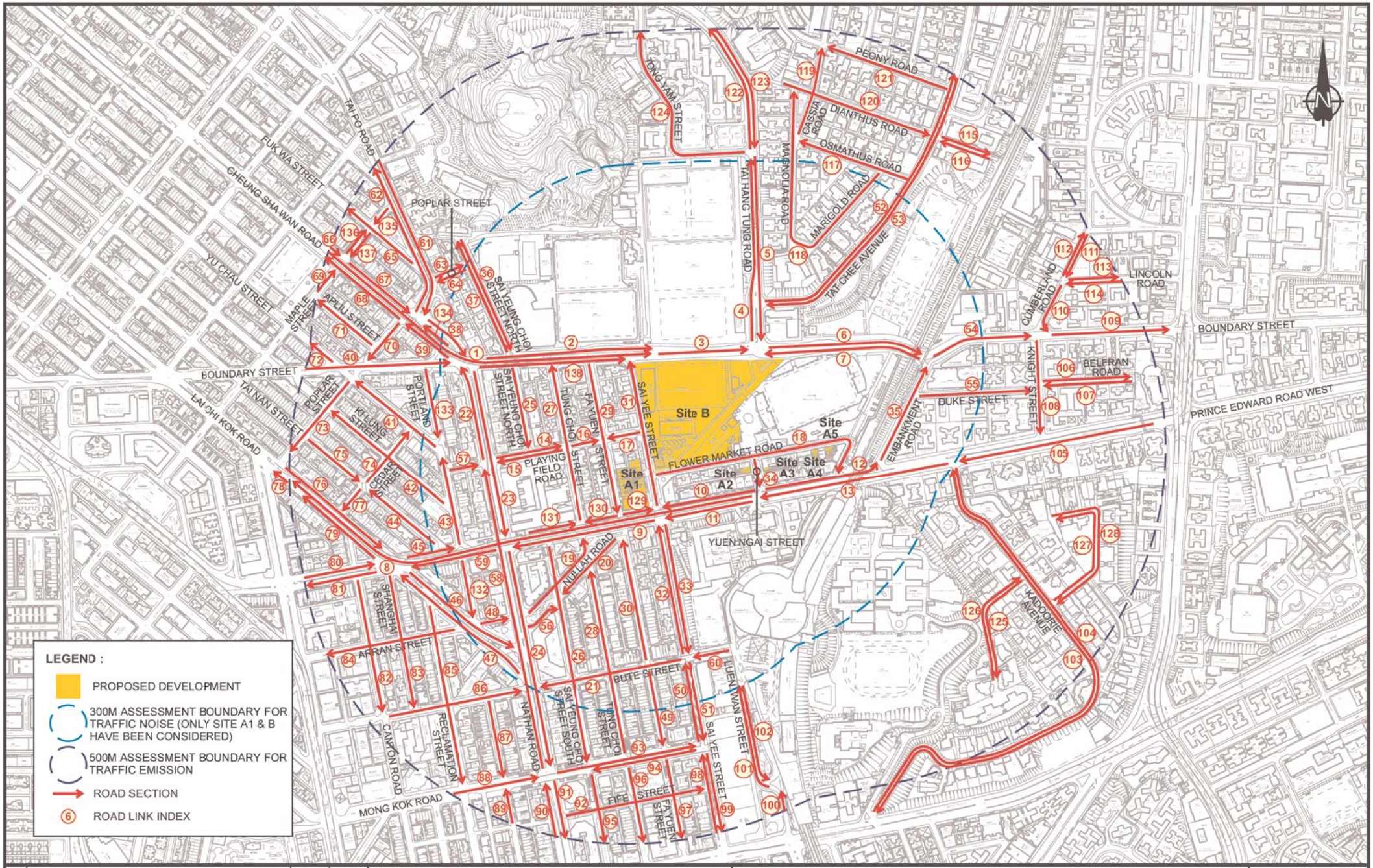
The 36th Highest Daily Averaged FSP Concentration (µg/m^3) at different Height

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	9	11	19			
		mPD	8.4	15.9	17.9	25.9			
Site B - Podium (Eastern Portion)	BH-PP-01		24.5	24.1	24.1	23.8			
	BH-PP-02		24.3	24.2	24.1	23.8			
	BH-PP-03		24.3	24.2	24.1	23.8			
	BH-PP-04		24.3	24.2	24.1	23.8			
	BH-PP-05		24.3	24.1	24.1	23.8			
	BH-PP-06		24.4	24.1	24.1	23.8			

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	28	32.2					
		mPD	34.9	39.1					
Site B - Hotel / Office Tower	BH-TT-01		23.8	23.7					
	BH-TT-02		23.8	23.7					
	BH-TT-03		23.8	23.7					
	BH-TT-04		23.8	23.7					
	BH-TT-05		23.8	23.7					
	BH-TT-06		23.8	23.7					

	Assessment Point		Annual Averaged NO_2 Concentration (µg/m^3) at different Height						
		mAG	1.5	5.5					
		mPD	7.4	12.4					
Site B -Single Storey Retails	BB-SR-01		24.2	24.1					
	BB-SR-02		24.2	24.1					
	BB-SR-03		24.2	24.1					
	BB-SR-04		24.2	24.2					
	BB-SR-05		24.2	24.2					

APPENDIX 4-1
PREDICTED TRAFFIC FLOW AT PEAK HOUR IN YEAR 2049



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

URBAN RENEWAL AUTHORITY
DEVELOPMENT SCHEME AT MONG KOK
(YMAA1-01-P1)

Drawing Title

ENVIRONMENTAL ASSESSMENT STUDY AREA AND ROAD LINKS

Designed	Checked	Scale	Date	Drawing No.	Rev.
CHM	HWL	NTS	AUG 2023	1	-

SYSTRA MVA

CHK50755110/EIA/F1.CDR/LLH/29AUG23

Original Size : A3

Predicted Traffic Flow at Peak Hours of Year 2050

Road ID	Road	Direction	At grade / Flyover	Speed Limit (km/hr)	AM Peak		PM Peak	
					Traffic	% Heavy	Traffic	% Heavy
1	Boundary Street (FO)	EB	FO	50	845	15%	915	15%
2	Boundary Street	EB	At grade	50	905	35%	1030	15%
3	Boundary Street	EB	At grade	50	2325	25%	2605	15%
4	Tai Hang Tung Road	NB	At grade	50	735	25%	690	15%
5	Tai Hang Tung Road	SB	At grade	50	730	25%	840	15%
6	Boundary Street	EB	At grade	50	2775	25%	2825	15%
7	Boundary Street	WB	At grade	50	530	25%	695	15%
8	Prince Edward Road West (FO)	WB	FO	50	1295	20%	1110	15%
9	Prince Edward Road West	WB	At grade	50	2165	30%	2370	15%
10	Prince Edward Road West	WB	At grade	50	30	20%	25	20%
11	Prince Edward Road West	WB	At grade	50	1965	30%	2180	20%
12	Prince Edward Road West	EB	At grade	50	105	60%	70	25%
13	Prince Edward Road West	WB	At grade	50	3130	25%	3775	20%
14	Playing Field Road	EB	At grade	50	45	25%	50	20%
15	Playing Field Road	WB	At grade	50	205	40%	255	20%
16	Playing Field Road	EB	At grade	50	55	30%	10	10%
17	Playing Field Road	WB	At grade	50	75	20%	70	10%
18	Flower Market Road	EB	At grade	50	185	50%	195	15%
19	Nullah Road	EB	At grade	50	60	15%	75	10%
20	Nullah Road	WB	At grade	50	75	30%	135	30%
21	Bute Street	WB	At grade	50	250	50%	295	30%
22	Nathan Road	NB	At grade	50	1380	40%	1605	30%
23	Nathan Road	SB	At grade	50	1755	40%	1500	25%
24	Nathan Road	SB	At grade	50	2230	50%	2020	30%
25	Sai Yeung Choi Street North	SB	At grade	50	110	30%	190	15%
26	Sai Yeung Choi Street South	SB	At grade	50	685	30%	665	25%
27	Tung Choi Street	SB	At grade	50	470	30%	610	15%
28	Tung Choi Street	NB	At grade	50	105	25%	135	25%
29	Fa Yuen Street	SB	At grade	50	550	35%	515	10%
30	Fa Yuen Street	NB	At grade	50	30	50%	20	25%
31	Sai Yee Street	NB	At grade	50	380	30%	530	10%
32	Sai Yee Street	NB	At grade	50	500	35%	700	20%
33	Sai Yee Street	SB	At grade	50	550	40%	505	35%
34	Yuen Ngai Street	SB	At grade	50	135	55%	90	15%
35	Embankment Road	NB	At grade	50	1000	35%	900	15%
36	Sai Yeung Choi Street North	SB	At grade	50	445	30%	280	15%
37	Sai Yeung Choi Street North	NB	At grade	50	45	30%	60	10%
38	Cheung Sha Wan Road	SB	At grade	50	1545	35%	1320	25%

Predicted Traffic Flow at Peak Hours of Year 2050

Road ID	Road	Direction	At grade / Flyover	Speed Limit (km/hr)	AM Peak		PM Peak	
					Traffic	% Heavy	Traffic	% Heavy
39	Cheung Sha Wan Road	NB	At grade	50	445	40%	605	30%
40	Boundary Street	EB	At grade	50	815	35%	1050	20%
41	Yu Chau Street	NB	At grade	50	535	40%	500	20%
42	Ki Lung Street	NB	At grade	50	50	40%	60	15%
43	Portland Street	NB	At grade	50	660	45%	590	20%
44	Tai Nan Street	NB	At grade	50	255	35%	285	25%
45	Prince Edward Road West	EB	At grade	50	345	40%	365	20%
46	Lai Chi Kok Road	SB	At grade	50	395	40%	400	20%
47	Lai Chi Kok Road	NB	At grade	50	435	60%	455	40%
48	Arran Street	EB	At grade	50	100	40%	185	30%
49	Fa Yuen Street	SB	At grade	50	25	50%	45	25%
50	Sai Yee Street	NB	At grade	50	570	35%	700	15%
51	Sai Yee Street	SB	At grade	50	810	45%	730	35%
52	Tat Chee Avenue	NB	At grade	50	360	25%	370	15%
53	Tat Chee Avenue	SB	At grade	50	290	25%	300	15%
54	Boundary Street	EB	At grade	50	3215	30%	3060	15%
55	Duke Street	EB	At grade	50	90	25%	70	20%
56	Nullah Road	EB	At grade	50	195	30%	250	15%
57	Playing Field Road	EB	At grade	50	285	40%	360	20%
58	Nathan Road	NB	At grade	50	735	55%	1055	45%
59	Prince Edward Road West	WB	At grade	50	1370	30%	1335	15%
60	Bute Street	WB	At grade	50	215	30%	310	40%
118	Marigold Road & Magnolia Road	NB	At grade	50	45	20%	40	15%
129	Prince Edward Road West	EB	At grade	50	140	30%	95	30%
130	Prince Edward Road West	WB	At grade	50	20	25%	80	30%
131	Prince Edward Road West	EB	At grade	50	80	30%	95	30%
132	Portland Street	SB	At grade	50	215	30%	385	30%
133	Portland Street	SB	At grade	50	85	30%	55	25%
134	Cheung Sha Wan Road	NB	At grade	50	365	30%	505	30%
138	Boundary Street	EB	At grade	50	560	30%	660	30%

APPENDIX 4-2
TRAFFIC NOISE ASSESSMENT RESULTS
(BASE SCENARIO)

Predicted Traffic Noise Level - Tower 1 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 1 (by assessment point)

NSR ID		T1-01-W1	T1-01-W2	T1-01-W3	T1-01-LB	T1-02-W1	T1-02-W2	T1-02-LB	T1-03-LB	T1-03-W1	T1-03-W2	T1-04-W1	T1-04-W2	T1-04-LB	T1-05-W1	T1-05-LB	T1-06-W1	T1-06-LB	T1-07-W1	T1-07-W2	T1-07-LB	T1-07-W3	T1-07-W4
Floor	mPD	L10, 1hr (dB(A))																					
38/F	147.25	69.9	67.8	65.2	65.4	65.8	65.9	65.8	65.5	65.0	60.9	60.2	64.2	62.6	63.2	62.1	67.9	70.1	**72.7**	**73.7**	**71.3**	**72.1**	**71.8**
37/F	144.10	69.9	67.8	65.1	65.3	65.7	65.9	65.8	65.5	65.0	61.0	60.2	64.3	62.6	63.3	62.1	67.9	70.2	**72.8**	**73.9**	**71.3**	**72.2**	**71.9**
36/F	140.95	69.9	67.9	65.1	65.3	65.7	65.9	65.8	65.5	65.0	61.0	60.3	64.3	62.7	63.3	62.2	68.0	70.3	**72.9**	**74.0**	**71.4**	**72.3**	**72.0**
35/F	137.80	69.9	67.9	65.0	65.3	65.6	65.9	65.7	65.5	65.0	61.0	60.3	64.3	62.7	63.4	62.3	68.0	70.3	**73.0**	**74.0**	**71.4**	**72.4**	**72.0**
34/F	134.65	70.0	68.0	65.0	65.2	65.6	65.8	65.7	65.4	65.0	61.0	60.4	64.3	62.8	63.4	62.3	68.0	70.4	**73.0**	**74.1**	**71.5**	**72.4**	**72.1**
33/F	131.50	70.0	68.0	65.0	65.1	65.5	65.8	65.7	65.4	64.9	61.0	60.4	64.3	62.8	63.4	62.4	68.1	70.4	**73.1**	**74.2**	**71.6**	**72.5**	**72.1**
32/F	128.35	70.0	68.1	64.9	65.1	65.5	65.7	65.6	65.3	64.9	61.0	60.5	64.3	62.8	63.5	62.5	68.1	**70.5**	**73.2**	**74.3**	**71.6**	**72.5**	**72.2**
31/F	125.20	70.1	68.1	64.9	65.1	65.4	65.6	65.5	65.2	64.8	61.0	60.5	64.3	62.9	63.5	62.5	68.2	**70.6**	**73.3**	**74.4**	**71.7**	**72.6**	**72.2**
30/F	122.05	70.2	68.2	65.0	65.1	65.4	65.6	65.5	65.2	64.8	61.0	60.6	64.3	62.9	63.5	62.6	68.2	**70.7**	**73.4**	**74.4**	**71.8**	**72.7**	**72.3**
29/F	118.90	70.2	68.3	65.0	65.1	65.3	65.6	65.4	65.1	64.6	61.0	60.6	64.3	62.9	63.5	62.6	68.2	**70.7**	**73.5**	**74.6**	**71.9**	**72.8**	**72.4**
28/F	115.75	70.2	68.4	65.0	65.1	65.3	65.5	65.3	65.0	64.5	61.0	60.7	64.3	63.0	63.5	62.7	68.2	**70.8**	**73.6**	**74.6**	**71.9**	**72.8**	**72.4**
27/F	112.60	70.3	68.5	65.1	65.1	65.3	65.5	65.3	64.8	64.4	61.0	60.7	64.2	63.0	63.6	62.8	68.2	**70.8**	**73.7**	**74.7**	**71.9**	**72.9**	**72.4**
26/F	109.45	70.4	68.5	65.1	65.2	65.3	65.5	65.2	64.8	64.3	61.1	60.8	64.2	63.0	63.6	62.8	68.2	**70.9**	**73.8**	**74.9**	**72.0**	**72.9**	**72.5**
25/F	106.30	**70.5**	68.6	65.2	65.2	65.4	65.5	65.2	64.7	64.1	61.1	60.8	64.1	63.1	63.6	62.9	68.2	**70.9**	**73.9**	**75.0**	**72.0**	**73.0**	**72.5**
24/F	103.15	**70.5**	68.6	65.2	65.3	65.4	65.5	65.2	64.7	64.0	61.2	60.9	64.0	63.1	63.7	62.9	68.1	**71.0**	**74.0**	**75.1**	**72.1**	**73.0**	**72.5**
23/F	100.00	**70.5**	68.6	65.3	65.3	65.5	65.6	65.2	64.6	64.0	61.2	61.0	64.0	63.2	63.7	63.0	68.1	**71.0**	**74.1**	**75.2**	**72.1**	**73.0**	**72.6**
22/F	96.85	**70.5**	68.7	65.4	65.4	65.5	65.6	65.3	64.6	63.9	61.2	61.0	63.8	63.2	63.8	63.1	68.0	**71.0**	**74.2**	**75.3**	**72.0**	**73.1**	**72.6**
21/F	93.70	Refuge Floor																					
20/F	90.55																						
19/F	87.40	**70.5**	68.8	66.0	66.0	66.1	66.2	65.7	64.8	63.9	61.3	61.2	63.8	63.4	63.9	63.3	68.1	**71.2**	**74.4**	**75.5**	**72.1**	**73.2**	**72.8**
18/F	84.25	**70.5**	68.8	66.1	66.1	66.2	66.3	65.8	65.0	64.0	61.4	61.2	63.8	63.4	64.0	63.4	68.1	**71.3**	**74.5**	**75.5**	**72.1**	**73.3**	**72.8**
17/F	81.10	70.4	68.8	66.2	66.2	66.3	66.4	65.9	65.1	64.0	61.4	61.3	63.8	63.5	64.0	63.5	68.2	**71.4**	**74.6**	**75.6**	**72.1**	**73.4**	**72.9**
16/F	77.95	70.4	68.8	66.3	66.3	66.4	66.5	66.0	65.1	64.0	61.4	61.3	63.9	63.6	64.1	63.6	68.6	**71.7**	**74.8**	**75.8**	**72.1**	**73.5**	**73.0**
15/F	74.80	70.4	68.8	66.5	66.5	66.6	66.6	66.1	65.2	64.1	61.5	61.3	63.9	63.6	64.2	63.7	68.7	**71.8**	**74.9**	**75.9**	**72.2**	**73.5**	**73.0**
14/F	71.65	70.4	68.9	66.6	66.6	66.7	66.7	66.1	65.3	64.1	61.5	61.4	64.0	63.7	64.3	63.8	68.8	**71.9**	**75.1**	**76.1**	**72.2**	**73.6**	**73.1**
13/F	68.50	70.4	68.8	66.7	66.7	66.8	66.8	66.2	65.4	64.2	61.6	61.4	64.0	63.8	64.3	63.9	69.0	**72.1**	**75.3**	**76.1**	**72.2**	**73.6**	**73.1**
12/F	65.35	70.3	68.6	66.9	66.9	66.9	66.9	66.3	65.5	64.2	61.6	61.4	64.1	63.8	64.4	64.0	69.1	**72.3**	**75.5**	**76.2**	**72.1**	**73.6**	**73.0**
11/F	62.20	70.0	68.2	67.1	67.1	67.1	67.0	66.4	65.5	64.3	61.5	61.3	64.1	63.9	64.5	64.1	69.3	**72.4**	**75.7**	**76.3**	**72.0**	**73.6**	**73.0**
10/F	59.05	69.7	67.8	67.3	67.2	67.2	67.2	66.5	65.6	64.2	61.4	61.2	64.2	63.9	64.6	64.2	69.4	**72.6**	**75.9**	**76.4**	**71.9**	**73.5**	**73.0**
9/F	55.90	69.5	67.4	67.3	67.2	67.3	67.2	66.6	65.6	64.1	61.1	60.9	64.1	63.9	64.7	64.2	69.6	**72.8**	**76.1**	**76.6**	**72.0**	**73.6**	**72.9**
8/F	52.75	69.3	67.1	67.2	67.2	67.2	67.2	66.5	65.4	63.9	60.9	60.6	63.9	63.8	64.7	64.3	69.9	**73.1**	**76.3**	**76.8**	**72.1**	**73.7**	**73.1**
7/F	49.60	69.3	66.9	67.2	67.1	67.2	67.1	66.4	65.3	63.6	60.5	60.3	63.5	63.5	64.6	64.3	70.2	**73.2**	**76.5**	**77.0**	**72.3**	**73.9**	**73.3**
6/F	46.45	69.4	66.8	67.1	67.0	67.1	67.0	66.3	65.1	63.3	60.2	60.2	63.3	63.2	64.4	64.4	70.4	**73.5**	**76.7**	**77.2**	**72.5**	**74.1**	**73.5**
5/F	43.30	69.6	66.8	67.0	67.0	67.1	67.0	66.2	65.0	63.0	59.8	59.9	63.0	62.8	64.1	63.9	**70.5**	**73.6**	**76.9**	**77.4**	**72.7**	**74.3**	**73.7**
4/F	40.15	69.9	66.8	67.0	66.9	67.0	66.9	66.1	64.8	62.6	59.3	59.6	62.6	62.4	63.6	63.5	**70.6**	**73.8**	**77.1**	**77.7**	**73.0**	**74.6**	**74.0**
3/F	37.00	70.1	66.8	66.9	66.8	66.9	66.8	65.9	64.5	62.1	58.7	59.1	62.0	61.8	63.1	62.8	**70.5**	**73.9**	**77.3**	**77.9**	**73.3**	**74.9**	**74.3**
2/F	33.85	70.4	66.3	66.7	66.6	66.8	66.6	65.6	64.0	61.1	58.2	58.4	61.1	60.9	62.4	62.0	**70.5**	**74.0**	**77.4**	**78.1**	**73.6**	**75.2**	**74.5**
1/F	30.70	**70.5**	63.5	65.9	66.0	66.4	66.2	65.3	63.4	59.9	57.5	57.6	60.0	59.9	61.3	61.0	70.4	**74.0**	**77.5**	**78.4**	**73.8**	**75.4**	**74.8**

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 1 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 1 (by flat)

Flat		T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07
Floor	mPD	L10, 1hr (dB(A))						
38/F	147.25	69.9	65.9	65.5	64.2	63.2	70.1	**73.7**
37/F	144.1	69.9	65.9	65.5	64.3	63.3	70.2	**73.9**
36/F	140.95	69.9	65.9	65.5	64.3	63.3	70.3	**74.0**
35/F	137.8	69.9	65.9	65.5	64.3	63.4	70.3	**74.0**
34/F	134.65	70.0	65.8	65.4	64.3	63.4	70.4	**74.1**
33/F	131.5	70.0	65.8	65.4	64.3	63.4	70.4	**74.2**
32/F	128.35	70.0	65.7	65.3	64.3	63.5	**70.5**	**74.3**
31/F	125.2	70.1	65.6	65.2	64.3	63.5	**70.6**	**74.4**
30/F	122.05	70.2	65.6	65.2	64.3	63.5	**70.7**	**74.4**
29/F	118.9	70.2	65.6	65.1	64.3	63.5	**70.7**	**74.6**
28/F	115.75	70.2	65.5	65.0	64.3	63.5	**70.8**	**74.6**
27/F	112.6	70.3	65.5	64.8	64.2	63.6	**70.8**	**74.7**
26/F	109.45	70.4	65.5	64.8	64.2	63.6	**70.9**	**74.9**
25/F	106.3	**70.5**	65.5	64.7	64.1	63.6	**70.9**	**75.0**
24/F	103.15	**70.5**	65.5	64.7	64.0	63.7	**71.0**	**75.1**
23/F	100	**70.5**	65.6	64.6	64.0	63.7	**71.0**	**75.2**
22/F	96.85	**70.5**	65.6	64.6	63.8	63.8	**71.0**	**75.3**
21/F	93.7	Refuge Floor						
20/F	90.55							
19/F	87.4	**70.5**	66.2	64.8	63.8	63.9	**71.2**	**75.5**
18/F	84.25	**70.5**	66.3	65.0	63.8	64.0	**71.3**	**75.5**
17/F	81.1	70.4	66.4	65.1	63.8	64.0	**71.4**	**75.6**
16/F	77.95	70.4	66.5	65.1	63.9	64.1	**71.7**	**75.8**
15/F	74.8	70.4	66.6	65.2	63.9	64.2	**71.8**	**75.9**
14/F	71.65	70.4	66.7	65.3	64.0	64.3	**71.9**	**76.1**
13/F	68.5	70.4	66.8	65.4	64.0	64.3	**72.1**	**76.1**
12/F	65.35	70.3	66.9	65.5	64.1	64.4	**72.3**	**76.2**
11/F	62.2	70.0	67.1	65.5	64.1	64.5	**72.4**	**76.3**
10/F	59.05	69.7	67.2	65.6	64.2	64.6	**72.6**	**76.4**
9/F	55.9	69.5	67.3	65.6	64.1	64.7	**72.8**	**76.6**
8/F	52.75	69.3	67.2	65.4	63.9	64.7	**73.1**	**76.8**
7/F	49.6	69.3	67.2	65.3	63.5	64.6	**73.2**	**77.0**
6/F	46.45	69.4	67.1	65.1	63.3	64.4	**73.5**	**77.2**
5/F	43.3	69.6	67.1	65.0	63.0	64.1	**73.6**	**77.4**
4/F	40.15	69.9	67.0	64.8	62.6	63.6	**73.8**	**77.7**
3/F	37	70.1	66.9	64.5	62.0	63.1	**73.9**	**77.9**
2/F	33.85	70.4	66.8	64.0	61.1	62.4	**74.0**	**78.1**
1/F	30.7	**70.5**	66.4	63.4	60.0	61.3	**74.0**	**78.4**

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 2 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 2 (by assessment point)

NSR ID		T2-01-W1	T2-01-W2	T2-01-LB	T2-01-W3	T2-02-LB	T2-02-W1	T2-02-W2	T2-03-LB	T2-03-W1	T2-03-W2	T2-04-LB	T2-04-W1	T2-04-W2	T2-05-W1	T2-05-W2	T2-05-LB	T2-05-W3	T2-05-W4	T2-06-W1	T2-06-W2	T2-06-LB
Floor	mPD	L10, 1hr (dB(A))																				
38/F	147.25	65.9	65.9	65.3	67.3	68.6	68.8	67.9	67.0	67.2	66.7	65.7	65.5	65.3	69.0	70.1	70.2	70.4	63.5	67.3	65.9	63.6
37/F	144.10	65.8	65.9	65.2	67.2	68.7	68.8	67.9	67.0	67.2	66.7	65.7	65.4	65.2	69.0	70.2	70.2	70.4	63.5	67.3	65.9	63.6
36/F	140.95	65.8	65.9	65.2	67.2	68.7	68.9	67.9	67.1	67.2	66.7	65.7	65.4	65.1	69.1	70.2	70.2	70.4	63.4	67.3	65.9	63.5
35/F	137.80	65.8	65.9	65.2	67.2	68.7	68.9	67.9	67.1	67.2	66.7	65.7	65.4	65.1	69.1	70.3	70.3	**70.5**	63.4	67.3	65.8	63.5
34/F	134.65	65.8	65.9	65.2	67.3	68.8	68.9	67.9	67.1	67.3	66.7	65.7	65.4	65.1	69.2	70.3	70.3	**70.5**	63.3	67.3	65.8	63.4
33/F	131.50	65.8	65.8	65.1	67.2	68.8	69.0	68.0	67.2	67.3	66.8	65.7	65.4	65.1	69.2	70.3	70.4	**70.5**	63.3	67.2	65.8	63.3
32/F	128.35	65.7	65.8	65.1	67.3	68.9	69.1	68.1	67.2	67.4	66.8	65.8	65.4	65.1	69.3	70.4	70.4	**70.6**	63.2	67.2	65.8	63.3
31/F	125.20	65.7	65.8	65.1	67.3	69.0	69.1	68.2	67.3	67.4	66.8	65.8	65.5	65.1	69.3	**70.5**	**70.5**	**70.7**	63.2	67.2	65.8	63.3
30/F	122.05	65.7	65.8	65.1	67.3	69.0	69.2	68.2	67.4	67.5	66.9	65.9	65.5	65.2	69.3	**70.5**	**70.6**	**70.7**	63.1	67.2	65.7	63.2
29/F	118.90	65.7	65.8	65.0	67.3	69.1	69.3	68.3	67.4	67.5	67.0	65.9	65.6	65.2	69.5	**70.6**	**70.6**	**70.7**	63.1	67.2	65.7	63.2
28/F	115.75	65.7	65.8	65.0	67.3	69.2	69.4	68.4	67.5	67.6	67.0	66.0	65.6	65.3	69.5	**70.6**	**70.6**	**70.8**	63.1	67.2	65.7	63.1
27/F	112.60	65.7	65.7	65.0	67.4	69.2	69.4	68.4	67.6	67.7	67.1	66.1	65.7	65.3	69.5	**70.6**	**70.7**	**70.8**	63.0	67.2	65.7	63.1
26/F	109.45	65.7	65.7	65.0	67.4	69.3	69.5	68.5	67.7	67.8	67.2	66.1	65.8	65.4	69.5	**70.8**	**70.8**	**70.9**	63.0	67.1	65.7	63.1
25/F	106.30	65.7	65.7	65.0	67.5	69.4	69.6	68.6	67.8	67.8	67.2	66.3	65.8	65.4	69.6	**70.8**	**70.9**	**71.0**	62.9	67.1	65.7	63.0
24/F	103.15	65.7	65.7	65.0	67.6	69.5	69.7	68.7	67.9	67.9	67.3	66.3	65.9	65.5	69.6	**70.8**	**70.9**	**71.0**	62.8	67.1	65.7	63.0
23/F	100.00	65.7	65.7	64.9	67.6	69.6	69.8	68.8	68.0	68.0	67.4	66.4	66.0	65.6	69.6	**70.9**	**70.9**	**71.0**	62.7	67.0	65.7	62.9
22/F	96.85	65.7	65.7	64.9	67.7	69.7	69.9	69.0	68.2	68.2	67.7	66.7	66.3	65.9	69.5	**70.9**	**71.0**	**71.1**	62.5	67.0	65.7	62.9
21/F	93.70	65.7	65.7	64.9	67.7	69.8	70.0	69.1	68.3	68.4	67.8	66.9	66.4	66.0	69.5	**70.9**	**71.0**	**71.1**	62.4	66.9	65.6	62.8
20/F	90.55	Refuge Floor																				
19/F	87.40	65.6	65.6	64.9	67.8	70.0	70.2	69.3	68.5	68.6	68.0	67.1	66.6	66.3	69.5	**71.0**	**71.0**	**71.1**	61.9	66.7	65.5	62.6
18/F	84.25	65.6	65.6	64.9	67.9	70.1	70.3	69.4	68.6	68.7	68.1	67.2	66.7	66.4	69.4	**71.0**	**71.0**	**71.1**	61.7	66.6	65.5	62.4
17/F	81.10	65.5	65.5	64.9	68.0	70.2	70.4	69.6	68.8	68.8	68.2	67.3	66.8	66.5	69.4	**71.0**	**71.0**	**71.1**	61.4	66.5	65.4	62.2
16/F	77.95	65.4	65.5	64.9	68.0	70.3	**70.6**	69.7	68.9	68.9	68.3	67.4	67.0	66.6	69.4	**71.0**	**71.0**	**71.1**	61.0	66.3	65.2	61.9
15/F	74.80	65.3	65.4	64.9	68.2	70.4	**70.7**	69.8	69.0	69.1	68.5	67.6	67.1	66.7	69.4	**71.0**	**71.0**	**71.1**	60.7	66.2	65.1	61.7
14/F	71.65	65.2	65.4	64.9	68.3	**70.6**	**70.8**	69.9	69.1	69.2	68.6	67.7	67.2	66.8	69.3	**71.0**	**71.0**	**71.1**	60.4	66.0	65.0	61.6
13/F	68.50	65.0	65.2	64.9	68.4	**70.7**	**71.0**	70.1	69.2	69.3	68.7	67.8	67.4	67.0	69.2	**71.0**	**71.0**	**71.1**	60.1	65.7	64.8	61.4
12/F	65.35	64.8	65.0	64.9	68.5	**70.8**	**71.1**	70.2	69.4	69.5	68.9	68.1	67.6	67.2	69.1	**70.9**	**71.0**	**71.1**	59.6	65.3	64.4	61.2
11/F	62.20	64.6	64.9	64.9	68.6	**70.9**	**71.2**	70.4	69.5	69.6	69.1	68.2	67.7	67.4	68.8	**70.8**	**70.9**	**71.0**	59.2	64.9	64.0	60.8
10/F	59.05	64.4	64.8	64.9	68.7	**71.0**	**71.4**	**70.5**	69.6	69.7	69.2	68.4	67.9	67.5	68.5	**70.7**	**70.9**	**71.0**	58.8	64.6	63.6	60.4
9/F	55.90	64.2	64.7	65.1	68.8	**71.2**	**71.5**	**70.6**	69.8	69.9	69.4	68.5	67.9	67.5	68.3	**70.7**	**70.8**	**70.9**	58.3	64.4	63.4	60.2
8/F	52.75	64.4	64.7	65.2	69.0	**71.4**	**71.7**	**70.8**	70.0	70.1	69.5	68.6	67.9	67.5	68.2	**70.7**	**70.8**	**70.8**	57.3	64.2	63.3	60.5
7/F	49.60	64.4	64.9	65.4	69.2	**71.5**	**71.8**	**71.0**	70.1	70.2	69.6	68.6	67.9	67.4	68.0	**70.6**	**70.7**	**70.7**	56.9	63.8	63.0	60.5
6/F	46.45	64.5	65.0	65.6	69.4	**71.7**	**72.0**	**71.1**	70.2	70.3	69.7	68.5	67.8	67.3	67.9	**70.5**	**70.5**	**70.5**	56.8	63.6	62.9	60.6
5/F	43.30	64.6	65.3	65.8	69.6	**71.8**	**72.2**	**71.3**	70.4	70.4	69.6	68.4	67.8	67.3	67.8	70.4	**70.5**	70.4	56.7	63.5	62.9	61.1
4/F	40.15	64.9	65.7	66.3	70.0	**72.0**	**72.4**	**71.5**	70.4	70.3	69.5	68.4	67.7	67.3	67.7	**70.6**	**70.5**	**70.5**	56.7	63.4	62.9	61.2
3/F	37.00	65.0	65.8	66.5	70.3	**72.1**	**72.6**	**71.6**	70.3	70.1	69.4	68.3	67.6	67.2	67.7	**70.8**	**70.7**	**70.6**	56.5	63.2	62.6	61.2
2/F	33.85	64.9	66.0	66.8	**70.6**	**72.2**	**72.7**	**71.6**	70.0	69.8	69.1	68.0	67.3	66.9	67.2	**71.0**	**71.0**	**70.9**	56.1	63.1	62.2	61.1
1/F	30.70	64.3	65.8	66.9	**70.8**	**72.1**	**72.5**	**70.9**	69.1	69.1	68.3	66.9	66.2	65.9	64.4	**71.0**	**71.0**	**70.9**	55.3	62.9	61.9	60.6

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 2 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 2 (by flat)

Flat		T2-01	T2-02	T2-03	T2-04	T2-05	T2-06
Floor	mPD	L10, 1hr (dB(A))					
38/F	147.25	67.3	68.8	67.2	65.7	70.4	67.3
37/F	144.1	67.2	68.8	67.2	65.7	70.4	67.3
36/F	140.95	67.2	68.9	67.2	65.7	70.4	67.3
35/F	137.8	67.2	68.9	67.2	65.7	**70.5**	67.3
34/F	134.65	67.3	68.9	67.3	65.7	**70.5**	67.3
33/F	131.5	67.2	69.0	67.3	65.7	**70.5**	67.2
32/F	128.35	67.3	69.1	67.4	65.8	**70.6**	67.2
31/F	125.2	67.3	69.1	67.4	65.8	**70.7**	67.2
30/F	122.05	67.3	69.2	67.5	65.9	**70.7**	67.2
29/F	118.9	67.3	69.3	67.5	65.9	**70.7**	67.2
28/F	115.75	67.3	69.4	67.6	66.0	**70.8**	67.2
27/F	112.6	67.4	69.4	67.7	66.1	**70.8**	67.2
26/F	109.45	67.4	69.5	67.8	66.1	**70.9**	67.1
25/F	106.3	67.5	69.6	67.8	66.3	**71.0**	67.1
24/F	103.15	67.6	69.7	67.9	66.3	**71.0**	67.1
23/F	100	67.6	69.8	68.0	66.4	**71.0**	67.0
22/F	96.85	67.7	69.9	68.2	66.7	**71.1**	67.0
21/F	93.7	67.7	70.0	68.4	66.9	**71.1**	66.9
20/F	90.55	Refuge Floor					
19/F	87.4	67.8	70.2	68.6	67.1	**71.1**	66.7
18/F	84.25	67.9	70.3	68.7	67.2	**71.1**	66.6
17/F	81.1	68.0	70.4	68.8	67.3	**71.1**	66.5
16/F	77.95	68.0	**70.6**	68.9	67.4	**71.1**	66.3
15/F	74.8	68.2	**70.7**	69.1	67.6	**71.1**	66.2
14/F	71.65	68.3	**70.8**	69.2	67.7	**71.1**	66.0
13/F	68.5	68.4	**71.0**	69.3	67.8	**71.1**	65.7
12/F	65.35	68.5	**71.1**	69.5	68.1	**71.1**	65.3
11/F	62.2	68.6	**71.2**	69.6	68.2	**71.0**	64.9
10/F	59.05	68.7	**71.4**	69.7	68.4	**71.0**	64.6
9/F	55.9	68.8	**71.5**	69.9	68.5	**70.9**	64.4
8/F	52.75	69.0	**71.7**	70.1	68.6	**70.8**	64.2
7/F	49.6	69.2	**71.8**	70.2	68.6	**70.7**	63.8
6/F	46.45	69.4	**72.0**	70.3	68.5	**70.5**	63.6
5/F	43.3	69.6	**72.2**	70.4	68.4	**70.5**	63.5
4/F	40.15	70.0	**72.4**	70.4	68.4	**70.6**	63.4
3/F	37	70.3	**72.6**	70.3	68.3	**70.8**	63.2
2/F	33.85	**70.6**	**72.7**	70.0	68.0	**71.0**	63.1
1/F	30.7	**70.8**	**72.5**	69.1	66.9	**71.0**	62.9

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 3 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 3 (by assessment point)

NSR ID		T3-01-W1	T3-01-W2	T3-01-LB	T3-02-LB	T3-02-W1	T3-03-W1	T3-03-LB	T3-04-LB	T3-04-W1	T3-05-W1	T3-05-W2	T3-05-LB	T3-06-LB	T3-06-B1	T3-07-W1	T3-07-LB	T3-08-LB	T3-08-W1	T3-08-W2	T3-09-W1	T3-09-W2	T3-09-LB
Floor	mPD	L10, 1hr (dB(A))																					
31/F	147.60	66.9	65.9	65.2	65.3	65.4	65.4	65.5	65.6	65.6	65.6	65.6	65.6	65.5	65.4	65.4	65.4	65.3	66.4	65.7	67.9	67.9	68.0
30/F	144.45	66.9	65.9	65.2	65.3	65.3	65.4	65.5	65.5	65.6	65.6	65.6	65.6	65.5	65.4	65.5	65.4	65.3	66.4	65.7	68.0	68.0	68.0
29/F	141.30	66.8	65.9	65.3	65.2	65.3	65.3	65.4	65.5	65.5	65.6	65.6	65.6	65.5	65.5	65.5	65.4	65.3	66.4	65.8	68.0	68.0	68.0
28/F	138.15	66.8	65.9	65.2	65.3	65.2	65.3	65.3	65.4	65.5	65.5	65.5	65.6	65.5	65.5	65.5	65.4	65.4	66.5	65.8	68.0	68.0	68.0
27/F	135.00	66.8	65.9	65.2	65.3	65.3	65.2	65.3	65.3	65.4	65.5	65.5	65.5	65.5	65.5	65.5	65.4	65.4	66.5	65.8	68.0	68.0	68.1
26/F	131.85	66.8	65.8	65.1	65.2	65.2	65.3	65.2	65.2	65.3	65.4	65.4	65.5	65.5	65.4	65.5	65.4	65.4	66.5	65.9	68.1	68.1	68.1
25/F	128.70	66.8	65.8	65.1	65.1	65.1	65.2	65.3	65.2	65.2	65.3	65.3	65.4	65.4	65.4	65.5	65.4	65.4	66.6	66.0	68.1	68.1	68.1
24/F	125.55	66.8	65.8	65.0	65.0	65.1	65.1	65.2	65.3	65.2	65.2	65.2	65.3	65.4	65.4	65.4	65.4	65.4	66.6	66.0	68.1	68.1	68.1
23/F	122.40	66.8	65.8	65.0	65.0	65.0	65.0	65.1	65.1	65.2	65.1	65.2	65.2	65.3	65.3	65.4	65.4	65.4	66.6	66.0	68.2	68.2	68.2
22/F	119.25	66.8	65.8	65.0	65.0	65.0	65.0	65.0	65.0	65.1	65.2	65.1	65.1	65.2	65.2	65.3	65.3	65.4	66.6	66.1	68.2	68.2	68.2
21/F	116.10	66.8	65.7	64.9	64.9	64.9	64.9	64.9	64.9	65.0	65.0	65.1	65.0	65.1	65.1	65.3	65.3	65.3	66.6	66.1	68.3	68.2	68.2
20/F	112.95	66.8	65.7	64.8	64.8	64.8	64.8	64.8	64.9	64.9	64.9	65.0	65.0	65.0	65.0	65.2	65.2	65.3	66.6	66.1	68.3	68.3	68.3
19/F	109.80	66.7	65.7	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.9	65.0	64.9	65.0	65.1	65.2	66.6	66.1	68.3	68.3	68.3
18/F	106.65	66.7	65.6	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.7	64.8	64.8	64.9	64.9	65.0	65.1	66.5	66.1	68.4	68.3	68.3
17/F	103.50	66.7	65.5	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.7	64.7	65.0	64.9	64.9	66.5	66.1	68.4	68.4	68.4
16/F	100.35	66.6	65.5	64.5	64.5	64.5	64.5	64.4	64.4	64.5	64.5	64.5	64.5	64.5	64.6	64.7	64.9	64.8	66.4	66.1	68.4	68.4	68.4
15/F	97.20	66.5	65.3	64.3	64.3	64.3	64.3	64.3	64.3	64.3	64.3	64.3	64.4	64.4	64.4	64.6	64.7	64.8	66.4	66.1	68.5	68.4	68.4
14/F	94.05	66.5	65.2	64.2	64.2	64.1	64.1	64.1	64.1	64.2	64.2	64.2	64.2	64.3	64.3	64.5	64.5	64.6	66.4	66.1	68.5	68.5	68.5
13/F	90.90	66.4	65.1	64.0	63.9	63.9	63.9	63.9	63.9	64.0	64.0	64.0	64.1	64.1	64.1	64.3	64.4	64.4	66.3	66.1	68.6	68.5	68.5
12/F	87.75	66.3	64.9	63.8	63.8	63.7	63.7	63.7	63.7	63.8	63.8	63.8	63.9	63.9	64.0	64.1	64.2	64.3	66.2	66.0	68.6	68.6	68.5
11/F	84.60	66.2	64.8	63.6	63.5	63.5	63.5	63.4	63.4	63.5	63.6	63.6	63.7	63.7	63.8	64.0	64.0	64.1	66.2	66.1	68.7	68.6	68.6
10/F	81.45	66.1	64.6	63.3	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.3	63.4	63.5	63.5	63.8	63.8	63.9	66.1	66.1	68.7	68.7	68.7
9/F	78.30	65.9	64.3	62.9	62.9	62.9	62.8	62.8	62.8	62.9	62.9	63.0	63.1	63.2	63.3	63.6	63.7	63.8	66.1	66.1	68.8	68.7	68.7
8/F	75.15	65.7	64.0	62.5	62.4	62.4	62.4	62.4	62.5	62.5	62.6	62.7	62.8	62.9	63.1	63.4	63.5	63.7	66.0	66.1	68.8	68.8	68.8
7/F	72.00	65.4	63.6	61.9	61.9	61.9	61.9	62.0	62.1	62.2	62.3	62.4	62.6	62.8	62.9	63.2	63.3	63.6	66.0	66.1	68.9	68.8	68.8
6/F	68.85	65.2	63.1	61.2	61.3	61.4	61.5	61.6	61.8	61.9	62.1	62.2	62.4	62.6	62.7	63.0	63.2	63.4	66.0	66.1	69.0	68.9	68.9
5/F	65.70	65.0	62.8	60.8	60.7	60.8	60.9	61.1	61.3	61.5	61.8	62.0	62.3	62.5	62.6	62.9	63.1	63.3	65.9	66.0	69.0	69.0	68.9
4/F	62.55	64.8	62.5	60.2	60.3	60.4	60.5	60.6	60.8	61.1	61.4	61.7	62.0	62.2	62.4	62.8	62.9	63.0	65.8	65.9	69.1	69.0	69.0
3/F	59.40	64.7	62.2	59.8	59.9	59.9	60.0	60.1	60.3	60.5	60.8	61.1	61.6	61.9	62.1	62.3	62.4	62.7	65.7	65.7	69.2	69.1	69.0
2/F	56.25	64.5	61.9	59.3	59.4	59.4	59.5	59.6	59.7	59.9	60.2	60.5	60.8	61.2	61.5	61.8	61.9	62.1	65.5	65.6	69.2	69.2	69.1
1/F	53.10	64.4	61.6	58.8	58.9	58.9	59.0	59.0	59.1	59.2	59.3	59.5	59.8	60.2	60.4	60.7	61.1	61.5	65.2	65.3	69.3	69.2	69.2

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 3 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 3 (by flat)

Flat		T3-01	T3-02	T3-03	T3-04	T3-05	T3-06	T3-07	T3-08	T3-09
Floor	mPD	L10, 1hr (dB(A))								
31/F	147.6	66.9	65.4	65.5	65.6	65.6	65.5	65.4	66.4	68.0
30/F	144.45	66.9	65.3	65.5	65.6	65.6	65.5	65.5	66.4	68.0
29/F	141.3	66.8	65.3	65.4	65.5	65.6	65.5	65.5	66.4	68.0
28/F	138.15	66.8	65.3	65.3	65.5	65.6	65.5	65.5	66.5	68.0
27/F	135	66.8	65.3	65.3	65.4	65.5	65.5	65.5	66.5	68.1
26/F	131.85	66.8	65.2	65.3	65.3	65.5	65.5	65.5	66.5	68.1
25/F	128.7	66.8	65.1	65.3	65.2	65.4	65.4	65.5	66.6	68.1
24/F	125.55	66.8	65.1	65.2	65.3	65.3	65.4	65.4	66.6	68.1
23/F	122.4	66.8	65.0	65.1	65.2	65.2	65.3	65.4	66.6	68.2
22/F	119.25	66.8	65.0	65.0	65.1	65.2	65.2	65.3	66.6	68.2
21/F	116.1	66.8	64.9	64.9	65.0	65.1	65.1	65.3	66.6	68.3
20/F	112.95	66.8	64.8	64.8	64.9	65.0	65.0	65.2	66.6	68.3
19/F	109.8	66.7	64.8	64.8	64.8	64.9	65.0	65.1	66.6	68.3
18/F	106.65	66.7	64.7	64.7	64.7	64.8	64.9	65.0	66.5	68.4
17/F	103.5	66.7	64.6	64.6	64.6	64.6	64.7	65.0	66.5	68.4
16/F	100.35	66.6	64.5	64.5	64.5	64.5	64.6	64.9	66.4	68.4
15/F	97.2	66.5	64.3	64.3	64.3	64.4	64.4	64.7	66.4	68.5
14/F	94.05	66.5	64.2	64.1	64.2	64.2	64.3	64.5	66.4	68.5
13/F	90.9	66.4	63.9	63.9	64.0	64.1	64.1	64.4	66.3	68.6
12/F	87.75	66.3	63.8	63.7	63.8	63.9	64.0	64.2	66.2	68.6
11/F	84.6	66.2	63.5	63.5	63.5	63.7	63.8	64.0	66.2	68.7
10/F	81.45	66.1	63.2	63.2	63.2	63.4	63.5	63.8	66.1	68.7
9/F	78.3	65.9	62.9	62.8	62.9	63.1	63.3	63.7	66.1	68.8
8/F	75.15	65.7	62.4	62.4	62.5	62.8	63.1	63.5	66.1	68.8
7/F	72	65.4	61.9	62.0	62.2	62.6	62.9	63.3	66.1	68.9
6/F	68.85	65.2	61.4	61.6	61.9	62.4	62.7	63.2	66.1	69.0
5/F	65.7	65.0	60.8	61.1	61.5	62.3	62.6	63.1	66.0	69.0
4/F	62.55	64.8	60.4	60.6	61.1	62.0	62.4	62.9	65.9	69.1
3/F	59.4	64.7	59.9	60.1	60.5	61.6	62.1	62.4	65.7	69.2
2/F	56.25	64.5	59.4	59.6	59.9	60.8	61.5	61.9	65.6	69.2
1/F	53.1	64.4	58.9	59.0	59.2	59.8	60.4	61.1	65.3	69.3

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 3 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 3 (by assessment point)

NSR ID		T3-10-LB	T3-10-W1	T3-11-W1	T3-11-W2	T3-11-LB	T3-12-LB	T3-12-W1	T3-12-W2	T3-13-W1	T3-13-W2	T3-13-LB	T3-14-LB	T3-14-W1	T3-14-W2	T3-15-W1	T3-15-W2	T3-15-LB	T3-16-LB	T3-16-W1	T3-16-W2
Floor	mPD	L10, 1hr (dB(A))																			
31/F	147.6	67.9	67.9	67.4	67.4	67.4	67.4	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	68.0	68.0	68.0	68.1	68.1	68.3
30/F	144.45	68.0	68.0	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	68.0	68.0	68.0	68.1	68.1	68.3
29/F	141.3	68.0	68.0	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	68.0	68.0	68.1	68.1	68.1	68.3
28/F	138.15	68.0	68.0	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	68.0	68.0	68.1	68.1	68.1	68.3
27/F	135	68.0	68.0	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	67.6	68.0	68.0	68.1	68.1	68.1	68.3
26/F	131.85	68.1	68.0	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	67.6	68.0	68.0	68.1	68.1	68.1	68.3
25/F	128.7	68.1	68.1	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	67.6	68.1	68.1	68.1	68.1	68.2	68.3
24/F	125.55	68.1	68.1	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	67.6	68.1	68.1	68.1	68.1	68.2	68.4
23/F	122.4	68.2	68.2	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.5	67.6	67.6	67.6	67.6	68.1	68.1	68.1	68.1	68.2	68.4
22/F	119.25	68.2	68.2	67.6	67.6	67.6	67.6	67.6	67.6	67.5	67.6	67.6	67.6	67.6	67.6	68.1	68.1	68.1	68.1	68.2	68.4
21/F	116.1	68.2	68.2	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	68.1	68.1	68.1	68.2	68.2	68.4
20/F	112.95	68.3	68.2	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	68.1	68.1	68.1	68.2	68.2	68.4
19/F	109.8	68.3	68.3	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	68.1	68.2	68.2	68.2	68.2	68.4
18/F	106.65	68.3	68.3	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.7	68.2	68.2	68.2	68.2	68.3	68.5
17/F	103.5	68.3	68.3	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.7	67.7	68.2	68.2	68.2	68.2	68.3	68.5
16/F	100.35	68.4	68.3	67.7	67.7	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.7	67.7	67.7	68.2	68.2	68.2	68.3	68.3	68.5
15/F	97.2	68.4	68.4	67.7	67.7	67.7	67.6	67.6	67.6	67.6	67.6	67.6	67.7	67.7	67.7	68.2	68.3	68.3	68.3	68.3	68.5
14/F	94.05	68.4	68.4	67.7	67.7	67.7	67.7	67.7	67.7	67.6	67.6	67.6	67.7	67.7	67.7	68.3	68.3	68.3	68.3	68.4	68.6
13/F	90.9	68.5	68.4	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.6	67.7	67.7	67.7	67.7	68.3	68.3	68.3	68.3	68.4	68.6
12/F	87.75	68.5	68.5	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	68.3	68.3	68.3	68.3	68.4	68.6
11/F	84.6	68.6	68.5	67.8	67.8	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	68.3	68.3	68.3	68.4	68.4	68.6
10/F	81.45	68.6	68.6	67.8	67.8	67.8	67.8	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	68.3	68.3	68.3	68.4	68.4	68.6
9/F	78.3	68.7	68.6	67.8	67.8	67.8	67.8	67.8	67.7	67.7	67.7	67.7	67.7	67.7	67.8	68.3	68.3	68.4	68.4	68.4	68.6
8/F	75.15	68.7	68.7	67.9	67.9	67.8	67.8	67.8	67.8	67.8	67.7	67.7	67.7	67.8	67.8	68.3	68.3	68.4	68.4	68.5	68.7
7/F	72	68.8	68.7	67.9	67.9	67.9	67.8	67.8	67.8	67.8	67.8	67.8	67.8	67.8	67.8	68.4	68.4	68.4	68.4	68.5	68.7
6/F	68.85	68.8	68.8	68.0	68.0	67.9	67.9	67.9	67.8	67.8	67.8	67.8	67.8	67.8	67.8	68.4	68.4	68.4	68.4	68.5	68.7
5/F	65.7	68.9	68.8	68.0	68.0	68.0	67.9	67.9	67.9	67.9	67.8	67.8	67.8	67.8	67.9	68.4	68.4	68.5	68.5	68.5	68.7
4/F	62.55	68.9	68.9	68.1	68.0	68.0	68.0	68.0	67.9	67.9	67.9	67.9	67.9	67.9	67.9	68.5	68.5	68.5	68.5	68.6	68.7
3/F	59.4	69.0	68.9	68.1	68.1	68.1	68.0	68.0	68.0	68.0	67.9	67.9	67.9	67.9	67.9	68.5	68.5	68.5	68.6	68.6	68.7
2/F	56.25	69.0	69.0	68.2	68.1	68.1	68.1	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.6	68.6	68.6	68.6	68.6	68.8
1/F	53.1	69.1	69.1	68.2	68.2	68.1	68.1	68.1	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.6	68.6	68.6	68.7	68.7	68.8

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 3 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 3 (by flat)

Flat		T3-10	T3-11	T3-12	T3-13	T3-14	T3-15	T3-16
Floor	mPD	L10, 1hr (dB(A))						
31/F	147.6	67.9	67.4	67.5	67.5	67.6	68.0	68.3
30/F	144.45	68.0	67.5	67.5	67.5	67.6	68.0	68.3
29/F	141.3	68.0	67.5	67.5	67.5	67.6	68.1	68.3
28/F	138.15	68.0	67.5	67.5	67.5	67.6	68.1	68.3
27/F	135	68.0	67.5	67.5	67.5	67.6	68.1	68.3
26/F	131.85	68.1	67.5	67.5	67.5	67.6	68.1	68.3
25/F	128.7	68.1	67.5	67.5	67.5	67.6	68.1	68.3
24/F	125.55	68.1	67.5	67.5	67.5	67.6	68.1	68.4
23/F	122.4	68.2	67.5	67.5	67.6	67.6	68.1	68.4
22/F	119.25	68.2	67.6	67.6	67.6	67.6	68.1	68.4
21/F	116.1	68.2	67.6	67.6	67.6	67.6	68.1	68.4
20/F	112.95	68.3	67.6	67.6	67.6	67.6	68.1	68.4
19/F	109.8	68.3	67.6	67.6	67.6	67.6	68.2	68.4
18/F	106.65	68.3	67.6	67.6	67.6	67.7	68.2	68.5
17/F	103.5	68.3	67.6	67.6	67.6	67.7	68.2	68.5
16/F	100.35	68.4	67.7	67.6	67.6	67.7	68.2	68.5
15/F	97.2	68.4	67.7	67.6	67.6	67.7	68.3	68.5
14/F	94.05	68.4	67.7	67.7	67.6	67.7	68.3	68.6
13/F	90.9	68.5	67.7	67.7	67.7	67.7	68.3	68.6
12/F	87.75	68.5	67.7	67.7	67.7	67.7	68.3	68.6
11/F	84.6	68.6	67.8	67.7	67.7	67.7	68.3	68.6
10/F	81.45	68.6	67.8	67.8	67.7	67.7	68.3	68.6
9/F	78.3	68.7	67.8	67.8	67.7	67.8	68.4	68.6
8/F	75.15	68.7	67.9	67.8	67.8	67.8	68.4	68.7
7/F	72	68.8	67.9	67.8	67.8	67.8	68.4	68.7
6/F	68.85	68.8	68.0	67.9	67.8	67.8	68.4	68.7
5/F	65.7	68.9	68.0	67.9	67.9	67.9	68.5	68.7
4/F	62.55	68.9	68.1	68.0	67.9	67.9	68.5	68.7
3/F	59.4	69.0	68.1	68.0	68.0	67.9	68.5	68.7
2/F	56.25	69.0	68.2	68.1	68.0	68.0	68.6	68.8
1/F	53.1	69.1	68.2	68.1	68.0	68.0	68.6	68.8

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 4 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 4 (by assessment point)

NSR ID		T4L-01-W1	T4L-01-LB	T4L-02-W1	T4L-02-LB	T4L-03-LB	T4L-03-W1	T4L-04-W1	T4L-04-LB	T4L-05-LB	T4L-05-W1	T4L-06-W1	T4L-06-W2	T4L-06-LB	T4L-07-W1	T4L-07-W2	T4L-07-LB	T4L-08-W1	T4L-08-LB	T4L-09-LB	T4L-09-W1	T4L-10-W1	T4L-10-LB	T4L-11-LB	T4L-11-W1	T4L-12-LB	T4L-12-W1	T4L-12-W2	T4L-13-LB	T4L-13-W1	T4L-13-W2
Floor	mPD	L10, 1hr (dB(A))																													
12/F	87.75	**71.9**	**71.0**	**71.1**	71.1	**71.0**	**71.0**	**70.9**	**70.8**	**70.6**	70.4	66.7	66.1	63.4	60.3	65.6	65.7	66.1	66.3	66.6	66.8	67.0	67.2	67.4	67.7	67.9	68.4	69.4	**70.5**	**70.8**	**71.5**
11/F	84.60	**72.0**	**71.1**	**71.2**	71.2	**71.1**	**71.0**	**70.9**	**70.9**	**70.7**	**70.5**	66.8	66.2	63.4	60.0	65.4	65.5	66.0	66.2	66.6	66.8	67.0	67.2	67.4	67.7	67.9	68.4	69.5	**70.5**	**70.8**	**71.5**
10/F	81.45	**72.1**	**71.2**	**71.3**	71.2	**71.1**	**71.1**	**71.1**	**71.0**	**70.8**	**70.6**	66.8	66.3	63.5	59.7	65.2	65.3	65.8	66.1	66.5	66.7	66.9	67.2	67.4	67.7	68.0	68.5	69.5	**70.6**	**70.9**	**71.6**
9/F	78.30	**72.3**	**71.3**	**71.2**	71.2	**71.2**	**71.2**	**71.1**	**71.1**	**70.9**	**70.7**	66.9	66.3	63.5	59.5	65.2	65.1	65.6	65.9	66.3	66.6	66.9	67.1	67.4	67.6	68.0	68.5	69.6	**70.7**	**71.0**	**71.7**
8/F	75.15	**72.4**	**71.3**	**71.2**	71.2	**71.1**	**71.2**	**71.2**	**71.2**	**70.9**	**70.8**	67.0	66.4	63.6	59.3	65.0	65.1	65.5	65.7	66.2	66.5	66.8	67.1	67.4	67.6	68.0	68.5	69.6	**70.7**	**71.0**	**71.8**
7/F	72.00	**72.5**	**71.3**	**71.2**	71.1	**71.2**	**71.2**	**71.2**	**71.2**	**71.0**	**70.8**	67.0	66.5	63.7	59.1	64.9	64.9	65.4	65.6	66.0	66.3	66.7	67.0	67.3	67.6	68.0	68.6	69.7	**70.8**	**71.1**	**71.9**
6/F	68.85	**72.7**	**71.3**	**71.1**	**70.9**	**71.1**	**71.2**	**71.2**	**71.1**	**71.1**	**70.9**	67.1	66.6	63.7	59.0	64.8	64.8	65.3	65.5	65.9	66.1	66.5	66.9	67.3	67.6	68.0	68.6	69.8	**70.9**	**71.1**	**72.0**
5/F	65.70	**72.8**	**71.1**	**70.8**	**70.9**	**71.0**	**71.1**	**71.1**	**71.1**	**71.1**	**71.0**	67.2	66.7	63.8	59.0	64.6	64.7	65.2	65.4	65.8	66.0	66.3	66.7	67.2	67.6	68.0	68.7	69.8	**71.1**	**71.1**	**72.1**
4/F	62.55	**72.9**	**70.9**	**70.7**	**70.7**	**70.8**	**70.9**	**70.9**	**71.1**	**71.2**	**71.1**	67.3	66.8	63.8	58.9	64.4	64.5	65.0	65.2	65.6	65.9	66.2	66.5	66.9	67.4	68.0	68.7	69.9	**71.2**	**71.2**	**72.1**
3/F	59.40	**72.9**	**70.8**	70.4	70.4	70.4	**70.5**	**70.7**	**71.1**	**71.3**	**71.3**	67.4	66.9	63.9	58.7	64.0	64.1	64.7	65.0	65.3	65.6	65.9	66.4	66.7	67.2	67.8	68.6	69.9	**71.3**	**71.2**	**72.1**
2/F	56.25	**72.9**	70.3	70.1	70.1	70.1	70.1	70.4	**71.0**	**71.4**	**71.4**	67.5	67.0	63.9	58.5	63.5	63.4	64.2	64.5	64.9	65.3	65.6	66.0	66.4	66.9	67.6	68.5	69.9	**71.5**	**71.2**	**72.0**
1/F	53.10	**72.6**	69.9	69.7	69.7	69.6	69.6	69.9	**70.5**	**71.3**	**71.5**	67.7	67.1	64.0	58.4	62.6	62.5	63.1	63.4	64.0	64.5	65.0	65.5	65.9	66.4	67.1	68.1	69.3	**71.6**	**71.2**	**71.7**

Flat		T4H-01-W1	T4H-01-LB	T4H-02-W1	T4H-02-LB	T4H-03-LB	T4H-03-W1	T4H-04-W1	T4H-04-LB	T4H-05-LB	T4H-05-W1	T4H-06-W1	T4H-06-W2	T4H-06-LB	T4H-07-W1	T4H-07-W2	T4H-07-LB	T4H-08-LB	T4H-08-W1	T4H-09-LB	T4H-09-W1	T4H-09-W2	T4H-10-LB	T4H-10-W1	T4H-11-LB	T4H-11-W1	T4H-11-W2	T4H-12-LB	T4H-12-W1	T4H-12-W2
Floor	mPD	L10, 1hr (dB(A))																													
31/F	147.60	69.8	69.2	69.5	69.6	69.6	69.5	69.4	69.3	69.2	69.0	66.5	66.1	64.0	62.5	66.0	66.0	66.3	66.3	66.3	66.4	66.5	66.6	66.8	67.1	67.5	68.2	69.2	69.4	69.9
30/F	144.45	69.9	69.3	69.5	69.6	69.6	69.6	69.4	69.3	69.2	69.1	66.4	65.9	63.7	62.4	66.0	66.0	66.3	66.3	66.3	66.4	66.5	66.7	66.9	67.1	67.5	68.3	69.2	69.4	70.0
29/F	141.30	70.0	69.3	69.6	69.7	69.7	69.6	69.5	69.4	69.3	69.1	66.4	65.8	63.6	62.4	66.0	66.0	66.3	66.4	66.4	66.5	66.6	66.7	66.9	67.2	67.6	68.3	69.3	69.5	70.1
28/F	138.15	70.0	69.4	69.7	69.8	69.8	69.7	69.6	69.5	69.3	69.2	66.4	65.8	63.5	62.3	66.1	66.1	66.4	66.4	66.4	66.5	66.6	66.8	67.0	67.2	67.6	68.4	69.4	69.6	70.2
27/F	135.00	70.1	69.5	69.8	69.9	69.8	69.8	69.7	69.5	69.4	69.2	66.4	65.8	63.5	62.3	66.1	66.1	66.4	66.4	66.4	66.6	66.7	66.8	67.0	67.3	67.7	68.5	69.4	69.6	70.2
26/F	131.85	70.2	69.6	69.8	69.9	69.9	69.8	69.7	69.6	69.5	69.3	66.4	65.8	63.4	62.2	66.1	66.1	66.4	66.5	66.5	66.6	66.7	66.9	67.1	67.3	67.7	68.5	69.5	69.7	70.3
25/F	128.70	70.3	69.7	70.0	70.0	70.0	69.9	69.8	69.7	69.5	69.4	66.4	65.8	63.3	62.1	66.1	66.1	66.5	66.5	66.5	66.6	66.8	66.9	67.1	67.4	67.8	68.6	69.6	69.8	70.4
24/F	125.55	70.4	69.8	70.0	70.1	70.1	70.0	69.9	69.8	69.6	69.4	66.4	65.8	63.3	62.1	66.2	66.2	66.5	66.5	66.6	66.7	66.8	67.0	67.2	67.4	67.8	68.6	69.6	69.8	70.4
23/F	122.40	**70.6**	69.9	70.1	70.2	70.2	70.1	70.0	69.9	69.7	69.5	66.5	65.8	63.2	61.9	66.2	66.2	66.5	66.5	66.6	66.7	66.9	67.0	67.2	67.5	67.9	68.7	69.7	69.9	**70.5**
22/F	119.25	**70.7**	70.0	70.2	70.3	70.3	70.2	70.1	69.9	69.8	69.6	66.5	65.8	63.2	61.8	66.2	66.2	66.5	66.6	66.6	66.8	66.9	67.1	67.2	67.5	67.9	68.8	69.8	70.0	**70.6**
21/F	116.10	**70.8**	70.1	70.3	70.4	70.4	70.3	70.1	70.0	69.9	69.7	66.5	65.8	63.3	61.7	66.2	66.2	66.6	66.6	66.7	66.8	67.0	67.1	67.3	67.5	68.0	68.8	69.8	70.1	**70.7**
20/F	112.95	**70.9**	70.2	70.4	**70.5**	**70.5**	70.4	70.2	70.1	69.9	69.7	66.5	65.8	63.2	61.6	66.2	66.2	66.6	66.6	66.7	66.9	67.0	67.2	67.3	67.6	68.0	68.9	69.9	70.1	**70.8**
19/F	109.80	**71.0**	70.3	**70.5**	**70.6**	**70.6**	**70.5**	70.3	70.2	70.0	69.8	66.5	65.9	63.1	61.5	66.2	66.2	66.6	66.6	66.8	66.9	67.1	67.2	67.4	67.7	68.1	69.0	70.0	70.2	**70.9**
18/F	106.65	**71.1**	70.4	**70.6**	**70.7**	**70.6**	**70.5**	70.4	70.3	70.1	69.9	66.5	65.8	63.2	61.4	66.2	66.2	66.6	66.7	66.8	67.0	67.1	67.3	67.4	67.7	68.2	69.0	70.1	70.3	**70.9**
17/F	103.50	**71.2**	**70.5**	**70.7**	**70.8**	**70.7**	**70.6**	**70.5**	70.4	70.2	70.0	66.5	65.9	63.3	61.3	66.2	66.2	66.6	66.7	66.8	67.0	67.1	67.3	67.5	67.8	68.2	69.1	70.2	70.4	**71.0**
16/F	100.35	**71.4**	**70.6**	**70.8**	**70.9**	**70.8**	**70.7**	**70.6**	70.4	70.3	70.1	66.7	65.9	63.3	61.2	66.2	66.2	66.6	66.7	66.8	67.0	67.2	67.4	67.5	67.8	68.3	69.2	70.2	**70.5**	**71.1**
15/F	97.20	**71.5**	**70.7**	**70.9**	**71.0**	**70.9**	**70.8**	**70.7**	**70.5**	70.4	70.2	66.6	66.0	63.3	61.1	66.1	66.2	66.6	66.7	66.8	67.0	67.2	67.4	67.6	67.8	68.3	69.3	70.3	**70.6**	**71.2**
14/F	94.05	**71.6**	**70.8**	**71.0**	**71.0**	**70.9**	**70.9**	**70.7**	**70.6**	**70.5**	70.3	66.6	66.0	63.3	61.0	66.1	66.1	66.6	66.7	66.8	67.0	67.2	67.4	67.6	67.9	68.4	69.3	70.4	**70.6**	**71.3**
13/F	90.90	**71.7**	**70.9**	**71.1**	**71.1**	**71.0**	**70.9**	**70.8**	**70.7**	**70.6**	70.4	66.7	66.1	63.4	59.6	65.8	65.9	66.4	66.6	66.8	67.0	67.2	67.4	67.6	67.9	68.4	69.4	70.4	**70.7**	**71.4**

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 4 in Base Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 4 (by flat)

Flat		T4L-01	T4L-02	T4L-03	T4L-04	T4L-05	T4L-06	T4L-07	T4L-08	T4L-09	T4L-10	T4L-11	T4L-12	T4L-13
Floor	mPD	L10, 1hr (dB(A))												
12/F	87.75	**71.9**	**71.1**	**71.0**	**70.9**	**70.6**	66.7	65.7	66.3	66.8	67.2	67.7	69.4	**71.5**
11/F	84.6	**72.0**	**71.2**	**71.1**	**70.9**	**70.7**	66.8	65.5	66.2	66.8	67.2	67.7	69.5	**71.5**
10/F	81.45	**72.1**	**71.3**	**71.1**	**71.1**	**70.8**	66.8	65.3	66.1	66.7	67.2	67.7	69.5	**71.6**
9/F	78.3	**72.3**	**71.2**	**71.2**	**71.1**	**70.9**	66.9	65.2	65.9	66.6	67.1	67.6	69.6	**71.7**
8/F	75.15	**72.4**	**71.2**	**71.2**	**71.2**	**70.9**	67.0	65.1	65.7	66.5	67.1	67.6	69.6	**71.8**
7/F	72	**72.5**	**71.2**	**71.2**	**71.2**	**71.0**	67.0	64.9	65.6	66.3	67.0	67.6	69.7	**71.9**
6/F	68.85	**72.7**	**71.1**	**71.2**	**71.2**	**71.1**	67.1	64.8	65.5	66.1	66.9	67.6	69.8	**72.0**
5/F	65.7	**72.8**	**70.9**	**71.1**	**71.1**	**71.1**	67.2	64.7	65.4	66.0	66.7	67.6	69.8	**72.1**
4/F	62.55	**72.9**	**70.7**	**70.9**	**71.1**	**71.2**	67.3	64.5	65.2	65.9	66.5	67.4	69.9	**72.1**
3/F	59.4	**72.9**	70.4	**70.5**	**71.1**	**71.3**	67.4	64.1	65.0	65.6	66.4	67.2	69.9	**72.1**
2/F	56.25	**72.9**	70.1	70.1	**71.0**	**71.4**	67.5	63.5	64.5	65.3	66.0	66.9	69.9	**72.0**
1/F	53.1	**72.6**	69.7	69.6	**70.5**	**71.5**	67.7	62.6	63.4	64.5	65.5	66.4	69.3	**71.7**

Flat		T4H-01	T4H-02	T4H-03	T4H-04	T4H-05	T4H-06	T4H-07	T4H-08	T4H-09	T4H-10	T4H-11	T4H-12
Floor	mPD	L10, 1hr (dB(A))											
31/F	147.6	69.8	69.6	69.6	69.4	69.2	66.5	66.0	66.3	66.5	66.8	68.2	69.9
30/F	144.45	69.9	69.6	69.6	69.4	69.2	66.4	66.0	66.3	66.5	66.9	68.3	70.0
29/F	141.3	70.0	69.7	69.7	69.5	69.3	66.4	66.0	66.4	66.6	66.9	68.3	70.1
28/F	138.15	70.0	69.8	69.8	69.6	69.3	66.4	66.1	66.4	66.6	67.0	68.4	70.2
27/F	135	70.1	69.9	69.8	69.7	69.4	66.4	66.1	66.4	66.7	67.0	68.5	70.2
26/F	131.85	70.2	69.9	69.9	69.7	69.5	66.4	66.1	66.5	66.7	67.1	68.5	70.3
25/F	128.7	70.3	70.0	70.0	69.8	69.5	66.4	66.1	66.5	66.8	67.1	68.6	70.4
24/F	125.55	70.4	70.1	70.1	69.9	69.6	66.4	66.2	66.5	66.8	67.2	68.6	70.4
23/F	122.4	**70.6**	70.2	70.2	70.0	69.7	66.5	66.2	66.5	66.9	67.2	68.7	**70.5**
22/F	119.25	**70.7**	70.3	70.3	70.1	69.8	66.5	66.2	66.6	66.9	67.2	68.8	**70.6**
21/F	116.1	**70.8**	70.4	70.4	70.1	69.9	66.5	66.2	66.6	67.0	67.3	68.8	**70.7**
20/F	112.95	**70.9**	**70.5**	**70.5**	70.2	69.9	66.5	66.2	66.6	67.0	67.3	68.9	**70.8**
19/F	109.8	**71.0**	**70.6**	**70.6**	70.3	70.0	66.5	66.2	66.6	67.1	67.4	69.0	**70.9**
18/F	106.65	**71.1**	**70.7**	**70.6**	70.4	70.1	66.5	66.2	66.7	67.1	67.4	69.0	**70.9**
17/F	103.5	**71.2**	**70.8**	**70.7**	**70.5**	70.2	66.5	66.2	66.7	67.1	67.5	69.1	**71.0**
16/F	100.35	**71.4**	**70.9**	**70.8**	**70.6**	70.3	66.7	66.2	66.7	67.2	67.5	69.2	**71.1**
15/F	97.2	**71.5**	**71.0**	**70.9**	**70.7**	70.4	66.6	66.2	66.7	67.2	67.6	69.3	**71.2**
14/F	94.05	**71.6**	**71.0**	**70.9**	**70.7**	**70.5**	66.6	66.1	66.7	67.2	67.6	69.3	**71.3**
13/F	90.9	**71.7**	**71.1**	**71.0**	**70.8**	**70.6**	66.7	65.9	66.6	67.2	67.6	69.4	**71.4**

Bold underlined: Noise exceedance

APPENDIX 4-3
PROPOSED MITIGATION MEASURES & TRAFFIC NOISE ASSESSMENT RESULTS (MITIGATED SCENARIO - WITH ACOUSTIC WINDOWS)

Proposed Mitigation Measure

Tower 1

NSR ID	T1-01-W1	T1-01-W2	T1-01-W3	T1-01-LB	T1-02-W1	T1-02-W2	T1-02-LB	T1-03-LB	T1-03-W1	T1-03-W2	T1-04-W1	T1-04-W2	T1-04-LB	T1-05-W1	T1-05-LB	T1-06-W1	T1-06-LB	T1-07-W1	T1-07-W2	T1-07-LB	T1-07-W3	T1-07-W4
Floor	mPD	L10, 1hr (dB(A))																				
38/F	147.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	AW
37/F	144.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	AW
36/F	140.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	AW
35/F	137.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	AW
34/F	134.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	AW
33/F	131.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	AW
32/F	128.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
31/F	125.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
30/F	122.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
29/F	118.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
28/F	115.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
27/F	112.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
26/F	109.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
25/F	106.30	AW	FG	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
24/F	103.15	AW	FG	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
23/F	100.00	AW	FG	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
22/F	96.85	AW	FG	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
21/F	93.70	Refuge Floor																				
20/F	90.55																					
19/F	87.40	AW	FG	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
18/F	84.25	AW	FG	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
17/F	81.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
16/F	77.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
15/F	74.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
14/F	71.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
13/F	68.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
12/F	65.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
11/F	62.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
10/F	59.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
9/F	55.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
8/F	52.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
7/F	49.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
6/F	46.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW
5/F	43.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AB	FG	AW	AB	AW	AW
4/F	40.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AB	FG	AW	AB	AW	AW
3/F	37.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AB	FG	AW	AB	AW	AW
2/F	33.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AB	FG	AW	AB	AW	AW
1/F	30.70	AW	FG	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	FG	AW	AB	AW	AW

ID	Description	Correction
--	No Mitigation Measure	0 dB(A)
AW	Acoustic Window	-4.0 dB(A)
AB	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Proposed Mitigation Measure

Tower 2

NSR ID		T2-01-W1	T2-01-W2	T2-01-LB	T2-01-W3	T2-02-LB	T2-02-W1	T2-02-W2	T2-03-LB	T2-03-W1	T2-03-W2	T2-04-LB	T2-04-W1	T2-04-W2	T2-05-W1	T2-05-W2	T2-05-LB	T2-05-W3	T2-05-W4	T2-06-W1	T2-06-W2	T2-06-LB
Floor	mPD	L10, 1hr (dB(A))																				
38/F	147.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
37/F	144.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
36/F	140.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
35/F	137.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	--	--	--	--
34/F	134.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	--	--	--	--
33/F	131.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	--	--	--	--
32/F	128.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	--	--	--	--
31/F	125.20	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
30/F	122.05	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
29/F	118.90	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
28/F	115.75	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
27/F	112.60	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
26/F	109.45	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
25/F	106.30	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
24/F	103.15	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
23/F	100.00	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
22/F	96.85	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
21/F	93.70	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
20/F	90.55	Refuge Floor																				
19/F	87.40	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
18/F	84.25	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
17/F	81.10	--	--	--	--	--	--	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
16/F	77.95	--	--	--	--	--	AW	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
15/F	74.80	--	--	--	--	--	AW	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
14/F	71.65	--	--	--	--	AB	AW	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
13/F	68.50	--	--	--	--	AB	AW	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
12/F	65.35	--	--	--	--	AB	AW	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
11/F	62.20	--	--	--	--	AB	AW	--	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
10/F	59.05	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
9/F	55.90	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
8/F	52.75	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
7/F	49.60	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
6/F	46.45	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
5/F	43.30	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	--	--	AB	--	--	--	--	--
4/F	40.15	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
3/F	37.00	--	--	--	--	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
2/F	33.85	--	--	--	AW	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--
1/F	30.70	--	--	--	AW	AB	AW	AW	--	--	--	--	--	--	FG	AW	AB	AW	--	--	--	--

ID	Description	Correction
--	No Mitigation Measure	0 dB(A)
AW	Acoustic Window	-4.0 dB(A)
AB	Acoustic Balcony	-2.0 dB(A)

Proposed Mitigation Measure

Tower 4

NSR ID		T4L-01-W1	T4L-01-LB	T4L-02-W1	T4L-02-LB	T4L-03-LB	T4L-03-W1	T4L-04-W1	T4L-04-LB	T4L-05-LB	T4L-05-W1	T4L-06-W1	T4L-06-W2	T4L-06-LB	T4L-07-W1	T4L-07-W2	T4L-07-LB	T4L-08-W1	T4L-08-LB	T4L-09-LB	T4L-09-W1	T4L-10-W1	T4L-10-LB	T4L-11-LB	T4L-11-W1	T4L-12-LB	T4L-12-W1	T4L-12-W2	T4L-13-LB	T4L-13-W1	T4L-13-W2
Floor	mPD	L10, 1hr (dB(A))																												
12/F	87.75	AW	AB	AW	AB	AB	AW	AW	AB	AB	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
11/F	84.60	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
10/F	81.45	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
9/F	78.30	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
8/F	75.15	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
7/F	72.00	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
6/F	68.85	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
5/F	65.70	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
4/F	62.55	AW	AB	AW	AB	AB	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
3/F	59.40	AW	AB	--	--	--	AW	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
2/F	56.25	AW	--	--	--	--	--	--	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW
1/F	53.10	AW	--	--	--	--	--	--	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AB	AW	AW

NSR ID		T4H-01-W1	T4H-01-LB	T4H-02-W1	T4H-02-LB	T4H-03-LB	T4H-03-W1	T4H-04-W1	T4H-04-LB	T4H-05-LB	T4H-05-W1	T4H-06-W1	T4H-06-W2	T4H-06-LB	T4H-07-W1	T4H-07-W2	T4H-07-LB	T4H-08-LB	T4H-08-W1	T4H-09-LB	T4H-09-W1	T4H-09-W2	T4H-10-LB	T4H-10-W1	T4H-11-LB	T4H-11-W1	T4H-11-W2	T4H-12-LB	T4H-12-W1	T4H-12-W2
Floor	mPD	L10, 1hr (dB(A))																												
31/F	147.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
30/F	144.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29/F	141.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
28/F	138.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27/F	135.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26/F	131.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25/F	128.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24/F	125.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23/F	122.40	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW
22/F	119.25	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW
21/F	116.10	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW
20/F	112.95	AW	--	--	AB	AB	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW
19/F	109.80	AW	--	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW
18/F	106.65	AW	--	AW	AB	AB	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW
17/F	103.50	AW	AB	AW	AB	AB	AW	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW
16/F	100.35	AW	AB	AW	AB	AB	AW	AW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AW
15/F	97.20	AW	AB	AW	AB	AB	AW	AW	AB	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AW
14/F	94.05	AW	AB	AW	AB	AB	AW	AW	AB	AB	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AW
13/F	90.90	AW	AB	AW	AB	AB	AW	AW	AB	AB	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AW	AW

ID	Description	Correction
--	No Mitigation Measure	0 dB(A)
AW	Acoustic Window	-4.0 dB(A)
AB	Acoustic Balcony	-2.0 dB(A)

Predicted Traffic Noise Level - Tower 1 in Mitigated Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 1 (by assessment points)

NSR ID	T1-01-W1	T1-01-W2	T1-01-W3	T1-01-LB	T1-02-W1	T1-02-W2	T1-02-LB	T1-03-LB	T1-03-W1	T1-03-W2	T1-04-W1	T1-04-W2	T1-04-LB	T1-05-W1	T1-05-LB	T1-06-W1	T1-06-LB	T1-07-W1	T1-07-W2	T1-07-LB	T1-07-W3	T1-07-W4
Floor	mPD	L10, 1hr (dB(A))																				
38/F	147.25	69.9	67.8	65.2	65.4	65.8	65.9	65.8	65.5	65.0	60.9	60.2	64.2	62.6	63.2	62.1	67.9	70.1	FG	69.7	69.3	68.1	67.8
37/F	144.10	69.9	67.8	65.1	65.3	65.7	65.9	65.8	65.5	65.0	61.0	60.2	64.3	62.6	63.3	62.1	67.9	70.2	FG	69.9	69.3	68.2	67.9
36/F	140.95	69.9	67.9	65.1	65.3	65.7	65.9	65.8	65.5	65.0	61.0	60.3	64.3	62.7	63.3	62.2	68.0	70.3	FG	70.0	69.4	68.3	68.0
35/F	137.80	69.9	67.9	65.0	65.3	65.6	65.9	65.7	65.5	65.0	61.0	60.3	64.3	62.7	63.4	62.3	68.0	70.3	FG	70.0	69.4	68.4	68.0
34/F	134.65	70.0	68.0	65.0	65.2	65.6	65.8	65.7	65.4	65.0	61.0	60.4	64.3	62.8	63.4	62.3	68.0	70.4	FG	70.1	69.5	68.4	68.1
33/F	131.50	70.0	68.0	65.0	65.1	65.5	65.8	65.7	65.4	64.9	61.0	60.4	64.3	62.8	63.4	62.4	68.1	70.4	FG	70.2	69.6	68.5	68.1
32/F	128.35	70.0	68.1	64.9	65.1	65.5	65.7	65.6	65.3	64.9	61.0	60.5	64.3	62.8	63.5	62.5	68.1	68.5	FG	70.3	69.6	68.5	68.2
31/F	125.20	70.1	68.1	64.9	65.1	65.4	65.6	65.5	65.2	64.8	61.0	60.5	64.3	62.9	63.5	62.5	68.2	68.6	FG	70.4	69.7	68.6	68.2
30/F	122.05	70.2	68.2	65.0	65.1	65.4	65.6	65.5	65.2	64.8	61.0	60.6	64.3	62.9	63.5	62.6	68.2	68.7	FG	70.4	69.8	68.7	68.3
29/F	118.90	70.2	68.3	65.0	65.1	65.3	65.6	65.4	65.1	64.6	61.0	60.6	64.3	62.9	63.5	62.6	68.2	68.7	FG	**70.6**	69.9	68.8	68.4
28/F	115.75	70.2	68.4	65.0	65.1	65.3	65.5	65.3	65.0	64.5	61.0	60.7	64.3	63.0	63.5	62.7	68.2	68.8	FG	**70.6**	69.9	68.8	68.4
27/F	112.60	70.3	68.5	65.1	65.1	65.3	65.5	65.3	64.8	64.4	61.0	60.7	64.2	63.0	63.6	62.8	68.2	68.8	FG	**70.7**	69.9	68.9	68.4
26/F	109.45	70.4	68.5	65.1	65.2	65.3	65.5	65.2	64.8	64.3	61.1	60.8	64.2	63.0	63.6	62.8	68.2	68.9	FG	**70.9**	70.0	68.9	68.5
25/F	106.30	66.5	FG	65.2	65.2	65.4	65.5	65.2	64.7	64.1	61.1	60.8	64.1	63.1	63.6	62.9	68.2	68.9	FG	**71.0**	70.0	69.0	68.5
24/F	103.15	66.5	FG	65.2	65.3	65.4	65.5	65.2	64.7	64.0	61.2	60.9	64.0	63.1	63.7	62.9	68.1	69.0	FG	**71.1**	70.1	69.0	68.5
23/F	100.00	66.5	FG	65.3	65.3	65.5	65.6	65.2	64.6	64.0	61.2	61.0	64.0	63.2	63.7	63.0	68.1	69.0	FG	**71.2**	70.1	69.0	68.6
22/F	96.85	66.5	FG	65.4	65.4	65.5	65.6	65.3	64.6	63.9	61.2	61.0	63.8	63.2	63.8	63.1	68.0	69.0	FG	**71.3**	70.0	69.1	68.6
21/F	93.70	Refuge Floor																				
20/F	90.55																					
19/F	87.40	66.5	FG	66.0	66.0	66.1	66.2	65.7	64.8	63.9	61.3	61.2	63.8	63.4	63.9	63.3	68.1	69.2	FG	**71.5**	70.1	69.2	68.8
18/F	84.25	66.5	FG	66.1	66.1	66.2	66.3	65.8	65.0	64.0	61.4	61.2	63.8	63.4	64.0	63.4	68.1	69.3	FG	**71.5**	70.1	69.3	68.8
17/F	81.10	70.4	68.8	66.2	66.2	66.3	66.4	65.9	65.1	64.0	61.4	61.3	63.8	63.5	64.0	63.5	68.2	69.4	FG	**71.6**	70.1	69.4	68.9
16/F	77.95	70.4	68.8	66.3	66.3	66.4	66.5	66.0	65.1	64.0	61.4	61.3	63.9	63.6	64.1	63.6	68.6	69.7	FG	**71.8**	70.1	69.5	69.0
15/F	74.80	70.4	68.8	66.5	66.5	66.6	66.6	66.1	65.2	64.1	61.5	61.3	63.9	63.6	64.2	63.7	68.7	69.8	FG	**71.9**	70.2	69.5	69.0
14/F	71.65	70.4	68.9	66.6	66.6	66.7	66.7	66.1	65.3	64.1	61.5	61.4	64.0	63.7	64.3	63.8	68.8	69.9	FG	**72.1**	70.2	69.6	69.1
13/F	68.50	70.4	68.8	66.7	66.7	66.8	66.8	66.2	65.4	64.2	61.6	61.4	64.0	63.8	64.3	63.9	69.0	70.1	FG	**72.1**	70.2	69.6	69.1
12/F	65.35	70.3	68.6	66.9	66.9	66.9	66.9	66.3	65.5	64.2	61.6	61.4	64.1	63.8	64.4	64.0	69.1	70.3	FG	**72.2**	70.1	69.6	69.0
11/F	62.20	70.0	68.2	67.1	67.1	67.1	67.0	66.4	65.5	64.3	61.5	61.3	64.1	63.9	64.5	64.1	69.3	70.4	FG	**72.3**	70.0	69.6	69.0
10/F	59.05	69.7	67.8	67.3	67.2	67.2	67.2	66.5	65.6	64.2	61.4	61.2	64.2	63.9	64.6	64.2	69.4	**70.6**	FG	**72.4**	69.9	69.5	69.0
9/F	55.90	69.5	67.4	67.3	67.2	67.3	67.2	66.6	65.6	64.1	61.1	60.9	64.1	63.9	64.7	64.2	69.6	**70.8**	FG	**72.6**	70.0	69.6	68.9
8/F	52.75	69.3	67.1	67.2	67.2	67.2	67.2	66.5	65.4	63.9	60.9	60.6	63.9	63.8	64.7	64.3	69.9	**71.1**	FG	**72.8**	70.1	69.7	69.1
7/F	49.60	69.3	66.9	67.2	67.1	67.2	67.1	66.4	65.3	63.6	60.5	60.3	63.5	63.5	64.6	64.3	70.2	**71.2**	FG	**73.0**	70.3	69.9	69.3
6/F	46.45	69.4	66.8	67.1	67.0	67.1	67.0	66.3	65.1	63.3	60.2	60.2	63.3	63.2	64.4	64.4	70.4	**71.5**	FG	**73.2**	**70.5**	70.1	69.5
5/F	43.30	69.6	66.8	67.0	67.0	67.1	67.0	66.2	65.0	63.0	59.8	59.9	63.0	62.8	64.1	63.9	66.5	**71.6**	FG	**73.4**	**70.7**	70.3	69.7
4/F	40.15	69.9	66.8	67.0	66.9	67.0	66.9	66.1	64.8	62.6	59.3	59.6	62.6	62.4	63.6	63.5	66.6	**71.8**	FG	**73.7**	**71.0**	**70.6**	70.0
3/F	37.00	70.1	66.8	66.9	66.8	66.9	66.8	65.9	64.5	62.1	58.7	59.1	62.0	61.8	63.1	62.8	66.5	**71.9**	FG	**73.9**	**71.3**	**70.9**	70.3
2/F	33.85	70.4	66.3	66.7	66.6	66.8	66.6	65.6	64.0	61.1	58.2	58.4	61.1	60.9	62.4	62.0	66.5	**72.0**	FG	**74.1**	**71.6**	**71.2**	**70.5**
1/F	30.70	66.5	FG	65.9	66.0	66.4	66.2	65.3	63.4	59.9	57.5	57.6	60.0	59.9	61.3	61.0	70.4	**72.0**	FG	**74.4**	**71.8**	**71.4**	**70.8**

ID	Description	Correction
--	No Mitigation Measure	0 dB(A)
AW	Acoustic Window	-4.0 dB(A)
AB	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 1 in Mitigated Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 1 (by flats)

Flat		T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07
Floor	mPD	L10, 1hr (dB(A))						
38/F	147.25	69.9	65.9	65.5	64.2	63.2	70.1	69.7
37/F	144.1	69.9	65.9	65.5	64.3	63.3	70.2	69.9
36/F	140.95	69.9	65.9	65.5	64.3	63.3	70.3	70.0
35/F	137.8	69.9	65.9	65.5	64.3	63.4	70.3	70.0
34/F	134.65	70.0	65.8	65.4	64.3	63.4	70.4	70.1
33/F	131.5	70.0	65.8	65.4	64.3	63.4	70.4	70.2
32/F	128.35	70.0	65.7	65.3	64.3	63.5	68.5	70.3
31/F	125.2	70.1	65.6	65.2	64.3	63.5	68.6	70.4
30/F	122.05	70.2	65.6	65.2	64.3	63.5	68.7	70.4
29/F	118.9	70.2	65.6	65.1	64.3	63.5	68.7	**70.6**
28/F	115.75	70.2	65.5	65.0	64.3	63.5	68.8	**70.6**
27/F	112.6	70.3	65.5	64.8	64.2	63.6	68.8	**70.7**
26/F	109.45	70.4	65.5	64.8	64.2	63.6	68.9	**70.9**
25/F	106.3	66.5	65.5	64.7	64.1	63.6	68.9	**71.0**
24/F	103.15	66.5	65.5	64.7	64.0	63.7	69.0	**71.1**
23/F	100	66.5	65.6	64.6	64.0	63.7	69.0	**71.2**
22/F	96.85	66.5	65.6	64.6	63.8	63.8	69.0	**71.3**
21/F	93.7	Refuge Floor						
20/F	90.55							
19/F	87.4	66.5	66.2	64.8	63.8	63.9	69.2	**71.5**
18/F	84.25	66.5	66.3	65.0	63.8	64.0	69.3	**71.5**
17/F	81.1	70.4	66.4	65.1	63.8	64.0	69.4	**71.6**
16/F	77.95	70.4	66.5	65.1	63.9	64.1	69.7	**71.8**
15/F	74.8	70.4	66.6	65.2	63.9	64.2	69.8	**71.9**
14/F	71.65	70.4	66.7	65.3	64.0	64.3	69.9	**72.1**
13/F	68.5	70.4	66.8	65.4	64.0	64.3	70.1	**72.1**
12/F	65.35	70.3	66.9	65.5	64.1	64.4	70.3	**72.2**
11/F	62.2	70.0	67.1	65.5	64.1	64.5	70.4	**72.3**
10/F	59.05	69.7	67.2	65.6	64.2	64.6	**70.6**	**72.4**
9/F	55.9	69.5	67.3	65.6	64.1	64.7	**70.8**	**72.6**
8/F	52.75	69.3	67.2	65.4	63.9	64.7	**71.1**	**72.8**
7/F	49.6	69.3	67.2	65.3	63.5	64.6	**71.2**	**73.0**
6/F	46.45	69.4	67.1	65.1	63.3	64.4	**71.5**	**73.2**
5/F	43.3	69.6	67.1	65.0	63.0	64.1	**71.6**	**73.4**
4/F	40.15	69.9	67.0	64.8	62.6	63.6	**71.8**	**73.7**
3/F	37	70.1	66.9	64.5	62.0	63.1	**71.9**	**73.9**
2/F	33.85	70.4	66.8	64.0	61.1	62.4	**72.0**	**74.1**
1/F	30.7	66.5	66.4	63.4	60.0	61.3	**72.0**	**74.4**

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 2 in Mitigated Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 2 (by assessment point)

NSR ID	T2-01-W1	T2-01-W2	T2-01-LB	T2-01-W3	T2-02-LB	T2-02-W1	T2-02-W2	T2-03-LB	T2-03-W1	T2-03-W2	T2-04-LB	T2-04-W1	T2-04-W2	T2-05-W1	T2-05-W2	T2-05-LB	T2-05-W3	T2-05-W4	T2-06-W1	T2-06-W2	T2-06-LB
Floor	mPD	L10, 1hr (dB(A))																			
38/F	147.25	65.9	65.9	65.3	67.3	68.6	68.8	67.9	67.0	67.2	66.7	65.7	65.5	65.3	69.0	70.1	70.2	70.4	63.5	67.3	65.9	63.6
37/F	144.10	65.8	65.9	65.2	67.2	68.7	68.8	67.9	67.0	67.2	66.7	65.7	65.4	65.2	69.0	70.2	70.2	70.4	63.5	67.3	65.9	63.6
36/F	140.95	65.8	65.9	65.2	67.2	68.7	68.9	67.9	67.1	67.2	66.7	65.7	65.4	65.1	69.1	70.2	70.2	70.4	63.4	67.3	65.9	63.5
35/F	137.80	65.8	65.9	65.2	67.2	68.7	68.9	67.9	67.1	67.2	66.7	65.7	65.4	65.1	69.1	70.3	70.3	66.5	63.4	67.3	65.8	63.5
34/F	134.65	65.8	65.9	65.2	67.3	68.8	68.9	67.9	67.1	67.3	66.7	65.7	65.4	65.1	69.2	70.3	70.3	66.5	63.3	67.3	65.8	63.4
33/F	131.50	65.8	65.8	65.1	67.2	68.8	69.0	68.0	67.2	67.3	66.8	65.7	65.4	65.1	69.2	70.3	70.4	66.5	63.3	67.2	65.8	63.3
32/F	128.35	65.7	65.8	65.1	67.3	68.9	69.1	68.1	67.2	67.4	66.8	65.8	65.4	65.1	69.3	70.4	70.4	66.6	63.2	67.2	65.8	63.3
31/F	125.20	65.7	65.8	65.1	67.3	69.0	69.1	68.2	67.3	67.4	66.8	65.8	65.5	65.1	FG	66.5	68.5	66.7	63.2	67.2	65.8	63.3
30/F	122.05	65.7	65.8	65.1	67.3	69.0	69.2	68.2	67.4	67.5	66.9	65.9	65.5	65.2	FG	66.5	68.6	66.7	63.1	67.2	65.7	63.2
29/F	118.90	65.7	65.8	65.0	67.3	69.1	69.3	68.3	67.4	67.5	67.0	65.9	65.6	65.2	FG	66.6	68.6	66.7	63.1	67.2	65.7	63.2
28/F	115.75	65.7	65.8	65.0	67.3	69.2	69.4	68.4	67.5	67.6	67.0	66.0	65.6	65.3	FG	66.6	68.6	66.8	63.1	67.2	65.7	63.1
27/F	112.60	65.7	65.7	65.0	67.4	69.2	69.4	68.4	67.6	67.7	67.1	66.1	65.7	65.3	FG	66.6	68.7	66.8	63.0	67.2	65.7	63.1
26/F	109.45	65.7	65.7	65.0	67.4	69.3	69.5	68.5	67.7	67.8	67.2	66.1	65.8	65.4	FG	66.8	68.8	66.9	63.0	67.1	65.7	63.1
25/F	106.30	65.7	65.7	65.0	67.5	69.4	69.6	68.6	67.8	67.8	67.2	66.3	65.8	65.4	FG	66.8	68.9	67.0	62.9	67.1	65.7	63.0
24/F	103.15	65.7	65.7	65.0	67.6	69.5	69.7	68.7	67.9	67.9	67.3	66.3	65.9	65.5	FG	66.8	68.9	67.0	62.8	67.1	65.7	63.0
23/F	100.00	65.7	65.7	64.9	67.6	69.6	69.8	68.8	68.0	68.0	67.4	66.4	66.0	65.6	FG	66.9	68.9	67.0	62.7	67.0	65.7	62.9
22/F	96.85	65.7	65.7	64.9	67.7	69.7	69.9	69.0	68.2	68.2	67.7	66.7	66.3	65.9	FG	66.9	69.0	67.1	62.5	67.0	65.7	62.9
21/F	93.70	65.7	65.7	64.9	67.7	69.8	70.0	69.1	68.3	68.4	67.8	66.9	66.4	66.0	FG	66.9	69.0	67.1	62.4	66.9	65.6	62.8
20/F	90.55	Refuge Floor																			
19/F	87.40	65.6	65.6	64.9	67.8	70.0	70.2	69.3	68.5	68.6	68.0	67.1	66.6	66.3	FG	67.0	69.0	67.1	61.9	66.7	65.5	62.6
18/F	84.25	65.6	65.6	64.9	67.9	70.1	70.3	69.4	68.6	68.7	68.1	67.2	66.7	66.4	FG	67.0	69.0	67.1	61.7	66.6	65.5	62.4
17/F	81.10	65.5	65.5	64.9	68.0	70.2	70.4	69.6	68.8	68.8	68.2	67.3	66.8	66.5	FG	67.0	69.0	67.1	61.4	66.5	65.4	62.2
16/F	77.95	65.4	65.5	64.9	68.0	70.3	66.6	69.7	68.9	68.9	68.3	67.4	67.0	66.6	FG	67.0	69.0	67.1	61.0	66.3	65.2	61.9
15/F	74.80	65.3	65.4	64.9	68.2	70.4	66.7	69.8	69.0	69.1	68.5	67.6	67.1	66.7	FG	67.0	69.0	67.1	60.7	66.2	65.1	61.7
14/F	71.65	65.2	65.4	64.9	68.3	68.6	66.8	69.9	69.1	69.2	68.6	67.7	67.2	66.8	FG	67.0	69.0	67.1	60.4	66.0	65.0	61.6
13/F	68.50	65.0	65.2	64.9	68.4	68.7	67.0	70.1	69.2	69.3	68.7	67.8	67.4	67.0	FG	67.0	69.0	67.1	60.1	65.7	64.8	61.4
12/F	65.35	64.8	65.0	64.9	68.5	68.8	67.1	70.2	69.4	69.5	68.9	68.1	67.6	67.2	FG	66.9	69.0	67.1	59.6	65.3	64.4	61.2
11/F	62.20	64.6	64.9	64.9	68.6	68.9	67.2	70.4	69.5	69.6	69.1	68.2	67.7	67.4	FG	66.8	68.9	67.0	59.2	64.9	64.0	60.8
10/F	59.05	64.4	64.8	64.9	68.7	69.0	67.4	66.5	69.6	69.7	69.2	68.4	67.9	67.5	FG	66.7	68.9	67.0	58.8	64.6	63.6	60.4
9/F	55.90	64.2	64.7	65.1	68.8	69.2	67.5	66.6	69.8	69.9	69.4	68.5	67.9	67.5	FG	66.7	68.8	66.9	58.3	64.4	63.4	60.2
8/F	52.75	64.4	64.7	65.2	69.0	69.4	67.7	66.8	70.0	70.1	69.5	68.6	67.9	67.5	FG	66.7	68.8	66.8	57.3	64.2	63.3	60.5
7/F	49.60	64.4	64.9	65.4	69.2	69.5	67.8	67.0	70.1	70.2	69.6	68.6	67.9	67.4	FG	66.6	68.7	66.7	56.9	63.8	63.0	60.5
6/F	46.45	64.5	65.0	65.6	69.4	69.7	68.0	67.1	70.2	70.3	69.7	68.5	67.8	67.3	FG	66.5	68.5	66.5	56.8	63.6	62.9	60.6
5/F	43.30	64.6	65.3	65.8	69.6	69.8	68.2	67.3	70.4	70.4	69.6	68.4	67.8	67.3	67.8	70.4	68.5	70.4	56.7	63.5	62.9	61.1
4/F	40.15	64.9	65.7	66.3	70.0	70.0	68.4	67.5	70.4	70.3	69.5	68.4	67.7	67.3	FG	66.6	68.5	66.5	56.7	63.4	62.9	61.2
3/F	37.00	65.0	65.8	66.5	70.3	70.1	68.6	67.6	70.3	70.1	69.4	68.3	67.6	67.2	FG	66.8	68.7	66.6	56.5	63.2	62.6	61.2
2/F	33.85	64.9	66.0	66.8	66.6	70.2	68.7	67.6	70.0	69.8	69.1	68.0	67.3	66.9	FG	67.0	69.0	66.9	56.1	63.1	62.2	61.1
1/F	30.70	64.3	65.8	66.9	66.8	70.1	68.5	66.9	69.1	69.1	68.3	66.9	66.2	65.9	FG	67.0	69.0	66.9	55.3	62.9	61.9	60.6

ID	Description	Correction
--	No Mitigation Measure	0 dB(A)
AW	Acoustic Window	-4.0 dB(A)
AB	Acoustic Balcony	-2.0 dB(A)

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 2 in Mitigated Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 2 (by flat)

Flat		T2-01	T2-02	T2-03	T2-04	T2-05	T2-06
Floor	mPD	L10, 1hr (dB(A))					
38/F	147.25	67.3	68.8	67.2	65.7	70.4	67.3
37/F	144.1	67.2	68.8	67.2	65.7	70.4	67.3
36/F	140.95	67.2	68.9	67.2	65.7	70.4	67.3
35/F	137.8	67.2	68.9	67.2	65.7	70.3	67.3
34/F	134.65	67.3	68.9	67.3	65.7	70.3	67.3
33/F	131.5	67.2	69.0	67.3	65.7	70.4	67.2
32/F	128.35	67.3	69.1	67.4	65.8	70.4	67.2
31/F	125.2	67.3	69.1	67.4	65.8	68.5	67.2
30/F	122.05	67.3	69.2	67.5	65.9	68.6	67.2
29/F	118.9	67.3	69.3	67.5	65.9	68.6	67.2
28/F	115.75	67.3	69.4	67.6	66.0	68.6	67.2
27/F	112.6	67.4	69.4	67.7	66.1	68.7	67.2
26/F	109.45	67.4	69.5	67.8	66.1	68.8	67.1
25/F	106.3	67.5	69.6	67.8	66.3	68.9	67.1
24/F	103.15	67.6	69.7	67.9	66.3	68.9	67.1
23/F	100	67.6	69.8	68.0	66.4	68.9	67.0
22/F	96.85	67.7	69.9	68.2	66.7	69.0	67.0
21/F	93.7	67.7	70.0	68.4	66.9	69.0	66.9
20/F	90.55	Refuge Floor					
19/F	87.4	67.8	70.2	68.6	67.1	69.0	66.7
18/F	84.25	67.9	70.3	68.7	67.2	69.0	66.6
17/F	81.1	68.0	70.4	68.8	67.3	69.0	66.5
16/F	77.95	68.0	70.3	68.9	67.4	69.0	66.3
15/F	74.8	68.2	70.4	69.1	67.6	69.0	66.2
14/F	71.65	68.3	69.9	69.2	67.7	69.0	66.0
13/F	68.5	68.4	70.1	69.3	67.8	69.0	65.7
12/F	65.35	68.5	70.2	69.5	68.1	69.0	65.3
11/F	62.2	68.6	70.4	69.6	68.2	68.9	64.9
10/F	59.05	68.7	69.0	69.7	68.4	68.9	64.6
9/F	55.9	68.8	69.2	69.9	68.5	68.8	64.4
8/F	52.75	69.0	69.4	70.1	68.6	68.8	64.2
7/F	49.6	69.2	69.5	70.2	68.6	68.7	63.8
6/F	46.45	69.4	69.7	70.3	68.5	68.5	63.6
5/F	43.3	69.6	69.8	70.4	68.4	70.4	63.5
4/F	40.15	70.0	70.0	70.4	68.4	68.5	63.4
3/F	37	70.3	70.1	70.3	68.3	68.7	63.2
2/F	33.85	66.8	70.2	70.0	68.0	69.0	63.1
1/F	30.7	66.9	70.1	69.1	66.9	69.0	62.9

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 4 in Mitigated Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 4 (by assessment points)

NSR ID		T4L-01-W1	T4L-01-LB	T4L-02-W1	T4L-02-LB	T4L-03-LB	T4L-03-W1	T4L-04-W1	T4L-04-LB	T4L-05-LB	T4L-05-W1	T4L-06-W1	T4L-06-W2	T4L-06-LB	T4L-07-W1	T4L-07-W2	T4L-07-LB	T4L-08-W1	T4L-08-LB	T4L-09-LB	T4L-09-W1	T4L-10-W1	T4L-10-LB	T4L-11-LB	T4L-11-W1	T4L-12-LB	T4L-12-W1	T4L-12-W2	T4L-13-LB	T4L-13-W1	T4L-13-W2
Floor	mPD	L10, 1hr (dB(A))																													
12/F	87.75	67.9	69.0	67.1	69.1	69.0	67.0	66.9	68.8	68.6	70.4	66.7	66.1	63.4	60.3	65.6	65.7	66.1	66.3	66.6	66.8	67.0	67.2	67.4	67.7	67.9	68.4	69.4	68.5	66.8	67.5
11/F	84.60	68.0	69.1	67.2	69.2	69.1	67.0	66.9	68.9	68.7	66.5	66.8	66.2	63.4	60.0	65.4	65.5	66.0	66.2	66.6	66.8	67.0	67.2	67.4	67.7	67.9	68.4	69.5	68.5	66.8	67.5
10/F	81.45	68.1	69.2	67.3	69.2	69.1	67.1	67.1	69.0	68.8	66.6	66.8	66.3	63.5	59.7	65.2	65.3	65.8	66.1	66.5	66.7	66.9	67.2	67.4	67.7	68.0	68.5	69.5	68.6	66.9	67.6
9/F	78.30	68.3	69.3	67.2	69.2	69.2	67.2	67.1	69.1	68.9	66.7	66.9	66.3	63.5	59.5	65.2	65.1	65.6	65.9	66.3	66.6	66.9	67.1	67.4	67.6	68.0	68.5	69.6	68.7	67.0	67.7
8/F	75.15	68.4	69.3	67.2	69.2	69.1	67.2	67.2	69.2	68.9	66.8	67.0	66.4	63.6	59.3	65.0	65.1	65.5	65.7	66.2	66.5	66.8	67.1	67.4	67.6	68.0	68.5	69.6	68.7	67.0	67.8
7/F	72.00	68.5	69.3	67.2	69.1	69.2	67.2	67.2	69.2	69.0	66.8	67.0	66.5	63.7	59.1	64.9	64.9	65.4	65.6	66.0	66.3	66.7	67.0	67.3	67.6	68.0	68.6	69.7	68.8	67.1	67.9
6/F	68.85	68.7	69.3	67.1	68.9	69.1	67.2	67.2	69.1	69.1	66.9	67.1	66.6	63.7	59.0	64.8	64.8	65.3	65.5	65.9	66.1	66.5	66.9	67.3	67.6	68.0	68.6	69.8	68.9	67.1	68.0
5/F	65.70	68.8	69.1	66.8	68.9	69.0	67.1	67.1	69.1	69.1	67.0	67.2	66.7	63.8	59.0	64.6	64.7	65.2	65.4	65.8	66.0	66.3	66.7	67.2	67.6	68.0	68.7	69.8	69.1	67.1	68.1
4/F	62.55	68.9	68.9	66.7	68.7	68.8	66.9	66.9	69.1	69.2	67.1	67.3	66.8	63.8	58.9	64.4	64.5	65.0	65.2	65.6	65.9	66.2	66.5	66.9	67.4	68.0	68.7	69.9	69.2	67.2	68.1
3/F	59.40	68.9	68.8	70.4	70.4	70.4	66.5	66.7	69.1	69.3	67.3	67.4	66.9	63.9	58.7	64.0	64.1	64.7	65.0	65.3	65.6	65.9	66.4	66.7	67.2	67.8	68.6	69.9	69.3	67.2	68.1
2/F	56.25	68.9	70.3	70.1	70.1	70.1	70.1	70.4	69.0	69.4	67.4	67.5	67.0	63.9	58.5	63.5	63.4	64.2	64.5	64.9	65.3	65.6	66.0	66.4	66.9	67.6	68.5	69.9	69.5	67.2	68.0
1/F	53.10	68.6	69.9	69.7	69.7	69.6	69.6	69.9	68.5	69.3	67.5	67.7	67.1	64.0	58.4	62.6	62.5	63.1	63.4	64.0	64.5	65.0	65.5	65.9	66.4	67.1	68.1	69.3	69.6	67.2	67.7

NSR ID		T4H-01-W1	T4H-01-LB	T4H-02-W1	T4H-02-LB	T4H-03-LB	T4H-03-W1	T4H-04-W1	T4H-04-LB	T4H-05-LB	T4H-05-W1	T4H-06-W1	T4H-06-W2	T4H-06-LB	T4H-07-W1	T4H-07-W2	T4H-07-LB	T4H-08-LB	T4H-08-W1	T4H-09-LB	T4H-09-W1	T4H-09-W2	T4H-10-LB	T4H-10-W1	T4H-11-LB	T4H-11-W1	T4H-11-W2	T4H-12-LB	T4H-12-W1	T4H-12-W2
Floor	mPD	L10, 1hr (dB(A))																													
31/F	147.60	69.8	69.2	69.5	69.6	69.6	69.5	69.4	69.3	69.2	69.0	66.5	66.1	64.0	62.5	66.0	66.0	66.3	66.3	66.3	66.4	66.5	66.6	66.8	67.1	67.5	68.2	69.2	69.4	69.9
30/F	144.45	69.9	69.3	69.5	69.6	69.6	69.6	69.4	69.3	69.2	69.1	66.4	65.9	63.7	62.4	66.0	66.0	66.3	66.3	66.3	66.4	66.5	66.7	66.9	67.1	67.5	68.3	69.2	69.4	70.0
29/F	141.30	70.0	69.3	69.6	69.7	69.7	69.6	69.5	69.4	69.3	69.1	66.4	65.8	63.6	62.4	66.0	66.0	66.3	66.4	66.4	66.5	66.6	66.7	66.9	67.2	67.6	68.3	69.3	69.5	70.1
28/F	138.15	70.0	69.4	69.7	69.8	69.8	69.7	69.6	69.5	69.3	69.2	66.4	65.8	63.5	62.3	66.1	66.1	66.4	66.4	66.4	66.5	66.6	66.8	67.0	67.2	67.6	68.4	69.4	69.6	70.2
27/F	135.00	70.1	69.5	69.8	69.9	69.8	69.8	69.7	69.5	69.4	69.2	66.4	65.8	63.5	62.3	66.1	66.1	66.4	66.4	66.4	66.6	66.7	66.8	67.0	67.3	67.7	68.5	69.4	69.6	70.2
26/F	131.85	70.2	69.6	69.8	69.9	69.9	69.8	69.7	69.6	69.5	69.3	66.4	65.8	63.4	62.2	66.1	66.1	66.4	66.5	66.5	66.6	66.7	66.9	67.1	67.3	67.7	68.5	69.5	69.7	70.3
25/F	128.70	70.3	69.7	70.0	70.0	70.0	69.9	69.8	69.7	69.5	69.4	66.4	65.8	63.3	62.1	66.1	66.1	66.5	66.5	66.5	66.6	66.8	66.9	67.1	67.4	67.8	68.6	69.6	69.8	70.4
24/F	125.55	70.4	69.8	70.0	70.1	70.1	70.0	69.9	69.8	69.6	69.4	66.4	65.8	63.3	62.1	66.2	66.2	66.5	66.5	66.6	66.7	66.8	67.0	67.2	67.4	67.8	68.6	69.6	69.8	70.4
23/F	122.40	66.6	69.9	70.1	70.2	70.2	70.1	70.0	69.9	69.7	69.5	66.5	65.8	63.2	61.9	66.2	66.2	66.5	66.5	66.6	66.7	66.9	67.0	67.2	67.5	67.9	68.7	69.7	69.9	66.5
22/F	119.25	66.7	70.0	70.2	70.3	70.3	70.2	70.1	69.9	69.8	69.6	66.5	65.8	63.2	61.8	66.2	66.2	66.5	66.6	66.6	66.8	66.9	67.1	67.2	67.5	67.9	68.8	69.8	70.0	66.6
21/F	116.10	66.8	70.1	70.3	70.4	70.4	70.3	70.1	70.0	69.9	69.7	66.5	65.8	63.3	61.7	66.2	66.2	66.6	66.6	66.7	66.8	67.0	67.1	67.3	67.5	68.0	68.8	69.8	70.1	66.7
20/F	112.95	66.9	70.2	70.4	68.5	68.5	70.4	70.2	70.1	69.9	69.7	66.5	65.8	63.2	61.6	66.2	66.2	66.6	66.6	66.7	66.9	67.0	67.2	67.3	67.6	68.0	68.9	69.9	70.1	66.8
19/F	109.80	67.0	70.3	66.5	68.6	68.6	66.5	70.3	70.2	70.0	69.8	66.5	65.9	63.1	61.5	66.2	66.2	66.6	66.6	66.8	66.9	67.1	67.2	67.4	67.7	68.1	69.0	70.0	70.2	66.9
18/F	106.65	67.1	70.4	66.6	68.7	68.6	66.5	70.4	70.3	70.1	69.9	66.5	65.8	63.2	61.4	66.2	66.2	66.6	66.7	66.8	67.0	67.1	67.3	67.4	67.7	68.2	69.0	70.1	70.3	66.9
17/F	103.50	67.2	68.5	66.7	68.8	68.7	66.6	66.5	70.4	70.2	70.0	66.5	65.9	63.3	61.3	66.2	66.2	66.6	66.7	66.8	67.0	67.1	67.3	67.5	67.8	68.2	69.1	70.2	70.4	67.0
16/F	100.35	67.4	68.6	66.8	68.9	68.8	66.7	66.6	70.4	70.3	70.1	66.7	65.9	63.3	61.2	66.2	66.2	66.6	66.7	66.8	67.0	67.2	67.4	67.5	67.8	68.3	69.2	70.2	66.5	67.1
15/F	97.20	67.5	68.7	66.9	69.0	68.9	66.8	66.7	68.5	70.4	70.2	66.6	66.0	63.3	61.1	66.1	66.2	66.6	66.7	66.8	67.0	67.2	67.4	67.6	67.8	68.3	69.3	70.3	66.6	67.2
14/F	94.05	67.6	68.8	67.0	69.0	68.9	66.9	66.7	68.6	68.5	70.3	66.6	66.0	63.3	61.0	66.1	66.1	66.6	66.7	66.8	67.0	67.2	67.4	67.6	67.9	68.4	69.3	70.4	66.6	67.3
13/F	90.90	67.7	68.9	67.1	69.1	69.0	66.9	66.8	68.7	68.6	70.4	66.7	66.1	63.4	59.6	65.8	65.9	66.4	66.6	66.8	67.0	67.2	67.4	67.6	67.9	68.4	69.4	70.4	66.7	67.4

ID	Description	Correction
--	No Mitigation Measure	0 dB(A)
AW	Acoustic Window	-4.0 dB(A)
AB	Acoustic Balcony	-2.0 dB(A)

Bold underlined: Noise exceedance

Predicted Traffic Noise Level - Tower 4 in Mitigated Scenario ($L_{10,\ 1hr}$), dB(A)

Tower 4 (by flat)

Flat		T4L-01	T4L-02	T4L-03	T4L-04	T4L-05	T4L-06	T4L-07	T4L-08	T4L-09	T4L-10	T4L-11	T4L-12	T4L-13
Floor	mPD	L10, 1hr (dB(A))												
12/F	87.75	69.0	69.1	69.0	68.8	70.4	66.7	65.7	66.3	66.8	67.2	67.7	69.4	68.5
11/F	84.6	69.1	69.2	69.1	68.9	68.7	66.8	65.5	66.2	66.8	67.2	67.7	69.5	68.5
10/F	81.45	69.2	69.2	69.1	69.0	68.8	66.8	65.3	66.1	66.7	67.2	67.7	69.5	68.6
9/F	78.3	69.3	69.2	69.2	69.1	68.9	66.9	65.2	65.9	66.6	67.1	67.6	69.6	68.7
8/F	75.15	69.3	69.2	69.1	69.2	68.9	67.0	65.1	65.7	66.5	67.1	67.6	69.6	68.7
7/F	72	69.3	69.1	69.2	69.2	69.0	67.0	64.9	65.6	66.3	67.0	67.6	69.7	68.8
6/F	68.85	69.3	68.9	69.1	69.1	69.1	67.1	64.8	65.5	66.1	66.9	67.6	69.8	68.9
5/F	65.7	69.1	68.9	69.0	69.1	69.1	67.2	64.7	65.4	66.0	66.7	67.6	69.8	69.1
4/F	62.55	68.9	68.7	68.8	69.1	69.2	67.3	64.5	65.2	65.9	66.5	67.4	69.9	69.2
3/F	59.4	68.9	70.4	70.4	69.1	69.3	67.4	64.1	65.0	65.6	66.4	67.2	69.9	69.3
2/F	56.25	70.3	70.1	70.1	70.4	69.4	67.5	63.5	64.5	65.3	66.0	66.9	69.9	69.5
1/F	53.1	69.9	69.7	69.6	69.9	69.3	67.7	62.6	63.4	64.5	65.5	66.4	69.3	69.6

Flat		T4H-01	T4H-02	T4H-03	T4H-04	T4H-05	T4H-06	T4H-07	T4H-08	T4H-09	T4H-10	T4H-11	T4H-12
Floor	mPD	L10, 1hr (dB(A))											
31/F	147.6	69.8	69.6	69.6	69.4	69.2	66.5	66.0	66.3	66.5	66.8	68.2	69.9
30/F	144.45	69.9	69.6	69.6	69.4	69.2	66.4	66.0	66.3	66.5	66.9	68.3	70.0
29/F	141.3	70.0	69.7	69.7	69.5	69.3	66.4	66.0	66.4	66.6	66.9	68.3	70.1
28/F	138.15	70.0	69.8	69.8	69.6	69.3	66.4	66.1	66.4	66.6	67.0	68.4	70.2
27/F	135	70.1	69.9	69.8	69.7	69.4	66.4	66.1	66.4	66.7	67.0	68.5	70.2
26/F	131.85	70.2	69.9	69.9	69.7	69.5	66.4	66.1	66.5	66.7	67.1	68.5	70.3
25/F	128.7	70.3	70.0	70.0	69.8	69.5	66.4	66.1	66.5	66.8	67.1	68.6	70.4
24/F	125.55	70.4	70.1	70.1	69.9	69.6	66.4	66.2	66.5	66.8	67.2	68.6	70.4
23/F	122.4	69.9	70.2	70.2	70.0	69.7	66.5	66.2	66.5	66.9	67.2	68.7	69.9
22/F	119.25	70.0	70.3	70.3	70.1	69.8	66.5	66.2	66.6	66.9	67.2	68.8	70.0
21/F	116.1	70.1	70.4	70.4	70.1	69.9	66.5	66.2	66.6	67.0	67.3	68.8	70.1
20/F	112.95	70.2	70.4	70.4	70.2	69.9	66.5	66.2	66.6	67.0	67.3	68.9	70.1
19/F	109.8	70.3	68.6	68.6	70.3	70.0	66.5	66.2	66.6	67.1	67.4	69.0	70.2
18/F	106.65	70.4	68.7	68.6	70.4	70.1	66.5	66.2	66.7	67.1	67.4	69.0	70.3
17/F	103.5	68.5	68.8	68.7	70.4	70.2	66.5	66.2	66.7	67.1	67.5	69.1	70.4
16/F	100.35	68.6	68.9	68.8	70.4	70.3	66.7	66.2	66.7	67.2	67.5	69.2	70.2
15/F	97.2	68.7	69.0	68.9	68.5	70.4	66.6	66.2	66.7	67.2	67.6	69.3	70.3
14/F	94.05	68.8	69.0	68.9	68.6	70.3	66.6	66.1	66.7	67.2	67.6	69.3	70.4
13/F	90.9	68.9	69.1	69.0	68.7	70.4	66.7	65.9	66.6	67.2	67.6	69.4	70.4

Bold underlined: Noise exceedance

APPENDIX 4-4
MAXIMUM ALLOWABLE SOUND POWER LEVELS FOR PLANNED FIXED NOISE SOURCES

Maximum Allowable Sound Power Level at Source

Time Period	Maximum Allowable SPL at NSR, dB(A)	Horizontal Distance from the Project Site Boundary to the Nearest NSR, m	Correction, dB(A)			Allowable Sound Power Level at Source, dB(A) [1]
			Distance	Facade	Tonality	
Site A1						
Day and Evening Time (07:00-23:00)	65	12	30	-3	-6	86
Night Time (23:00 – 07:00)	55	12	30	-3	-6	76
Site B (Podium of Residential Portion)						
Day and Evening Time (07:00-23:00)	65	17	33	-3	-6	89
Night Time (23:00 – 07:00)	55	17	33	-3	-6	79
Site B (Hotel Portion)						
Day and Evening Time (07:00-23:00)	65	15	32	-3	-6	88
Night Time (23:00 – 07:00)	55	15	32	-3	-6	78

[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.

Cumulative Noise level form the Planned the Building Service Equipment of the Proposed Development

NSR ID	Description	Horizontal Distance (m)			Allowable Sound Power Level at Source, dB(A)					
					Day and Evening Time (07:00-23:00)			Night Time (23:00 – 07:00)		
		Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B	Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B	Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B
NSR01	Fa Yuen Mansion	19	97	247	86	89	88	76	79	78
NSR02	Oscar Court	13	66	216	86	89	88	76	79	78
NSR03	Circle Garden	**12**	46	193	86	89	88	76	79	78
NSR04	Mongkok City Building	26	85	201	86	89	88	76	79	78
NSR05	Merlin Building	46	146	268	86	89	88	76	79	78
NSR06	Flower Villa	49	66	176	86	89	88	76	79	78
NSR07	Heung To College of Professional Studies	52	**17**	161	86	89	88	76	79	78
NSR08	Jenny's Court	104	25	147	86	89	88	76	79	78
NSR09	Residential flat of the Scheme (Tower 4)	178	N/A	**15**	86	89	88	76	79	78

[1] The nearest Representative Noise Sensitive Receivers for each corresponding source are bold underlined.

[2] Restricted locations has been provided in Site A1.

Cumulative Noise level form the Planned the Building Service Equipment of the Proposed Development

NSR ID	Description	Correction, dB(A)								SPL at NSR, dB(A)									
		Distance			Barrier [5]			Facade	Tonality [3,4]	Day and Evening Time (07:00-23:00)					Night Time (23:00 – 07:00)				
		Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B	Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B			Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B	**Total**	Criteria	Podium of Site A1	Podium of Site B (Residential Portion)	Hotel of Site B	**Total**	Criteria
NSR01	Fa Yuen Mansion	-34	-48	-56	0	0	0	3	6	61	50	41	**61**	65	51	40	31	**51**	55
NSR02	Oscar Court	-30	-44	-55	-5	0	0	3	6	59	53	42	**60**	65	49	43	32	**50**	55
NSR03	Circle Garden	-30	-41	-54	-5	0	0	3	6	60	56	43	**62**	65	50	46	33	**52**	55
NSR04	Mongkok City Building	-36	-47	-54	0	0	0	3	6	58	51	42	**59**	65	48	41	32	**49**	55
NSR05	Merlin Building	-41	-51	-57	0	0	0	3	6	53	46	40	**54**	65	43	36	30	**44**	55
NSR06	Flower Villa	-42	-44	-53	0	0	0	3	6	53	53	44	**56**	65	43	43	34	**46**	55
NSR07	Heung To College of Professional Studies	-42	-33	-52	0	0	0	3	6	52	65	44	**65**	65	42	55	34	**55**	55
NSR08	Jenny's Court	-48	-36	-51	0	0	0	3	6	46	62	45	**62**	65	36	52	35	**52**	55
NSR09	Residential flat of the Scheme (Tower 4)	-53	N/A	-32	0	0	0	3	6	42	N/A	65	**65**	65	32	N/A	55	**55**	55

[3] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.

[4] 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 dB(A) of noise reduce has been adopted for noise source without direct view.

APPENDIX 4-5
RAILWAY NOISE CALCULATION

Railway Noise Calculation

	Northbound (ERL)	Southbound (ERL)		Northbound (Intercity) [7]		Combined	Criteria
Horizontal Seperation (m)	200	204		200			
Speed (kph) [1]	80	80		80			
Peak Train Frequency per 30 min (7:00-23:00) [2][6]	15	15		1			
Peak Train Frequency per 30 min (23:00-7:00) [2][6]	12	12		1			
Peak Train Frequency per day [2][3]	425	425		48			
Reference Lmax, (dB(A)) [4]	75.3	75.3		75.3			
Reference SEL, (dB(A)) [4]	82.8	82.8		82.8			
Speed Correction, (dB(A))	-4.2	-4.2		-4.2			
Distance Correction, (dB(A))	-9.0	-9.1		-9.0			
Façade correction, (dB(A))	2.5	2.5		2.5			
Track Wear Correction, (dB(A))	3.0	3.0		3.0			
Reflection Correction, (dB(A))	1.5	1.5		1.5			
Slab Track Correction, (dB(A))	0.0	0.0		0.0			
SEL of a single passby, (dB(A))	76.6	76.5		76.6			
Train frequence correction, 30min (7:00-23:00), (dB(A))	11.8	11.8		0.0			
Train frequence correction, 30min (23:00-7:00), (dB(A))	10.8	10.8		0.0			
Train frequence correction, daily, (dB(A))	26.3	26.3		16.8			
Leq 30min (7:00-23:00), (dB(A))	55.8	55.7		44.0		58.9	70
Leq 30min (23:00-7:00), (dB(A))	54.8	54.7		44.0		57.9	60
Leq 24 hour, (dB(A))	53.5	53.4		44.0		56.7	65
Lmax, (dB(A)) [5]	69.1	69.0		69.1		72.0	85

[1] The speed of the Train is typically with the range of 60-80 kph. From on-site observation, the average velocity of ERL trains within the 300m assessment area are seldom over 70 km/h, due to the vicinity to station. The average train speed for ERL is assumed to be 80kph in the calculation, for conservative asessment. Base on on-site observation in year 2019, the speed of intercity train was around 75-80km/h and assumed to be 80 km/h in the calculation.

[2] Ultimate frequency limit from Environmental Permit EP-437/2012/A & Approved EIA report AEIAR-165/2012 for Shatin to Central Link

[3] The ultimate daily frequency is 850 train per day including both northbound and southbound. The current assessment assume the train frequency of northbound and southbound trains are equal.

[4] The Reference Lmax, Reference SEL, and the calculation methodology is reference to Approved EIA report AEIAR-165/2012

[5] Assume the Lmax of one (intercity) northbound train and one southbound (ERL) train occur at the same time.

[6] Train frequency of Intercity train has been referenced to approved EIA report (AEIAR-165/2012)]

[7] Assume all intercity trains are northbound for conservative assessment.

APPENDIX 6-1
HISTORICAL AERIAL PHOTOS

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1949

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	1
		REV	-

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1956

SCALE	1:1000 @ A3	DATE	07 Mar 2024
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JOB No.	IA19021-YMAA101P1	DRAWING No.	2
		REV	-

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1963

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	3
		REV	-

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1969

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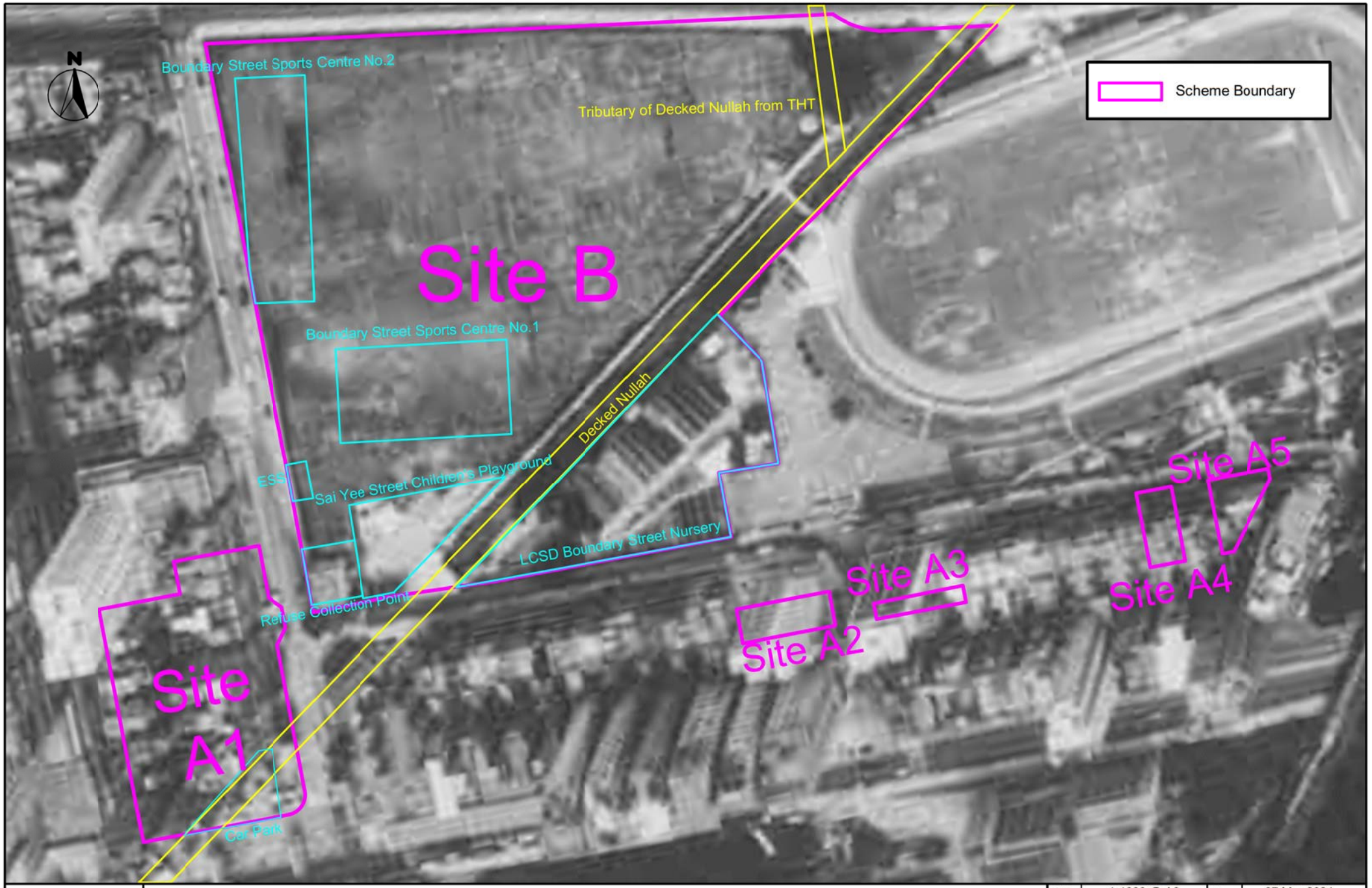

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1974

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	5
		REV	-

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1975

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	6
		REV	-

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1976

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	7
		REV	-

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1981

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	8
		REV	-

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 1986

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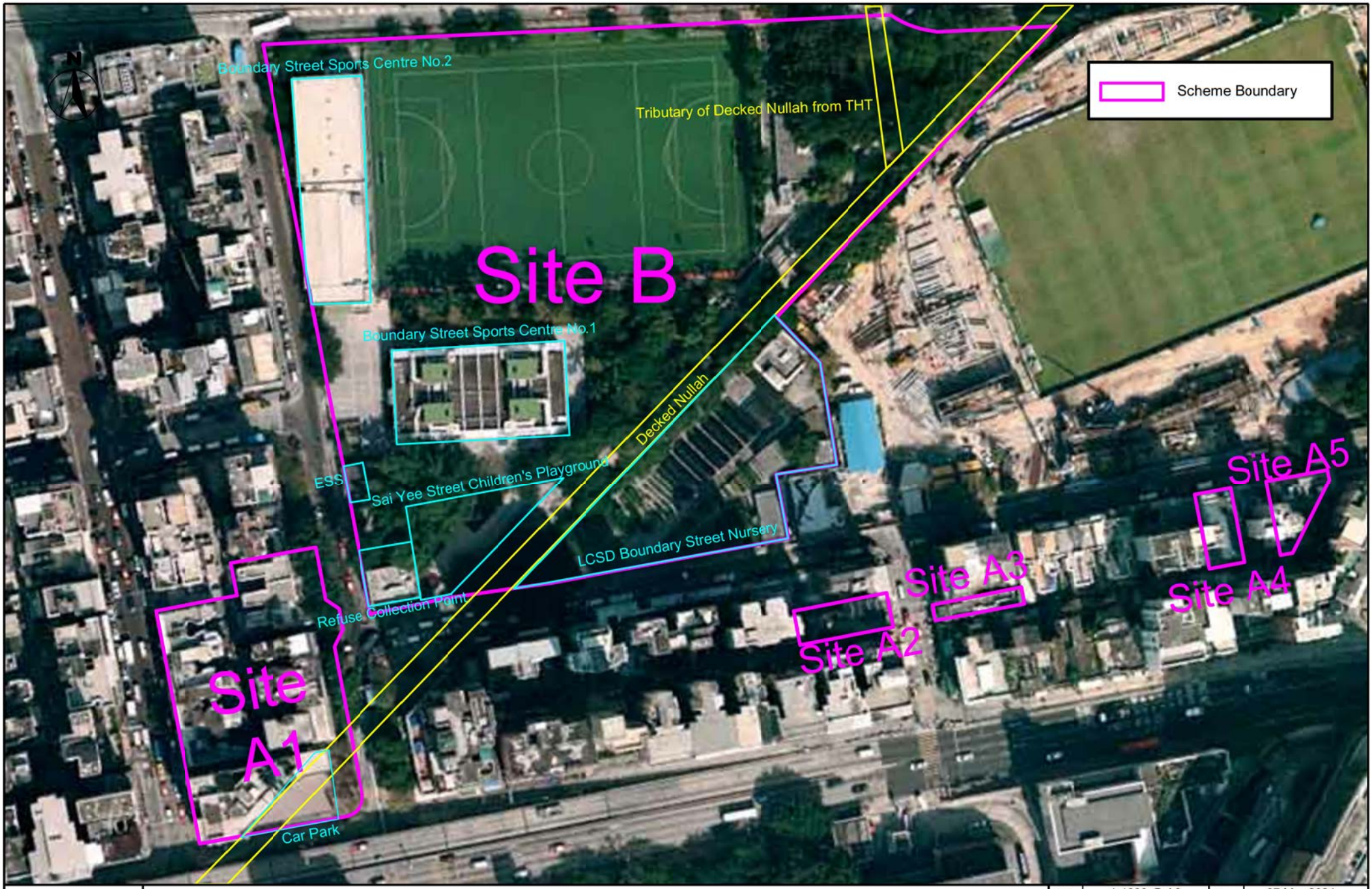

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 2010

SCALE	1:1000 @ A3	DATE	07 Mar 2024
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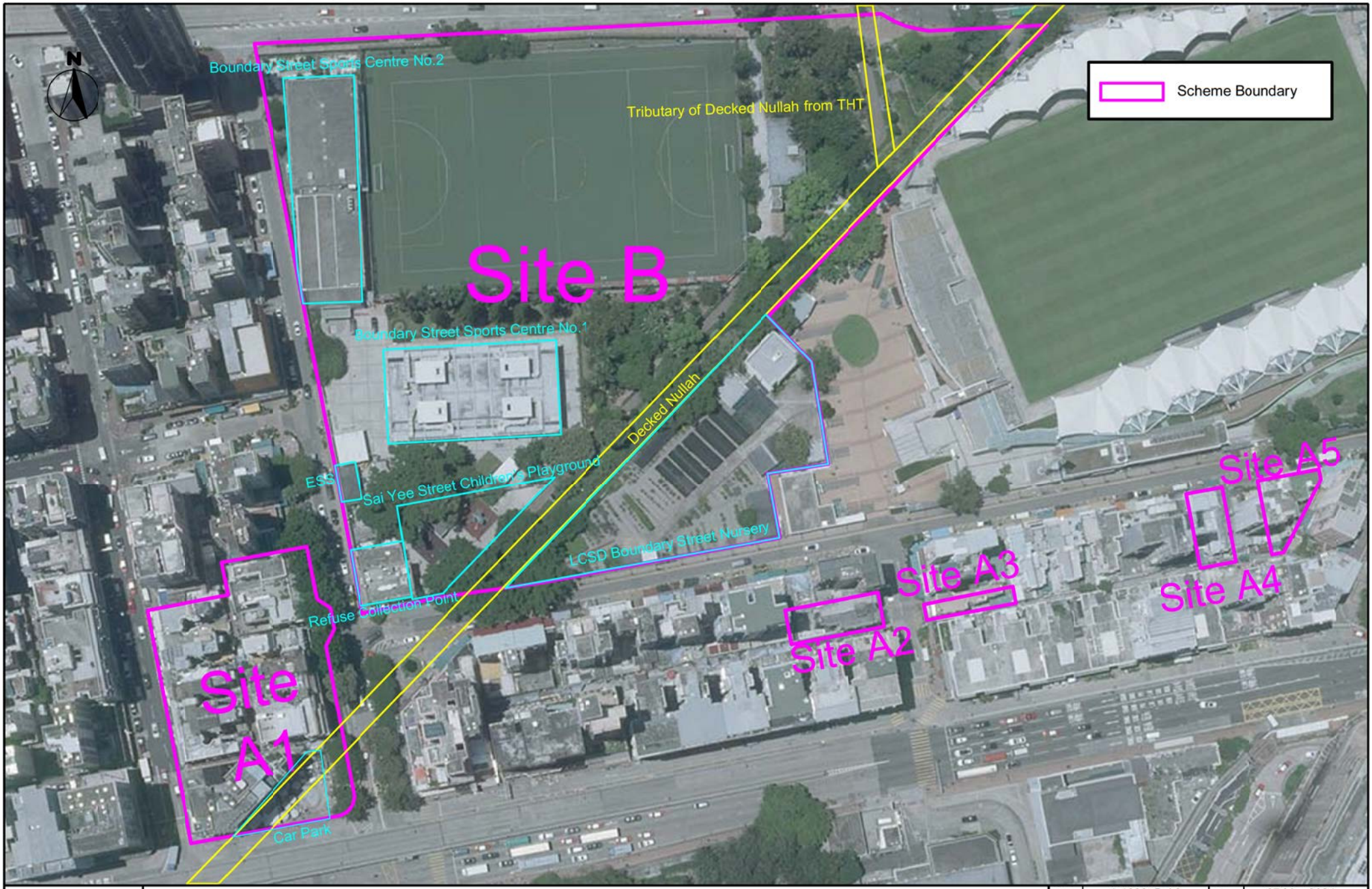

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 2020

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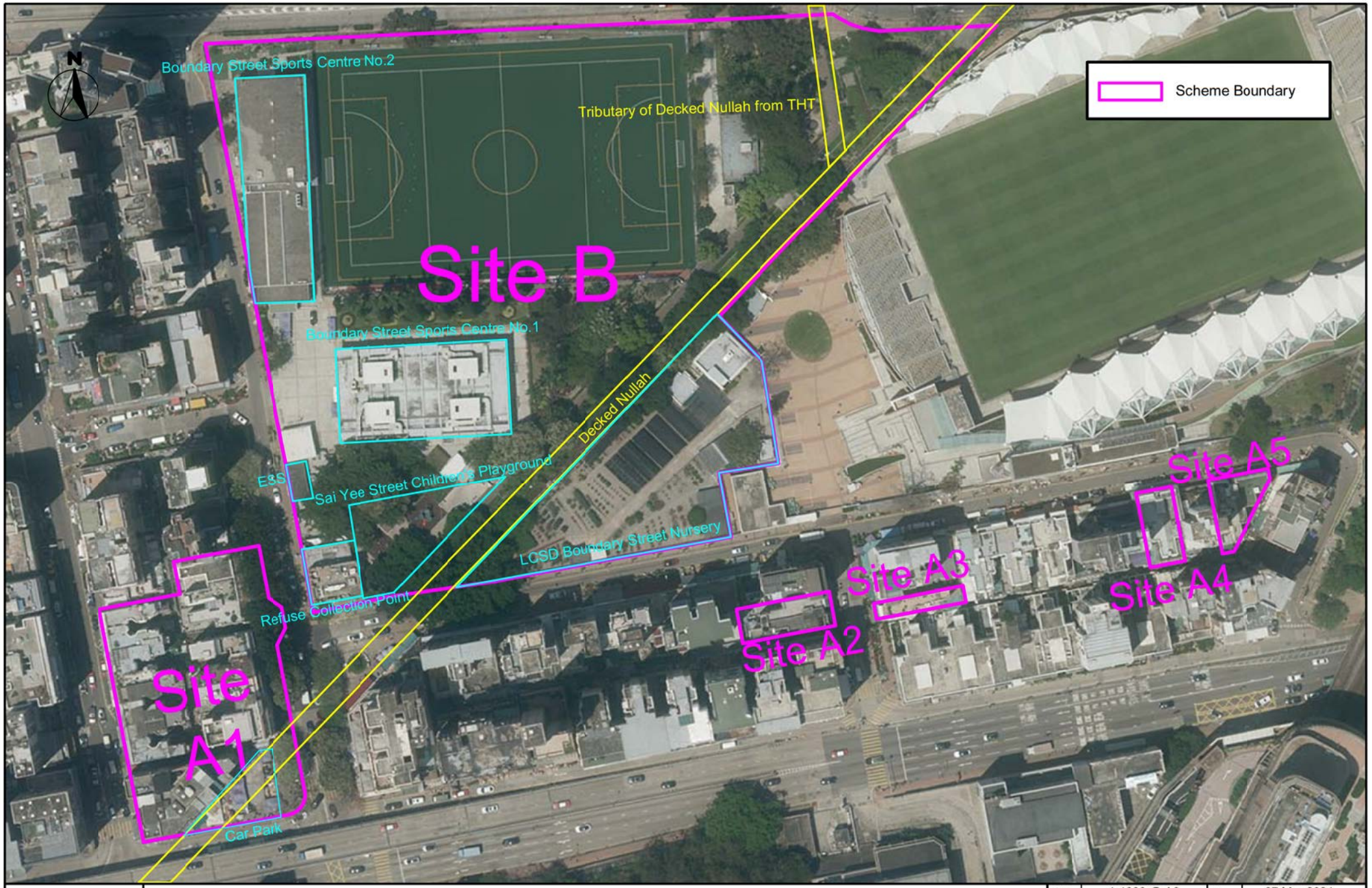


CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Historical Aerial Photo - 2022

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	12
		REV	-

APPENDIX 6-2
CORRESPONDENT FROM EPD AND FSD REGARDING FOR LAND CONTAMINATION ENQUIRES

CINOTECH 漢臻
consultants limited

Room 1710, 17/F., Technology Park
18 On Lai Street, Shatin, Hong Kong
Tel: 852-21512083 Fax: 852-31071388
Website: http://www.cinotech.com.hk
General E-mail: info@cinotech.com.hk

Our Ref: CCL/IA19021/YMAA1-01-P1/cc230726epd

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
MongKok

8th floor, Cheung Sha Wan Government Offices,
303 Cheung Sha Wan Road, Kowloon

By E-Mail
26th July 2023

Dear Mr. KWAN Yiu Keung, John,

STRICTLY CONFIDENTIAL

Urban Renewal Authority ("URA")
Proposed Development Scheme at Mongkok (YMAA1-01-P1)

Enquiry on Record of Land Contamination

We, Cinotech Consultants Ltd., have been commissioned by the Urban Renewal Authority (URA) to conduct a Land Contamination Assessment to investigate the environmental acceptability for a Proposed Development Scheme at Mong Kok.

I am writing to enquire if there is any past record of registered chemical waste producers and reported accidents of chemical leakage or spillage within or in the vicinity of the proposed works. A location plan covering the areas of concern is attached for reference.

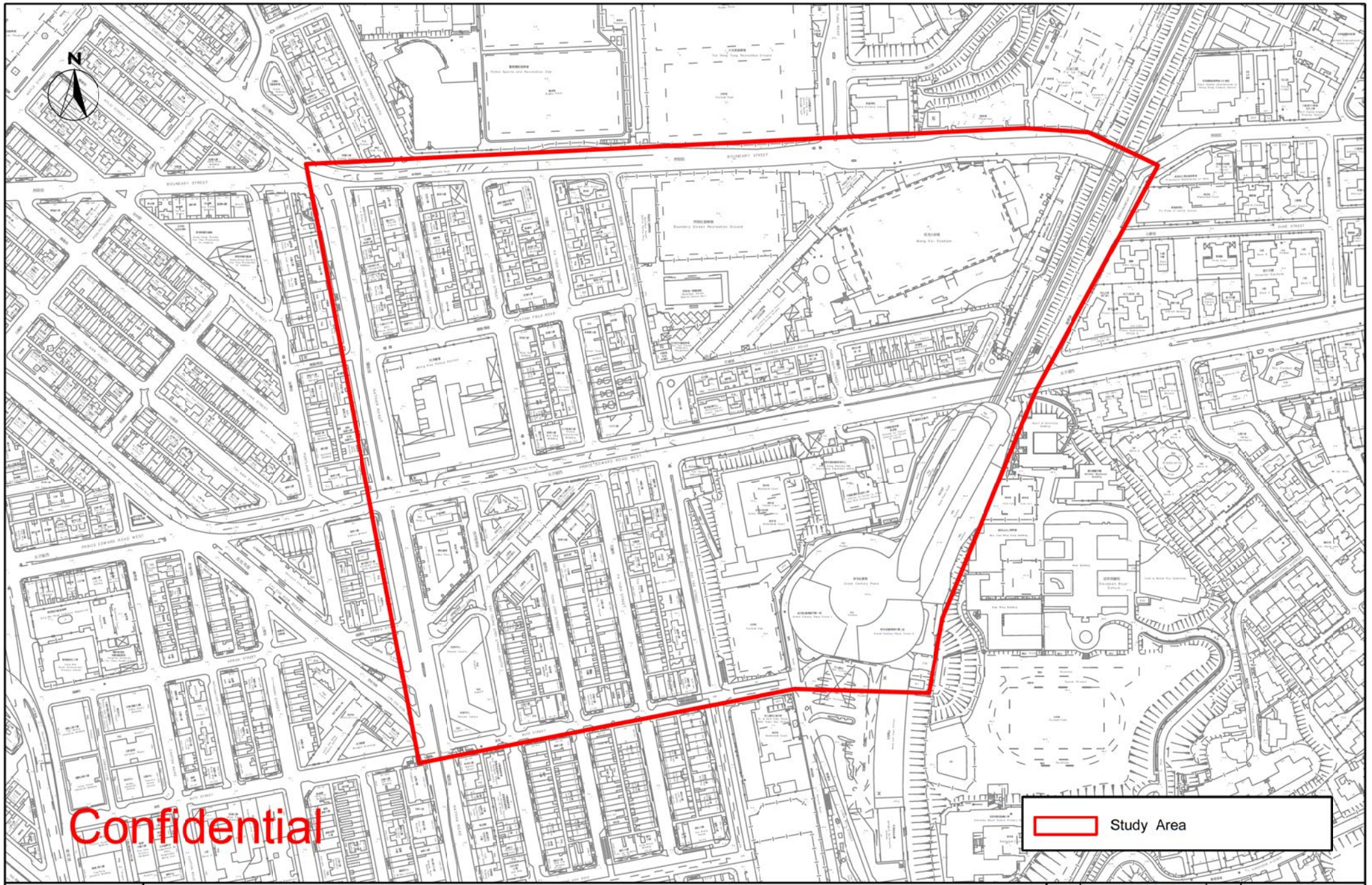
Your reply by 25th August 2023 will be much appreciated. If you need any further clarification, please contact our Colman Wong at 2151 2068 or the undersigned at 2151 2091.

Yours sincerely,

KS LEE
Technical Director

Encl. Figure 1 - Study Area
Appointed Service Order Form

c.c. URA Mr. Frankie Choy (by e-mail)



Confidential

Cinotech Consultants Limited

Urban Renewal Authority Development Scheme at Mongkok (YMAA1-01-P1)

Study Area for the Proposed Redevelopment

SCALE	1:3000 @ A3	DATE	Jul 2023
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 1
		REV	-

本署檔號
OUR REF: (41) in EP412/R2/3 Pt.12
來函檔號
YOUR REF: CCL/IA19021/YMAA1-01-P1/cc230726epd
電　話
TEL. NO.: 2150 8019
圖文傳真
FAX NO: 2402 8275
電子郵件
E-MAIL: kinhongchow@epd.gov.hk
網　址
HOMEPAGE: http://www.epd.gov.hk

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)

8/F., Cheung Sha Wan Government Offices
303 Cheung Sha Wan Road
Kowloon

環境保護署
環保法規管理科
區域辦事處(東)
九龍長沙灣道 303 號
長沙灣政府合署 8 樓

By Email
28 July 2023

Cinotech Consultants Limited
Room 1710, 17/F., Technology Park
18 On Lai Street,
Shatin, Hong Kong
(Attn: Mr. KS LEE)

Dear Mr. LEE,

Re: Urban Renewal Authority ("URA")
Proposed Development Scheme at Mongkok (YMAA1-01-P1)
Enquiry on Record of Land Contamination

We refer to your letter dated 26 July 2023 regarding the subject matter.

A registry of chemical waste producers is available in the Territorial Control Office of this department. Please contact Mr. Paul TSANG at 2835 1017 or at cktsang@epd.gov.hk for making an appointment to view the records.

As far as this office is concerned, we are not aware of any record of chemical spillage/leakage at the concerned location. However, please be reminded that this information may not be exhaustive. You may wish to check with the Fire Services Department or other relevant parties / departments for such information as appropriate for record of chemical spillage/leakage accident.

Please feel free to contact me should you have any query on the above matter.

Yours sincerely,

(CHOW Kin-hong)

for Director of Environmental Protection

CINOTECH 漢臻
consultants limited

Room 1710, 17/F., Technology Park
18 On Lai Street, Shatin, Hong Kong
Tel: 852-21512083 Fax: 852-31071388
Website: http://www.cinotech.com.hk
General E-mail: info@cinotech.com.hk

Our Ref: CCL/IA19021/YMAA1-01-P1/cc230726fsd

Fire Services Department
Fire Services Headquarters Command
Management Group (MG)
9th Floor, Fire Services Headquarters Building
1 Hong Chong Road, Tsim Sha Tsui East, Kowloon

By Mail
26th July 2023

Attn.: To whom it may concern

Dear Sir/Madam,

STRICTLY CONFIDENTIAL

Urban Renewal Authority ("URA")
Proposed Development Scheme at Mongkok (YMAA1-01-P1)

Enquiry on Record of Land Contamination

We, Cinotech Consultants Ltd., have been commissioned by the Urban Renewal Authority (URA) to conduct a Land Contamination Assessment to investigate the environmental acceptability for a Proposed Development Scheme at Mong Kok.

I am writing to enquire if there is any past record of dangerous goods license and reported accidents of dangerous goods leakage or spillage within or in the vicinity of the proposed works. A location plan covering the areas of concern is attached for reference.

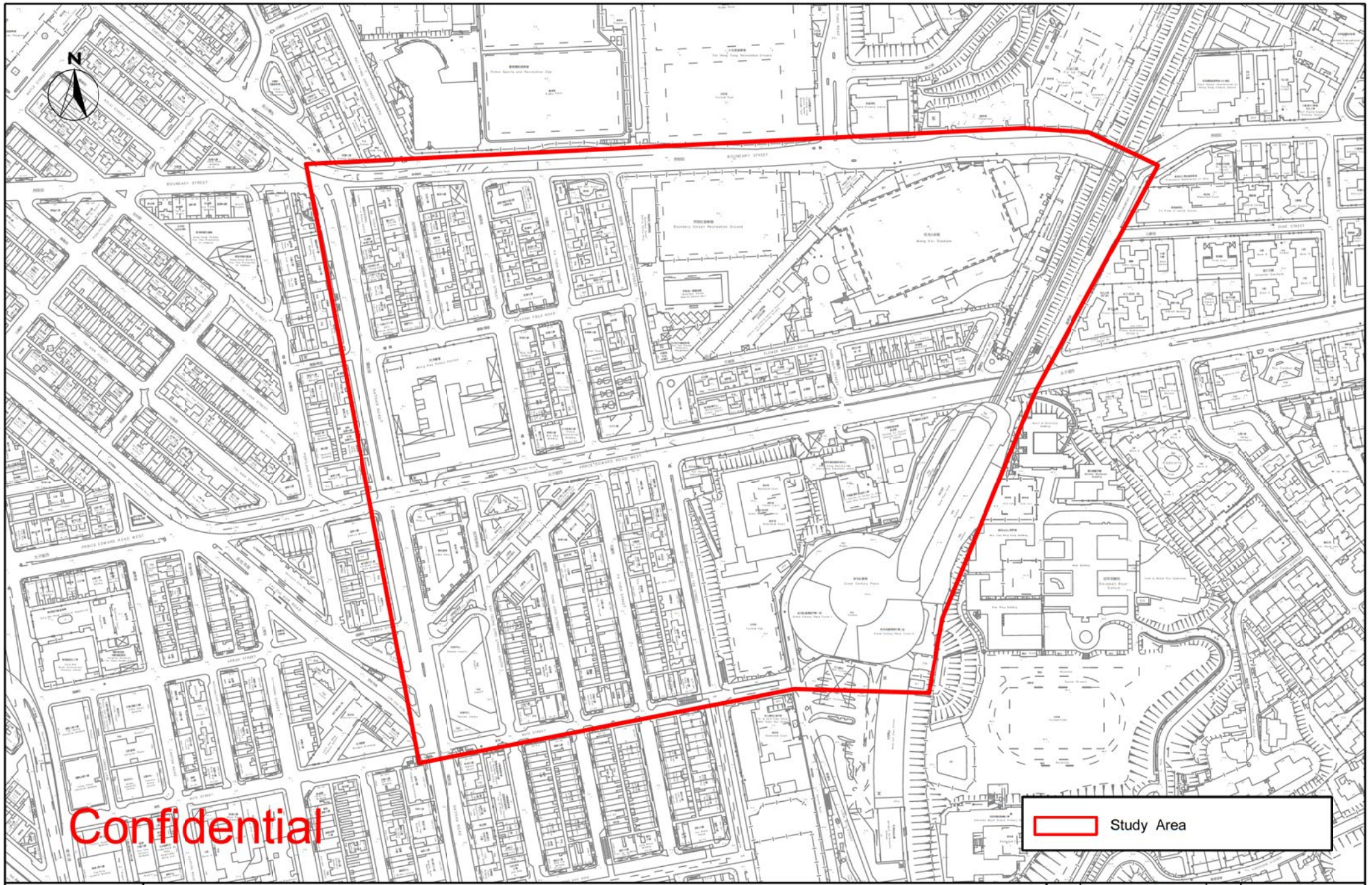
Your reply by 25th August 2023 will be much appreciated. If you need any further clarification, please contact our Colman Wong at 2151 2068 or the undersigned at 2151 2091.

Yours sincerely,

KS LEE
Technical Director

Encl. Figure 1 - Study Area
Appointed Service Order Form

c.c. URA Mr. Frankie Choy (by e-mail)



Confidential

Cinotech Consultants Limited

Urban Renewal Authority Development Scheme at Mongkok (YMAA1-01-P1)

Study Area for the Proposed Redevelopment

SCALE	1:3000 @ A3	DATE	Jul 2023
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 1
		REV	-

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.** : (66) in FSD GR 6-5/4 R Pt. 48
來函檔號 **YOUR REF.** : CCL/IA19021/YMAA-01-PI/cc230726fsd
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2739 5879
電 話 **TEL NO.** : 2733 7743

24 August 2023

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,

Urban Renewal Authority("URA")
Proposed Development Scheme at Mongkok (YMAAI-01-PI)
Request for Information of Dangerous Goods & Incident Records

I refer to your letter and email of 26.7.2023 regarding the captioned request and reply below in response to your questions:-

According to our record, from the year of 1990 to present moment, dangerous goods licenses have been issued by this department to the subject address, with details as shown in **Appendix A**. No incident record was found at the aforesaid location with your given conditions.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(CHEUNG Wai-lam)
for Director of Fire Services

Appendix A

Urban Renewal Authority("URA")
Proposed Development Scheme at Mongkok (YMAAI-01-PI)
Request for Information of Dangerous Goods & Incident Records

Item	Type of DG	Quantity	Storage Location
1.	Diesel Oils	22500 litres	48 Boundary Street
2.	Petrol	11250 litres	
3.	Diesel Oils	13650 litres	KIL 11177, Prince Edward Road
4.	Diesel Oils	6825 litres	
5.	Petrol	11375 litres	
6.	Petrol	6825 litres	
7.	Petrol	6825 litres	
8.	Diesel	600 litres	Mong Kok East Station
9.	Diesel	1500 litres	
10.	Diesel	1050 litres	
11.	Unleaded motor spirit	180 litres	Mongkok Stadium
12.	Light Diesel	90 litres	
13.	Paint	40 litres	
14.	Thinner	8 litres	
15.	Kerosene	72 litres	No. 142 Prince Edward Road
16.	Petrol	18 litres	
17.	Paint	90 litres	

APPENDIX 6-3
PHOTO RECORDS FOR LAND CONTAMINATION ASSESSMENT

1_Boundary Street Sports Ground

2_Temporary structure for sports tools storage and landscaping area

3_ESS within Site B

4_Thick steel sheet was identified on ground of ESS within Site B

5_Children's Playground

6_Refuse Collection Point

7_Plantation in Nursery

8_View from entrance of Nursery

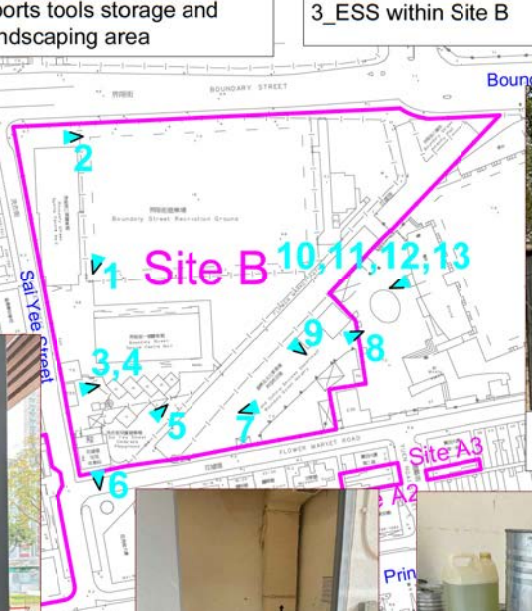
9_Area for composting in Nursery

10_DG Storage at Mong Kok Stadium

11_DG Storage at Mong Kok Stadium

12_Gasoline on fully paved ground

13_Diesel on fully pave ground



CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Photo Record for Land Contamination Assessment (Site B and MK Stadium)

SCALE	1:2500 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	Appendix 6-3
		REV	-

1_Car Parking Area or Flower Market at Site A1

2_Car Parking Area or Flower Market at Site A1

3_Fully paved ground without cracks at Site A1

4_Residential buildings with G/F shops at Site A1

Scheme Boundary

Photo ID Photo's Point of View

Site A1

Site A2

Choi Street North

Sai Yee Street

Playing Field

FLOWER MARKET ROAD

PRINCE EDWARD ROAD WEST

Mong Kok Police Station

CINOTECH
Cinotech Consultants Limited

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Photo Record for Land Contamination Assessment (Site A1)

SCALE	1:1000 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	Appendix 6-3
		REV	-

1_Residential buildings with G/F flower shops at Site A2

2_Residential buildings with G/F flower shops at Site A3

3_Residential buildings with G/F flower shops at Site A4

4_Residential buildings with G/F flower shops at Site A5

Scheme Boundary

Photo ID Photo's Point of View

Boundary Street

Prince Edward Road West

Site A2

Site A3

Site A4

Site A5

CINOTECH Cinotech Consultants Limited	Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)		
	Photo Record for Land Contamination Assessment (Sites A2 - A5)		
SCALE	1:1500 @ A3	DATE	07 Mar 2024
CHECK	KC	DRAWN	EH
JOB No.	IA19021-YMAA101P1	DRAWING No.	Appendix 6-3
		REV	-

Appendix 8

Drainage Impact Assessment

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Drainage Impact Assessment

(V2.0)

Mar 2024

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.

CINOTECH CONSULTANTS LIMITED
Room 1710, Technology Park
18 On Lai Street
Shatin, NT, Hong Kong
Tel: (852) 2151 2083 Fax: (852) 3107 1388
Email: info@cinotech.com.hk

TABLE OF CONTENTS

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1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority ("URA") has proposed Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance ("URAO"). The Scheme is the first implementation of a project proposed under the Master Urban Renewal Concept Plan ("MRCP") as devised from the URA's District Study for Yau Ma Tei and Mong Kok ("YMDS"), and is part of the proposed "Mong Kok East – Nullah Road Urban Waterway Development Node" ("Nullah Road DN").

1.1.2 Cinotech Consultants Limited is commissioned by the URA to conduct a Drainage Impact Assessment (DIA) to support the submission of a draft Development Scheme Plan ("DSP") of the Scheme with its planning proposal to the Town Planning Board ("TPB") for consideration.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

2.1.1 The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m^2, the Scheme is divided into Site A (about 4,445m^2) and Site B (about 24,870m^2). The location of the Scheme is shown on **Figure 2-1**.

2.1.2 Site A of the Scheme comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

2.1.3 Site B of the Scheme is currently occupied by various leisure, recreation and GIC facilities, including Boundary Street Recreation Ground, Sai Yee Street Children's Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department ("LCSD") Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath.

2.1.4 On the approved Mong Kok Outline Zoning Plan ("OZP") no. S/K3/36, Site A1 of the Scheme area is zoned "Residential (Group A)" ("R(A)"). Sites A2 to A5 are zoned "Other Specified Uses" annotated "Mixed Use" ("OU(MU)"). Sites A1 to A5 also covers pavement area shown as "Road". Site B covers area zoned "Government, Institution or Community" ("G/IC") and "Open Space" ("O"), and the Flower Market Path which is shown as "Road".

2.2 The Proposed Development

Draft DSP

2.2.1 Under the draft DSP, the Scheme is proposed to be rezoned to "OU(MU)" and areas shown as "Road" for the surrounding pavement. The planning intention of the "OU(MU)" zone is primarily for comprehensive residential/ mixed-use developments with the provision of public vehicle park, at-grade open space and GIC facilities.

2.2.2 Site A ("OU(MU)1") consists of Sub-areas Sites A1 to A5. Site A1 will be developed for residential development cum commercial podium, with a building height restriction ("BHR") of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5. Site B ("OU(MU)2") is divided into Sub-areas (1) and (2). Sub-area 1 of "OU(MU)2" zone will be for high-rise development with a BHR of 150mPD adopting a stepped height profile. Sub-area (2) of "OU(MU)2" zone comprises the Waterway Park and ancillary retail/commercial uses and LCSD's sports/ GIC facilities with a BHR of 30mPD.

Notional Design

2.2.3 A notional design, which is illustrated in **Appendix I**, is prepared based on the development parameters allowed in the draft DSP to demonstrate the proposed planning intention and development concepts of the Scheme. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2 to A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.

2.2.4 Under the current notional design, at Sub-area (2) of Site B (i.e. north-east corner of Site B), a comprehensive mixed-use development with high-rise residential and hotel/office towers with recreation and GIC facilities at the podia is proposed. Ancillary parking and public vehicle park are proposed at the basement levels at Site B. An at-grade open space, named as "Waterway Park", is proposed within Site B. Ancillary retail facilities are proposed at ground level, basement and the Waterway Park to bring retail activities and vibrancy.

2.2.5 To enhance walkability and connectivity, four pedestrian connections are proposed:

- Footbridge to connect between Site B and Tai Hang Tung Recreation Ground;
- Subway to connect between Site A1 and Site B;
- Potential subway connection from Site A1 across Prince Edward Road West towards the Prince Edward MTR Station and/or the commercial spine along Nathan Road; and
- Subway to connect between proposed underground PVP at Site B and southern part of proposed Waterway Park.

2.2.6 All these pedestrian footbridges/ subways shall be subject to technical feasibility, detailed design and agreement with relevant Government departments. For footbridge/ subways outside DSP boundaries shall be under separate public works/ revitalization initiatives not forming part of the Scheme.

2.2.7 The proposed development of the Scheme will be redeveloped in phases and the tentative completion year of the whole project is in 2035.

Development Parameters

2.2.8 This assessment is prepared based on the following development parameters in **Table 2-1**, **Table 2-2** and notional design, which are subject to DSP approval and changes at detailed design stage:

Table 2-1 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m^2	About 268m^2	About 123m^2	About 233m^2	About 251m^2
	About 4,445m^2				
Net Site Area (subject to survey)	About 2,640m^2	About 239m^2	About 109m^2	About 202m^2	About 198m^2
	About 3,388m^2				
Zoning	OU(MU)1				
Domestic GFA [1]	23,716m^2	-	-	-	-
Non-Domestic GFA [1]	6,576m^2	-	-	100m^2	100m^2
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m^2	-	-	-	-
At-grade Open Space	About 800m^2				

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-2 Development Parameters of the Notion Design (Site B)

Site B			
Gross Site Area	About 24,870m^2		
Zoning	OU(MU)2		
	Sub-area (1)	**Sub-area (2)**	**Total**
Net Site Area (subject to survey)	7,170m^2	17,700m^2	24,870m^2
Domestic GFA [1]	44,030m^2	-	44,030m^2
Non-Domestic GFA [1] - Retail - Hotel/Office	20,500m^2 (2,150m^2) (18,350m^2)	8,850m^2 (8,850m^2) -	29,350m^2 (11,000m^2) (18,350m^2)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m^2		
No. of Building Blocks [2]	2 residential towers and 1 hotel/office tower on top of a GIC/recreation podium + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (hotel/office tower) 1 storey (retail block)		
No. of Flats [2]	880	-	880
Average Flat Size [2]	50m^2	-	50m^2
At-grade Open Space	About 8,800m^2		
Public Vehicle Park [4]	About 235		

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
[3] The actual GIC GFA is not yet confirmed and subject to liaison with Government departments. As a conservative approach, 30,000m^2 GIC GFA is assumed in this assessment.
[4] Subject to liaison with Transport Department.

2.2.9 The stormwater discharge system of Sites A1 and B, including the discharge points, will be completely revamped. Additionally, certain existing stormwater pipes will be removed to accommodate the development requirements. Consequently, provisions for diversion will be made, and a comprehensive assessment of the potential drainage impact resulting from the development of Sites A1 and B shall be conducted and appropriate measures shall be taken.

2.2.10 On the other hand, the peak stormwater discharge of Sites A2 (catchment S-A2), A3 (catchment S-A3), A4 (catchment S-A4) & A5 (catchment S-A5) are 25.0 L/s, 11.6 L/s, 21.6 L/s & 23.2 L/s respectively according to the calculation (**Appendix II**). Since these sites are served by the major stormwater pipes of 1275mm to 1500mm along Prince Edward Road West, which having capacity of ~2100 L/s and ~3250 L/s respectively when the slope is 1:300, the discharge from Sites A2 to A5 are small in comparison to the scale of the major stormwater pipes in their downstream vicinity.

3 DRAINAGE IMPACT ASSESSMENT

3.1 Methodology

3.1.1 Stormwater Drainage Manual – Planning, Design and Management", fifth edition, January 2018, (hereafter called "the SDM") prepared by Drainage Services Department (DSD) provides guidelines for the design of the drainage system. "Corrigendum No. 1/2022 of the Stormwater Drainage Manual" (hereafter called "SDM Corrigendum"), has been made by the DSD in 2022 for updating the design requirement of rainfall increase and extreme sea level rise in 21st century.

3.1.2 This report adopts the rational method for the assessment, where the peak runoff is estimated by runoff coefficient, rainfall intensity and catchment area as stated in Section 7.5.2 of the DSD Manual.

3.1.3 The adopted runoff coefficients are referred to Section 7.5.2(b) of the DSD Manual and 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(b) of "Stormwater Drainage Manual – Planning, Design and Management", fifth edition, January 2018.

3.1.4 According to Table 10 of the SDM, the recommended design return period based on flood levels is 50 years ("Urban Drainage Branch Systems[1]") for conservative purpose. The rainfall intensities are calculated by Intensity-Duration-Frequency (IDF) Relationship (Section 4.3.3 of SDM) with storm constants of HKO Headquarters's rainfall zone (Figure 3 & Table 3a of the SDM).

3.1.5 As stated in Section 6.8 of the SDM Corrigendum, drainage provision in new development areas should consider the climate change effects up to end of 21st century. Therefore, the increase of 16.0% in rainfall and 12.1% design allowance for end of 21st century (Tables 28 & 31 of SDM Corrigendum) is incorporated into the calculation.

3.1.6 The capacities of the public stormwater pipes are calculated by Colebrook-White Equation. All existing public stormwater pipes in the assessment are assumed to be slimed concrete pipes under poor condition for conservative assessment.

3.2 Stormwater Discharge from the Project

3.2.1 The existing stormwater system and the stormwater catchments in the vicinity are illustrated in **Figures 3-1a to 3-1g**.

3.2.2 Under the existing condition, the stormwater from Sites A1 and B is discharged to the decked nullah within the sites via the local stormwater drainage system and/or short sections of public drainage pipes. As for Sites A2 to A5, the stormwater discharged from these sites is collected by local 300mm public drainage pipes that are connected to nearby

[1] This Project do not intend altern or upgrade any trunk drains, which are equal to or larger than 1.8 m in diameter according to Section 6.6.2 of the SDM. Therefore, return period of "Urban Drainage Branch Systems" has been adopted.

1200mm/1500mm public drainage pipes along the main street, which also connected to the decked nullah.

3.2.3 After the redevelopment, the stormwater from Sites A1 and B will be directly discharged to the decked nullah. For Sites A2 to A5, the stormwater will be discharged to the nearest public stormwater manholes, which will remain the same as in the existing condition.

3.2.4 Currently, there are some existing unpaved areas within Site B. Although the Scheme is not expected to reduce the total unpaved area of Site B, a fully paved scenario for all of the Project Sites has been adopted for a conservative assessment.

3.2.5 The peak stormwater discharge from the Site, calculated as per **Section 3.1**, is summarised in **Table 3-2**. The detailed calculations are shown in **Appendix II.**

Table 3-2 Peak Stormwater Discharge from the Site

Catchments	Description	Total Drainage Discharge (L/s)
S-A1	Site A1	279.8
S-A2	Site A2	25.0
S-A3	Site A3	11.6
S-A4	Site A4	21.6
S-A5	Site A5	23.2
S-B	Site B	1827.5

Note:
[1] Detailed calculations are shown in **Appendix II**.
[2] Assume a fully paved scenario

3.3 Stormwater Discharge from Surrounding Catchments

3.3.1 The surrounding developments and roads near the Project are divided into different catchments (B1 to B4 for developments; R1 to R6 for road surfaces) based on the existing public stormwater drainage system. The stormwater catchment areas in the vicinity of the Site are illustrated in **Figures 3-1a to 3-1g**. The stormwater discharge from surrounding developments and roads are summarised in **Table 3-3 & Table 3-4**. The detailed calculations are shown in **Appendix II**.

Table 3-3 Stormwater Discharge from Surrounding Buildings

Catchments	Description	Total Drainage Discharge (L/s)
B1	Existing Development	1697.6
B2	Existing Development	378.8
B3	Existing Development	122.4
B4	Existing Development	67.7

Note:
[1] Detailed calculations are shown in **Appendix II**.

Table 3-4 Stormwater Discharge from Surrounding Roads

Catchments	Description	Total Drainage Discharge (L/s)
R1	Paved Road	303.1
R2	Paved Road	105.6
R3	Paved Road	104.0
R4	Paved Road	60.2
R5	Paved Road	178.7
R6	Paved Road	180.4

Note:
[1] Detailed calculations are shown in **Appendix II**.

3.4 Assessment of Existing Stormwater System, Proposed New Stormwater Pipes and Proposed Upgrades

Planned Demolition, Diversion, and Upgrades

3.4.1 The stormwater pipes that are affected by the proposed development need to be evaluated to determine if they can accommodate the stormwater discharge. Additionally, certain existing stormwater pipes are planned to be demolished or reconstructed either due to Scheme requirements or practical reasons. The existing stormwater pipes to be demolished and upgraded are illustrated in **Figure 3-2**, while the proposed new pipes or upgrades are shown in **Figures 3-3a to 3-3f**.

Near Sites A1 & B

3.4.2 Firstly, to facilitate the potential underground pedestrian connection between Site A1 and Site B, as shown in **Figure 3-2**, the existing 975mm stormwater pipes along Sai Yee Street, between the public existing stormwater manholes SMH4020120 to SMH4020145, are tentatively planned for removal. The elevation and extent of the pedestrian connection are subject to detailed design.

3.4.3 In order to redirect the upstream stormwater flow at existing stormwater manhole SMH4020120, proposed new stormwater pipes along Playing Field Road have been planned. These pipes will direct the upstream flow from Sai Yee Street towards another existing stormwater manhole SMH4020576 located at the junction of Fa Yuen Street, as illustrated in **Figure 3-3b**.

3.4.4 Secondly, to facilitate the construction of the basement at Site A1, all existing public stormwater pipes within Site A1 will be demolished, as depicted in **Figure 3-2**. Consequently, the current stormwater discharge route from the developments north of Site A1 (Catchment B3) will no longer be available once the excavation works at Site A1 commence. To address this, the stormwater from Catchment B3 will be redirected to the existing stormwater pipes along Fa Yuen Street, as shown in **Figure 3-3b**. As a result, the flow direction of the existing public stormwater pipes PS01 & PS02 will be reversed.

3.4.5 It is important to note that the existing downstream stormwater pipes along Fa Yuen Street are not designed to handle the diverted stormwater flow as per the planned configuration shown in **Figure 3-3b**. Therefore, it will be necessary to upgrade the downstream stormwater

pipes (PS03 to PS09; **Figures 3-3b & 3-3c**) to ensure they can effectively handle the increased flow.

Near Sites A2 - A5

3.4.6 As indicated in **Sections 2.2.10**, the stormwater discharge from Sites A2-A5 is relatively small in comparison to the capacity of the larger-scale stormwater pipes in their downstream vicinity (1200mm and 1275mm), as depicted in **Figures 3-3e** and **3-3f**. Consequently, it is anticipated that there will be no adverse drainage impact arising from Sites A2, A3, A4, and A5. Therefore, a detailed assessment of their downstream stormwater pipes is not deemed necessary at this stage.

Capacity of Existing Downstream Stormwater Pipes

3.4.7 The capacities of the affected downstream stormwater pipe sections (PS01 - PS09), based on the planned flow configuration as illustrated in **Figures 3-3b & 3-3c**, have been calculated using Colebrook-White Equation. The calculated capacities are listed in **Table 3-5** and the detailed calculation can be found in **Table A of Appendix III**.

Table 3-5 Capacity of Existing Stormwater Pipes

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)
PS01 [1]	SMH4020140	SMH4093500	-
PS02 [1]	SMH4093500	SMH4020139	-
PS03	SMH4020576	SMH4059700	531.1
PS04	SMH4059700	SMH4020571	858.4
PS05	SMH4020571	SMH4020572	393.8
PS06	SMH4020572	SMH4020585	802.5
PS07	SMH4020585	SMH4059701	612.8
PS08 [2]	SMH4059701	SMH4059702	727.0
PS09 [2]	SMH4059702	to Nullah	473.8

Note:
[1] The flow direction of PS01 to PS02 shall be reversed thus the existing pipes need to be reconstructed.
[2] PS08 & PS09 consist of 2 pipes
[3] The calculation is detailed in **Appendix III**.

3.4.8 A summary of the utilization of the existing downstream stormwater pipe are shown in **Table 3-6**. Detailed calculation can be found in **Table A of Appendix III**. The results indicate that the existing stormwater pipes PS03 to PS09 are unable to cater the expected stormwater flow, while the flow direction of PS01 to PS02 shall be reversed.

Table 3-6 Proportion of Peak Flow to Full Capacity (Existing Pipes)

Pipe Section	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01 [1]	-	122.4	-
PS02 [1]	-	122.4	-
PS03	531.1	3198.5	602%
PS04	858.4	3198.5	373%
PS05	393.8	3198.5	812%
PS06	802.5	3198.5	399%
PS07	612.8	3198.5	522%
PS08 [2]	727.0	3198.5	440%
PS09 [2]	473.8	3198.5	675%

Note:
[1] The flow direction of PS01 to PS02 shall be reversed thus the existing pipes need to be reconstructed.
[2] PS08 & PS09 consist of 2 pipes
[3] The calculation is detailed in **Appendix III**.

Terminal Manholes and Discharge Pipes of the Sites

3.4.9 The stormwater discharge from the Site A1 is proposed to be collected by terminal manhole STMH-A01 and discharged via the proposed pipe PP-A01, which has a diameter of 500mm and slope of 1:50. The pipe will be connected to the decked nullah as shown in **Figure 3-3c**.

3.4.10 The stormwater discharge from the Site A2 is proposed to be collected by terminal manhole STMH-A02 and discharged via the proposed pipe PP-A02, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4020522 as shown in **Figure 3-3e**.

3.4.11 The stormwater discharge from the Site A3 is proposed to be collected by terminal manhole STMH-A03 and discharged via the proposed pipe PP-A03, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4020520 as shown in **Figure 3-3e**.

3.4.12 The stormwater discharge from the Site A4 is proposed to be collected by terminal manhole STMH-A04 and discharged via the proposed pipe PP-A04, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4098783 as shown in **Figure 3-3f**.

3.4.13 The stormwater discharge from the Site A5 is proposed to be collected by terminal manhole STMH-A05 and discharged via the proposed pipe PP-A05, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4020531 as shown in **Figure 3-3f**.

3.4.14 The stormwater discharge from the Site B is proposed to be collected by terminal manhole STMH-B01 and discharged via the proposed pipe PP-B01, which has a diameter of 900mm and slope of 1:50. The pipe will be connected to the decked nullah as shown in **Figure 3-3d**.

Proposed New Pipes and Upgrades in the Surrounding

3.4.15 Apart from the stormwater pipes connected to the terminal manholes of the Sites, there are three proposed new stormwater pipes (PP-D01 to PP-D03) for the purpose of stormwater diversion, as depicted in **Figure 3-3b**. PP-D01 and PP-D02 are 1700mm pipes designed to redirect stormwater from Sai Yee Street to Fa Yuen Street. PP-D03 is a 400mm pipe intended to divert stormwater from the existing developments to the north of Site A1 (Catchment B3).

3.4.16 There are nine pipes (PS01 to PS09) proposed for upgrading and/or modification, as shown in **Figures 3-3b and 3-3c**. The slope of PS01 and PS02 is planned to be reversed to change the flow direction. PS03 to PS07 are scheduled for upgrading from 900mm pipes to 1700mm pipes with revised invert levels to accommodate the increased stormwater flow.

3.4.17 It is important to note that PS08 and PS09 (refer to **Figure 3-3c**) are currently located beneath the existing sewers FWD4099180 and FWD4018380, respectively. Based on the separately conducted Sewerage Impact Assessment (SIA) for the Project, FWD4099180 is proposed to be demolished during redevelopment. FWD4018380 will be divided into two sections of sewers, and PS09 will intersect the middle of a proposed sewer. The new sewer to be constructed above PS09 will be a 900mm sewer with an invert level of 3.79 - 3.75 mPD. Considering the typical thickness of a 900mm sewer (0.11m), the bottom of the sewer at the crossing location will be approximately ((3.79+3.75)/2 - 0.11) = 3.66 mPD. To maintain a 300mm vertical clearance between the proposed drainage pipe and the proposed sewer, the top of the drain pipe should not exceed 3.36 mPD at the crossing location.

3.4.18 The lowest allowable invert level at the connection point of PS09 to the nullah is estimated based on available information. According to the drainage record plans, the invert level of the nullah 110m upstream of the connection point is 2.74 mPD (SGJ4012541), and the invert level of the nullah 23m downstream of the connection point is 2.43 mPD (SGJ4002734). By interpolation, the lowest feasible invert level for the connection point is determined to be 2.484 mPD. Therefore, an invert level of 2.485mPD has been proposed in the assessment. The details of the connection to the nullah will be subject to detail design after the planning stage.

3.4.19 Due to the aforementioned restriction, it will be necessary to utilize multiple 750mm pipes for PS09. On the other hand, since there is no height limitation for PS08, it is preferable to use a single large-diameter pipe. Therefore, the proposal includes upgrading PS08 from twin 700mm pipes to a single 1700mm pipe and upgrading PS09 from twin 700mm pipes to four 750mm pipes to accommodate the increased stormwater flow.

3.4.20 The details of connections to box culverts for Proposed Pipes PS09, PP-A01 & PP-B01 are subject to detailed design after the planning stage.

3.4.21 The proposed new pipes and upgrades are presented in **Table 3-7 & Table 3-8** below. The exact location of the new manholes and invert levels will be subject to detailed design. With the proposed new pipes and upgrades, the downstream pipes will be able to cater the expected peak stormwater flow, thus no adverse drainage impact arising from the proposed development is anticipated.

Table 3-7 Proportion of Peak Flow to Full Capacity (Proposed New Pipes)

Pipe Section	Upstream Manhole	Downstream Manhole	Diameter (m)	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PP-A01	STMH-A01	to Nullah	0.500	436.2	279.8	64%
PP-A02	STMH-A02	SMH4020522	0.225	51.8	25.0	48%
PP-A03	STMH-A03	SMH4020520	0.225	51.8	11.6	22%
PP-A04	STMH-A04	SMH4098783	0.225	51.8	21.6	42%
PP-A05	STMH-A05	SMH4020531	0.225	51.8	23.2	45%
PP-B01	STMH-B01	to Nullah	0.900	2070.6	1827.5	88%
PP-D01	SMH4020120	SMH-D01	1.700	3111.4	2589.1	83%
PP-D02 [2]	SMH-D01	SMH4020576	1.700	3261.0	2771.7	85%
PP-D03	SMH4020139	SMH-D01	0.400	202.7	122.4	60%

Note:
[1] The calculation is detailed in **Appendix III**.
[2] New pipe PP-D02 is not required under Alternative Scenario as illustrated in **Section 3.5**.

Table 3-8 Proportion of Peak Flow to Full Capacity (Proposed Upgrades)

Pipe Section	Upstream Manhole	Downstream Manhole	Diameter (m)	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01	SMH4020140	SMH4093500	0.300	195.4	122.4	63%
PS02	SMH4093500	SMH4020139	0.300	153.9	122.4	80%
PS03 [3]	SMH4020576	SMH4059700	1.700	3514.5	3198.5	91%
PS04 [3]	SMH4059700	SMH4020571	1.700	3514.5	3198.5	91%
PS05 [3]	SMH4020571	SMH4020572	1.700	3514.5	3198.5	91%
PS06 [3]	SMH4020572	SMH4020585	1.700	3514.5	3198.5	91%
PS07 [3]	SMH4020585	SMH4059701	1.700	3514.5	3198.5	91%
PS08 [3]	SMH4059701	SMH4059702	1.700	3514.5	3198.5	91%
PS09 [1]	SMH4059702	to Nullah	0.750	3474.2	3198.5	92%

Note:
[1] PS09 consist of 4 pipes
[2] The calculation is detailed in **Appendix III**.
[3] Upgrade is not required for PS03 – PS08 under Alternative Scenario as illustrated in **Section 3.5**.

3.5 Potential Alternative Scenario

3.5.1 As stated in **Section 3.4.2**, the existing 975mm stormwater pipes along Sai Yee Street between the public existing stormwater manholes SMH4020120 to SMH4020145 along Sai Yee Street (**Figure 3-2**) are planned for removal due to the potential underground pedestrian connection between Site A1 and Site B.

3.5.2 As the alignment and design of the potential underground pedestrian connection is subject to detailed design, if the affected area of the underground pedestrian connection is limited to a certain elevation, e.g.: 1mPD or lower, it is possible that the existing 975mm stormwater pipes along Sai Yee Street (between SMH4020120 to SMH4020145) can be kept and the diversion of the stormwater pipe along Playing Field Road (between SMH4020120 & SMH4020576) is no longer required.

3.5.3 In this case, the stormwater of the Catchment B3 can be diverted to SMH4020120 as illustrated in **Figure 3-4**. The proposed new pipe PP-D02 and the upgrade of PS03 - PS08 (in **Figures 3-3b & 3-3c**) are no longer required as those pipes are not affected by the Scheme. However, the modification of PS09 shall still be required to leave a sufficient room for the

potential sewer above PS09 as stated in **Section 3.4.17**. The potential diversion route of the potential alternative scenario is illustrated in **Figure 3-4**.

4 CONCLUSION

4.1.1 This Drainage Impact Assessment has been undertaken to assess the potential drainage impact of the proposed development and to serves as a supporting document for the draft DSP of the Scheme with its planning proposal to the TPB for consideration.

4.1.2 The stormwater discharge from Site A1 is proposed to be connected to the decked nullah through the proposed pipe PP-A01, which has a diameter of 500mm and a slope of 1:50.

4.1.3 The stormwater discharge from Sites A2, A3, A4, and A5 is proposed to be connected to nearby public stormwater manholes through the proposed pipes PP-A02, PP-A03, PP-A04, and PP-A05, respectively. These pipes have a diameter of 225mm and a slope of 1:50.

4.1.4 The stormwater discharge from Site B is proposed to be connected to the decked nullah through the proposed pipes PP-B01, which has a diameter of 900mm and a slope of 1:50.

4.1.5 There are three proposed new stormwater pipes (PP-D01 to PP-D03) for the purpose of stormwater diversion. PP-D01 and PP-D02 are 1700mm pipes designed to divert stormwater from Sai Yee Street to Fa Yuen Street. PP-D03 is a 400mm pipe intended to divert stormwater from the existing developments to the north of Site A1.

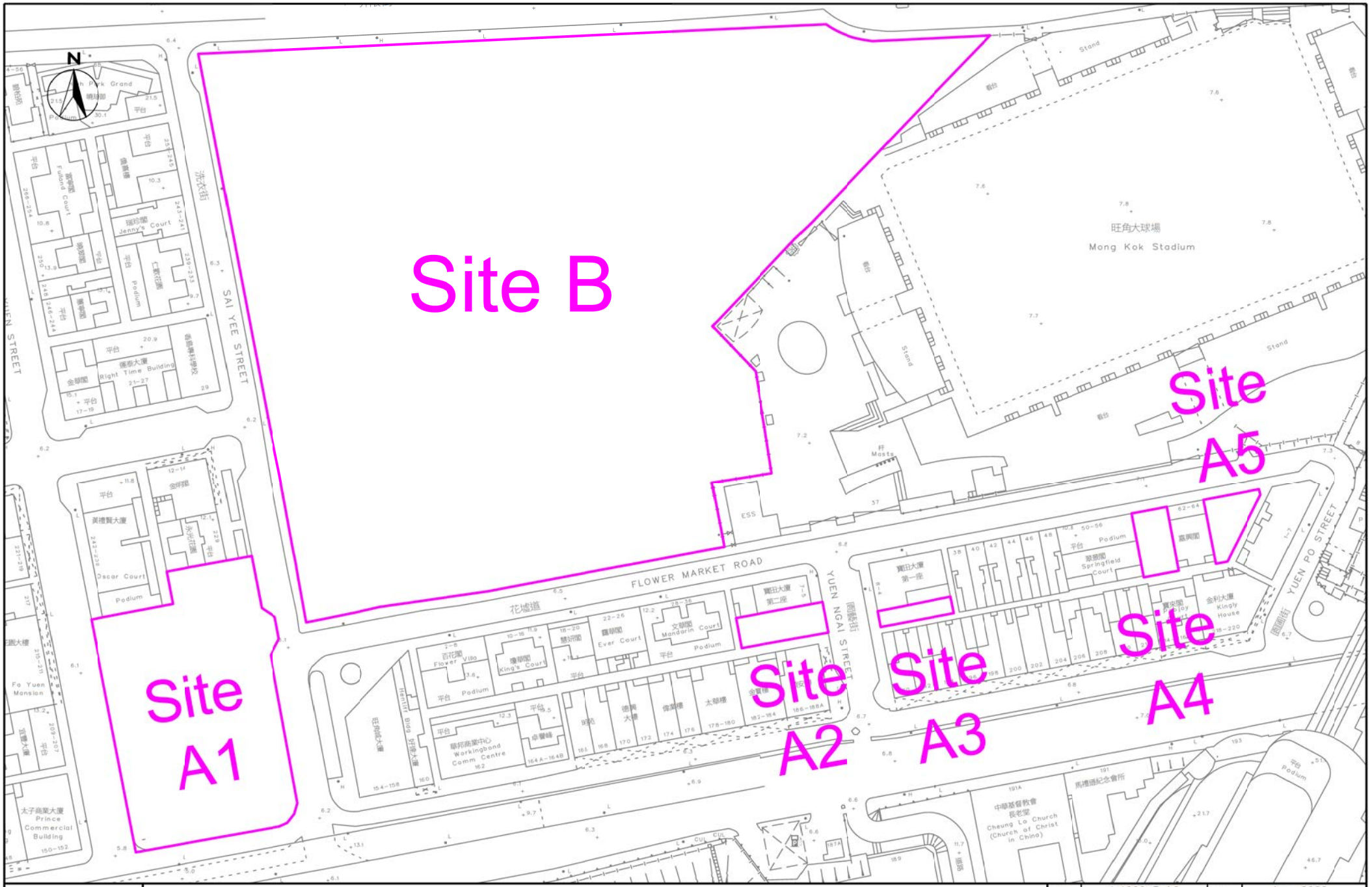
4.1.6 There are nine pipes (PS01 to PS09) proposed to be upgraded and/or modified. The slope of PS01 and PS02 is proposed to be reversed to change the flow direction. PS03 to PS07 are planned for upgrading from 900mm pipes to 1700mm pipes with revised invert levels to accommodate the increased stormwater flow. PS08 is proposed to upgrade from twin 700mm pipes to a single 1700mm pipe; while PS09 is proposed to upgrade from twin 700mm pipes to four 750mm pipes with revised invert levels to cater for the increased stormwater flow.

4.1.7 With the proposed new pipes and upgrades, the downstream pipes will be able to cater for the expected peak stormwater flow, thus no adverse drainage impact arising from the proposed development is anticipated.

4.1.8 It should be noted that the designs of the potential underground pedestrian connection is subject to detailed design. If the affected area of the underground pedestrian connection is limited to a certain elevation, it is possible that the existing 975mm stormwater pipes along Sai Yee Street can be kept and the diversion of the stormwater pipe at manhole SMH4020120 is no longer required. In this case, the stormwater of the Catchment B3 can be diverted to SMH4020120 with a much smaller pipe. The proposed new pipe PP-D-02 and the upgrade of PS03 - PS08 (**Figures 3-3b & 3-3c**) are also no longer required as they are not affected by the Scheme. However, the modification of PS09 shall still be required to leave a sufficient room for the potential sewer above PS09. Under this alternative scenario, there is also no adverse impact arising from the proposed development anticipated.

4.1.9 Upon approval of the Scheme by the Chief Executive in Council, site survey and detailed design would be carried out to ascertain the site condition and layout, and adopt an appropriate drainage proposal subject to further liaison with relevant Government departments.

FIGURES



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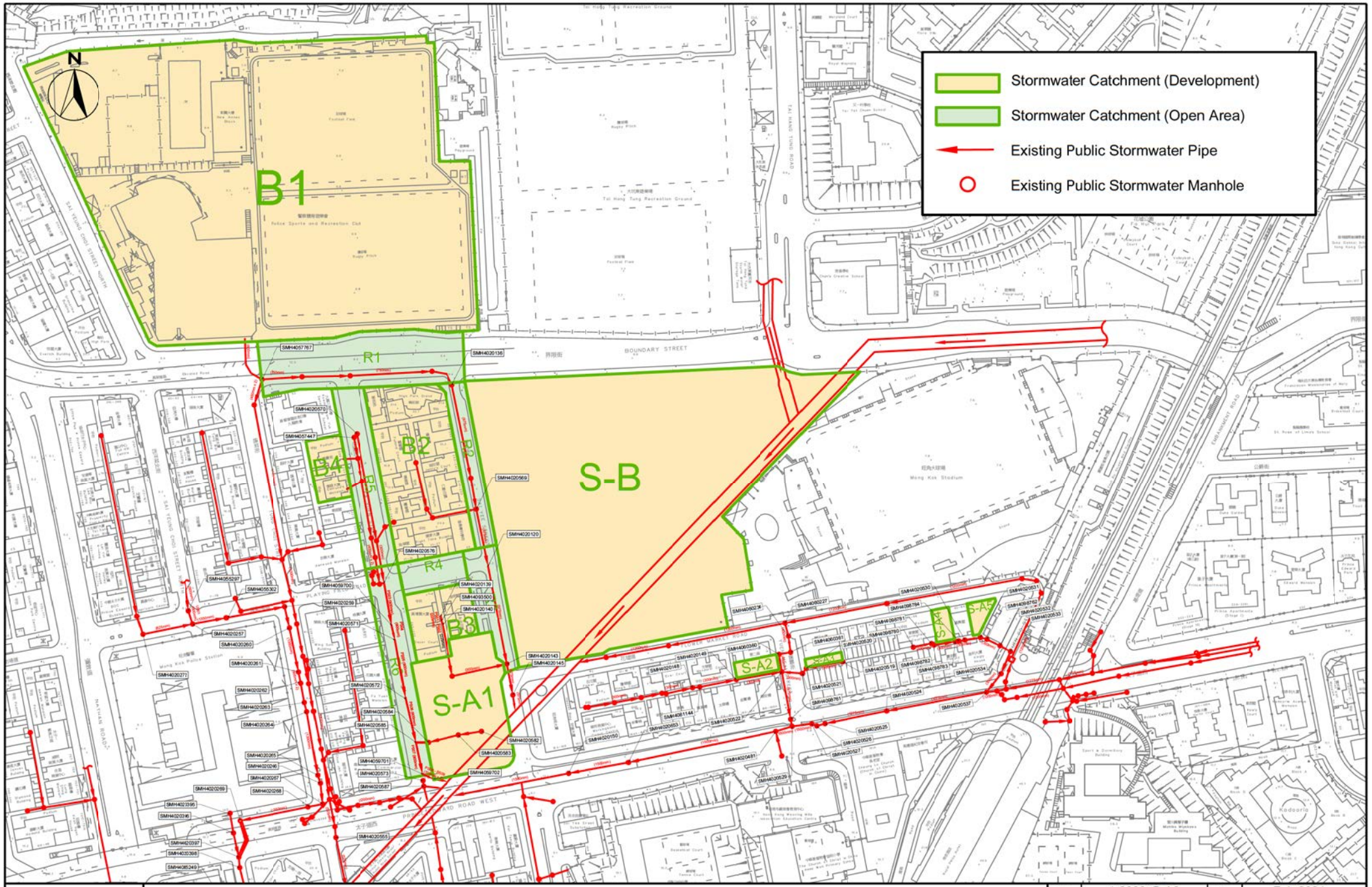
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location Plan

SCALE	1:1000 @ A3	DATE	June 2023
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 2-1
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater System in the Vicinity (Overview)

SCALE	1:2000 @ A3	DATE	Feb 2024
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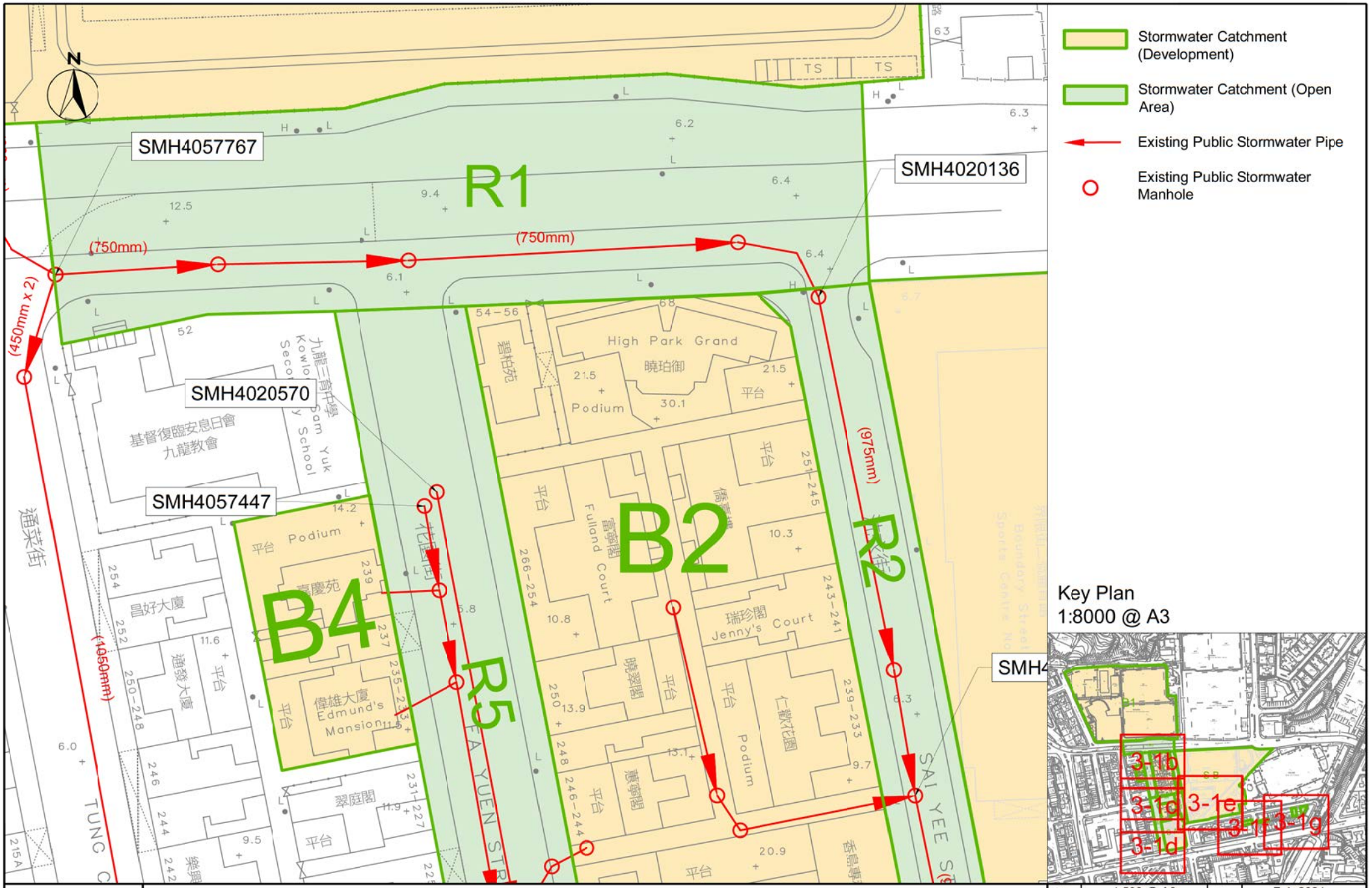
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1a
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater System in the Vicinity - 1

SCALE	1:500 @ A3	DATE	Feb 2024
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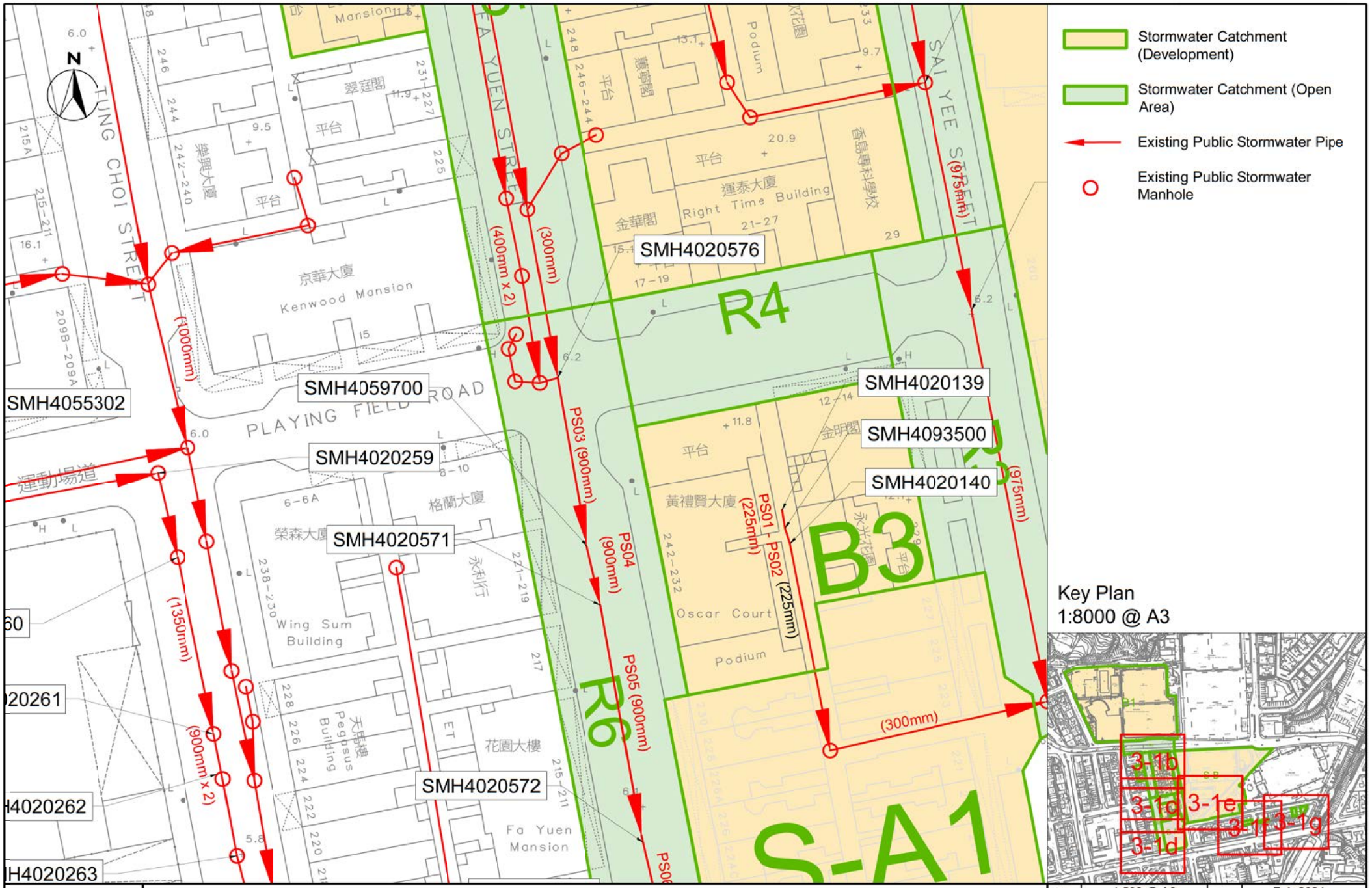
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1b
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater System in the Vicinity - 2

SCALE	1:500 @ A3	DATE	Feb 2024
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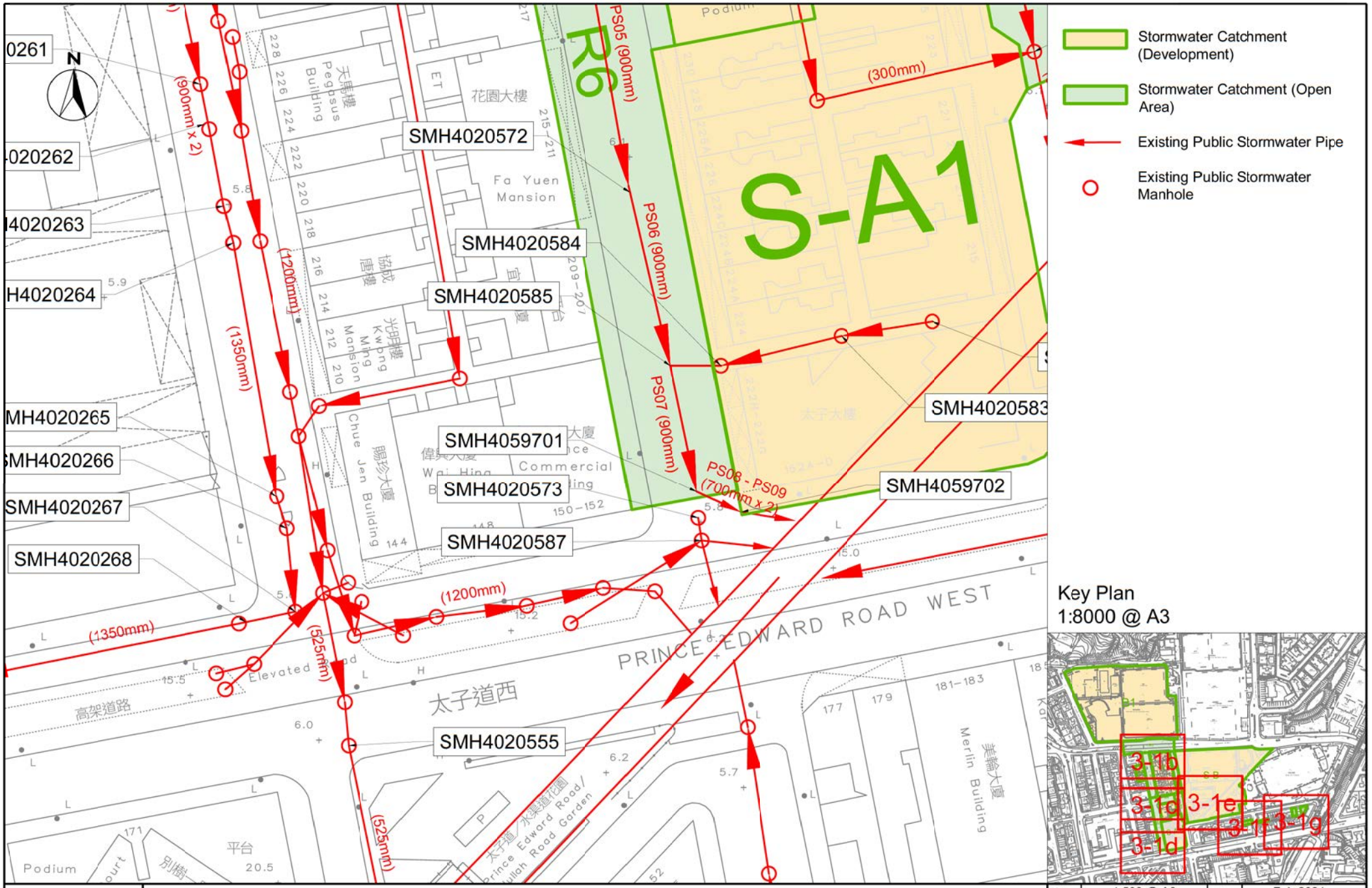
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1c
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater System in the Vicinity - 3

SCALE	1:500 @ A3	DATE	Feb 2024
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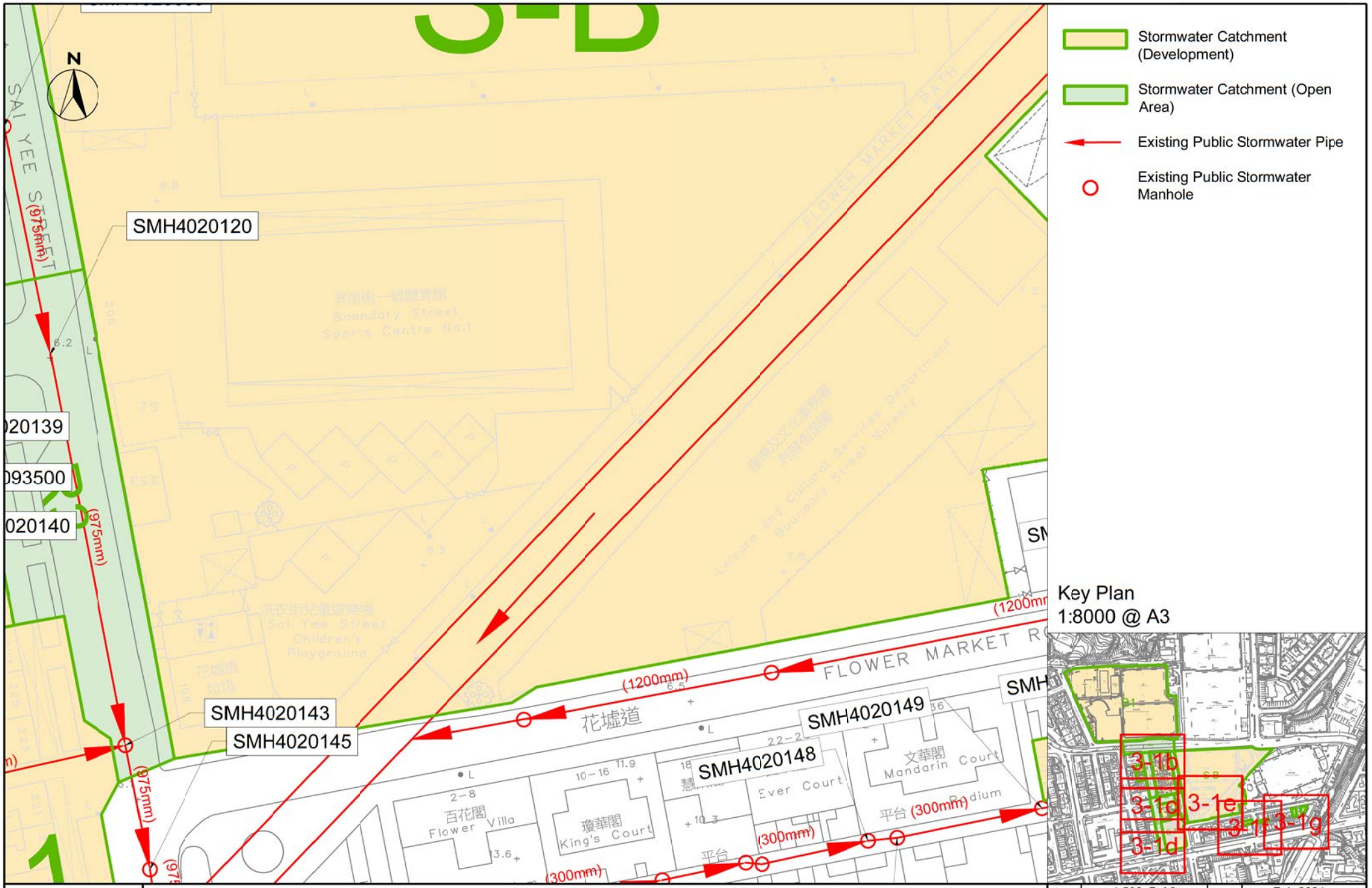
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1d
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater System in the Vicinity - 4

SCALE	1:500 @ A3	DATE	Feb 2024
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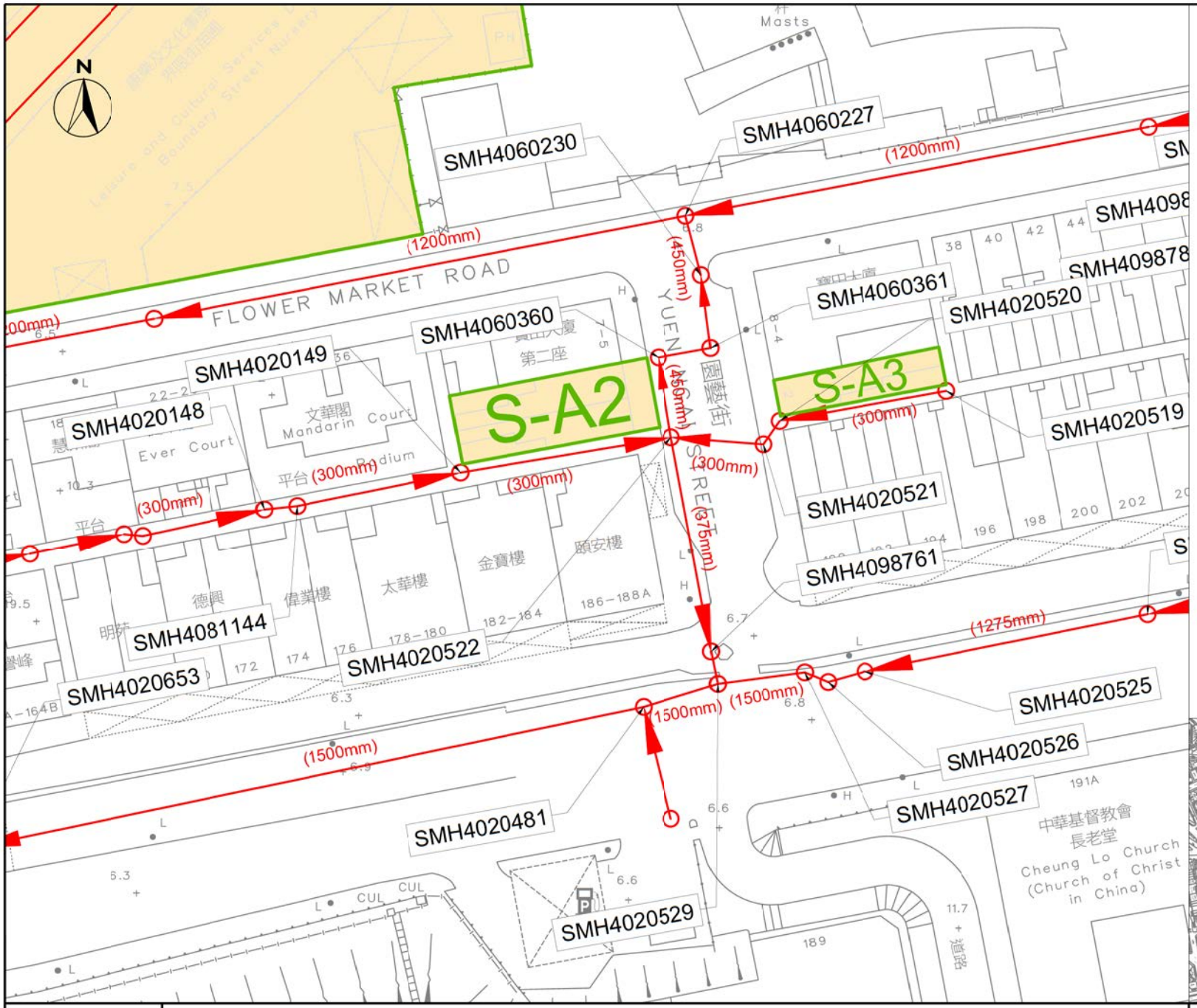
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1e
		REV	-



Stormwater Catchment (Development)

Stormwater Catchment (Open Area)

Existing Public Stormwater Pipe

Existing Public Stormwater Manhole

Key Plan
1:8000 @ A3

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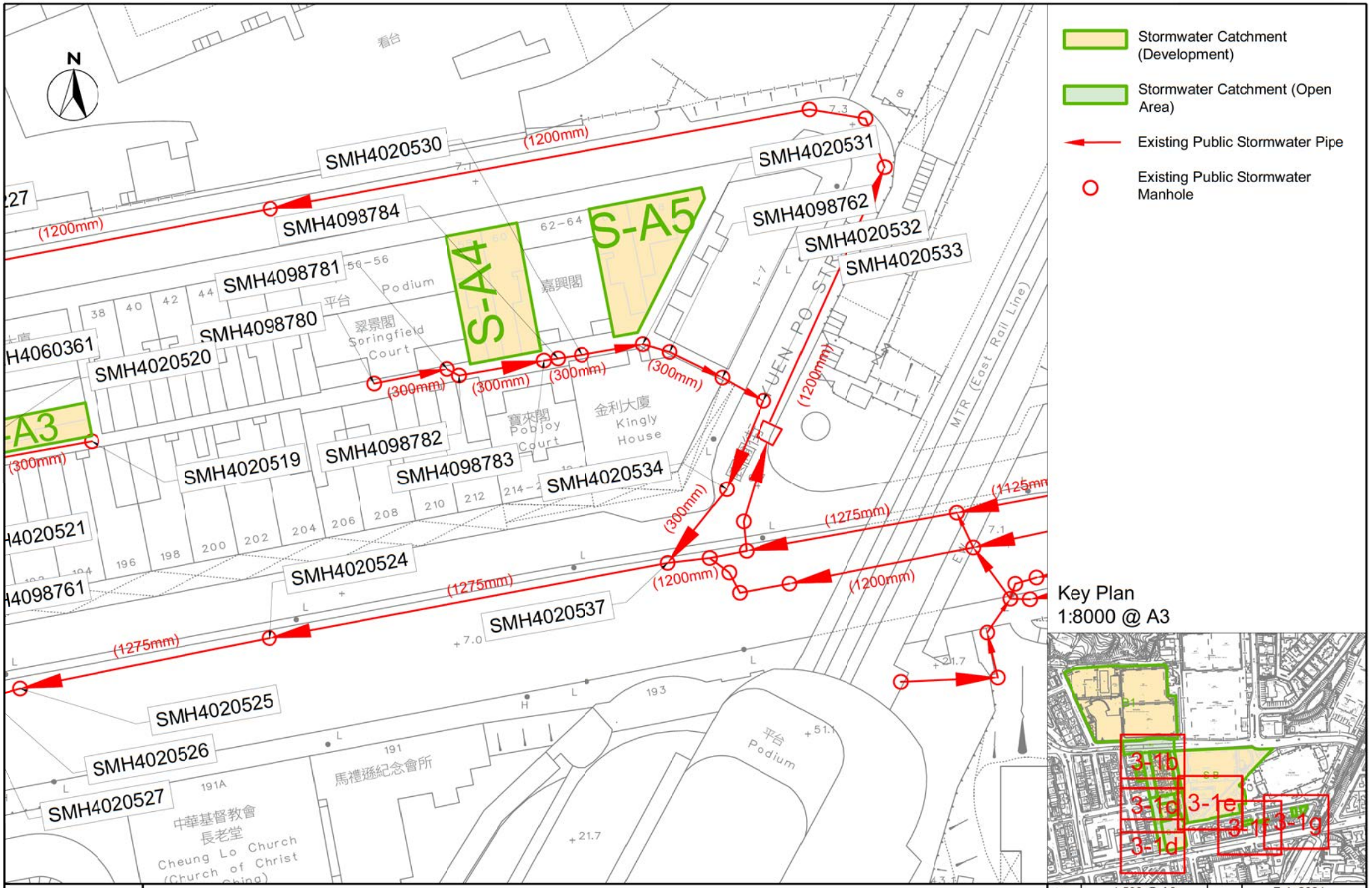
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater System in the Vicinity - 5

SCALE	1:500 @ A3	DATE	Feb 2024
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1f
		REV	-



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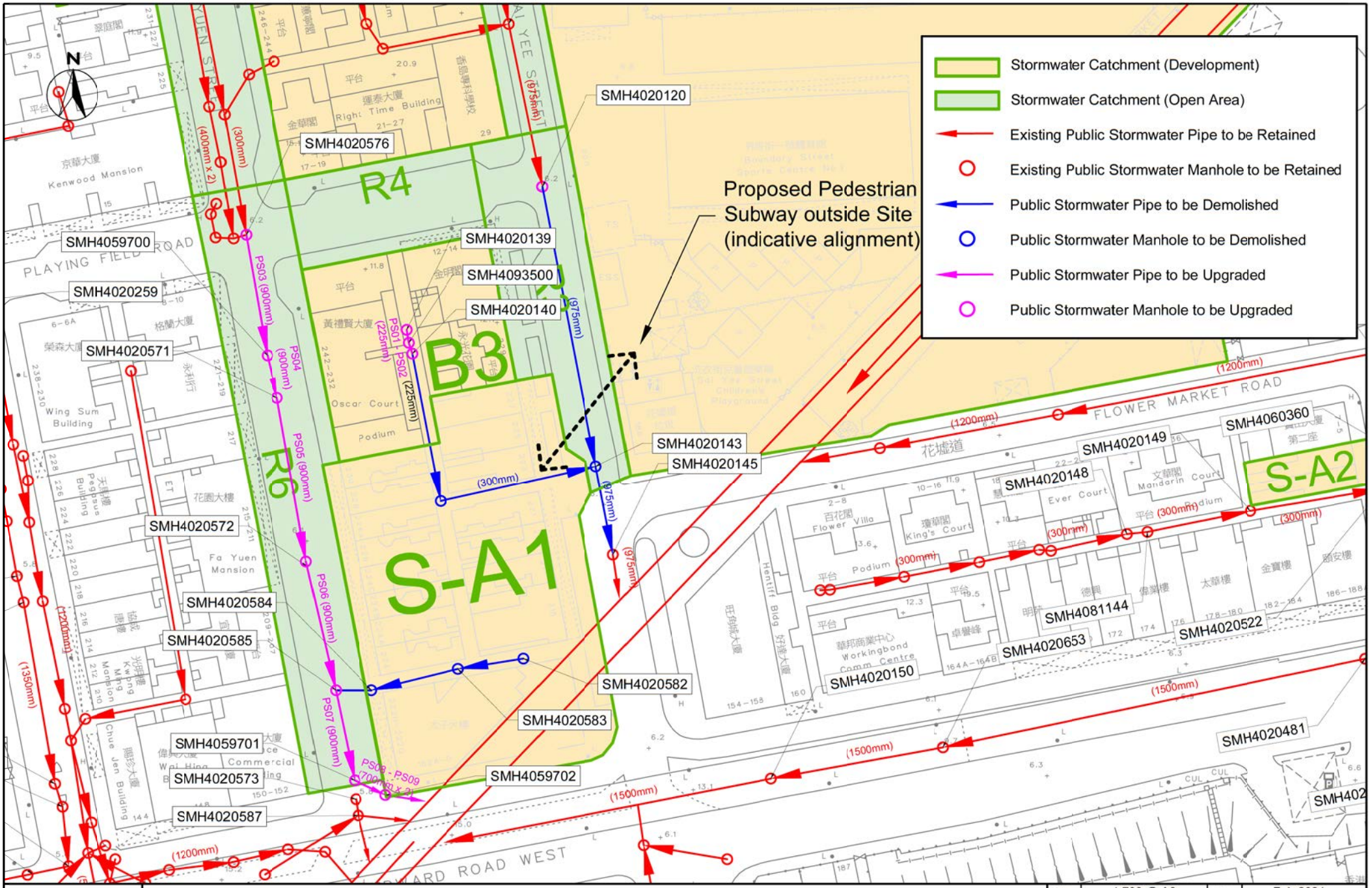
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater System in the Vicinity - 6

SCALE	1:500 @ A3	DATE	Feb 2024
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1g
		REV	-



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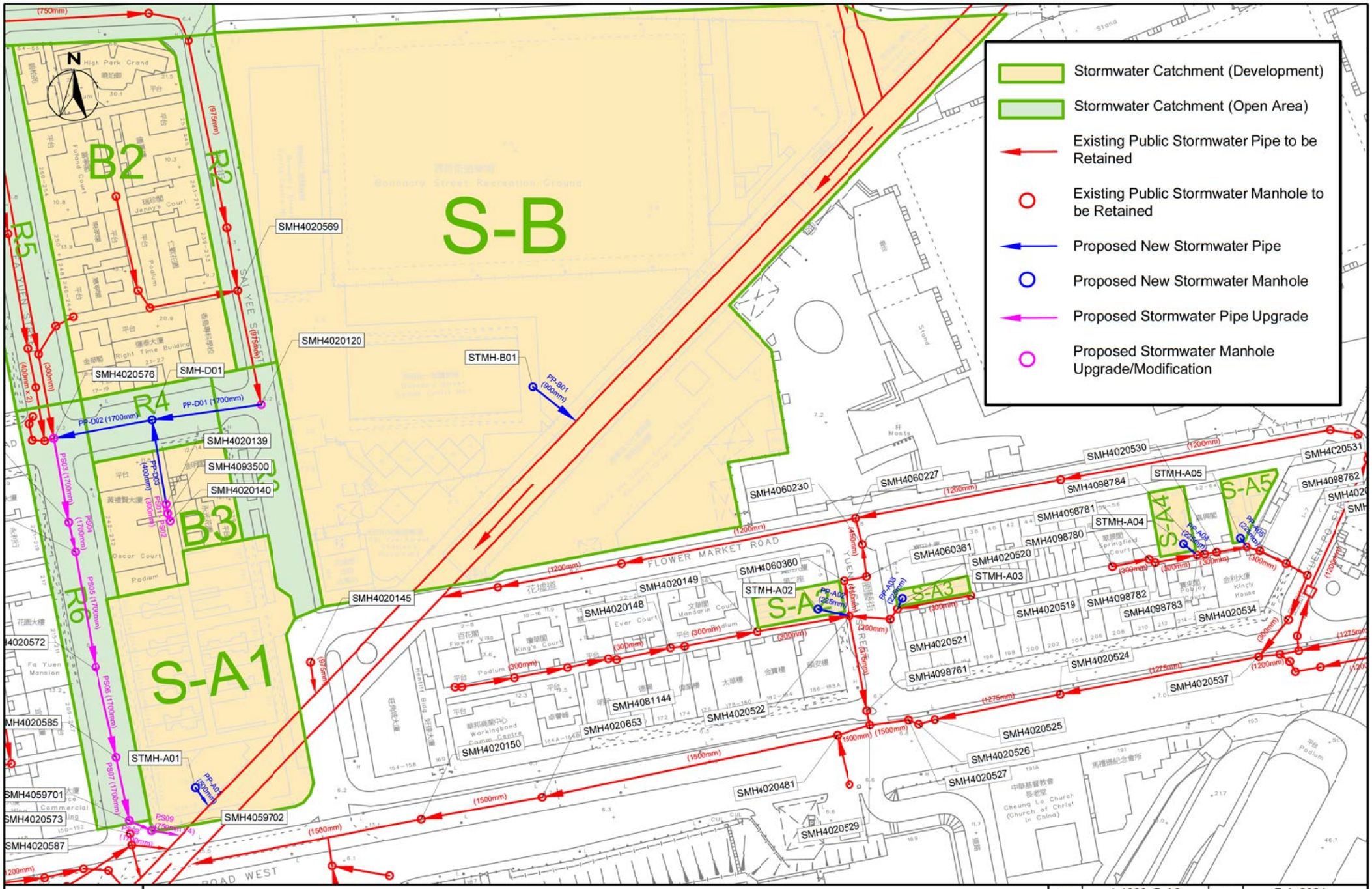
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Stormwater Pipes and Manholes to be Demolished

SCALE	1:700 @ A3	DATE	Feb 2024
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-2
		REV	-



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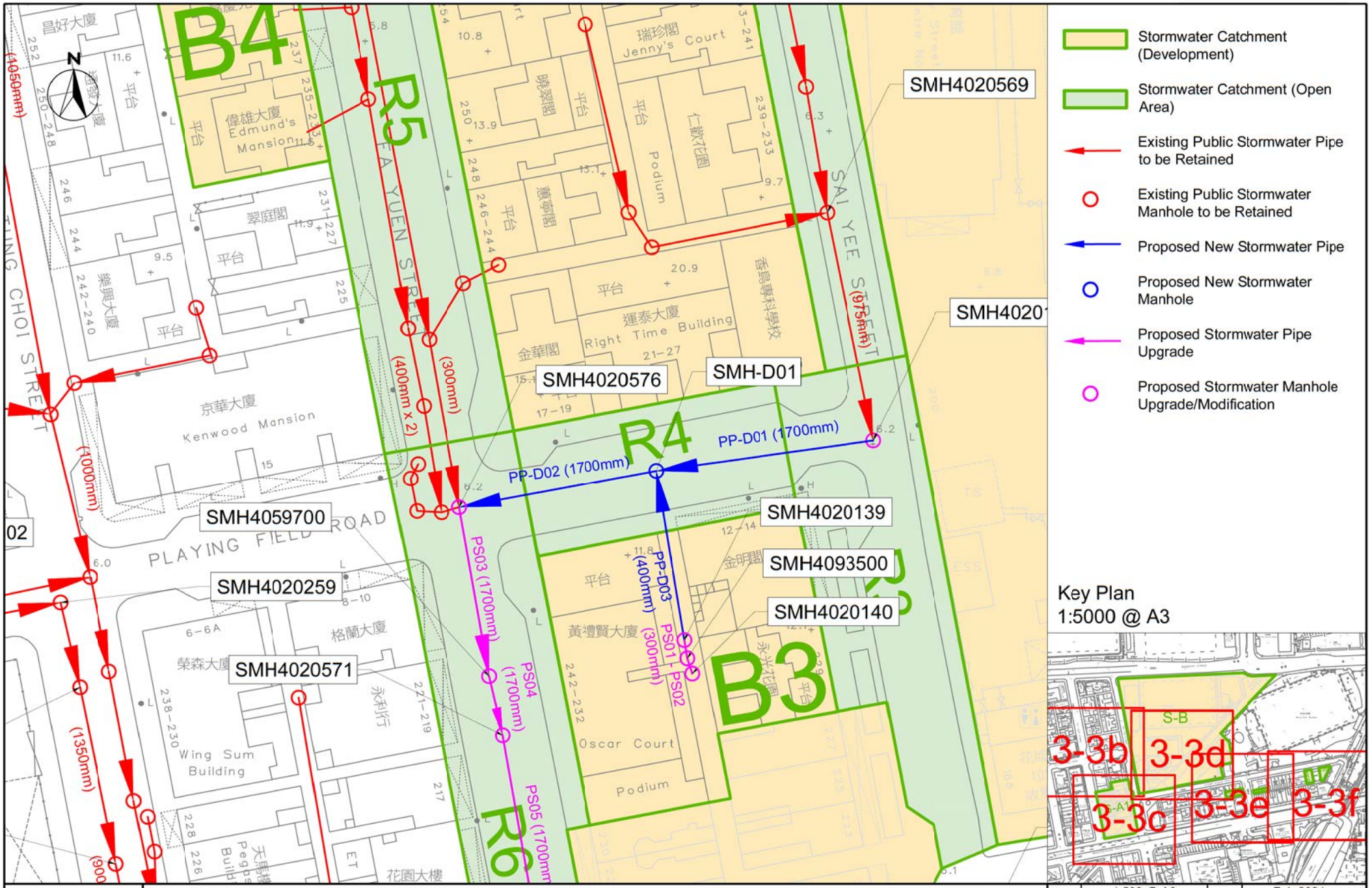
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Stormwater Pipe and Manholes (Overview)

SCALE	1:1000 @ A3	DATE	Feb 2024
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-3a
		REV	-



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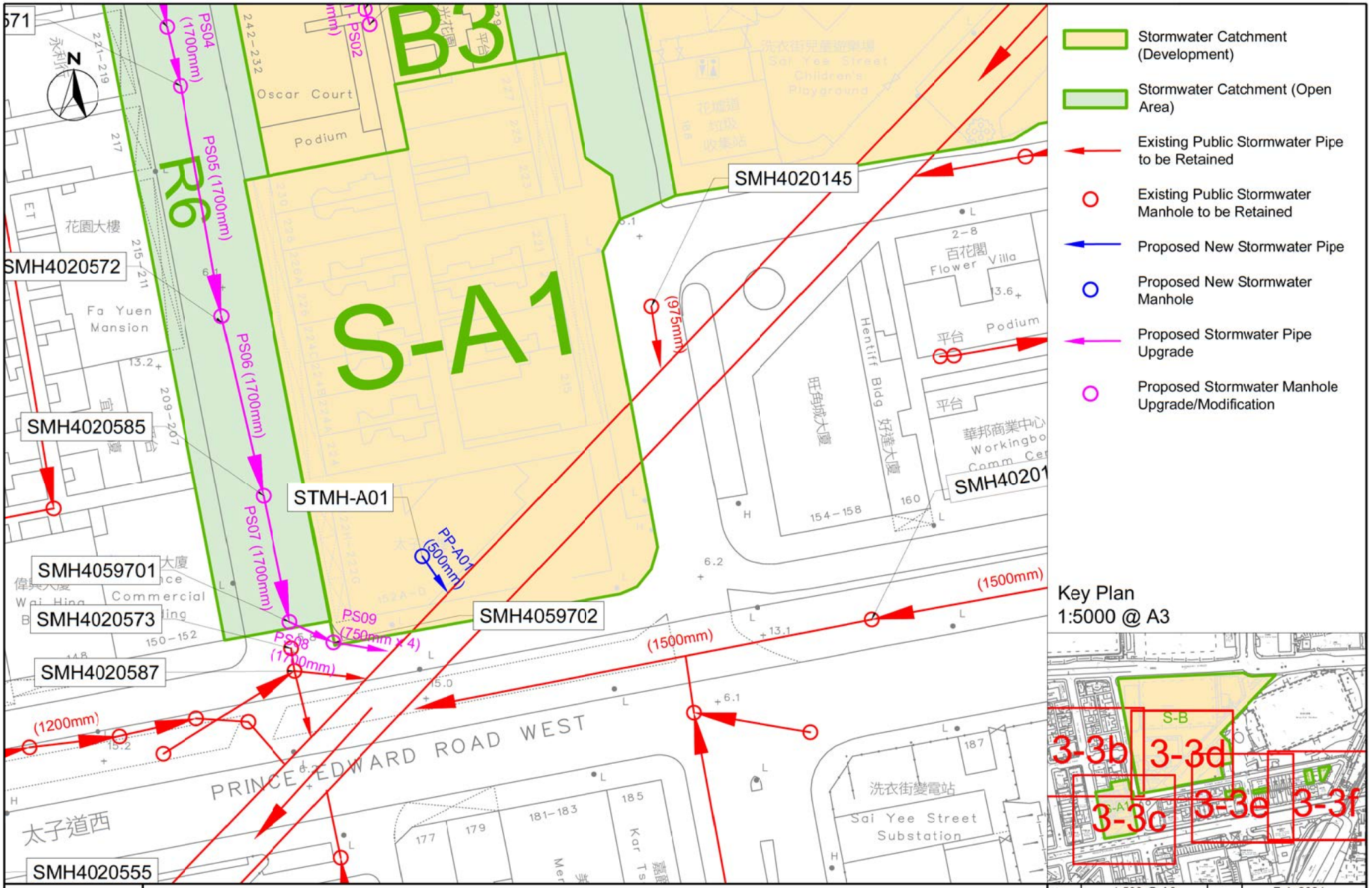
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Stormwater Pipe and Manholes - 1

SCALE	1:500 @ A3	DATE	Feb 2024
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-3b
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Stormwater Pipe and Manholes - 2

SCALE	1:500 @ A3	DATE	Feb 2024
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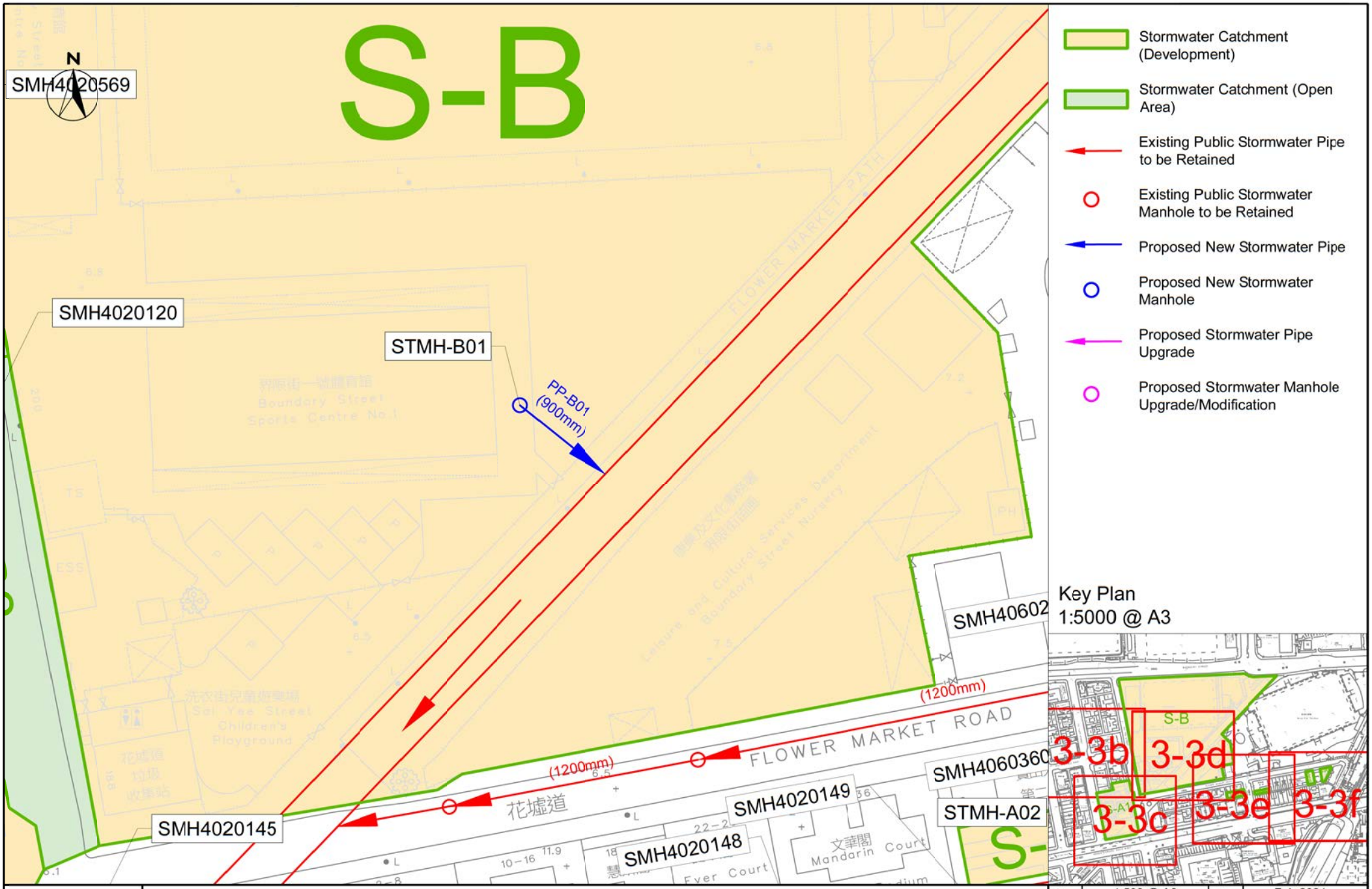
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-3c
		REV	-



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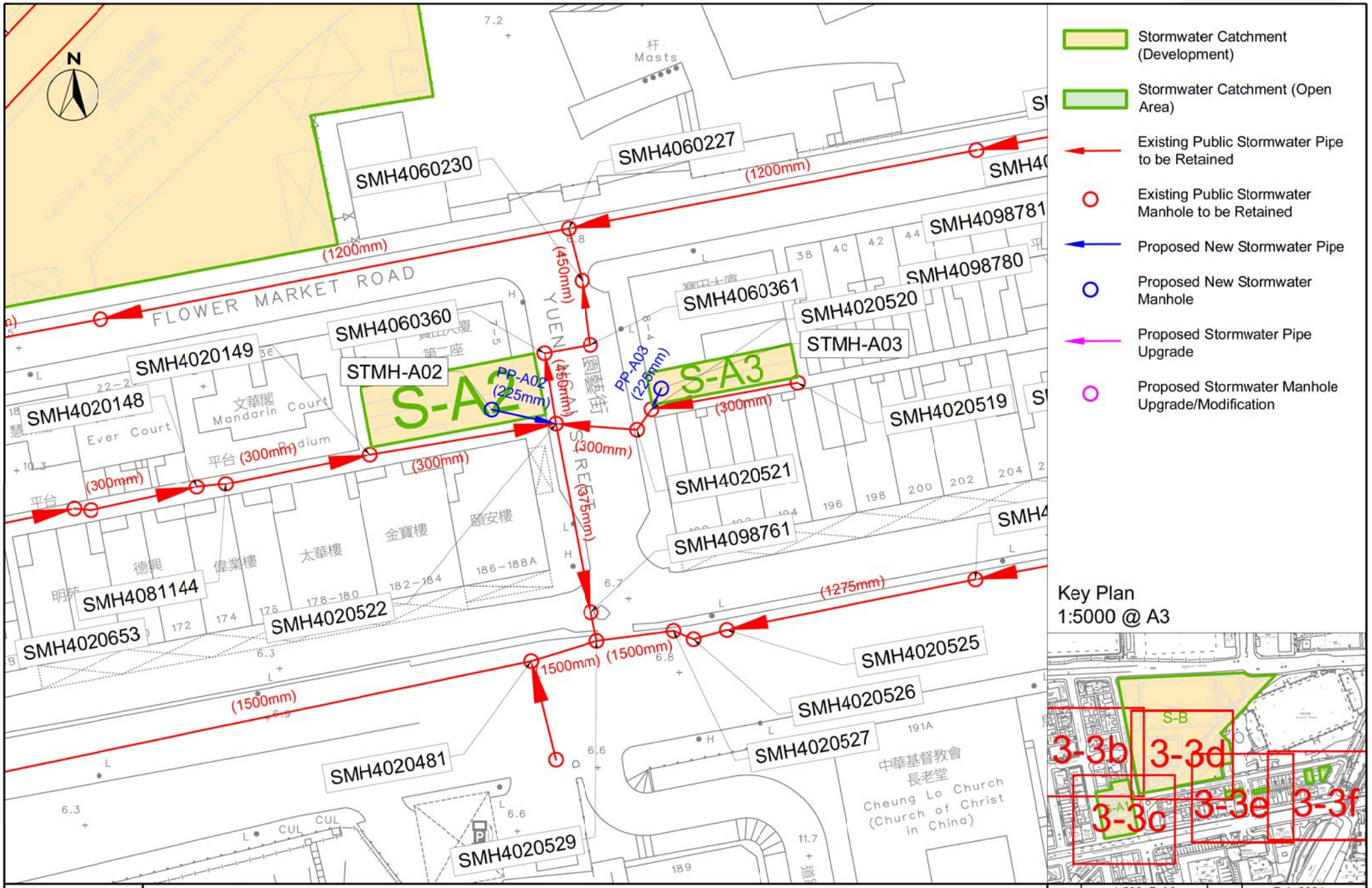
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Stormwater Pipe and Manholes - 3

SCALE	1:500 @ A3	DATE	Feb 2024
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-3d
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Stormwater Pipe and Manholes - 4

SCALE	1:500 @ A3	DATE	Feb 2024
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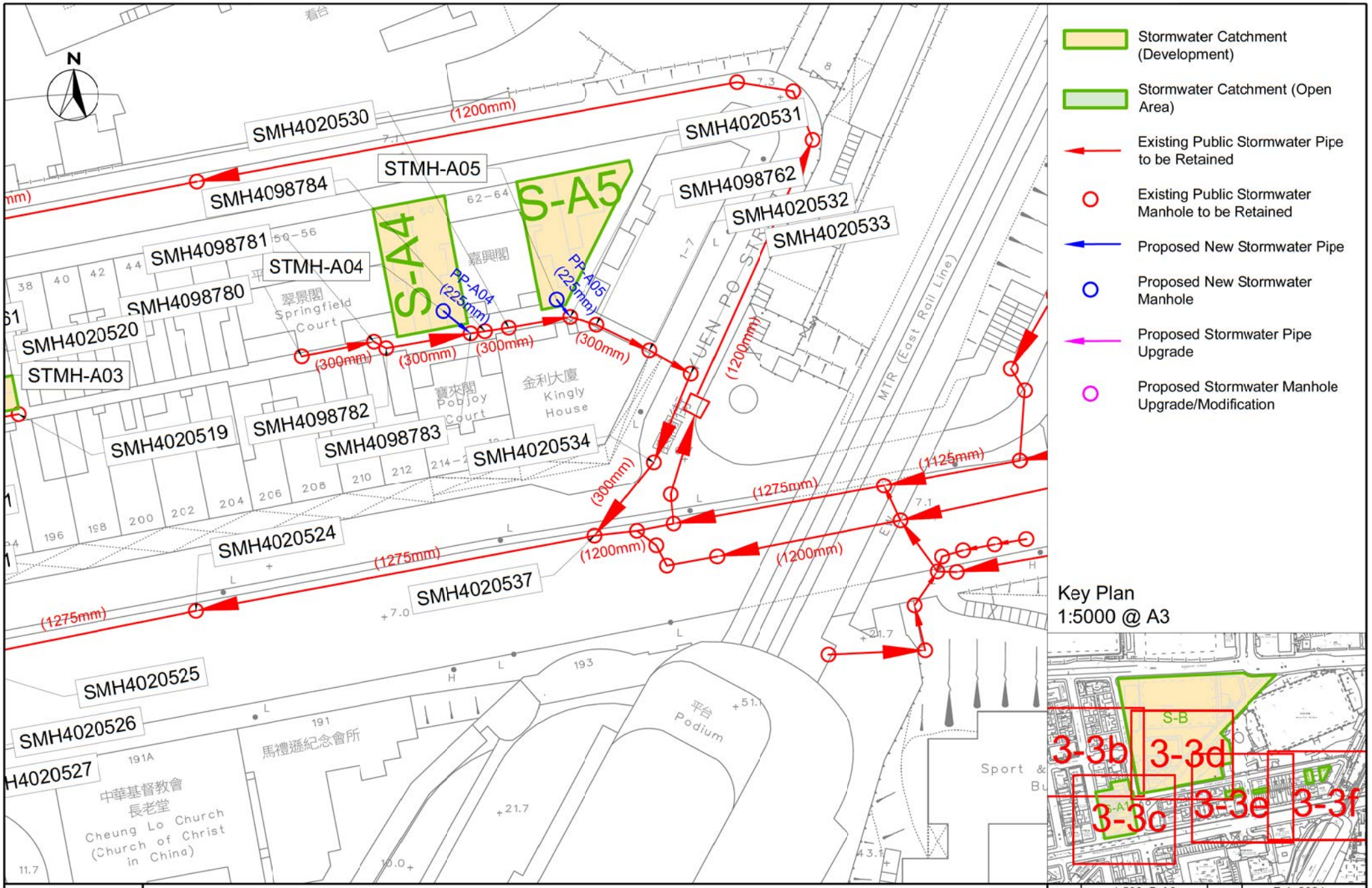
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-3e
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed Stormwater Pipe and Manholes - 5

SCALE	1:500 @ A3	DATE	Feb 2024
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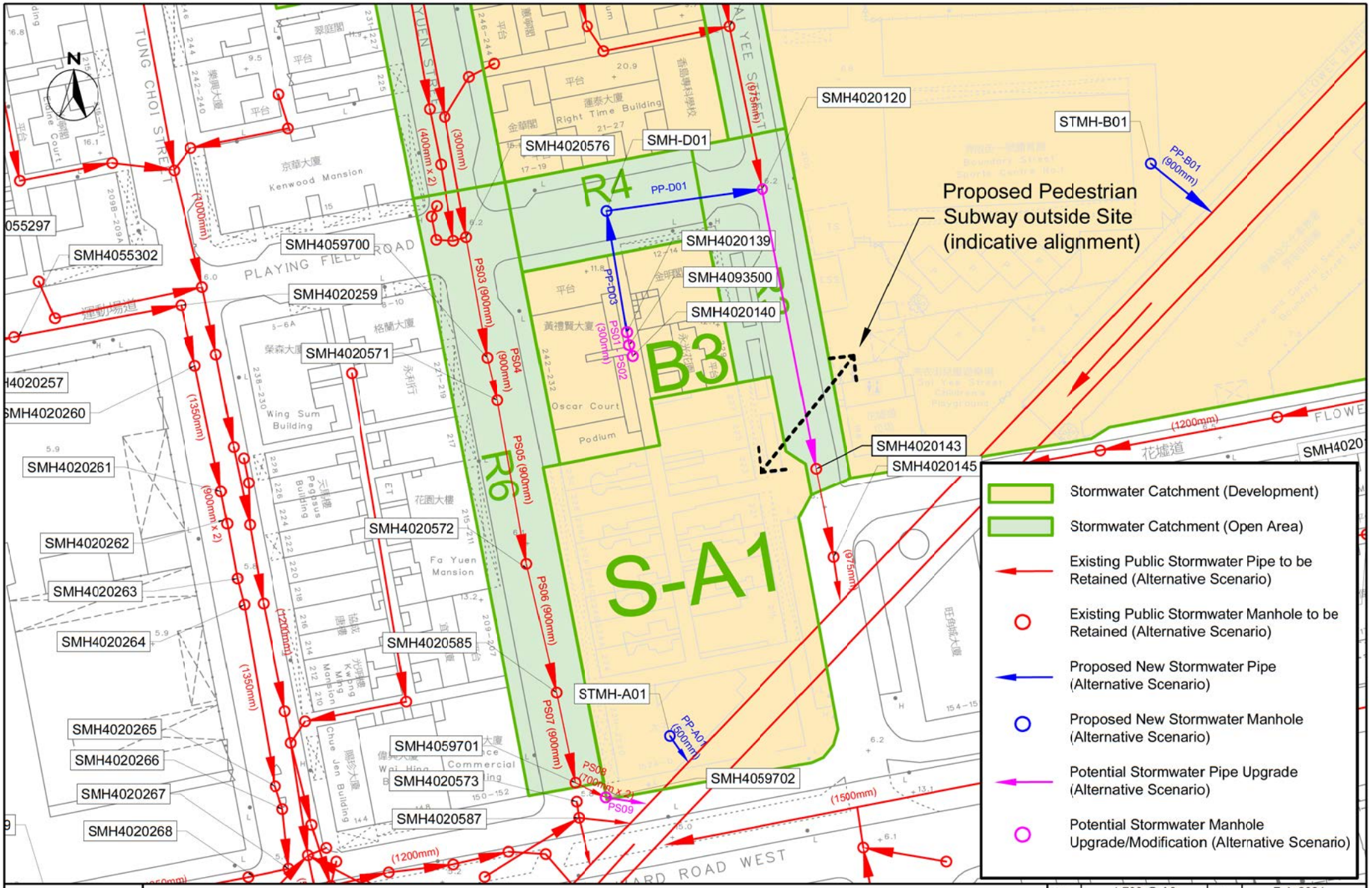
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-3f
		REV	-



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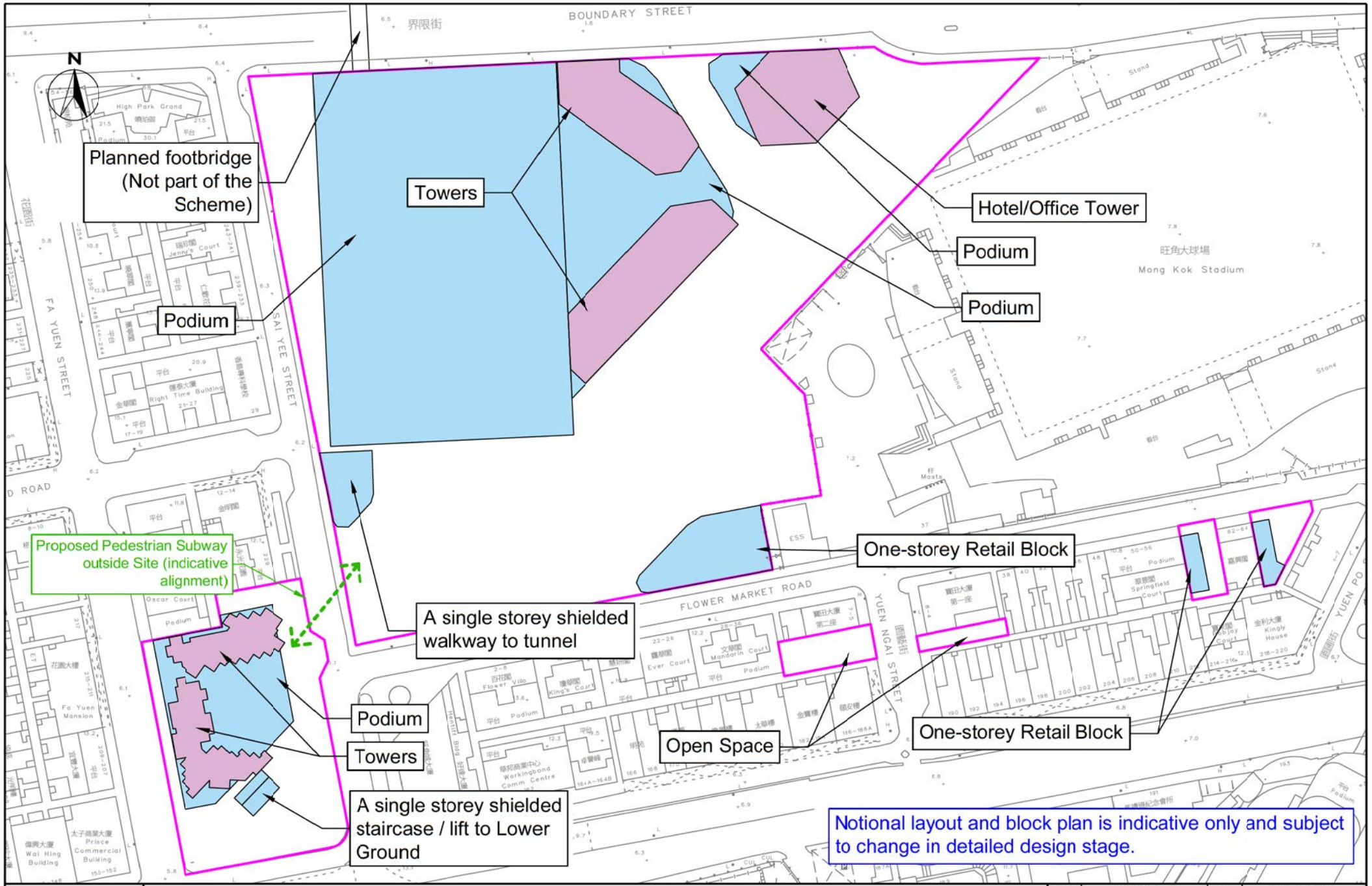
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Diversion Route for the Potential Alternative Scenario

SCALE	1:700 @ A3	DATE	Feb 2024
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-4
		REV	-

APPENDIX I
NOTIONAL PLAN OF THE PROPOSED SCHEME



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Notional Plan of the Proposed Scheme

SCALE	1:1000 @ A3	DATE	March 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	--
		REV	-

APPENDIX II
STORMWATER DISCHARGE FROM CATCHMENT ZONE

Appendix II - Stormwater Discharge from Catchment Zone

Catchment Zone	S-A1	S-A2	S-A3	S-A4	S-A5	S-B1	B1	B2	B3
Description	Site A1	Site A2	Site A3	Site A4	Site A5	Site B	Existing Development	Existing Development	Existing Development
Catchment Area (m^2)	3570	268	123	233	251	24870	36749	4553	1334
Slope (m per 100m)[1]	2.50	2.50	2.50	2.50	2.50	2.50	0.16	2.50	2.50
L (m)	70.0	17.0	15.0	19.0	19.0	150.0	170.0	52.0	24.0
TOC (min) [3]	3.7	1.2	1.1	1.3	1.3	5.0	5.0	2.7	1.4
Runoff intensity (mm/hr)[2]	244.6	291.5	294.2	288.8	288.8	229.3	229.3	259.6	286.3
Paved area (m^2)	3570	268	123	233	251	24870	19449	4553	1334
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)	218.4	19.5	9.1	16.8	18.1	1426.6	1115.7	295.7	95.5
Unpaved area (m^2)[3]	0	0	0	0	0	0	17300	0	0
Runoff coefficient (unpaved)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Stormwater discharge (L/s)	0.0	0.0	0.0	0.0	0.0	0.0	209.5	0.0	0.0
Total Stormwater discharge (L/s)	218.4	19.5	9.1	16.8	18.1	1426.6	1325.2	295.7	95.5
Rainfall increased and design allowance for end of 21st century	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Total Stormwater discharge with Rainfall increased (L/s)	279.8	25.0	11.6	21.6	23.2	1827.5	1697.6	378.8	122.4

Note:

[1] A slope of 1:40 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] The time of Concentration (TOC) has been capped to 5 minutes.

Appendix II - Stormwater Discharge from Catchment Zone

Catchment Zone	B4	R1	R2	R3	R4	R5	R6
Description	Existing Development	Paved Road	Paved Road	Paved Road	Paved Road	Paved Road	Paved Road
Catchment Area (m^2)	725	3595	1180	1199	699	1965	2064
Slope (m per 100m)[1]	2.50	0.20	0.15	0.15	0.15	0.57	0.16
L (m)	20.0	28.0	16.0	20.0	20.0	20.0	20.0
TOC (min) [3]	1.2	2.5	1.7	2.1	2.2	1.5	2.0
Runoff intensity (mm/hr)[2]	291.5	263.1	279.1	270.6	268.7	283.8	272.7
Paved area (m^2)	725	3595	1180	1199	699	1965	2064
Runoff coefficient (paved)	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Drainage discharge (L/s)	52.9	236.6	82.4	81.2	47.0	139.5	140.8
Unpaved area (m^2)[3]	0	0	0	0	0	0	0
Runoff coefficient (unpaved)	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Stormwater discharge (L/s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Stormwater discharge (L/s)	52.9	236.6	82.4	81.2	47.0	139.5	140.8
Rainfall increased and design allowance for end of 21st century	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Total Stormwater discharge with Rainfall increased (L/s)	67.7	303.1	105.6	104.0	60.2	178.7	180.4

APPENDIX III
DETAILED CALCULATION OF PIPE UTILIZATION

Appendix III - Detailed Calculation of Pipe Utilization

Table A -Existing Pipes

Pipe No.	Upstream Manhole No.	Downstream Manhole No.	Upstream invert level (mP.D.) [3]	Downstream invert level (mP.D.) [3]	Length (m)	Diameter (m)	Area (m^2)[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																
PS01 [4]	SMH4020140	SMH4093500	4.74	4.75	2.3	0.225	0.036	0.056	-0.006	1.14E-06	0.003	-	-	#N/A	#N/A	-
PS02 [4]	SMH4093500	SMH4020139	4.75	4.77	2.6	0.225	0.036	0.056	-0.006	1.14E-06	0.003	-	-	#N/A	#N/A	-
PS03	SMH4020576	SMH4059700	3.94	3.90	24.7	0.900	0.573	0.225	0.002	1.14E-06	0.006	0.93	531.1	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	602%
PS04	SMH4059700	SMH4020571	3.90	3.87	8.7	0.900	0.573	0.225	0.003	1.14E-06	0.003	1.50	858.4	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	373%
PS05	SMH4020571	SMH4020572	3.85	3.82	33.6	0.900	0.573	0.225	0.001	1.14E-06	0.006	0.69	393.8	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	812%
PS06	SMH4020572	SMH4020585	3.82	3.74	26.6	0.900	0.573	0.225	0.003	1.14E-06	0.003	1.40	802.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	399%
PS07	SMH4020585	SMH4059701	3.74	3.70	18.5	0.900	0.573	0.225	0.002	1.14E-06	0.006	1.07	612.8	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	522%
PS08 (Single Pipe)	SMH4059701	SMH4059702	2.57	2.55	6.9	0.700	0.346	0.175	0.003	1.14E-06	0.006	1.05	363.5	#N/A	#N/A	-
PS08	SMH4059701	SMH4059702	PS08 consist of two pipes										727.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	440%
PS09 (Single Pipe)	SMH4059702	to Nullah	2.55	2.54	8.1	0.700	0.346	0.175	0.001	1.14E-06	0.006	0.68	236.9	#N/A	#N/A	-
PS09	SMH4059702	to Nullah	PS09 consist of two pipes										473.8	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	675%

Note:
[1] The roughness coefficient for slime concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.
[2] According to Section 9.3 of Stormwater Drainage Manual (Fifth Edition), the effect of sedimentation should be estimated by 10% reduction in flow area.
[3] Highlighted invert levels are estimated values.
[4] The flow direction of PS01 to PS02 have been reversed based on the planned configuration instead of the existing configuration.

Appendix III - Detailed Calculation of Pipe Utilization

Table B - Proposed 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)[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 Pipe [3]																
PP-A01	STMH-A01	to Nullah	--	--	--	0.500	0.177	0.125	0.020	1.14E-06	0.003	2.47	436.2	S-A1	279.8	64%
PP-A02	STMH-A02	SMH4020522	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.003	1.45	51.8	S-A2	25.0	48%
PP-A03	STMH-A03	SMH4020520	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.003	1.45	51.8	S-A3	11.6	22%
PP-A04	STMH-A04	SMH4098783	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.003	1.45	51.8	S-A4	21.6	42%
PP-A05	STMH-A05	SMH4020531	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.003	1.45	51.8	S-A5	23.2	45%
PP-B01	STMH-B01	to Nullah	--	--	--	0.900	0.573	0.225	0.020	1.14E-06	0.003	3.62	2070.6	S-B1	1827.5	88%
PP-D01	SMH4020120	SMH-D01	2.90	2.85	31.6	1.700	2.043	0.425	0.0016	1.14E-06	0.003	1.52	3111.4	B1, B2, R1, R2, R3	2589.1	83%
PP-D02	SMH-D01	SMH4020576	2.85	2.80	28.8	1.700	2.043	0.425	0.0017	1.14E-06	0.003	1.60	3261.0	B1, B2, B3, R1, R2, R3, R4	2771.7	85%
PP-D03	SMh4020139	SMH-D01	3.20	2.85	24.7	0.400	0.113	0.100	0.0142	1.14E-06	0.003	1.79	202.7	B3	122.4	60%

Note:
[1] The roughness coefficient for slime concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.
[2] According to Section 9.3 of Stormwater Drainage Manual (Fifth Edition), the effect of sedimentation should be estimated by 10% reduction in flow area.
[3] The details of the Proposed Pipe subject to change.
[4] Proposed changes are bold-underlined.

Appendix III - Detailed Calculation of Pipe Utilization

Table B - Proposed 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)[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 Upgrade Pipe [3][4]																
PS01	SMH4020140	SMH4093500	4.74	**4.60**	2.3	**0.300**	0.064	0.075	0.061	1.14E-06	0.003	3.07	195.4	B3	122.4	63%
PS02	SMH4093500	SMH4020139	**4.60**	**4.50**	2.6	**0.300**	0.064	0.075	0.038	1.14E-06	0.003	2.42	153.9	B3	122.4	80%
PS03	SMH4020576	SMH4059700	**2.80**	**2.75**	24.7	**1.700**	2.043	0.425	0.002	1.14E-06	0.003	1.72	3514.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	91%
PS04	SMH4059700	SMH4020571	**2.75**	**2.73**	8.7	**1.700**	2.043	0.425	0.002	1.14E-06	0.003	1.72	3514.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	91%
PS05	SMH4020571	SMH4020572	**2.73**	**2.66**	33.6	**1.700**	2.043	0.425	0.002	1.14E-06	0.003	1.72	3514.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	91%
PS06	SMH4020572	SMH4020585	**2.66**	**2.61**	26.6	**1.700**	2.043	0.425	0.002	1.14E-06	0.003	1.72	3514.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	91%
PS07	SMH4020585	SMH4059701	**2.61**	**2.57**	18.5	**1.700**	2.043	0.425	0.002	1.14E-06	0.003	1.72	3514.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	91%
PS08	SMH4059701	SMH4059702	**2.57**	**2.56**	6.9	**1.700**	2.043	0.425	0.002	1.14E-06	0.003	1.72	3514.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	91%
PS09 (Single Pipe)	SMH4059702	to Nullah	**2.56**	**2.485**	8.1	**0.750**	0.398	0.188	0.009	1.14E-06	0.003	2.18	868.5	#N/A	#N/A	-
PS09	SMH4059702	to Nullah	PS09 consists of **four** pipes										3474.2	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3198.5	92%

Note:
[1] The roughness coefficient for slime concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.
[2] According to Section 9.3 of Stormwater Drainage Manual (Fifth Edition), the effect of sedimentation should be estimated by 10% reduction in flow area.
[3] The details of the Proposed Pipe subject to change.
[4] Proposed changes are bold-underlined.

Appendix 9

Sewerage Impact Assessment

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Sewerage Impact Assessment

(V2.0)

Mar 2024

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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1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority ("URA") has proposed Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance ("URAO"). The Scheme is the first implementation of a project proposed under the Master Urban Renewal Concept Plan ("MRCP") as devised from the URA's District Study for Yau Ma Tei and Mong Kok ("YMDS"), and is part of the proposed "Mong Kok East – Nullah Road Urban Waterway Development Node" ("Nullah Road DN").

1.1.2 Cinotech Consultants Limited is commissioned by the URA to conduct a Sewerage Impact Assessment (SIA) to support the submission of a draft Development Scheme Plan ("DSP") of the Scheme with its planning proposal to the Town Planning Board ("TPB") for consideration.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

2.1.1 The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m^2, the Scheme is divided into Site A (about 4,445m^2) and Site B (about 24,870m^2). The location of the Scheme is shown on **Figure 2-1**.

2.1.2 Site A of the Scheme comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

2.1.3 Site B of the Scheme is currently occupied by various leisure, recreation and GIC facilities, including Boundary Street Recreation Ground, Sai Yee Street Children's Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department ("LCSD") Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath.

2.1.4 On the approved Mong Kok Outline Zoning Plan ("OZP") no. S/K3/36, Site A1 of the Scheme area is zoned "Residential (Group A)" ("R(A)"). Sites A2 to A5 are zoned "Other Specified Uses" annotated "Mixed Use" ("OU(MU)"). Sites A1 to A5 also covers pavement area shown as "Road". Site B covers area zoned "Government, Institution or Community" ("G/IC") and "Open Space" ("O"), and the Flower Market Path which is shown as "Road".

2.2 The Proposed Development

Draft DSP

2.2.1 Under the draft DSP, the Scheme is proposed to be rezoned to "OU(MU)" and areas shown as "Road" for the surrounding pavement. The planning intention of the "OU(MU)" zone is primarily for comprehensive residential/ mixed-use developments with the provision of public vehicle park, at-grade open space and GIC facilities.

2.2.2 Site A ("OU(MU)1") consists of Sub-areas Sites A1 to A5. Site A1 will be developed for residential development cum commercial podium, with a building height restriction ("BHR") of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5. Site B ("OU(MU)2") is divided into Sub-areas (1) and (2). Sub-area 1 of "OU(MU)2" zone will be for high-rise development with a BHR of 150mPD adopting a stepped height profile. Sub-area (2) of "OU(MU)2" zone comprises the Waterway Park and ancillary retail/commercial uses and LCSD's sports/ GIC facilities with a BHR of 30mPD.

Notional Design

2.2.3 A notional design, which is illustrated in **Appendix I**, is prepared based on the development parameters allowed in the draft DSP to demonstrate the proposed planning intention and development concepts of the Scheme. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2 to A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.

2.2.4 Under the current notional design, at Sub-area (2) of Site B (i.e. north-east corner of Site B), a comprehensive mixed-use development with high-rise residential and hotel/office towers with recreation and GIC facilities at the podia is proposed. Ancillary parking and public vehicle park are proposed at the basement levels at Site B. An at-grade open space, named as "Waterway Park", is proposed within Site B. Ancillary retail facilities are proposed at ground level, basement and the Waterway Park to bring retail activities and vibrancy.

2.2.5 To enhance walkability and connectivity, four pedestrian connections are proposed:

- Footbridge to connect between Site B and Tai Hang Tung Recreation Ground;
- Subway to connect between Site A1 and Site B;
- Potential subway connection from Site A1 across Prince Edward Road West towards the Prince Edward MTR Station and/or the commercial spine along Nathan Road; and
- Subway to connect between proposed underground PVP at Site B and southern part of proposed Waterway Park.

2.2.6 All these pedestrian footbridges/ subways shall be subject to technical feasibility, detailed design and agreement with relevant Government departments. For footbridge/ subways outside DSP boundaries shall be under separate public works/ revitalization initiatives not forming part of the Scheme.

2.2.7 The proposed development of the Scheme will be redeveloped in phases and the tentative completion year of the whole project is in 2035.

Development Parameters

2.2.8 This assessment is prepared based on the following development parameters in **Table 2-1, Table 2-2** and notional design, which are subject to DSP approval and changes at detailed design stage:

Table 2-1 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m^2	About 268m^2	About 123m^2	About 233m^2	About 251m^2
	About 4,445m^2				
Net Site Area (subject to survey)	About 2,640m^2	About 239m^2	About 109m^2	About 202m^2	About 198m^2
	About 3,388m^2				
Zoning	OU(MU)1				
Notional Design					
Domestic GFA [1]	23,716m^2	-	-	-	-
Non-Domestic GFA [1]	6,576m^2	-	-	100m^2	100m^2
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m^2	-	-	-	-
At-grade Open Space	About 800m^2				

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-2 Development Parameters of the Notion Design (Site B)

Site B			
Gross Site Area	About 24,870m^2		
Zoning	OU(MU)2		
	Sub-area (1)	**Sub-area (2)**	**Total**
Net Site Area (subject to survey)	7,170m^2	17,700m^2	24,870m^2
Domestic GFA [1]	44,030m^2	-	44,030m^2
Non-Domestic GFA [1] - Retail - Hotel/Office	20,500m^2 (2,150m^2) (18,350m^2)	8,850m^2 (8,850m^2) -	29,350m^2 (11,000m^2) (18,350m^2)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m^2		
No. of Building Blocks [2]	2 residential towers and 1 hotel/office tower on top of a GIC/recreation podium + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (hotel/office tower) 1 storey (retail block)		
No. of Flats [2]	880	-	880
Average Flat Size [2]	50m^2	-	50m^2
At-grade Open Space	About 8,800m^2		
Public Vehicle Park [4]	About 235		

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
[3] The actual GIC GFA is not yet confirmed and subject to liaison with Government departments. As a conservative approach, 30,000m2 GIC GFA is assumed in this assessment.
[4] Subject to liaison with Transport Department.

2.2.9 Please note that sections of an existing decked nullah and its branch lies within Sites A1 & B (**Figure 2-2**). The Project is not expected to modify the existing decked nullah. Instead, a buffer region of 3m will be provided for its future maintenance.

2.2.10 Furthermore, as part of the redevelopment, the existing back alleys within Site A1 will be permanently closed, necessitating the re-diversion of sewers.

2.2.11 Sites A2, A3, A4, and A5 are currently occupied by four-storey tenement buildings with shops/retails on the ground floor. Upon redevelopment, these sites will either become open spaces or one-storey retail blocks. Based on the notional design, the estimated sewage generated from Sites A2, A3, A4, and A5 is expected to significantly decrease (as listed in **Table 3-5**), thereby eliminating any anticipated adverse sewerage impact for these sites.

2.3 Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 2

2.3.1 It should be noted that there is an ongoing project by the Drainage Services Department (DSD) called the Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 2 (PWP No. 4389DS)[1], which covers a large area of Kowloon.

2.3.2 Considering that the planned completion date of the DSD's project is in mid-2026, according to the implementation programme provided by the URA, the construction works of the proposed development will commence after the completion of the DSD's Project PWP No. 4389DS. As a result, the sewer works of the URA's scheme will not interface with the DSD's project.

2.3.3 During the detailed design stage, DSD will be consulted and the proposed sewerage system of the proposed development will be reviewed based on the latest drainage layout.

[1] PWP No. 4389DS - Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 2 https://www.dsd.gov.hk/EN/Our_Projects/All_Projects/4389DS.html

3 SEWERAGE IMPACT ASSESSMENT

3.1 Sewage Discharge from the Scheme

3.1.1 According to the Population Census 2021, the average domestic household size is 2.3 for the Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222, and 2.5 for Yau Tsim Mong District. For the purpose of conservative assessment, a household size of 2.5 has been adopted in the current assessment.

3.1.2 The population of non-residential area such as restaurant, retail, G/IC and hotel 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 Scheme. It should be noted that for conservative assessment purposes, the worker density and unit flow factor of a hotel have been adopted for the hotel/office portion.

Table 3-1 Estimation of Population

Section	No. of Flat [2]	Non-residential GFA (m^2) [2]	Population Factor		Population	
			No. of person per flat [1]	Residential Population	Worker Density (worker/100 m^2) [3]	No. of Employee
Site A1						
Residential	474	-	2.5	1185	-	-
Club House & Lobby [2]	-	-	-	-	-	10
Retail	-	3946	-	-	3.5	139
Restaurant	-	2630	-	-	5.1	135
Site A2						
Retail	-	0	-	-	3.5	0
Restaurant	-	0	-	-	5.1	0
Site A3						
Retail	-	0	-	-	3.5	0
Restaurant	-	0	-	-	5.1	0
Site A4						
Retail	-	60	-	-	3.5	3
Restaurant	-	40	-	-	5.1	3
Site A5						
Retail	-	60	-	-	3.5	3
Restaurant	-	40	-	-	5.1	3
Site B						
Residential	880	-	2.5	2200	-	-
Club House & Lobby [2]	-	-	-	-	-	20
G/IC	-	30000	-	-	3.3	990
Hotel/Office [4]	-	18350	-	-	3.2	588
Retail	-	6600	-	-	3.5	231

Section	No. of Flat [2]	Non-residential GFA (m^2) [2]	Population Factor		Population	
			No. of person per flat [1]	Residential Population	Worker Density (worker/100 m^2) [3]	No. of Employee
Restaurant	-	4400	-	-	5.1	225

Note:
[1] According to the Population Census 2021, the average domestic household size is 2.3 for Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222; and 2.5 for Yau Tsim Mong District. For conservative assessment household size of 2.5 has been adopted.
[2] Number of employees for club house and lobby are based on estimation from projects of similar scale.
[3] According to figure of Commercial and Industrial Floor Space Utilization Survey by Planning Department, the staff densities are: -
-- 3.3 staff per 100m^2 GFA for G/IC (Community, Social & Personal Services)
-- 3.5 staff per 100m^2 GFA for Retails and Shops
-- 5.1 staff per 100m^2 GFA for Restaurants
-- 3.2 staff per 100m^2 GFA for Hotel
[4] Discharge of hotel has been adopted for the Hotel/Office portion for conservative assessment.
[5] No swimming pool is provided in the current notional design.

3.1.3 As the Design Parameters of the Scheme is subject to detailed design, a 5% design allowance have been adopted in the sewage discharge from the Scheme. The estimated sewage flow rates from Scheme are summarised in **Table 3-2**. The average daily dry weather flow (ADWF) with additional 5% for conservative assessment are 603.7 m^3/day, 0 m^3/day, 0 m^3/day, 5.9 m^3/day, 5.9 m^3/day & 2337.3 m^3/day for Sties A1, A2, A3, A4, A5 & B, respectively.

Table 3-2 Calculation of Sewage Discharge

Occupant Type	Unit Flow Factors (m^3/day/person) [1]	No. of Occupants / Employee	Flow Rate (m^3/day) [2]
Site A1			
Residential	0.27	1185	320.0
Club House & Lobby	0.28	10	2.8
Retail	0.28	139	38.9
Restaurant	1.58	135	213.3
Total (+5%)[3]			**603.7**
Site A2			
Retail	0.28	0	0
Restaurant	1.58	0	0
Total (+5%)[3]			**0**
Site A3			
Retail	0.28	0	0
Restaurant	1.58	0	0
Total (+5%)[3]			**0**
Site A4			
Retail	0.28	3	0.8
Restaurant	1.58	3	4.7
Total (+5%)[3]			**5.9**

Occupant Type	Unit Flow Factors (m^3/day/person) [1]	No. of Occupants / Employee	Flow Rate (m^3/day) [2]
Site A5			
Retail	0.28	3	0.8
Restaurant	1.58	3	4.7
Total (+5%)[3]			**5.9**
Site B			
Residential	0.27	2200	594.0
Club House & Lobby	0.28	20	5.6
G/IC	0.28	990	277.2
Hotel/Office [4]	1.58	588	929.0
Retail	0.28	231	64.7
Restaurant	1.58	225	355.5
Total (+5%)[3]			**2337.3**

Noted
[1] According to EPD's Guidelines for Estimating Sewage Flows for Infrastructure Planning, the Unit Flow Factor are:
-- 0.27 m^3/day/person for Residential flat (R2);
-- 0.28 m^3/day/staff for Clubhouse & Lobby, Retail as well as G/IC;
-- 1.58 m^3/day/staff for Restaurant & Hotel; and
[2] Average Dry Weather Flow (ADWF).
[3] Additional of 5% ADWF has been adopted for conservative assessment.
[4] Discharge of hotel has been adopted for the Hotel/Office portion for conservative assessment

3.2 Comparison with the Existing Condition of Sites A2 – A5

3.2.1 Sites A2, A3, A4, and A5 are currently occupied by four-story tenement buildings with shops/retails on the ground floor. The existing sewage discharge of the Site A2 to A5 are estimated in **Table 3-4**, based on the existing the number of flats and population estimated by URA (**Table 3-3**). Upon redevelopment, these sites will either become open spaces or one-story retail blocks. Based on the notional design, the estimated sewage generated from Sites A2, A3, A4, and A5 (**Table 3-2**) is expected to significantly decrease as shown in **Table 3-5**, thereby eliminating any anticipated adverse sewerage impact for these sites.

Table 3-3 Existing Population (Sites A2 – A5)

Residential Section	Number of Units [1]		Population (Residential) [1]
Total			**90**
Site A2 -- Residential Flat	6		25
Site A3 -- Residential Flat	3		15
Site A4 -- Residential Flat	6		25
Site A5 -- Residential Flat	6		25
Non-Residential Section	**GFA (m^2) [2]**	**Staff Density (per 100m^2) [3]**	**No. of Employees**
Total			**23**
Site A2 -- Retail	200	3.5	10
Site A3 -- Retail	70	3.5	3
Site A4 -- Retail	130	3.5	5
Site A5 -- Retail	130	3.5	5

[1] The number of flats and population are estimated by URA.
[2] Estimated values.
[3] According to figure of Commercial and Industrial Floor Space Utilization Survey by Planning Department, the staff density is 3.5 staff per 100m^2 GFA for Retails and Shops

Table 3-4 Calculation of Existing Sewage Discharge (Sites A2 – A5)

Occupant Type	Unit Flow Factors (m^3/day/person)	No. of Occupants / Employees	ADWF (m^3/day)
Site A2 -- Residential Flat	0.27	25	6.8
Site A3 -- Residential Flat	0.27	15	4.1
Site A4 -- Residential Flat	0.27	25	6.8
Site A5 -- Residential Flat	0.27	25	6.8
Site A2 -- Retail	0.28	10	2.8
Site A3 -- Retail	0.28	3	0.8
Site A4 -- Retail	0.28	5	1.4
Site A5 -- Retail	0.28	5	1.4
Site A2 Total			9.6
Site A3 Total			4.9
Site A4 Total			8.2
Site A5 Total			8.2
Total	-	-	**30.7**

[1] According to EPD's Guidelines for Estimating Sewage Flows for Infrastructure Planning, the Unit Flow Factor are:
-- 0.27 m^3/day/person for Residential flat (R2);
-- 0.28 m^3/day/staff for Clubhouse, Lobby & Retail;
[2] Average Dry Weather Flow (ADWF).

Table 3-5 Comparison of Sewage Discharge for Sites A2-A5

Occupant Type	Existing ADWF (m^3/day)	Proposed Scheme ADWF (m^3/day)
Site A2 Total	9.6	0
Site A3 Total	4.9	0
Site A4 Total	8.2	5.9
Site A5 Total	8.2	5.9
Total	**30.7**	**11.8**

[1] The ADWF of the Existing case and Proposed Scheme are presented in **Table 3-4** & **Table 3-2** respectively.

3.3 Sewage Discharge from the Vicinity

3.3.1 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** and the estimated sewage discharges from each catchment are summarised in **Table 3-6**. It should be noted that average domestic household size of 2.5, instead of 2.3, as stated in **Section 3.1.1**, has been adopted for conservative assessment. Catchment C and E are referenced from Sewerage Impact Assessment of "OZP Amendments in Yau Ma Tei and Mong Kok Districts" and the extracted pages are presented in **Appendix V**. The population and detailed calculation of flow rate is presented in **Appendix II.**

Table 3-6 Sewage Discharge from Surrounding Catchments

Catchment ID	Development	Total Flowrate / catchment [1]
A	Oscar Court	122.2 m^3/day
	Kam Ming Court	
	Circle Garden	
B	Mongkok City Building	64.9 m^3/day
	Hentiff (Ho Tat) Building	
C	144-152 Prince Edward Road West	376.6 m^3/day
	207-221 Fa Yuen Street	
	210-238 Tung Choi Street	
	6-10 Playing Field Road	
D	Mong Kok Police Station	119.3 m^3/day
E	304-328 Sai Yeung Choi Street North	992.0 m^3/day
	7-29 Playing Field Road	
	40-46, 52-56,68 Boundary Street	
	209-229, 240-254 Tung Choi Street	
	225-239, 244-266 Fa Yuen Street	
	233-251 Sai Yee Street	
F	Bijou Apartments	260.7 m^3/day
	Bijou Court	
	Cheung Ling Mansion	
US01 [2]	Upstream Area served by Sewer US01 (FWD4018096)	497.2 L/s

[1] ADWF has been presented unless specified.
[2] The full capacity of the corresponding pipe has been adopted.
[3] The calculation is detailed in **Appendix II**.

3.4 Assessment of Existing Sewerage System Proposed New Sewers and Upgrading

Downstream of Sites A1 & B

3.4.1 The sewage discharge from Sites A1 & B is expected to increase after the redevelopment, the downstream sewers shall be checked for sufficient capacities to cater sewerage discharge. Besides, some existing sewers are planned to be demolished or reconstructed either due to the need of the Scheme or for other practical reasons, which will be described in the following paragraphs. The existing sewers to be demolished or reconstructed are illustrated in **Figure 3-2** and the proposed new sewers or upgrading are illustrated in **Figures 3-3a to 3-3e**.

3.4.2 Firstly, the existing 900mm sewer between the public sewer manholes FMH4017916 and FMH4017917 across Sai Yee Street shall be removed to facilitate the basement development at Site B (**Figure 3-2**). Additionally, as part of the reconstruction of Site A1, the original sewers connecting from the public sewer manholes FMH4017916 to FMH4017920 are proposed to be demolished (as shown in **Figure 3-2**) and to be replaced by a more direct and shorten new route crossing connecting the two same public sewer manholes, as depicted in **Figure 3-3c**.

3.4.3 Secondly, the existing developments to the north of Site A1 will no longer be able to discharge through the current southern route (**Figure 3-2**; sewers PS13 to PS15). Instead, the sewage from those developments will be redirected to the north and connected to the main sewer through the newly proposed 300mm sewers, as illustrated in **Figure 3-3c**. It is important to note that the existing 900mm sewer extending from public sewer manholes FMH4017918 to FMH4017920 cannot be reused. This is because the invert levels of the sewers near the decked nullah need to be raised to accommodate the proposed upgrades for the drainage pipes SMD4004100 and SMD4004101 that run beneath the existing sewers. For more detailed information regarding the proposed stormwater pipes, please refer to the Drainage Impact Assessment Report prepared for the Project separately.

3.4.4 Thirdly, as mentioned previously, the sewers in the vicinity of the decked nullah will be elevated to create additional space for the proposed upgrades to the drainage pipes. Therefore, the invert level of the existing sewer that crosses the decked nullah near Sai Yee Street (**Figure 3-2**; sewer PS04) will be raised. Moreover, the upgrading of current PS04 sewer will likely reduce potential disruptions to the flow of the decked nullah due to its current low invert level (downstream invert level of 3.75mPD). To comply with current standards, , the diameter of PS04 will increase from 150mm to 225mm.

3.4.5 Lastly, it has been identified that the sewer FWD4018104, located between the existing public sewer manholes FMH4017920 and FMH4017921 (**Figure 3-2**), is at risk of surcharging due to its small gradient (0.04m / 44m = 0.00091)[2]. To improve the sewer capacity, the proposed upgrades will shorten the sewer route and relocate the public manholes FMH4017921 outside of the garden area, as shown in **Figure 3-3d**. With the proposed changes, the flow shall achieve the self-cleansing velocity of 1.0m/s in full pipe condition as shown in **Table A in Appendix IV** (Sewer PP05 & PP06).

3.4.6 It is important to note that there are two 300mm sewers connected to the public sewer manholes FMH4017921 in the southeast. A preliminary desktop assessment indicates that these two 300mm sewers are likely not in use. However, the condition of these sewers will

[2] According to Section 5.1.2 of Sewerage Manual - Part 1 (Third Edition, May 2013), a self-cleansing velocity of 1.0m/s in full pipe condition and/or sewer gradient of 1:DN are recommended.

be further assessed in a later stage. If it is determined that the two 300mm sewers are indeed in use, it would be more practical to divert the sewage to nearby sewers in the southwest, rather than allowing it to cross the decked nullah at its current invert level (current invert levels: 3.25-3.32mPD).

Downstream of Sites A2 - A5

3.4.7 As stated in **Section 3.2**, the sewage flow from each of the Sites A2 – A5 is expected to decrease. Therefore, no adverse sewerage impact is anticipated from the discharge of those sites thus the assessment of their downstream sewers is not necessary.

Summary of Sewers to be Demolished

3.4.8 The sewers to be demolished are illustrate **Figure 3-2** and summarised in **Table 3-7**.

Table 3-7 Summary of Sewers to be Demolished

Location	From Manhole	To Manhole	Sewer Diameter	Remarks
South-west of Site B; Playing Field Road; & Fa Yuen Street.	FMH4017916	FMH4017920	900mm	To be diverted to a shorter route.
Along the nullah within Site A1 and its downstream	FMH4018197	FMH4017922	450-900mm	To be upgraded/modified.
Within Site A1	FMH4079142	FMH4018197	225mm	
Within Site A1	FMH4018192	FMH4018189	100-300mm	
Flower Market Road	FMH4073742	FMH4018200	225-405mm	No longer required.

Capacity of Existing Downstream Sewers

3.4.9 The capacities of the existing downstream foul sewer pipe sections (PS 01 - PS 15, **Figure 3-2**), based on the planned flow configuration as illustrated in **Figures 3-3a to 3-3e**, have been calculated by Colebrook-White Equation. The calculated capacities are listed in **Table 3-8** and the detailed calculation can be found in **Table A of Appendix III**.

Table 3-8 Capacity of Downstream Foul Sewers

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)
PS01	FMH4017914	FMH4017915	1000.3
PS02	FMH4017915	FMH4017916	1000.3
PS03	FMH4018200	FMH4018197	124.9
PS04	FMH4018202	FMH4018200	41.5
PS05	FMH4017922	FMH4017923	686.3
PS06	FMH4017923	FMH4017924	1596.9
PS07	FMH4017924	FMH4018185	2320.4
PS08	FMH4018185	FMH4018251	2814.3
PS09	FMH4018251	FMH4018252	836.2
PS10	FMH4018252	FMH4018253	989.3
PS11	FMH4018253	FMH4018254	1626.0
PS12	FMH4018254	FSH4000280	3172.9
PS13 [1]	FMH4079142	FMH4079141	-
PS14 [1]	FMH4079141	FMH4079140	-
PS15 [1]	FMH4079140	FMH4018194	-
US01 [2]	FMH4017912	FMH4017913	492.7

Note:
[1] Sewage flow direction between PS13 to PS15 is reserved based on planned flow configuration.
[2] The full capacity of the US01 has been adopted as upstream flow volume.
[3] The calculation is detailed in **Table A of Appendix III**.

3.4.10 A summary of the utilization of the sewers are shown in **Table 3-9**. Detailed calculation is shown in **Tables B of Appendix III**. The results indicate that the existing sewers PS03 & PS05 are unable to cater the expected sewer flow. In addition, the flow direction of sewers PS13, PS14 & PS15 will need to be reversed due to the redevelopment of Site A1.

Table 3-9 Proportion of Peak Flow to Full Capacity (Existing Pipes)

Pipe Section	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01	1000.3	497.2	50%
PS02	1000.3	673.1	67%
PS03	**124.9**	**678.0**	**543%**
PS04	41.5	7.8	19%
PS05	**686.3**	**689.4**	**100%**
PS06	1596.9	689.4	43%
PS07	2320.4	689.4	30%
PS08	2814.3	779.0	28%
PS09	836.2	779.0	93%
PS10	989.3	779.0	79%
PS11	1626.0	779.0	48%
PS12	3172.9	779.0	25%
PS13	-	**14.7**	-
PS14	-	**14.7**	-
PS15	-	**14.7**	-

Note:
[1] Surcharged sewers are **Bold Underline**.
[2] The calculation is detailed in **Table B of Appendix III**.
[3] Utilization of > 93% is considered surcharged.

Terminal Manholes and Discharge Sewers of the Sites

3.4.11 The sewage discharge from the Site A1 is proposed to be collected by terminal manhole FTMH-A01 and discharged via a proposed sewer PP-A01, with diameter of 300mm and slope of 1:100, connected to new manhole FMH-01 (**Figure 3-3c**).

3.4.12 The sewage discharge from the Site A4 is proposed to be collected by terminal manhole FTMH-A04 and discharged via a proposed sewer PP-A04, with diameter of 225mm and slope of 1:100, connected to existing manhole FMH4084221 (**Figure 3-3e**).

3.4.13 The sewage discharge from the Site A5 is proposed to be collected by terminal manhole FTMH-A05 and discharged via a proposed sewer PP-A05, with diameter of 225mm and slope of 1:100, connected to existing manhole FMH4018214 (**Figure 3-3e**).

3.4.14 The sewage discharge from the Site B is proposed to be collected by terminal manhole FTMH-B01 and discharged via a proposed sewer PP-B01, with diameter of 400mm and slope of 1:100, connected to existing manhole FMH4017915 (**Figure 3-3b**).

3.4.15 No terminal manhole and discharge sewers will be provided for Sites A2 & A3.

Proposed New Sewers and Upgrading in the Surrounding

3.4.16 In addition to the aforementioned sewers connected to the terminal manholes of the Sites, there are 12 proposed new sewers (PP01 to PP12). PP01 to PP07 are proposed to handle the increased sewage flow and facilitate the shortening of the 900mm sewers, while PP08 to PP12 are intended for diverting sewage from existing developments (**Figures 3-3c & 3-3d**).

3.4.17 There are 8 sewers (PS01 to PS05, and PS13 to PS15) proposed to be upgraded and/or modified. The invert levels of PS01 & PS02 are proposed to be adjusted to align with the invert level of the proposed new sewers; PS03 is proposed to be upgraded from 450mm to 900mm to cater the upstream flow; PS04 is proposed to be upgrade from 150mm to 225mm with increased invert level to align with the invert level of the proposed sewers; the slope of PS05 is proposed to be increased to cater the upstream flow; the slope of the PS13 to PS15 are proposed to be reversed to change the flow direction.

3.4.18 The proposed new pipes and upgrades are presented in **Table 3-10** & **Table 3-11** below. The exact location of the new manholes and invert levels will subject to design. With the proposed new sewers and upgrades, the downstream sewer will be able to cater the expect peak sewage flow, thus no adverse sewerage impact arising from the proposed development is anticipated.

Table 3-10 Proportion of Peak Flow to Full Capacity (Proposed New Sewers)

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PP-A01	FTMH-A01	FMH-01	120.4	54.5	45%
PP-A04	FTMH-A04	FMH4084221	45.6	0.7	2%
PP-A05	FTMH-A05	FMH4018214	45.6	0.7	2%
PP-B01	FTMH-B01	FMH4017915	256.4	175.8	69%
PP01	FMH4017916	FMH4018199	868.3	673.1	78%
PP02	FMH4018199	FMH4018200	863.1	673.1	78%
PP03	FMH4018197	FMH-01	874.7	678.0	78%
PP04	FMH-01	FMH4017920	874.9	689.4	79%
PP05	FMH4017920	FMH-02	878.4	689.4	78%
PP06	FMH-02	FMH-03	1082.2	689.4	64%
PP07	FMH-03	FMH4017922	1112.0	689.4	62%
PP08	FMH4018194	FMH-04	42.3	14.7	35%
PP09	FMH-04	FMH-05	26.7	14.7	55%
PP10	FMH-05	FMH-06	23.6	14.7	62%
PP11	FMH-06	FMH-07	23.6	14.7	62%
PP12	FMH-07	FMH-01	75.4	14.7	20%

Table 3-11 Proportion of Peak Flow to Full Capacity (Proposed Upgrading)

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01	FMH4017914	FMH4017915	606.5	497.2	82%
PS02	FMH4017915	FMH4017916	813.6	673.1	83%
PS03	FMH4018200	FMH4018197	880.2	678.0	77%
PS04	FMH4018202	FMH4018200	64.2	7.8	12%
PS05	FMH4017922	FMH4017923	1076.7	689.4	64%
PS13	FMH4079142	FMH4079141	19.2	14.7	77%
PS14	FMH4079141	FMH4079140	17.6	14.7	83%
PS15	FMH4079140	FMH4018194	18.9	14.7	78%

3.4.19 The necessity and arrangement of temporary sewer diversion will be subject to detailed design. By implementing appropriate works sequencing and temporary sewer diversion measures in the implementation stage, it is anticipated that any potential sewerage impact during the sewerage works can be effectively mitigated.

4 CONCLUSION

4.1.1 This Sewerage Impact Assessment has been undertaken to assess the potential sewerage impact of the proposed development and to serves as a supporting document for the draft DSP of the Scheme with its planning proposal to the TPB for consideration.

4.1.2 The sewage discharge from Sites A1 & B are expected to be increased while the sewage discharge from Sites A2 to A5 are expected to be reduced.

4.1.3 The sewage discharge from the Site A1 is proposed to be collected by terminal manhole FTMH-A01 and discharged via proposed 300mm sewer PP-A01 to new manhole FMH-01; The sewage discharge from the Site A4 is proposed to be collected by terminal manhole FTMH-A04 and discharged via proposed 225mm sewer PP-A04 to existing manhole FMH4084221; The sewage discharge from the Site A5 is proposed to be collected by terminal manhole FTMH-A05 and discharged via proposed 225mm sewer PP-A05 to existing manhole FMH4018214; The sewage discharge from the Site B is proposed to be collected by terminal manhole FTMH-B01 and discharged via proposed 400mm sewer PP-B01 to existing manhole FMH4017915. No terminal manhole and discharge sewers will be provided for Sites A2 & A3.

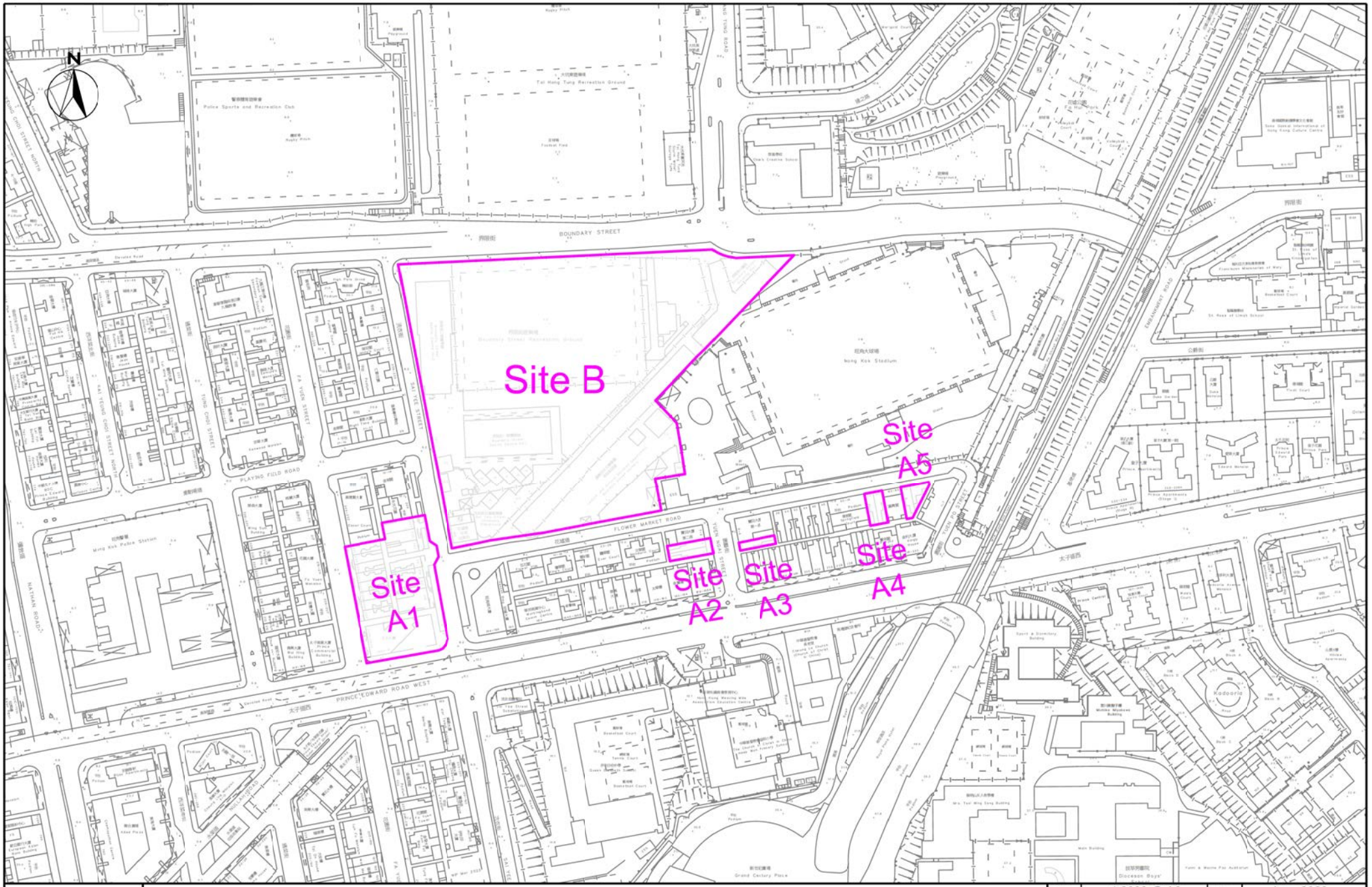
4.1.4 There are 12 proposed new sewers (PP01 to PP12). PP01 to PP07 are proposed to handle the increased sewage flow and facilitate the shortening of the 900mm sewers, while PP08 to PP12 are intended for diverting sewage from existing developments.

4.1.5 There are 8 sewers (PS01 to PS05, and PS13 to PS15) proposed to be upgraded and/or modified. The invert levels of PS01 & PS02 are proposed to be adjusted to align with the invert level of the proposed new sewers; PS03 is proposed to be upgraded from 450mm to 900mm to cater the upstream flow; PS04 is proposed to be upgrade from 150mm to 225mm with increased invert level to align with the invert level of the proposed sewers; the slope of PS05 is proposed to be increased to cater the upstream flow; the slope of the PS13 to PS15 are proposed to be reversed to change the flow direction.

4.1.6 With the proposed new sewers and upgrades, the downstream sewer will be able to cater the expect peak sewage flow, thus no adverse sewerage impact arising from the proposed development is anticipated.

4.1.7 The necessity and arrangement of temporary sewer diversion will be subject to detailed design. By implementing appropriate works sequencing and temporary sewer diversion measures in the implementation stage, it is anticipated that any potential sewerage impact during the sewerage works can be effectively mitigated.

FIGURES



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location Plan

SCALE	1:2000 @ A3	DATE	June 2023
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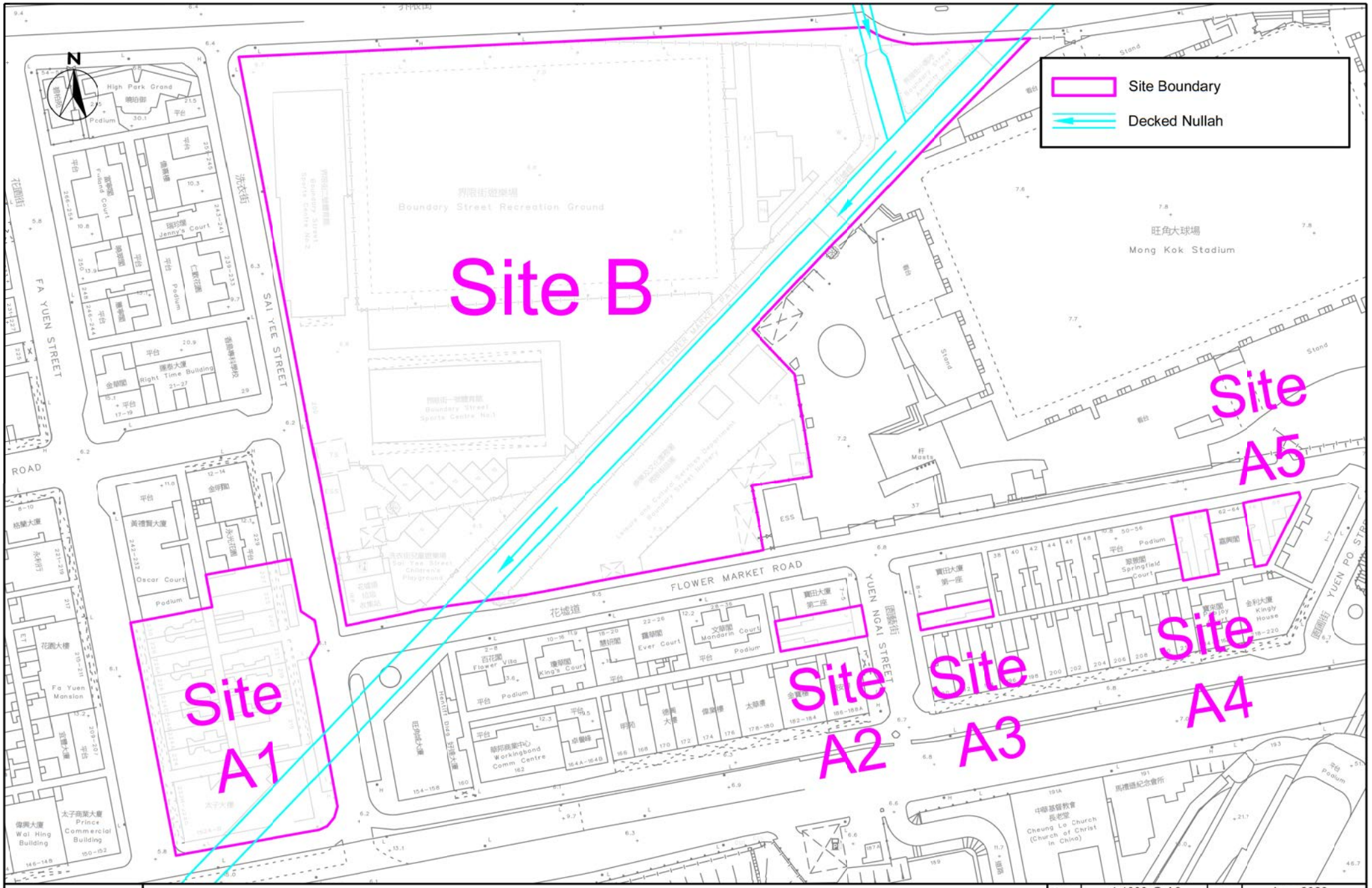
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 2-1
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Decked Nullah

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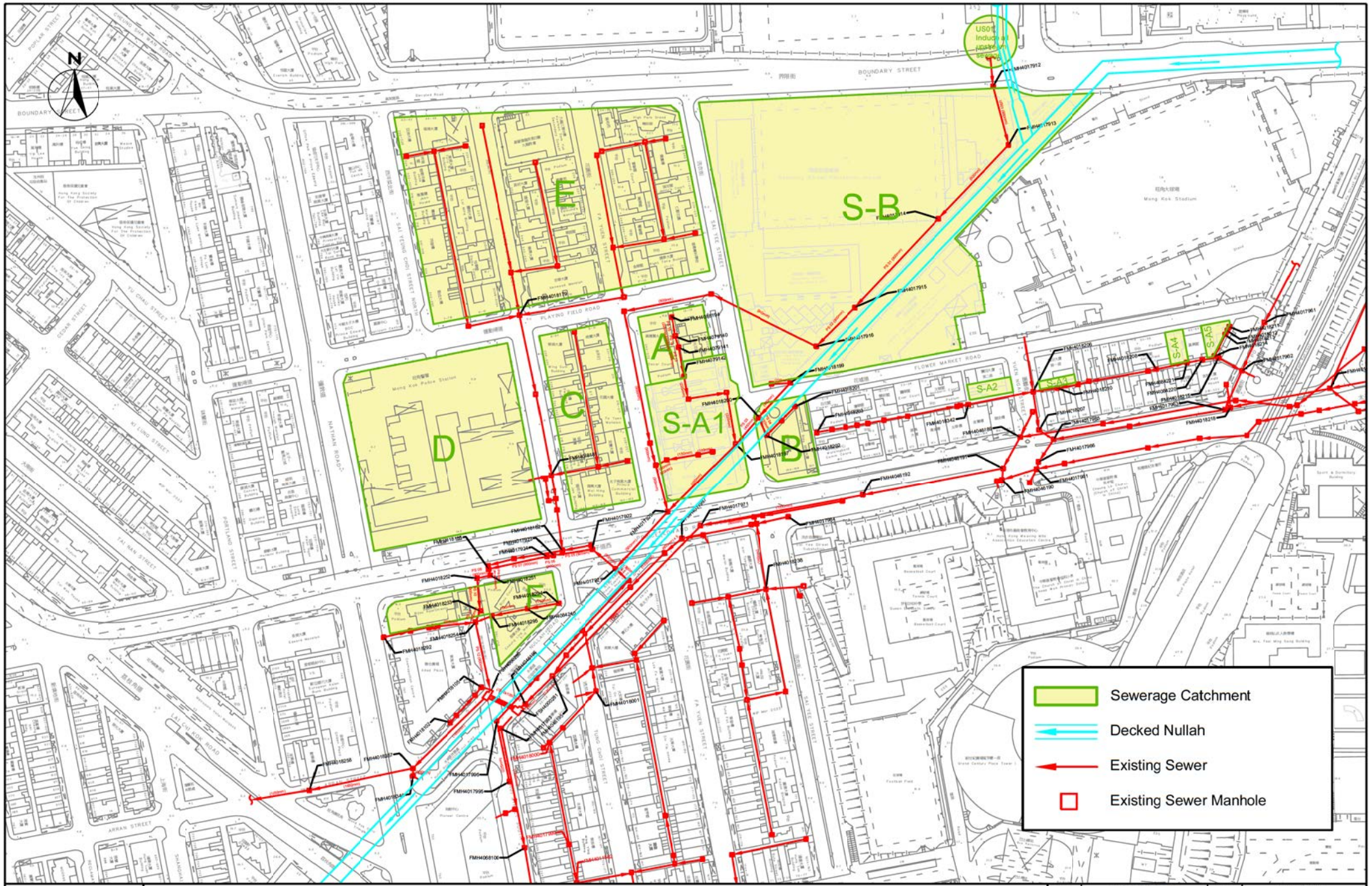
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Sewerage System in the Vicinity (Overview)

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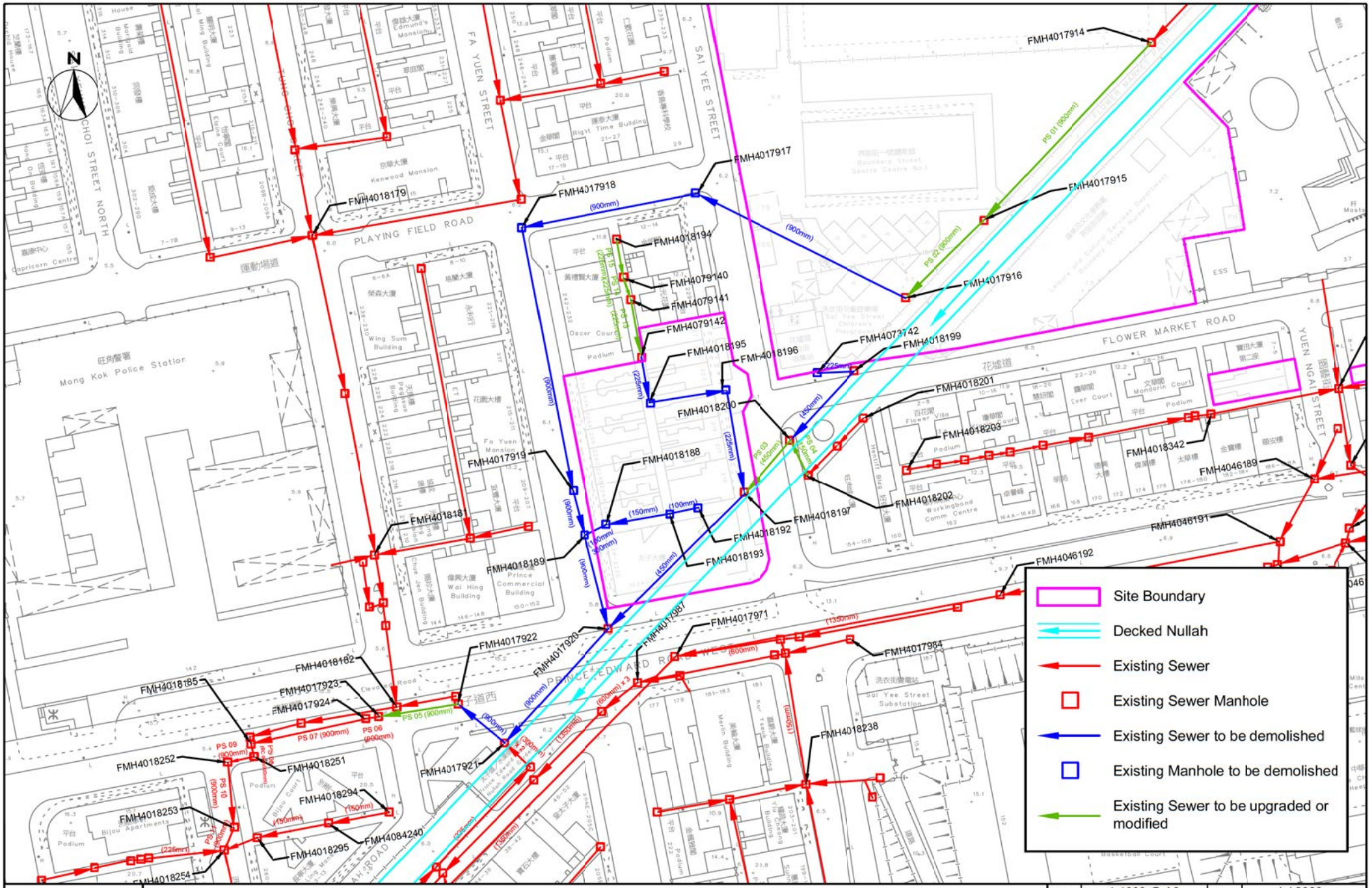
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Existing Sewer and Sewer Manhole to be Demolished or Reconstructed

SCALE	1:1000 @ A3	DATE	Jul 2023
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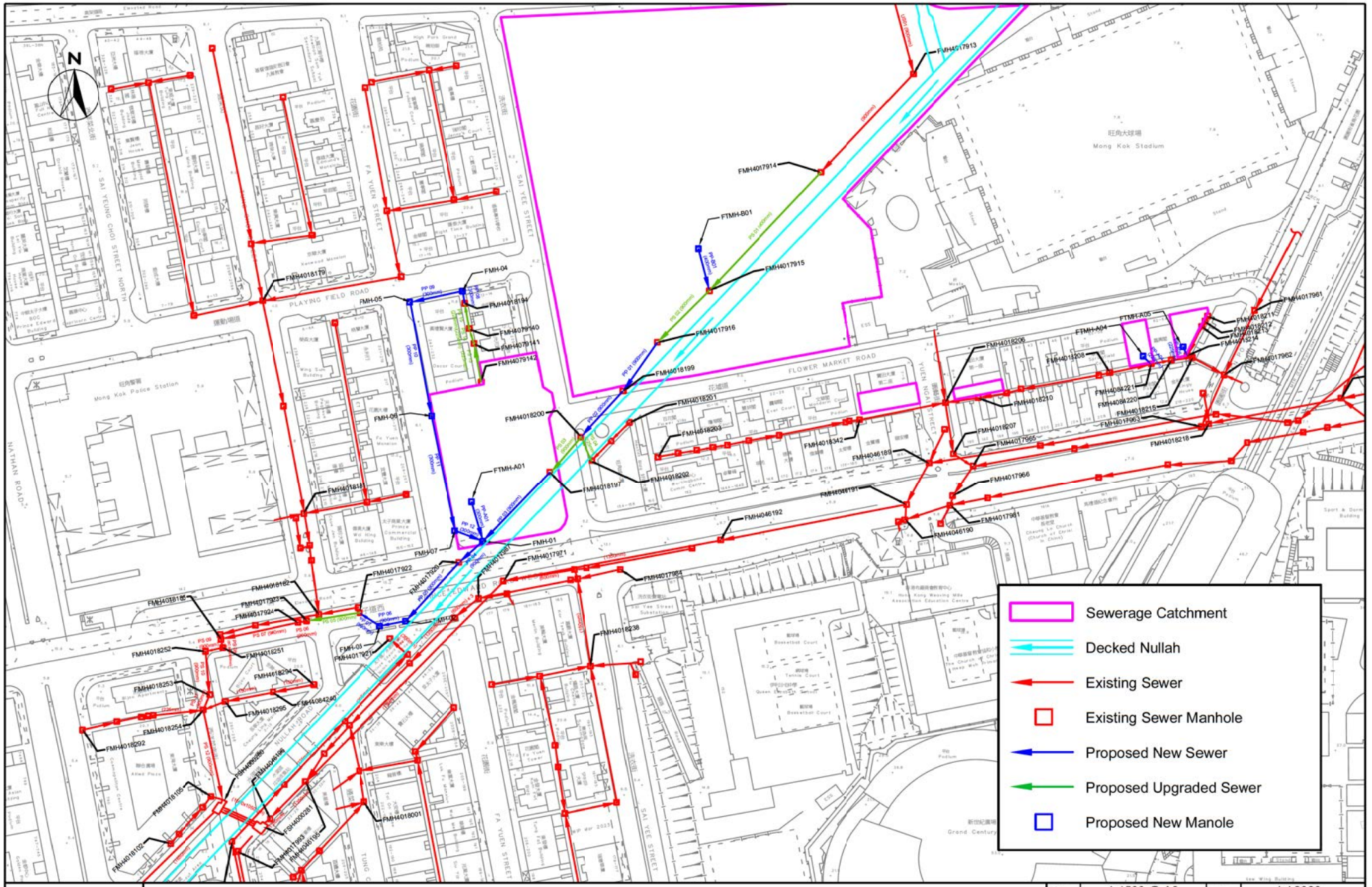
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed New Sewer and Sewer Manhole (Overview)

SCALE	1:1500 @ A3	DATE	Jul 2023
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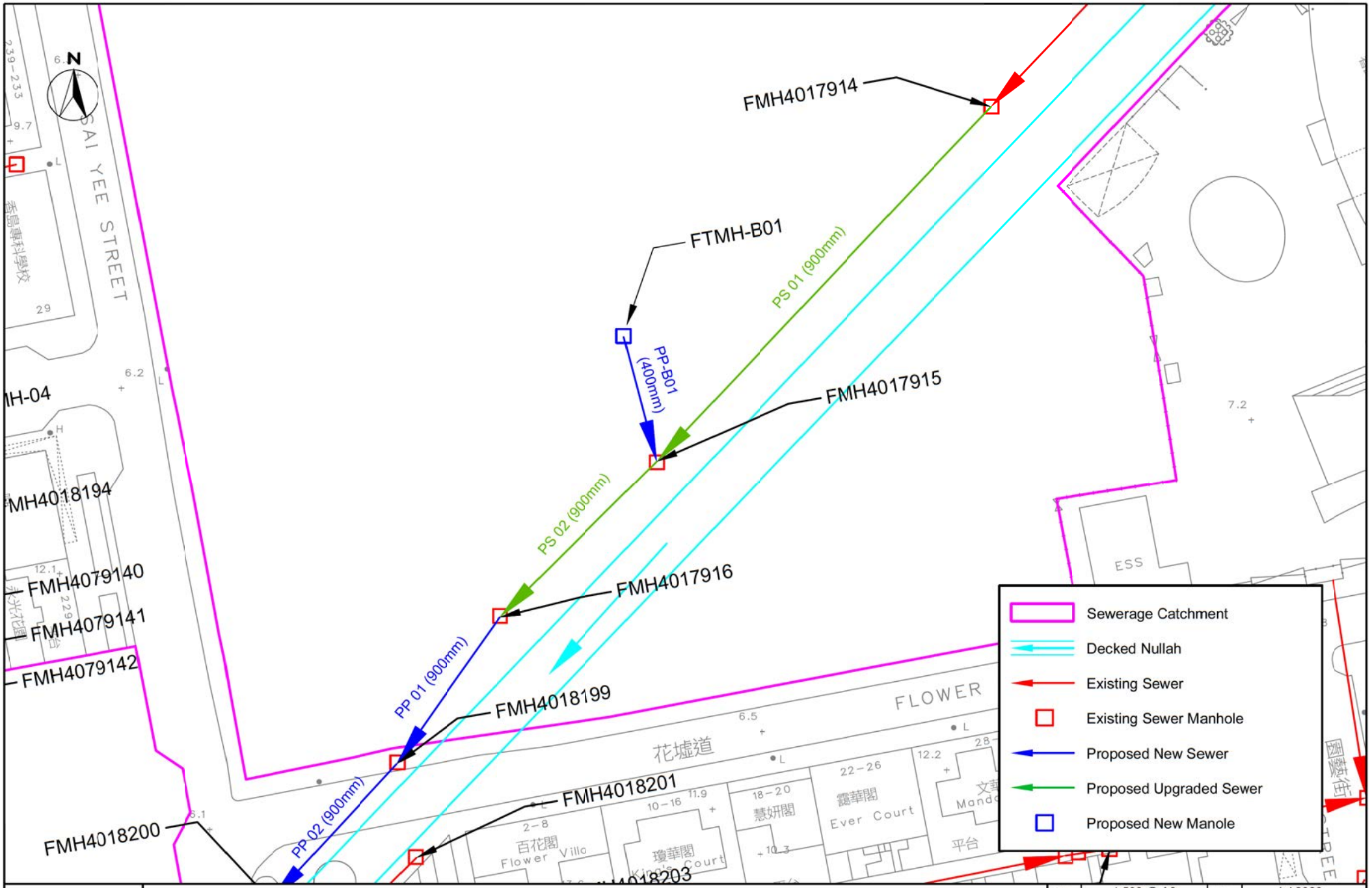
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig 3-3a
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed New Sewer and Sewer Manhole - 1

SCALE	1:500 @ A3	DATE	Jul 2023
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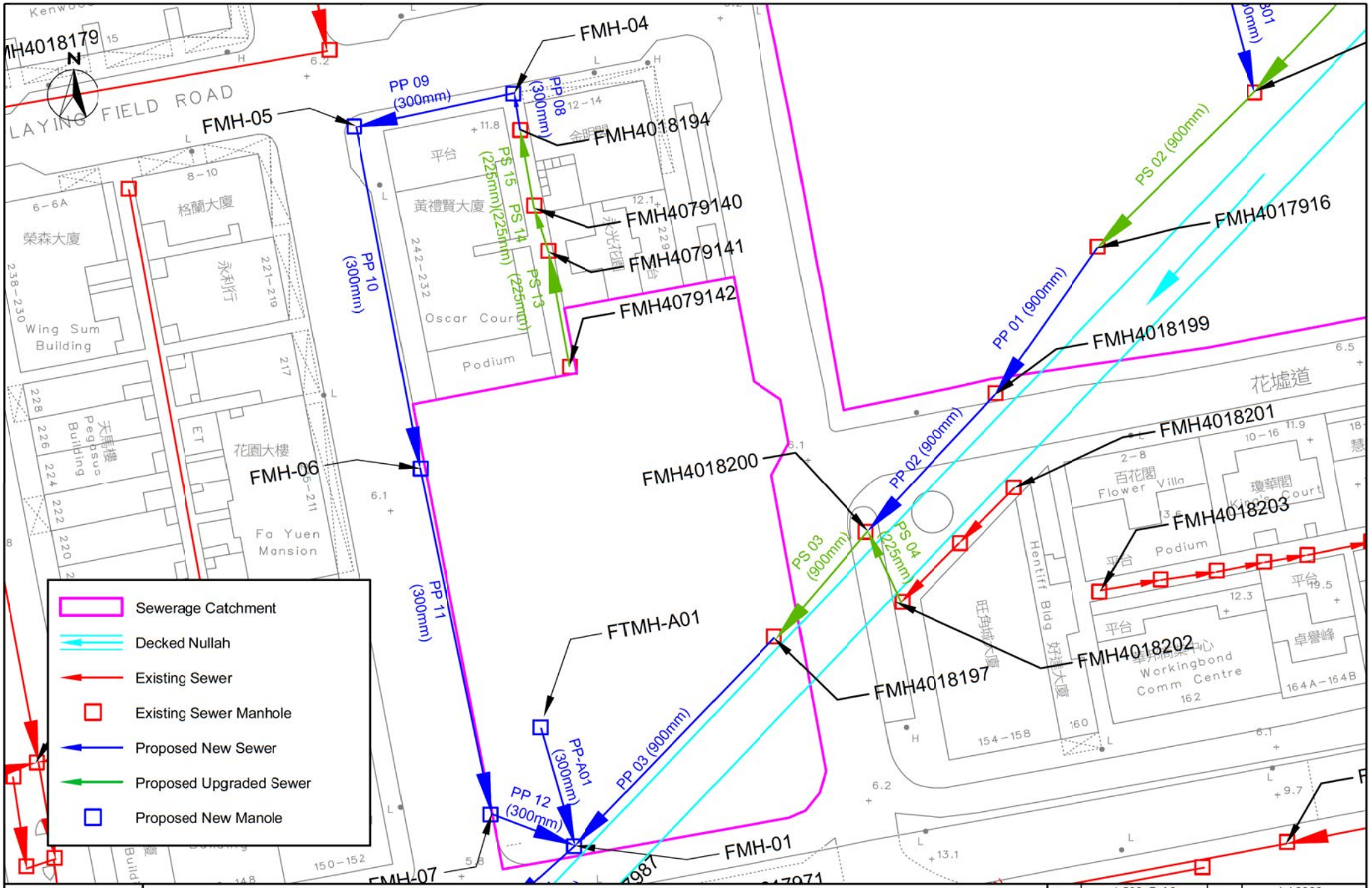
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed New Sewer and Sewer Manhole - 2

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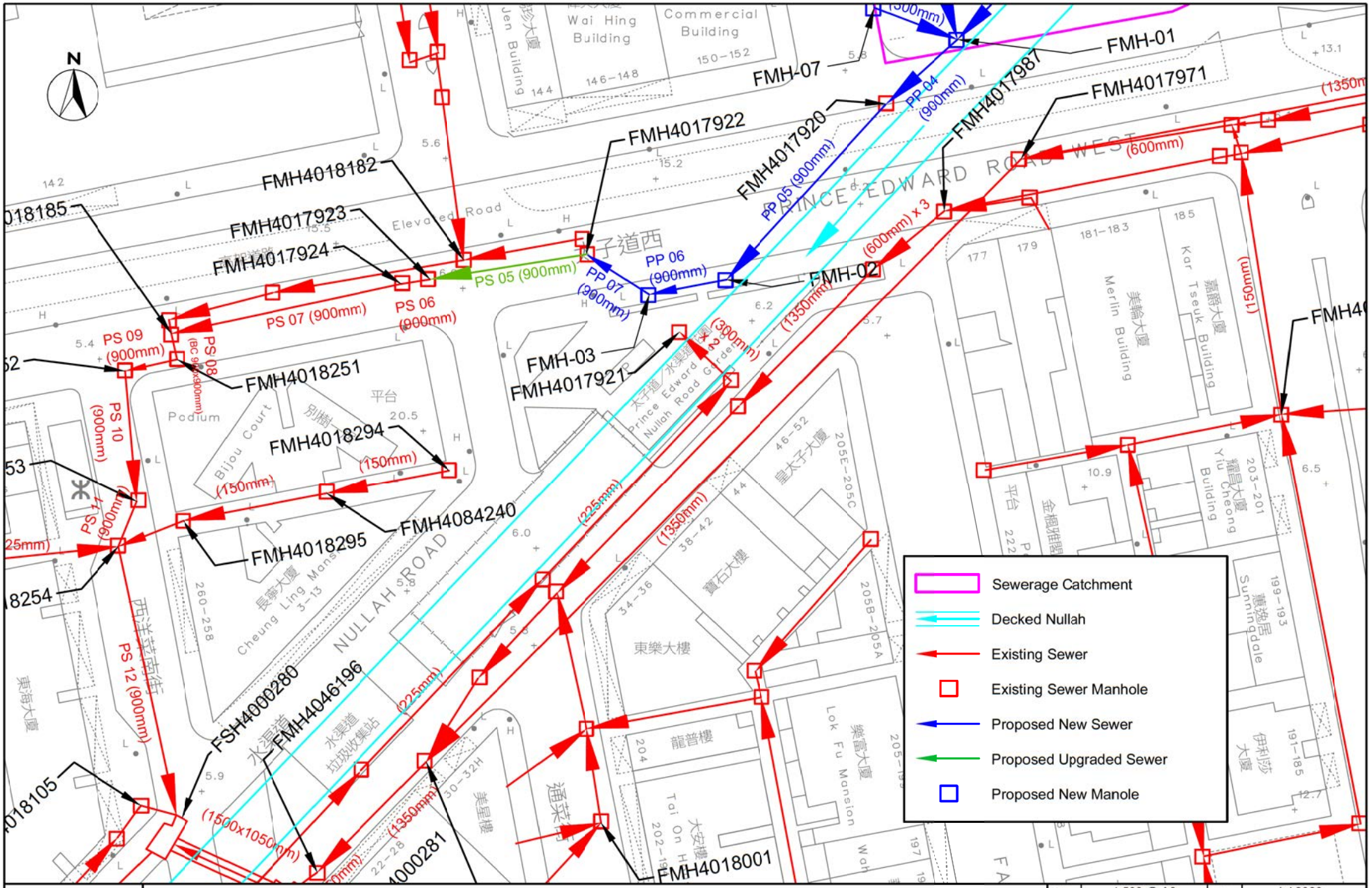
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed New Sewer and Sewer Manhole - 3

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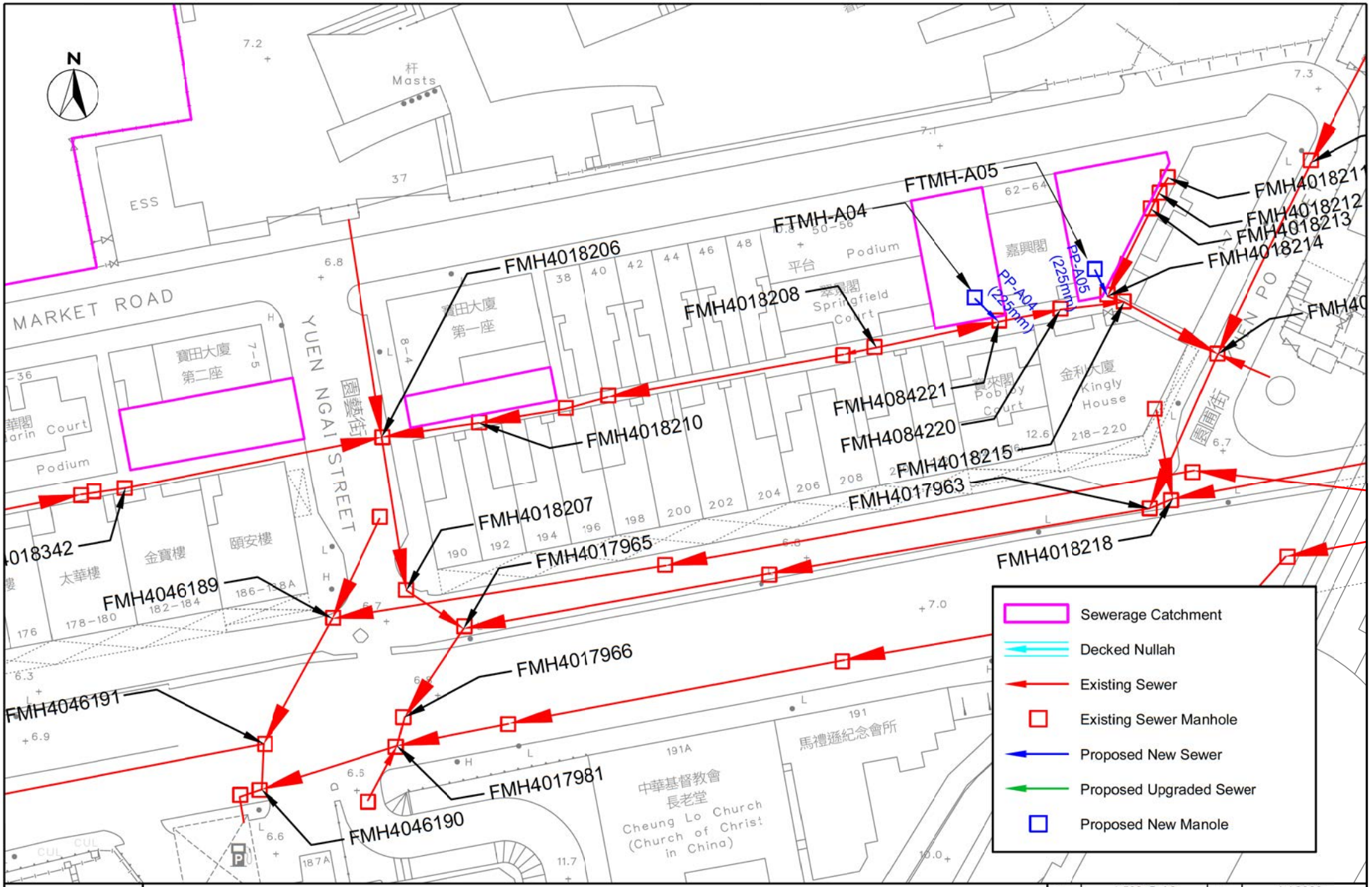
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Proposed New Sewer and Sewer Manhole - 4

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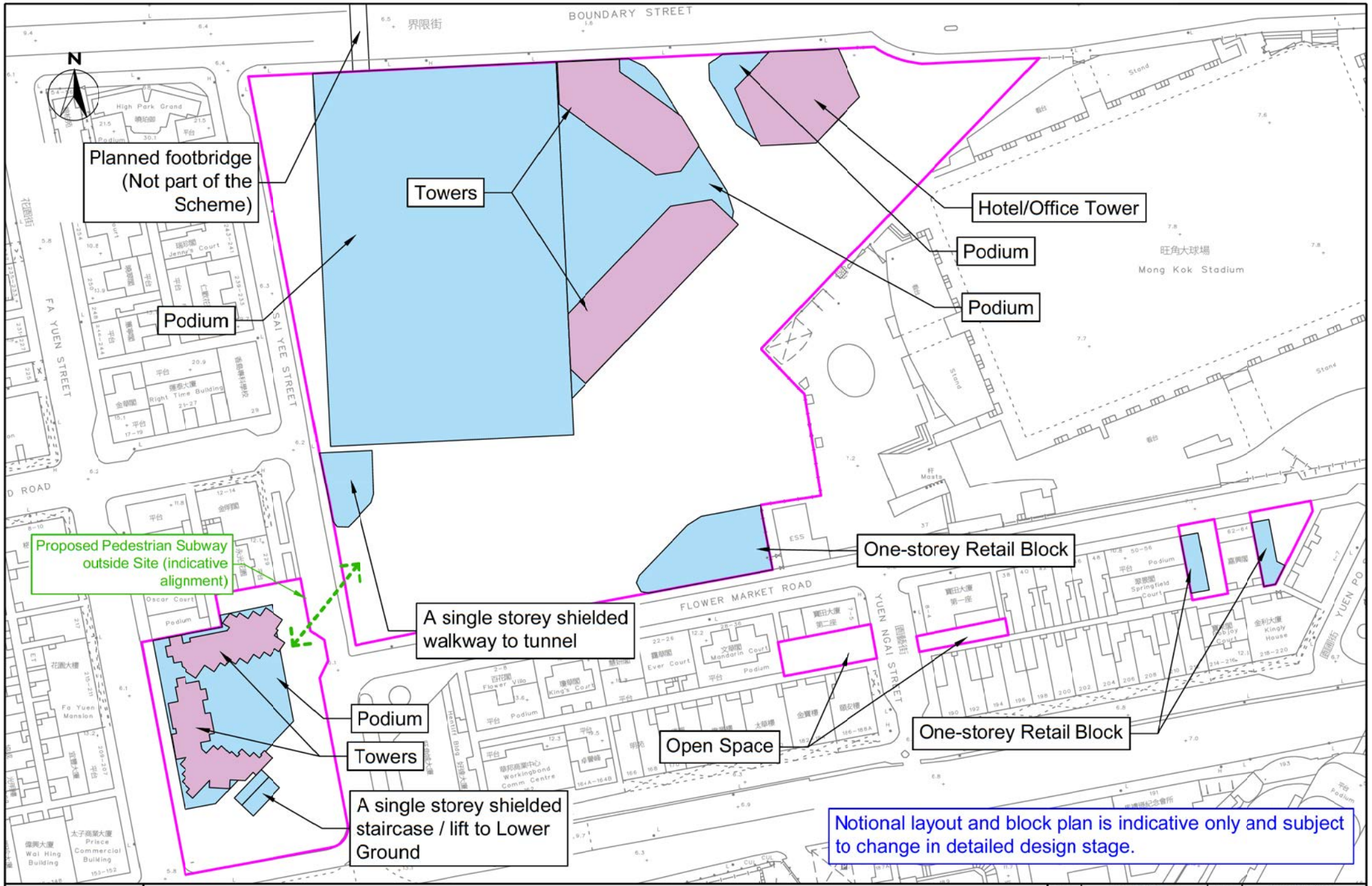
CHECK	CC	DRAWN	LL
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig 3-3e
		REV	-

APPENDIX I
NOTIONAL PLAN OF THE PROPOSED SCHEME



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Notional Plan of the Proposed Scheme

SCALE	1:1000 @ A3	DATE	March 2024
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JOB No.	IA19021-YMAA101P1	DRAWING No.	--
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APPENDIX II
SEWAGE DISCHARGE FROM SURROUNDING CATCHMENTS

Appendix II: Sewage Discharge from Surrounding Catchments

Catchment ID	Building	No. of Flats	Total Area (m^2) [2]			Population [1]				ADWF (m^3/day)				ADWF / Building (m^3/day)	Total ADWF / catchment (m^3/day)	Reference
			Community, Social & Personal Services	Retails	Restaurants	Staff (by worker density - Community, Social & Personal Services)	Staff (by worker density - Retails)	Staff (by worker density - Restaurants)	Residential	Residential UFF = 0.27	Community, Social & Personal Services UFF = 0.28	Wholesale & Retail UFF = 0.28	Restaurants UFF = 1.58			
A	Oscar Court	69	--	400	200	--	14	11	173	46.7	--	3.9	17.4	68.0	122.2	Estimation & Centaline Property
	Kam Ming Court	45	--	260	--	--	10	--	113	30.5	--	2.8	--	33.3		Estimation & Centaline Property
	Circle Garden	28	--	200	--	--	7	--	70	18.9	--	2.0	--	20.9		Estimation & Centaline Property
B	Mongkok City Building	45	1440	--	--	48	--	--	113	30.5	13.4	--	--	44.0	64.9	Centaline Property
	Hentiff (Ho Tat) Building	24	--	480	--	--	17	--	60	16.2	--	4.8	--	21.0		Centaline Property
C	144-152 Prince Edward Road West	--	--	--	--	--	--	--	-	--	--	--	--	--	376.6	Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report Block MKE07
	207-221 Fa Yuen Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	210-238 Tung Choi Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	6-10 Playing Field Road	--	--	--	--	--	--	--	-	--	--	--	--	--		
D	Mong Kok Police Station	--	12900	--	--	426	--	--	-	--	119.3	--	--	119.3	119.3	Estimation
E	304-328 Sai Yeung Choi Street North	--	--	--	--	--	--	--	-	--	--	--	--	--	992.0	Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report Blocks MKE04, MKE06, & MKE08
	7-29 Playing Field Road	--	--	--	--	--	--	--	-	--	--	--	--	--		
	40-46, 52-56,68 Boundary Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	209-229, 240-254 Tung Choi Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	225-239, 244-266 Fa Yuen Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	233-251 Sai Yee Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
F	Bijou Apartments	171	--	935	--	--	33	--	428	115.6	--	9.2	--	124.8	260.7	Centaline Property
	Bijou Court	84	--	928	--	--	33	--	210	56.7	--	9.2	--	65.9		Centaline Property
	Cheung Ling Mansion	92	--	300	50	--	11	3	230	62.1	--	3.1	4.7	69.9		Centaline Property

US01	Upstream Area served by Sewer US01 (FWD4018096)	The full capacity of Pipe US01 has been adopted. The peaking factor and catchment inflow factors are not applicable for this catchment.	Peak flow: 497.2L/s	Appendix III

Notes:

[1] According to the Population Census 2021, the average domestic household size is 2.3 for Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222; and 2.5 for Yau Tsim Mong District. For conservative assessment household size of 2.5 has been adopted.

According to figure of Commercial and Industrial Floor Space Utilization Survey by Planning Department, the staff density is: -

- 3.3 staff per 100m^2 GFA for Community, Social & Personal Services
- 3.5 staff per 100m^2 GFA for Retails and Shops
- 5.1 staff per 100m^2 GFA for Restaurants

[2] Estimated according to available informtion.

[3] According to EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0), the Unit Flow Factors are: -

- 0.37 m^3/person/day for Residential flat (R3)
- 0.28 m^3/staff/day (0.08 + 0.20) for Community, Social & Personal Services
- 0.28 m^3/staff/day (0.08 + 0.20) for Wholesale & Retail
- 1.58 m^3/staff/day (0.08 + 1.50) for Restaurants & Hotels

[4] Number of flats are reference to Centaline Property (https://hk.centanet.com/estate/index).

[5] Dischrage from Catchment C and E are referenced to attachment VIh of MPC Paper No. 10/22, Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report. Extracted pages from the "Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report" is presented in **Appendix V**.

APPENDIX III
DETAILED CALCULATION OF EXISTING SEWERS

Appendix III: Detailed Calculation of Existing Sewers

Table A: Calculation of Existing Sewers Capacity

Sewer	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)	Pipe material	Hydraulic Pipeline Roughness (m) [1]	Velocity (m/s)	Full Capacity (l/s)
Existing Downstream Sewer															
PS01	FMH4017914	FMH4017915	4.46	4.19	70.0	900	0.9	0.636	0.225	0.0038	0.00000114	Concrete	0.003	1.57	1000.3
PS02	FMH4017915	FMH4017916	4.19	4.07	31.9	900	0.9	0.636	0.225	0.0038	0.00000114	Concrete	0.003	1.57	1000.3
PS03	FMH4018200	FMH4018197	3.54	3.48	20.4	450	0.45	0.159	0.1125	0.0029	0.00000114	Concrete	0.006	0.79	124.9
PS04	FMH4018202	FMH4018200	4.78	3.75	11.3	150	0.15	0.018	0.0375	0.0913	0.00000114	Concrete	0.003	2.35	41.5
PS05	FMH4017922	FMH4017923	3.15	3.1	22.8	900	0.9	0.636	0.225	0.0022	0.00000114	Concrete	0.006	1.08	686.3
PS06	FMH4017923	FMH4017924	3.1	3.06	4.1	900	0.9	0.636	0.225	0.0096	0.00000114	Concrete	0.003	2.51	1596.9
PS07	FMH4017924	FMH4018185	3.06	2.37	33.9	900	0.9	0.636	0.225	0.0203	0.00000114	Concrete	0.003	3.65	2320.4
PS08	FMH4018185	FMH4018251	2.37	2.3	3.8	BC 900x900		0.810	0.225	0.0185	0.00000114	Concrete	0.003	3.47	2814.3
PS09	FMH4018251	FMH4018252	2.3	2.28	7.5	900	0.9	0.636	0.225	0.0026	0.00000114	Concrete	0.003	1.31	836.2
PS10	FMH4018252	FMH4018253	2.27	2.2	18.9	900	0.9	0.636	0.225	0.0037	0.00000114	Concrete	0.003	1.56	989.3
PS11	FMH4018253	FMH4018254	1.19	1.12	7.0	900	0.9	0.636	0.225	0.0100	0.00000114	Concrete	0.003	2.56	1626.0
PS12	FMH4018254	FSH4000280	1.1	-0.4	39.5	900	0.9	0.636	0.225	0.0380	0.00000114	Concrete	0.003	4.99	3172.9
PS13	FMH4079142	FMH4079141	--	--	16.7	225	0.225	0.040	0.05625	N/A	0.00000114	Concrete	0.003	-	-
PS14	FMH4079141	FMH4079140	--	--	6.6	225	0.225	0.040	0.05625	N/A	0.00000114	Concrete	0.003	-	-
PS15	FMH4079140	FMH4018194	--	4.62	11.5	225	0.225	0.040	0.05625	N/A	0.00000114	Concrete	0.003	-	-
Existing Upstream Sewer															
US01	FMH4017912	FMH4017913	4.69	4.65	34.7	900	0.9	0.636	0.225	0.0012	0.00000114	Concrete	0.006	0.78	497.2

Note:

[1] The roughness coefficient for slimed concrete sewer under poor condition has been adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.

[2] The estimated inverted levels are highlighted.

[3] The invert levels of PS13 to PS15 are not available

[4] Sewage flow direction between PS13 to PS15 is reserved based on planned flow configuration.

Appendix III: Detailed Calculation of Existing Sewers

Table B: Calculation of Existing Sewers Utilization

Sewer	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge - ADWF (Exclude Upstream Sewers) (m^3/day)	Contributing Population[1]	Peaking Factor[2]	Catchment Inflow Factors, P_{CIF} [3]	Peak Flow (Exclude Upstream Sewers) [4] (L/s)	Total Peak Flow [5] (L/s)	% of full capacity
Existing Downstream Sewer											
PS01	FMH4017914	FMH4017915	1000.3	US01	0.0	0	8	1.3	0.0	497.2	50%
PS02	FMH4017915	FMH4017916	1000.3	S-B, US01	2337.3	8657	5	1.3	175.8	673.1	67%
PS03	FMH4018200	FMH4018197	124.9	S-B, B, US01	2402.2	8897	5	1.3	180.7	678.0	543%
PS04	FMH4018202	FMH4018200	41.5	B	64.9	240	8	1.3	7.8	7.8	19%
PS05	FMH4017922	FMH4017923	686.3	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	100%
PS06	FMH4017923	FMH4017924	1596.9	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	43%
PS07	FMH4017924	FMH4018185	2320.4	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	30%
PS08	FMH4018185	FMH4018251	2814.3	S-A1, S-B, A, B, C, D, E, US01	4680.9	17337	4	1.3	281.7	779.0	28%
PS09	FMH4018251	FMH4018252	836.2	S-A1, S-B, A, B, C, D, E, US01	4680.9	17337	4	1.3	281.7	779.0	93%
PS10	FMH4018252	FMH4018253	989.3	S-A1, S-B, A, B, C, D, E, US01	4680.9	17337	4	1.3	281.7	779.0	79%
PS11	FMH4018253	FMH4018254	1626.0	S-A1, S-B, A, B, C, D, E, F, US01	4680.9	17337	4	1.3	281.7	779.0	48%
PS12	FMH4018254	FSH4000280	3172.9	S-A1, S-B, A, B, C, D, E, F, US01	4680.9	17337	4	1.3	281.7	779.0	25%
PS13	FMH4079142	FMH4079141	-	A	122.2	453	8	1.3	14.7	14.7	-
PS14	FMH4079141	FMH4079140	-	A	122.2	453	8	1.3	14.7	14.7	-
PS15	FMH4079140	FMH4018194	-	A	122.2	453	8	1.3	14.7	14.7	-

Note:

[1] The contributing population = total catchment discharge (m^3/day) / 0.27(m^3/day/person)

[2] Peaking Factor of 8 for contribution population <1,000, 6 for contribution population of 1000 - 5000, 5 for contribution population of 5000 - 10000, 4 for contribution population of 10000 - 50000.

[3] For conservative Assessment, Catchment Inflow Factor for North-west Kowloon (1.3) has been adopted.

[4] 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.

[5] Total Peak Flow = Peak Flow (Exclude Upstream Sewers) + discharge of Upstream Sewers.

APPENDIX IV
DETAILED CALCULATION OF PROPOSED SEWERS

Appendix IV: Detailed Calculation of Proposed Sewers

Table A: Calculation of Existing Sewers Capacity

Sewer	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)	Pipe material	Hydraulic Pipeline Roughness (m) [1]	Velocity (m/s)	Full Capacity (l/s)
Proposed New Sewer															
PP-A01	FTMH-A01	FMH-01	--	--	--	300	0.3	0.071	0.075	0.0100	0.00000114	PE	0.0003	1.70	120.4
PP-A04	FTMH-A04	FMH4084221	--	--	--	225	0.225	0.040	0.05625	0.0100	0.00000114	PE	0.0015	1.15	45.6
PP-A05	FTMH-A05	FMH4018214	--	--	--	225	0.225	0.040	0.05625	0.0100	0.00000114	PE	0.0015	1.15	45.6
PP-B01	FTMH-B01	FMH4017915	--	--	--	400	0.4	0.126	0.1	0.0100	0.00000114	PE	0.0003	2.04	256.4
PP01	FMH4017916	FMH4018199	4.26	4.06	70.0	900	0.9	0.636	0.225	0.0029	0.00000114	Concrete	0.003	1.36	868.3
PP02	FMH4018199	FMH4018200	4.06	3.97	31.9	900	0.9	0.636	0.225	0.0028	0.00000114	Concrete	0.003	1.36	863.1
PP03	FMH4018197	FMH-01	3.91	3.79	41.4	900	0.9	0.636	0.225	0.0029	0.00000114	Concrete	0.003	1.37	874.7
PP04	FMH-01	FMH4017920	3.79	3.75	13.8	900	0.9	0.636	0.225	0.0029	0.00000114	Concrete	0.003	1.38	874.9
PP05	FMH4017920	FMH-02	3.75	3.65	34.2	900	0.9	0.636	0.225	0.0029	0.00000114	Concrete	0.003	1.38	878.4
PP06	FMH-02	FMH-03	3.65	3.60	11.3	900	0.9	0.636	0.225	0.0044	0.00000114	Concrete	0.003	1.70	1082.2
PP07	FMH-03	FMH4017922	3.60	3.55	10.7	900	0.9	0.636	0.225	0.0047	0.00000114	Concrete	0.003	1.75	1112.0
PP08	FMH4018194	FMH-04	3.97	3.96	5.3	300	0.3	0.071	0.075	0.0019	0.00000114	PE	0.0015	0.60	42.3
PP09	FMH-04	FMH-05	3.96	3.94	26.3	300	0.3	0.071	0.075	0.0008	0.00000114	PE	0.0015	0.38	26.7
PP10	FMH-05	FMH-06	3.94	3.91	50.3	300	0.3	0.071	0.075	0.0006	0.00000114	PE	0.0015	0.33	23.6
PP11	FMH-06	FMH-07	3.91	3.88	50.6	300	0.3	0.071	0.075	0.0006	0.00000114	PE	0.0015	0.33	23.6
PP12	FMH-07	FMH-01	3.88	3.79	15.2	300	0.3	0.071	0.075	0.0059	0.00000114	PE	0.0015	1.07	75.4

Appendix IV: Detailed Calculation of Proposed Sewers

Table A: Calculation of Existing Sewers Capacity

Sewer	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)	Pipe material	Hydraulic Pipeline Roughness (m) [1]	Velocity (m/s)	Full Capacity (l/s)
Proposed Upgrade Sewer															
PS01	FMH4017914	FMH4017915	4.46	**4.34**	70.0	900	0.9	0.636	0.225	0.0017	0.00000114	Concrete	0.006	0.95	606.5
PS02	FMH4017915	FMH4017916	**4.34**	**4.26**	31.9	900	0.9	0.636	0.225	0.0025	0.00000114	Concrete	0.003	1.28	813.6
PS03	FMH4018200	FMH4018197	**3.97**	**3.91**	20.4	**900**	0.9	0.636	0.225	0.0029	0.00000114	Concrete	0.003	1.38	880.2
PS04	FMH4018202	FMH4018200	4.78	**4.50**	11.3	**225**	0.225	0.040	0.05625	0.0248	0.00000114	Concrete	0.003	1.61	64.2
PS05	FMH4017922	FMH4017923	**3.55**	**3.45**	22.8	900	0.9	0.636	0.225	0.0044	0.00000114	Concrete	0.003	1.69	1076.7
PS13	FMH4079142	FMH4079141	**4.03**	**4.00**	16.7	225	0.225	0.040	0.05625	0.0018	0.00000114	PE	0.002	0.48	19.2
PS14	FMH4079141	FMH4079140	**4.00**	**3.99**	6.6	225	0.225	0.040	0.05625	0.0015	0.00000114	PE	0.002	0.44	17.6
PS15	FMH4079140	FMH4018194	**3.99**	**3.97**	11.5	225	0.225	0.040	0.05625	0.0017	0.00000114	PE	0.002	0.48	18.9

Note:

[1] The roughness coefficient for Slimed uPVC sewer under poor condition has been adopted for PE sewer; the ks values are 0.3mm for velocities greater than 1.2m/s, otherwise 1.5mm.
The roughness coefficient for slimed concrete sewer under poor condition has been adopted for concrete sewer; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.

[2] The proposed modifications to existing sewers are **bolded & underlined**.

[3] All proposed new/upgrade sewer manhole and pipes are subject to change during detail design stage.

Appendix IV: Detailed Calculation of Proposed Sewers

Table B: Calculation of Propsoed Sewers Utilization

Sewer	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge - ADWF (Exclude Upstream Sewers) (m^3/day)	Contributing Population[1]	Peaking Factor[2]	Catchment Inflow Factors, P_{CIF} [3]	Peak Flow (Exclude Upstream Sewers) [4] (L/s)	Total Peak Flow [5] (L/s)	% of full capacity
Proposed New Sewer											
PP-A01	FTMH-A01	FMH-01	120.4	S-A1	603.7	2236	6	1.3	54.5	54.5	45%
PP-A04	FTMH-A04	FMH4084221	45.6	S-A4	5.9	22	8	1.3	0.7	0.7	2%
PP-A05	FTMH-A05	FMH4018214	45.6	S-A5	5.9	22	8	1.3	0.7	0.7	2%
PP-B01	FTMH-B01	FMH4017915	256.4	S-B	2337.3	8657	5	1.3	175.8	175.8	69%
PP01	FMH4017916	FMH4018199	868.3	S-B, US01	2337.3	8657	5	1.3	175.8	673.1	78%
PP02	FMH4018199	FMH4018200	863.1	S-B, US01	2337.3	8657	5	1.3	175.8	673.1	78%
PP03	FMH4018197	FMH-01	874.7	S-B, B, US01	2402.2	8897	5	1.3	180.7	678.0	78%
PP04	FMH-01	FMH4017920	874.9	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	79%
PP05	FMH4017920	FMH-02	878.4	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	78%
PP06	FMH-02	FMH-03	1082.2	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	64%
PP07	FMH-03	FMH4017922	1112.0	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	62%
PP08	FMH4018194	FMH-04	42.3	A	122.2	453	8	1.3	14.7	14.7	35%
PP09	FMH-04	FMH-05	26.7	A	122.2	453	8	1.3	14.7	14.7	55%
PP10	FMH-05	FMH-06	23.6	A	122.2	453	8	1.3	14.7	14.7	62%
PP11	FMH-06	FMH-07	23.6	A	122.2	453	8	1.3	14.7	14.7	62%
PP12	FMH-07	FMH-01	75.4	A	122.2	453	8	1.3	14.7	14.7	20%

Appendix IV: Detailed Calculation of Proposed Sewers

Table B: Calculation of Propsoed Sewers Utilization

Sewer	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge - ADWF (Exclude Upstream Sewers) (m^3/day)	Contributing Population[1]	Peaking Factor[2]	Catchment Inflow Factors, P_{CIF} [3]	Peak Flow (Exclude Upstream Sewers) [4] (L/s)	Total Peak Flow [5] (L/s)	% of full capacity
Proposed Upgrade/Modify											
PS01	FMH4017914	FMH4017915	606.5	US01	0.0	0	8	1.3	0.0	497.2	82%
PS02	FMH4017915	FMH4017916	813.6	S-B, US01	2337.3	8657	5	1.3	175.8	673.1	83%
PS03	FMH4018200	FMH4018197	880.2	S-B, B, US01	2402.2	8897	5	1.3	180.7	678.0	77%
PS04	FMH4018202	FMH4018200	64.2	B	64.9	240	8	1.3	7.8	7.8	12%
PS05	FMH4017922	FMH4017923	1076.7	S-A1, S-B, A, B, US01	3193.0	11826	4	1.3	192.2	689.4	64%
PS13	FMH4079142	FMH4079141	19.2	A	122.2	453	8	1.3	14.7	14.7	77%
PS14	FMH4079141	FMH4079140	17.6	A	122.2	453	8	1.3	14.7	14.7	83%
PS15	FMH4079140	FMH4018194	18.9	A	122.2	453	8	1.3	14.7	14.7	78%

Note:

[1] The contributing population = total catchment discharge (m^3/day) / 0.27(m^3/day/person)

[2] Peaking Factor of 8 for contribution population <1,000, 6 for contribution population of 1000 - 5000, 5 for contribution population of 5000 - 10000, 4 for contribution population of 10000 - 50000.

[3] For conservative Assessment, Catchment Inflow Factor for North-west Kowloon (1.3) has been adopted.

[4] 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.

[5] Total Peak Flow = Peak Flow (Exclude Upstream Sewers) + discharge of Upstream Sewers.

APPENDIX V
EXTRACTED PAGES FROM SEWERAGE IMPACT ASSESSMENT OF OZP AMENDMENTS IN YAU MA TEI AND MONG KOK DISTRICTS

Prepared for

Urban Renewal Authority

Prepared by

Ramboll Hong Kong Limited

OUTLINE ZONING PLAN AMENDMENTS IN YAU MA TEI AND MONG KOK DISTRICTS

SEWERAGE IMPACT ASSESSMENT

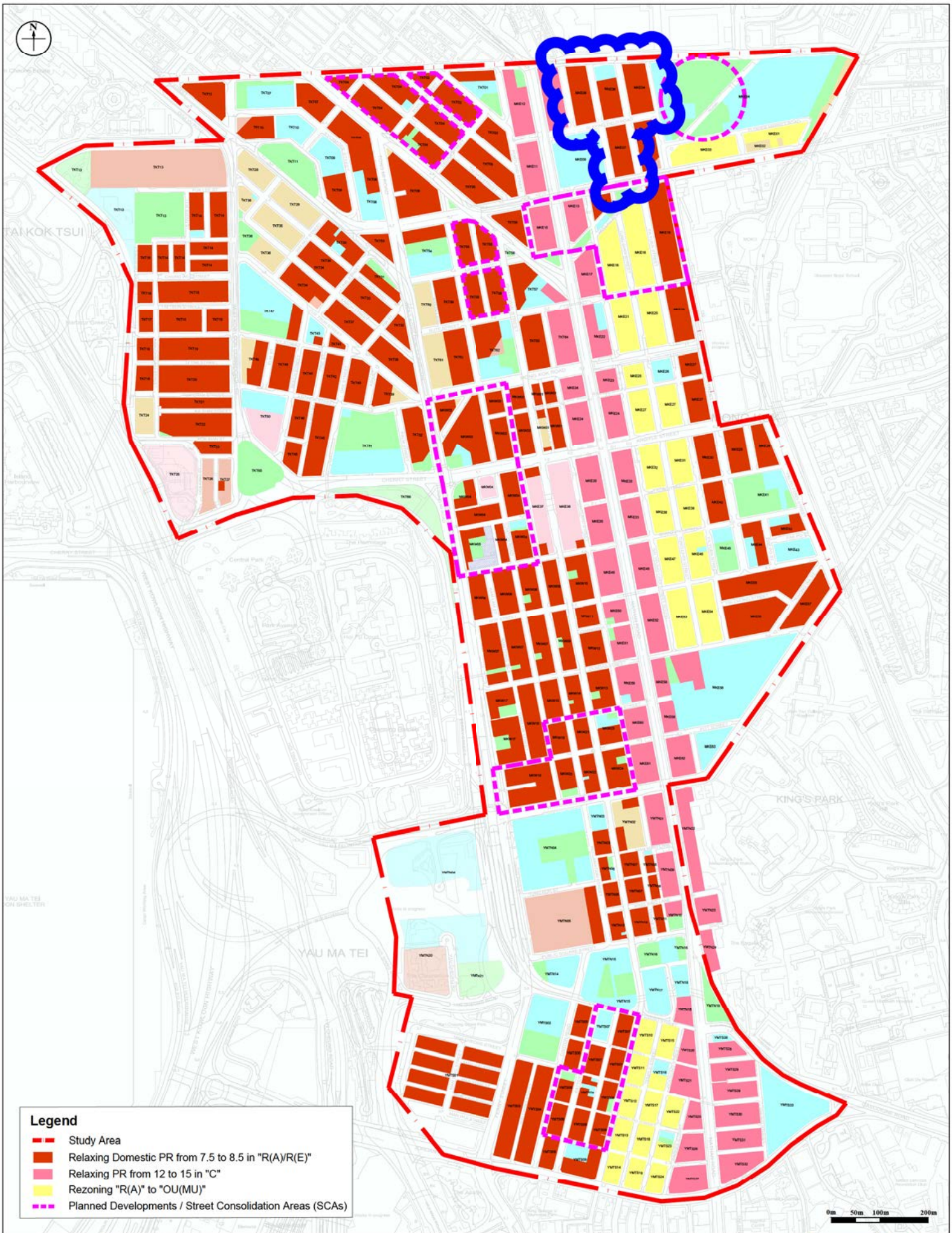

Figure: 1.2

Title: Location of Street Blocks

Project: Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts

RAMBOLL

Drawn by:	KL
Checked by:	KY
Rev.:	2.0
Date:	May 2022

		Private			School		Employment	
		0.27			0.04		0.28	
Street Block	Population[1]	ADWF	Total Residential ADWF	Number of Students	Total ADWF of Student	Employment Population[2]	ADWF for Employment	Total ADWF m^3/day
MKE01	329	88.8	88.8		0.0	49	13.7	102.5
MKE02	366	98.8	98.8		0.0	314	87.9	186.7
MKE03	1,164	314.2	314.2		0.0	701	196.3	510.5
MKE04	848	228.9	228.9		0.0	467	130.8	359.6
MKE05	673	181.8	181.8		0.0	123	34.4	216.2
MKE06	736	198.8	198.8	720	28.8	196	54.9	282.5
MKE07	955	257.8	257.8		0.0	424	118.7	376.6
MKE08	912	246.3	246.3		0.0	370	103.6	349.9
MKE09	0	0.0	0.0		0.0	0	0.0	0.0
MKE10	935	252.4	252.4		0.0	1,280	358.4	610.8
MKE11	761	205.3	205.3		0.0	868	243.0	448.4
MKE12	729	196.8	196.8		0.0	974	272.7	469.6
MKE13	252	67.9	67.9		0.0	59	16.5	84.5
MKE14	217	58.7	58.7		0.0	53	14.8	73.5
MKE15	665	179.5	179.5		0.0	974	272.7	452.2
MKE16	3,620	977.3	977.3		0.0	1,460	408.8	1386.1
MKE17	0	0.0	0.0		0.0	2,275	637.0	637.0
MKE18	1,577	425.7	425.7		0.0	575	161.0	586.7
MKE19	1,800	485.9	485.9		0.0	392	109.8	595.7
MKE20	1,630	440.0	440.0		0.0	343	96.0	536.1
MKE21	1,308	353.2	353.2		0.0	394	110.3	463.5
MKE22	981	264.8	264.8		0.0	1,048	293.4	558.2
MKE23	0	0.0	0.0		0.0	1,689	472.9	472.9
MKE24	0	0.0	0.0		0.0	3,038	850.6	850.6
MKE25	226	61.0	61.0		0.0	842	235.8	296.7
MKE26	0	0.0	0.0		0.0	0	0.0	0.0
MKE27	4,906	1324.7	1324.7		0.0	1,668	467.0	1791.7
MKE28	995	268.6	268.6		0.0	269	75.3	344.0
MKE29	871	235.1	235.1		0.0	576	161.3	396.3
MKE30	1,187	320.4	320.4		0.0	388	108.6	429.0
MKE31	996	269.0	269.0		0.0	345	96.6	365.6
MKE32	748	201.9	201.9		0.0	579	162.1	364.0
MKE33	553	149.4	149.4		0.0	4,239	1186.9	1336.3
MKE34	1,167	315.0	315.0		0.0	2,440	683.2	998.2
MKE35	317	85.7	85.7		0.0	5,295	1482.6	1568.3
MKE36	0	0.0	0.0		0.0	7,010	1962.8	1962.8
MKE37	339	91.5	91.5		0.0	2,882	807.0	898.4
MKE38	655	176.8	176.8		0.0	443	124.0	300.8
MKE39	889	240.1	240.1		0.0	262	73.4	313.4
MKE40	586	158.3	158.3		0.0	1,011	283.1	441.3
MKE41	722	194.9	194.9		0.0	467	130.8	325.7
MKE42	932	251.7	251.7	950	38.0	147	41.2	330.8
MKE43	0	0.0	0.0	1480	59.2	0	0.0	59.2
MKE44	522	140.9	140.9		0.0	120	33.6	174.5
MKE45	0	0.0	0.0	332	13.3	0	0.0	13.3

Appendix 10

Water Supply Impact Assessment

Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Water Supply Impact Assessment Report

(V2.0)

Mar 2024

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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1 INTRODUCTION

1.1 Background

1.1.1 The Urban Renewal Authority ("URA") has proposed Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under section 25 of the Urban Renewal Authority Ordinance ("URAO"). The Scheme is the first implementation of a project proposed under the Master Urban Renewal Concept Plan ("MRCP") as devised from the URA's District Study for Yau Ma Tei and Mong Kok ("YMDS"), and is part of the proposed "Mong Kok East – Nullah Road Urban Waterway Development Node" ("Nullah Road DN").

1.1.2 Cinotech Consultants Limited is commissioned by the URA to conduct a Water Supply Impact Assessment (WSIA) to support the submission of a draft Development Scheme Plan ("DSP") of the Scheme with its planning proposal to the Town Planning Board ("TPB") for consideration.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

2.1.1 The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m^2, the Scheme is divided into Site A (about 4,445m^2) and Site B (about 24,870m^2). The location of the Scheme is shown on **Figure 2-1**.

2.1.2 Site A of the Scheme comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

2.1.3 Site B of the Scheme is currently occupied by various leisure, recreation and GIC facilities, including Boundary Street Recreation Ground, Sai Yee Street Children's Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department ("LCSD") Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath.

2.1.4 On the approved Mong Kok Outline Zoning Plan ("OZP") no. S/K3/36, Site A1 of the Scheme area is zoned "Residential (Group A)" ("R(A)"). Sites A2 to A5 are zoned "Other Specified Uses" annotated "Mixed Use" ("OU(MU)"). Sites A1 to A5 also covers pavement area shown as "Road". Site B covers area zoned "Government, Institution or Community" ("G/IC") and "Open Space" ("O"), and the Flower Market Path which is shown as "Road".

2.2 The Proposed Development

Draft DSP

2.2.1 Under the draft DSP, the Scheme is proposed to be rezoned to "OU(MU)" and areas shown as "Road" for the surrounding pavement. The planning intention of the "OU(MU)" zone is primarily for comprehensive residential/ mixed-use developments with the provision of public vehicle park, at-grade open space and GIC facilities.

2.2.2 Site A ("OU(MU)1") consists of Sub-areas Sites A1 to A5. Site A1 will be developed for residential development cum commercial podium, with a building height restriction ("BHR") of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5. Site B ("OU(MU)2") is divided into Sub-areas (1) and (2). Sub-area 1 of "OU(MU)2" zone will be for high-rise development with a BHR of 150mPD adopting a stepped height profile. Sub-area (2) of "OU(MU)2" zone comprises the Waterway Park and ancillary retail/commercial uses and LCSD's sports/ GIC facilities with a BHR of 30mPD.

Notional Design

2.2.3 A notional design, which is illustrated in **Appendix I**, is prepared based on the development parameters allowed in the draft DSP to demonstrate the proposed planning intention and development concepts of the Scheme. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2 to A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.

2.2.4 Under the current notional design, at Sub-area (2) of Site B (i.e. north-east corner of Site B), a comprehensive mixed-use development with high-rise residential and hotel/office towers with recreation and GIC facilities at the podia is proposed. Ancillary parking and public vehicle park are proposed at the basement levels at Site B. An at-grade open space, named as "Waterway Park", is proposed within Site B. Ancillary retail facilities are proposed at ground level, basement and the Waterway Park to bring retail activities and vibrancy.

2.2.5 To enhance walkability and connectivity, four pedestrian connections are proposed:

- Footbridge to connect between Site B and Tai Hang Tung Recreation Ground;
- Subway to connect between Site A1 and Site B;
- Potential subway connection from Site A1 across Prince Edward Road West towards the Prince Edward MTR Station and/or the commercial spine along Nathan Road; and
- Subway to connect between proposed underground PVP at Site B and southern part of proposed Waterway Park.

2.2.6 All these pedestrian footbridges/ subways shall be subject to technical feasibility, detailed design and agreement with relevant Government departments. For footbridge/ subways outside DSP boundaries shall be under separate public works/ revitalization initiatives not forming part of the Scheme.

2.2.7 The proposed development of the Scheme will be redeveloped in phases and the tentative completion year of the whole project is in 2035.

Development Parameters

2.2.8 This assessment is prepared based on the following development parameters in **Table 2-1, Table 2-2** and notional design, which are subject to DSP approval and changes at detailed design stage:

Table 2-1 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m^2	About 268m^2	About 123m^2	About 233m^2	About 251m^2
	About 4,445m^2				
Net Site Area (subject to survey)	About 2,640m^2	About 239m^2	About 109m^2	About 202m^2	About 198m^2
	About 3,388m^2				
Zoning	OU(MU)1				
At-grade Open Space	About 800m^2				
Notional Design					
Domestic GFA [1]	23,716m^2	-	-	-	-
Non-Domestic GFA [1]	6,576m^2	-	-	100m^2	100m^2
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m^2	-	-	-	-
At-grade Open Space	About 800m^2				

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-2 Development Parameters of the Notion Design (Site B)

Site B			
Gross Site Area	About 24,870m^2		
Zoning	OU(MU)2		
	Sub-area (1)	**Sub-area (2)**	**Total**
Net Site Area (subject to survey)	7,170m^2	17,700m^2	24,870m^2
Notional Design			
Domestic GFA [1]	44,030m^2	-	44,030m^2
Non-Domestic GFA [1] - Retail - Hotel/Office	20,500m^2 (2,150m^2) (18,350m^2)	8,850m^2 (8,850m^2) -	29,350m^2 (11,000m^2) (18,350m^2)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m^2		
No. of Building Blocks [2]	2 residential towers and 1 hotel/office tower on top of a GIC/recreation podium + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (hotel/office tower) 1 storey (retail block)		
No. of Flats [2]	880	-	880
Average Flat Size [2]	50m^2	-	50m^2
At-grade Open Space	About 8,800m^2		
Public Vehicle Park [4]	About 235		

Note
[1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
[3] The actual GIC GFA is not yet confirmed and subject to liaison with Government departments. As a conservative approach, 30,000m2 GIC GFA is assumed in this assessment.
[4] Subject to liaison with Transport Department.

2.2.9 Some existing fresh/salt water mains will be removed to accommodate the development requirements. The existing fresh/salt water mains within the back alleys of the Site A1 will be removed. Therefore, diversion will be required for the existing development in the north of Site A1.

2.2.10 Within Site B, there are existing salt water mains. While these salt water mains currently serve only Site B, it is important to note that the 250mm main serves as a network extension for the nearby area and should be preserved.

2.2.11 On the other hand, due to the small scale of the development, no adverse water supply impact is anticipated from Sites A2, A3, A4, and A5.

2.2.12 It is important to noted that the removal of existing fresh/salt water mains can result in the suspension of nearby water mains. Therefore, during the detailed design stage, the necessity and procedure of removing or shutting down existing water mains will be carefully reviewed.

3 WATER SUPPLY IMPACT ASSESSMENT – FRESHWATER

3.1 Existing Freshwater Supply

3.1.1 The Scheme Area is currently served by Ho Man Tin East FWSR (Capacity: 152,411 m^3) & Ho Man Tin West FWSR (Capacity: 67,434 m^3).

3.1.2 Site A1 is currently served by a few 100 mm mains connected to the 150mm mains at Fa Yuen Street to the west, 150mm mains at Sai Yee Street to the east, and 300mm mains at Playing Field Road to the north.

3.1.3 Site B is currently served by a 100mm main at Flower Market Road in the south, a few 50/80mm branches connected to a 150mm main at Sai Yee Street to the west, some 80/150mm branches from a 750mm main at Boundary Street in the north-west, and a 40mm main connected to a 100mm branch Boundary Street in the north-east.

3.1.4 Site A2 to A5 are currently served by a 100m mains along the back alley, which further connected to 150mm mains at Yuen Po Street, Yuen Ngai Street, and Sai Yee Street.

3.1.5 The simplified fresh water main records are illustrated in **Figure 3-1a to Figure 3-1d.** The WSD Fresh Water Mains Record Plan is provided in **Appendix II**.

3.2 Freshwater Demand

3.2.1 The calculations for the water demand for the existing and proposed scenarios detailed in **Appendix IV** and summarized in **Table 3-1**. For a conservative assessment, 5% of additional water demand has been accounted for on top of the conservative unit demand factors to estimate the water demand for a reasonable worst scenario.

3.2.2 The fresh water demand for the Scheme is expected to increase from 843.0 m^3/day to 3190.7 m^3/d (an increase of 2,347.7 m^3/day, or 2.348 MLD).

3.2.3 The fresh water demands of Site A1 & B are expected to be greatly increased from 178.5 m^3/day and 633.0 m^3/day to 453.9 m^3/day and 2086.6 m^3/day, respectively. For the Sites A2 to A5, reduction of fresh water demand is anticipated.

Table 3-1 Summary of Fresh Water Demand

	Daily Demand - Fresh Water (m^3/day)		
	Existing	**Proposed [1]**	**Net Increase**
Site A1	178.5	453.9	275.4
Site A2	8.8	7.4	-1.4
Site A3	5.3	3.7	-1.6
Site A4	8.8	3.2	-5.6
Site A5	8.8	3.2	-5.6
Site B	633.0	2719.5	2086.6
Total	**843.0**	**3190.7**	**2347.7**

Note:
[1] 5% additional demand have been included for conservative assessment.

3.3 Freshwater Supply Impact - Ho Man Tin East FWSR & Ho Man Tin West FWSR

3.3.1 As shown in **Table D of Appendix IV**, there is substantially greater spare capacity (133.7 MLD) in Ho Man Tin East FWSR & Ho Man Tin West FWSR. The expected increase in demand (2.348 MLD) can therefore be accommodated by the existing Fresh Water Service Reservoirs. No adverse impact to the fresh water service reservoirs is anticipated.

3.4 Freshwater Supply Impact - Fresh Water Mains (Site A1)

3.4.1 Site A1 is currently served by a few 100 mm mains connected to the 150mm mains at Fa Yuen Street to the west, 150mm mains at Sai Yee Street to the east, and 300mm mains at Playing Field Road to the north as shown in **Figure 3-1b**.

3.4.2 With the implementation of the Scheme, the existing fresh water mains within the back alleys of the Site A1 will be removed. In order to provide a both-end feed fresh water supply to the existing development to the north of Site A1, a new 100mm fresh water main is proposed within the northern part of Site A1 to connect the existing 100mm fresh water main along the back alley to the 150mm fresh water main along Sai Yee Street. To ensure proper maintenance and access to the proposed new water mains, subject to detailed design, a reserve area may be required along its alignment.

3.4.3 Similarly, the both-end feed fresh water supply to the existing development to the west of Site A1 will be affected. Therefore, a new 200mm fresh water main along Fa Yuen Street has been proposed.

3.4.4 Three time the estimated mean daily fresh water demand of the proposed development at Site A1 is ~1,362m^3/day. With adopting a maximum sustained flow velocity as suggested in Departmental Instruction (DI) No. 1309 "Design Criteria" (**Table A2 of Appendix III**), the capacity of 150mm & 200mmfresh water mains are 2,290 m^3/day and 4,072 m^3/day respectively. Therefore, two new 150mm fresh water main connecting to the new 200mm main along Fa Yuen Street have been proposed for catering the fresh water demand of Site A1 as shown in **Figure 3-1b**. The alignment and connection points of the proposed new water pipes are subject to detailed design.

3.5 Freshwater Supply Impact - Fresh Water Mains (Sites A2 to A5)

3.5.1 Sites A2 to A5 are served by the 50mm branches from the 100mm fresh water mains along the back alley as shown in **Figure 3-1c**. As the fresh water consumption is expected to be reduced, no fresh water impact is anticipated.

3.6 Freshwater Supply Impact - Fresh Water Mains (Site B)

3.6.1 Site B is currently served by a 100mm main at Flower Market Road in the south, a few 50/80mm branches connected to a 150mm main at Sai Yee Street to the west, some 80/150mm branches from a 750mm main at Boundary Street in the north-west, and a 40mm main connected to a 100mm branch Boundary Street in the north-east as shown in **Figures 3-1a to 3-1d**.

3.6.2 With the implementation of the Scheme, some of the existing branches of fresh water mains that only serving the Site B will be removed.

3.6.3 Three time the estimated mean daily fresh water demand of the proposed development at Site B is ~8,158.2 m^3/day. With adopting a maximum sustained flow velocity as suggested in Departmental Instruction (DI) No. 1309 "Design Criteria" (**Table A2 of Appendix III**), the capacity of 300mm fresh water main is 9,161 m^3/day. Therefore, two new 300mm fresh water main connecting to the existing 300mm main along Boundary Street have been proposed for catering the fresh water demand of Site B as shown in **Figure 3-1d**. The alignment and connection points of the proposed new water pipes are subject to detailed design.

3.7 Freshwater Supply Impact - Proposed Pedestrian Subways

3.7.1 As separate revitalisation initiatives not forming part of the Scheme, there is a proposed pedestrian subway at Sai Yee Street connecting Site A1 & Site B (**Figure 3-1b**).

3.7.2 It should be noted that the proposed tunnel is still in very early stage thus only indicative alignment is available, while the detailed alignment, elevation and dimension are subject to detailed design and agreement with relevant Government departments.

3.7.3 There are multiple freshwater mains crossing the indicative alignment of the proposed tunnel, including freshwater mains of 150mm, 750mm, 900mm, and some 100mm or smaller freshwater mains to be removed (**Figure 3-1b**).

3.7.4 As freshwater mains are pressure driven, potential affected freshwater mains could be diverted vertically when necessary, subject to detailed design and technical feasibility. However, considered that the existing 750mm and 900mm freshwater mains along Sai Yee Street may be classified as trunk mains, during the detailed design stage, the proposed pedestrian subways will be thoroughly reviewed to minimize any potential adverse impact on these possible freshwater trunk mains. Therefore, no adverse freshwater supply impact arising from the proposed tunnel is anticipated at this stage.

4 WATER SUPPLY IMPACT ASSESSMENT – SALTWATER

4.1 Existing Saltwater Supply

4.1.1 The Scheme Area is currently served by Cheung Sha Wan SWPS (Design Pumping Capacity: 87 MLD).

4.1.2 Site A1 is currently served by a few 80mm mains connected to the 100mm mains at Fa Yuen Street to the west, 250mm mains at Sai Yee Street to the east, and 400mm mains at Playing Field Road to the north.

4.1.3 Site B is currently served by a 250mm main and a 40mm branch at Flower Market Road in the south.

4.1.4 There is an 80mm mains along the back alley of Site A2 to A5, which is further connected to a 250mm mains at Sai Yee Street and a 100mm mains at Yuen Po Street. Currently, only Site A5 is connected to the 80mm mains by two 40mm pipes, while Sites A2 to A4 are not connected to the 80mm mains.

4.1.5 The simplified salt water main records are illustrated in **Figure 3-2a to Figure 3-2d.** The WSD Salt Water Mains Record Plan is provided in **Appendix III**.

4.2 Saltwater Supply Impact

4.2.1 The calculations for the water demand for the existing and proposed scenarios detailed in **Appendix IV** and summarized in **Table 4-1.** For a conservative assessment, the plot ratio of the proposed development has been fully utilized. In addition, 5% of additional water demand has been accounted for on top of the conservative unit demand factors to estimate the water demand for a reasonable worst scenario.

4.2.2 The salt water demand for the Scheme is expected to increase from 121.0 m^3/day to 939.4 m^3/d (an increase of 818.4 m^3/day, or 0.818 MLD).

4.2.3 The salt water demands of Site A1 & Site B are expected to be greatly increased from 56.1 m^3/day and 55.0 m^3/day to 136.9 m^3/day and 800.4 m^3/day, respectively. For the Sites A2 to A5, reduction of salt water demand is anticipated.

Table 4-1 Summary of Salt Water Demand

	Daily Demand - Salt Water (m^3/day)		
	Existing	**Proposed**	**Net Increase**
Site A1	56.1	136.9	80.8
Site A2	2.8	0.0	-2.8
Site A3	1.7	0.0	-1.7
Site A4	2.8	1.1	-1.7
Site A5	2.8	1.1	-1.7
Site B	55.0	800.4	745.4
Total	**121.0**	**939.4**	**818.4**

4.3 Saltwater Supply Impact - Cheung Sha Wan SWPS

4.3.1 As shown in **Appendix IV**, there is substantially greater spare capacity (17.7 MDL) in Cheung Sha Wan SWPS. The expected increase in demand (0.818 MLD) can therefore be accommodated by the existing SWPS. No adverse impact to the salt water pumping stations is anticipated.

4.4 Saltwater Supply Impact - Saltwater Mains (Site A1)

4.4.1 Site A1 is currently served by a few 80mm mains connected to the 100mm mains at Fa Yuen Street to the west, 250mm mains at Sai Yee Street to the east, and 400mm mains at Playing Field Road to the north as shown in **Figure 3-2b**.

4.4.2 With the implementation of the Scheme, the existing salt water mains within the back alleys of Site A1 will be removed. In order to provide a both-end feed salt water supply to the existing development in the north of Site A1, a new 80mm salt water main is proposed within the northern part of Site A1 to connect the existing 80mm salt water main along the back alley to the 250mm salt water main along Sai Yee Street. To ensure proper maintenance and access to the proposed new water mains, subject to detailed design, a reserve area may be required along its alignment.

4.4.3 Two time the estimated mean daily salt water demand of the proposed development at Site A1 is ~274m^3/day. With adopting a maximum sustained flow velocity as suggested in Departmental Instruction (DI) No. 1309 "Design Criteria" (**Table A2 of Appendix IV**), the capacity of 80mm & 250mm salt water mains are 651 m^3/day and 6,362 m^3/day respectively. Therefore, a new 80mm salt water main connecting to the existing 250mm main along Sai Yee Street has been proposed for catering the salt water demand of Site A1. The alignment and connection points of the proposed new water pipes are subject to detail design. The suggested new salt water mains are illustrated in as shown in **Figure 3-2b**.

4.5 Saltwater Supply Impact - Saltwater Mains (Sites A2 to A5)

4.5.1 Site A5 is currently served by two 40mm pipes connected to the 80mm mains along the back alley. Whereas, Sites A2 to A4 are not connected to the 80mm mains.

4.5.2 The existing two 40mm pipes shall be sufficient to cater the saltwater consumption of Site A5. For Site A4, it is recommended to provide a 40mm pipe to cater to the expected saltwater consumption, as shown in **Figure 3-2c**. Sites A2 and A3 are not expected to use saltwater at all, therefore, no new pipe is proposed.

4.5.3 As there is no saltwater demand for Site A2 & Site A3, and the salt water consumption for Site A4 & Site A5 is expected to be reduced, no salt water impact is anticipated.

4.6 Saltwater Supply Impact - Saltwater Mains (Site B)

4.6.1 Site B is currently served by a 250mm main and a 40mm branch at Flower Market Road in the south as shown in **Figure 3-2d**.

4.6.2 With the implementation of the Scheme, the existing 80mm & 100mm branches from the 250mm salt water main within Site B will be removed.

4.6.3 Two time the estimated mean daily salt water demand of the proposed development at Site B is ~1,601 m^3/day. With adopting a maximum sustained flow velocity as suggested in

Departmental Instruction (DI) No. 1309 "Design Criteria" (**Table A2 of Appendix IV**), the capacity of 250mm salt water mains is 6,362 m^3/day. Therefore, the existing 250mm salt water main at Flower Market Road is sufficient for catering the salt water demand of Site B. The connection point will be subject to detailed design.

4.7 Saltwater Supply Impact - Proposed Pedestrian Subways

4.7.1 As separate revitalisation initiatives not forming part of the Scheme, there is a proposed pedestrian subway at Sai Yee Street connecting Site A1 & Site B (**Figure 3-2b**).

4.7.2 It should be noted that the proposed tunnel is still in very early stage thus only indicative alignment is available, while the detailed alignment, elevation and dimension are subject to detailed design and agreement with relevant Government departments.

4.7.3 There is a 250mm saltwater mains crossing the site of the proposed tunnel (**Figure 3-2b**).

4.7.4 The depths of the existing saltwater mains crossing the proposed tunnels are subject to further studies. Nevertheless, the saltwater mains are pressure driven, it is expected that the potential affected saltwater mains could be diverted vertically when necessary, subject to detailed design and technical feasibility. Therefore, no adverse saltwater supply impact arising from the proposed tunnels is anticipated at this stage.

5 SUMMARY AND THE FUTURE WORKS

5.1.1 The fresh and salt water mains to be demolished are summarised in **Table 5-1**. The proposed new fresh and salt water mains are summarised in **Table 5-2**.

Table 5-1 Summary of Freshwater/Saltwater Mains to be Demolished

Site	Freshwater Mains	Saltwater Mains
Site A1	All existing freshwater main within Site A1	All existing saltwater main within Site A1, except the 250mm saltwater main
Site A2	N/A	N/A
Site A3	N/A	N/A
Site A4	N/A	N/A
Site A5	N/A	N/A
Site B	All existing freshwater main within Site B	The existing 80mm & 100mm branches from the 250mm salt water main within Site B
Others	The existing 100mm (and its 50-80mm branches) freshwater mains between Site A1 and Site B A short section of the 100mm freshwater mains along the back alley in the north of Site A1	A short section of the 80mm saltwater mains along the back alley in the north of Site A1

Table 5-2 Summary of Proposed New Freshwater/Saltwater Mains

Site	Freshwater Mains	Saltwater Mains
Site A1	2 x new 150mm freshwater mains from the new 200mm freshwater mains along Fa Yuen Street	A new 80mm saltwater mains from the existing 250mm saltwater mains along Sai Yee Street
Site A2	N/A	N/A
Site A3	N/A	N/A
Site A4	N/A	A 40mm saltwater mains from the existing 80mm saltwater mains along the back alley
Site A5	N/A	N/A
Site B	2 x new 300mm freshwater mains from the existing 300mm freshwater mains along Boundary Street.	N/A
Others	A new 100mm freshwater mains from back alley in the north of Site A1 to the existing 150mm freshwater mains along Sai Yee Street A new 200mm freshwater mains along Fa Yuen Street	A new 80mm saltwater mains from back alley in the north of Site A1 to the existing 250mm saltwater mains along Sai Yee Street

5.2 Construction and Maintenance

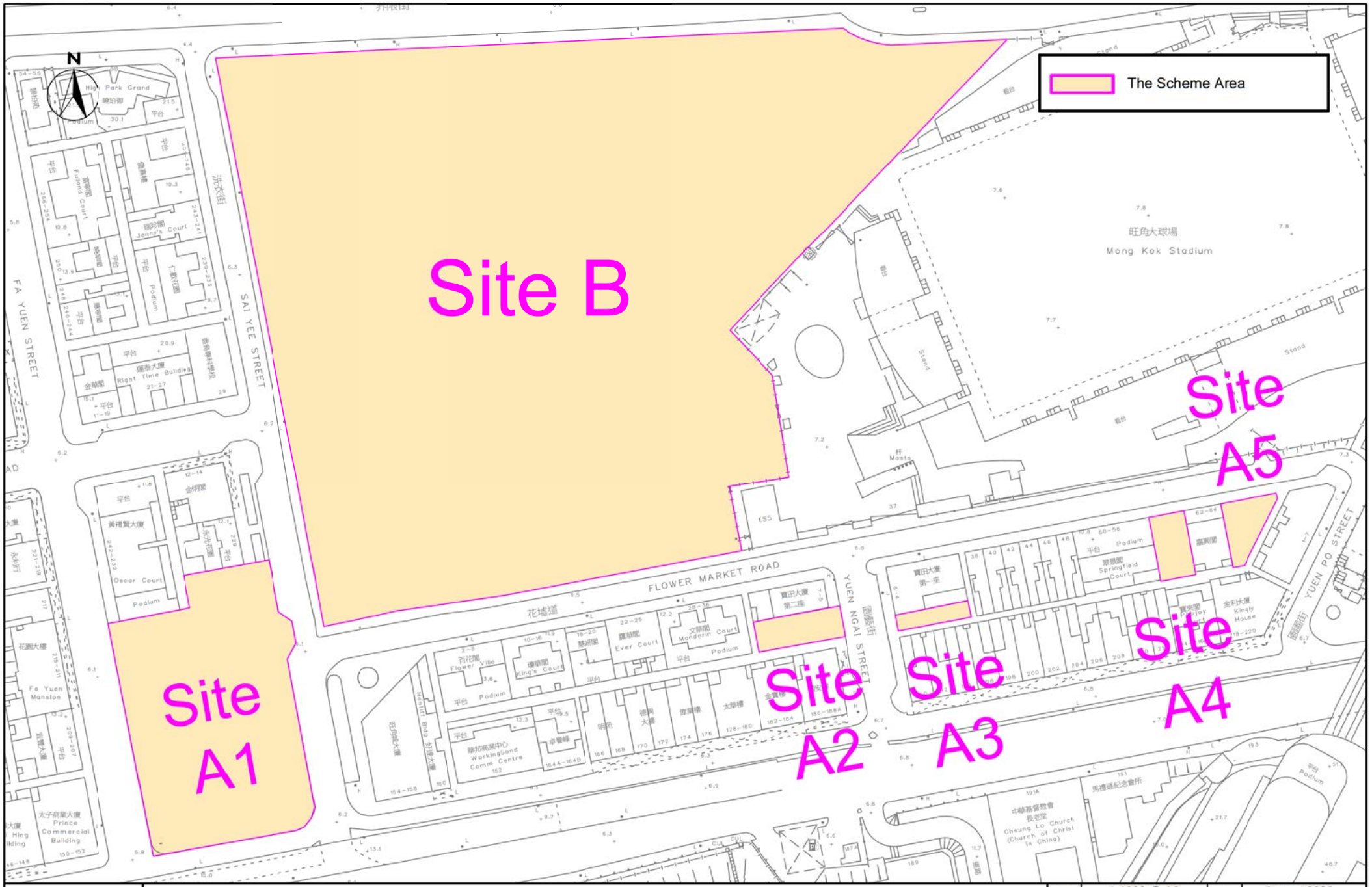
5.2.1 Responsibilities for the investigation, design, construction, repair and maintenance of the internal water supply facilities and connection to the main water system(s) will be discussed among URA/its joint venture partners/its assignees and relevant Government departments in detailed design stage.

5.2.2 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.

6 CONCLUSION

6.1.1 The potential water supply impact under the worst-case scenario of the proposed development of the Scheme has been reviewed. The assessment conducted concludes that no upgrading works on the water supply infrastructure will be required. For the local water supply network, 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 pipes. The indicative alignment of the proposed pedestrian subway outside the Scheme area is expected to cross a number of existing freshwater & saltwater mains. As the freshwater/saltwater mains are pressure driven, it is expected that the potential affected freshwater/saltwater mains could be diverted vertically when necessary. Therefore, no adverse water supply impact is anticipated from the proposed development.

FIGURES



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Location Plan

SCALE	1:1000 @ A3	DATE	August 2023
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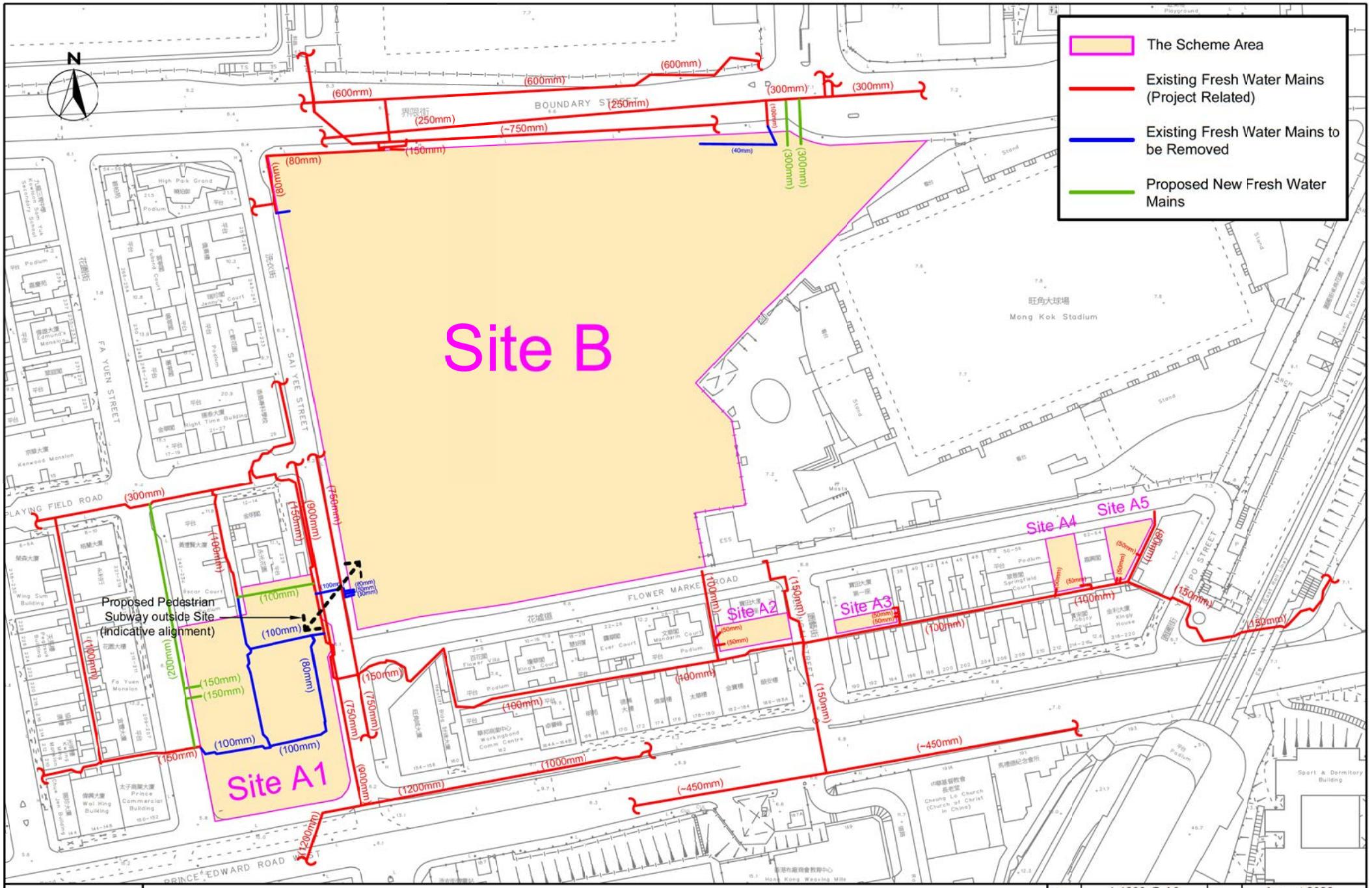
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 2-1
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Fresh Water Mains in the Vicinity (Overview)

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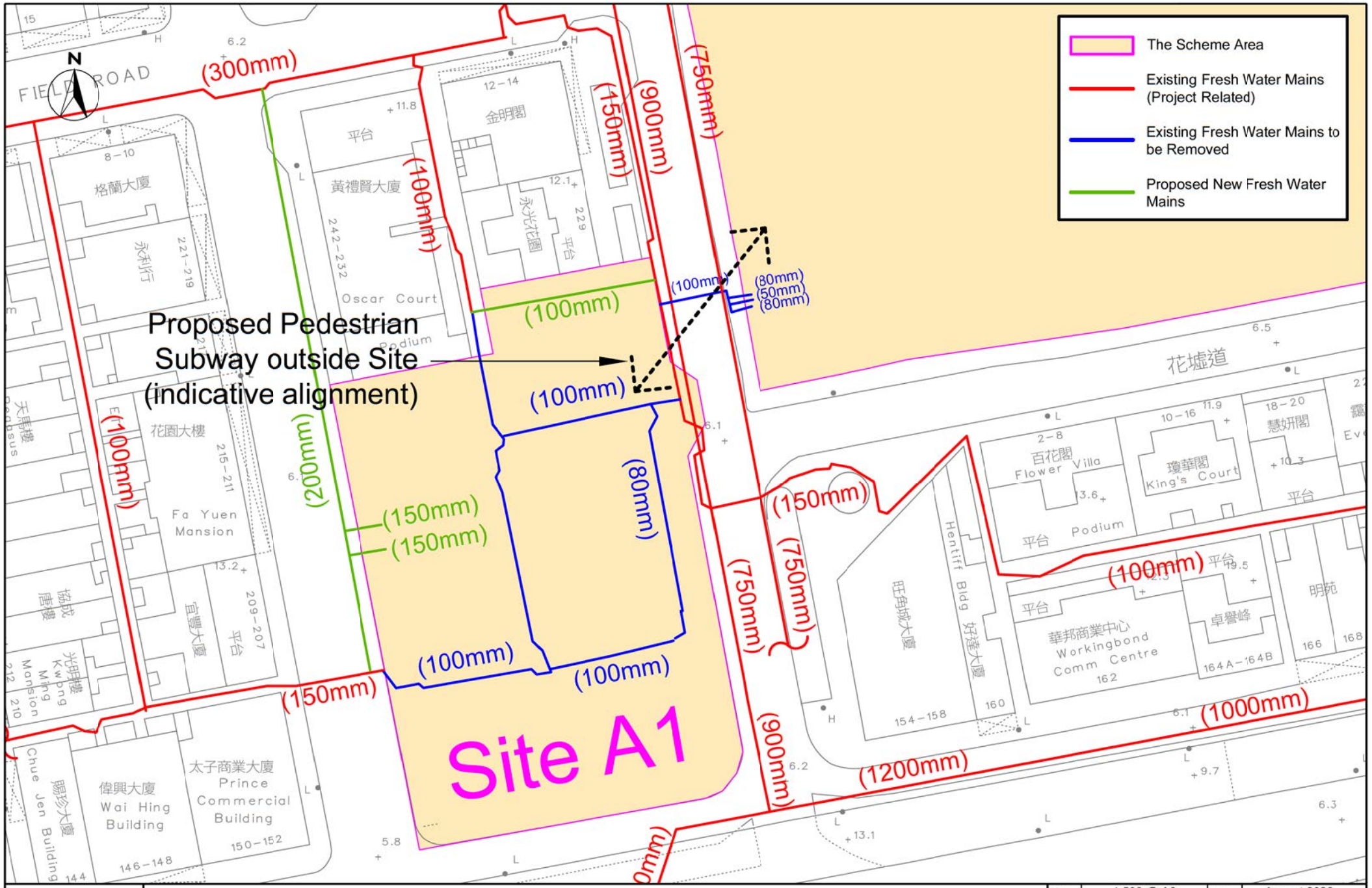

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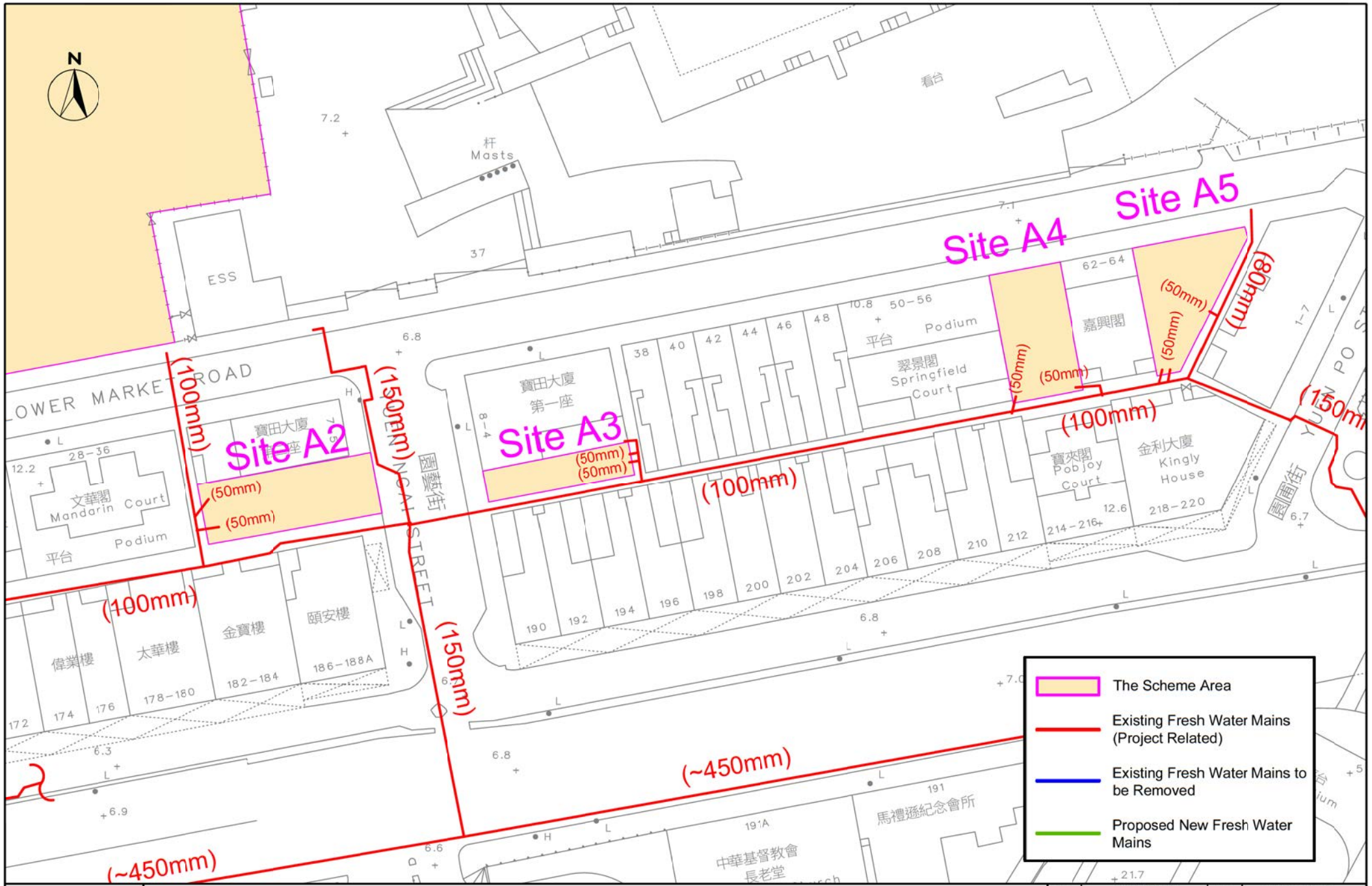
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Fresh Water Mains in the Vicinity (Site A1)

SCALE	1:500 @ A3	DATE	August 2023
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1b
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Fresh Water Mains in the Vicinity (Sites A2 to A5)

SCALE	1:500 @ A3	DATE	August 2023
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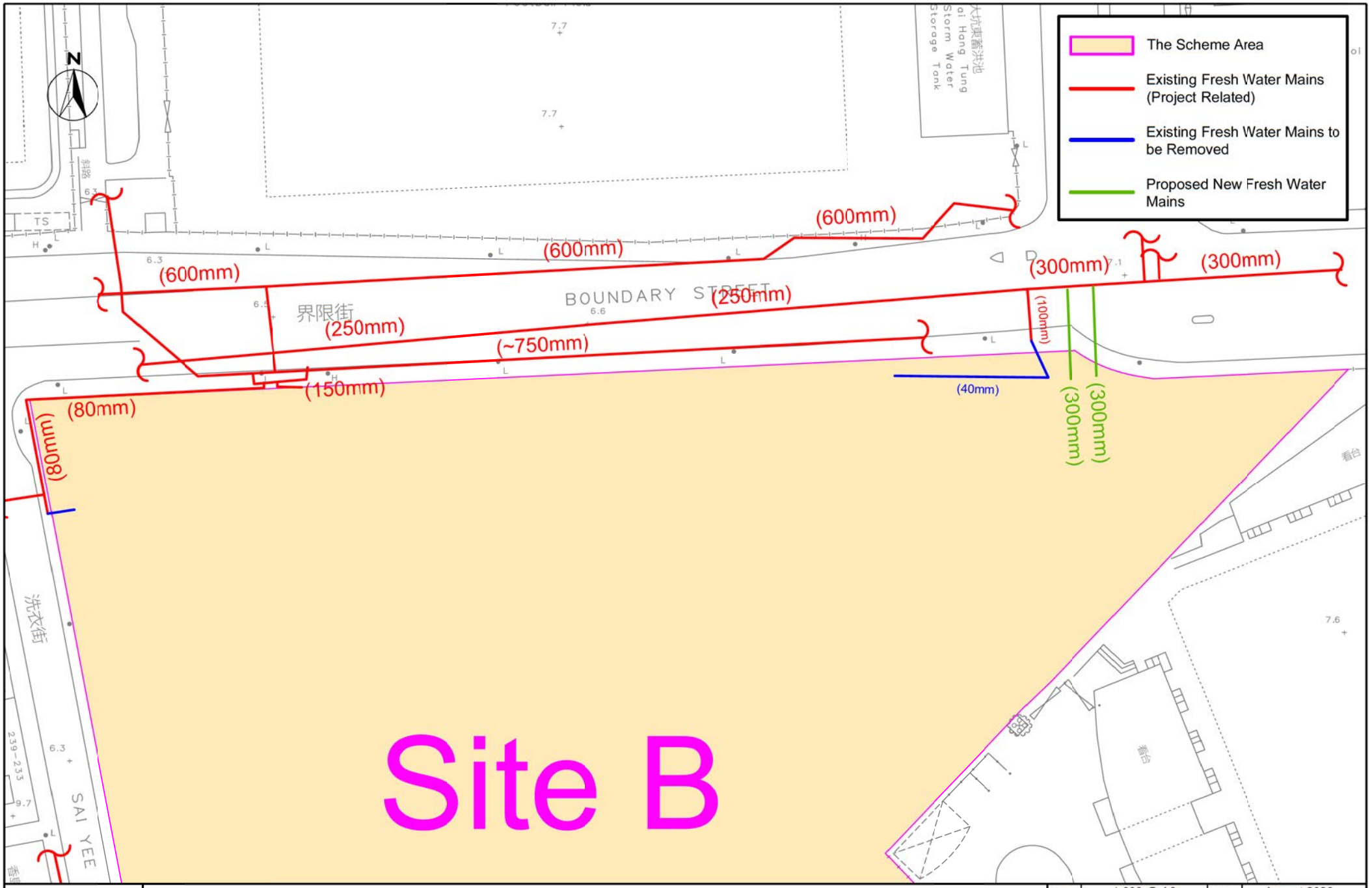
		REV	-



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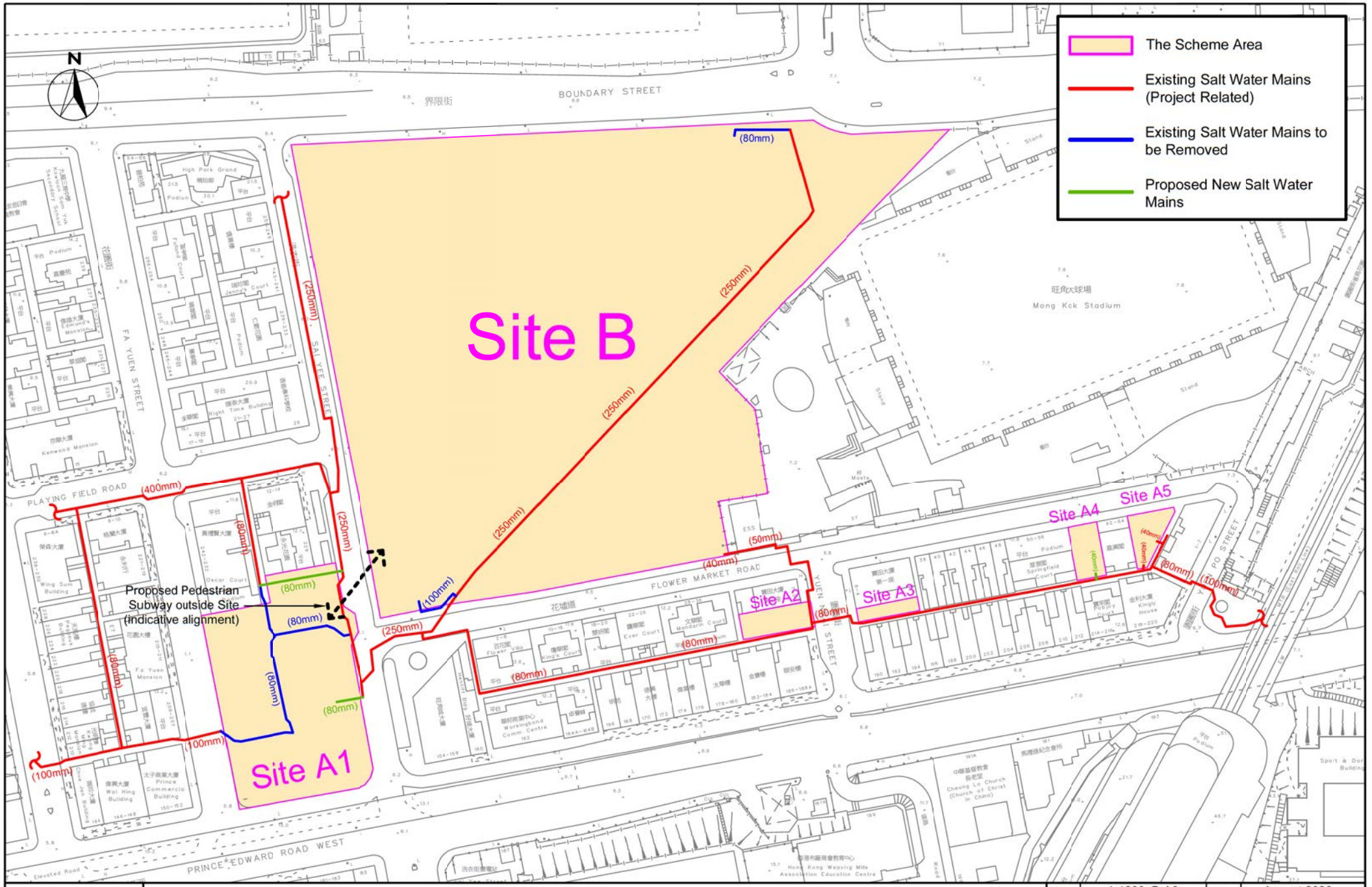
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Fresh Water Mains in the Vicinity (Site B)

SCALE	1:600 @ A3	DATE	August 2023
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-1d
		REV	-



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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Salt Water Mains in the Vicinity (Overview)

SCALE	1:1200 @ A3	DATE	August 2023
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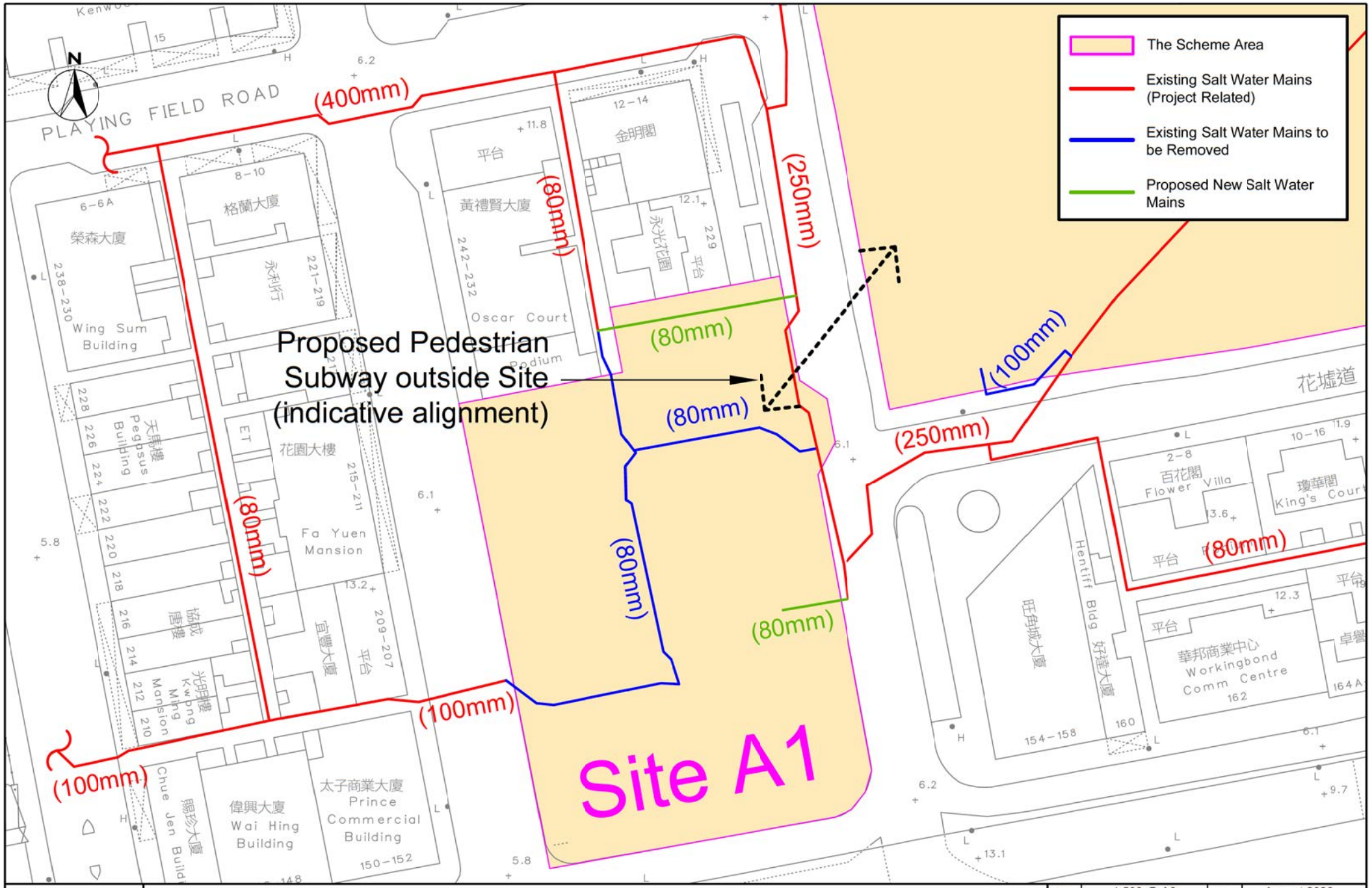
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-2a
		REV	-



CINOTECH
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Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Salt Water Mains in the Vicinity (Site A1)

SCALE	1:500 @ A3	DATE	August 2023
CHECK	LL	DRAWN	CC
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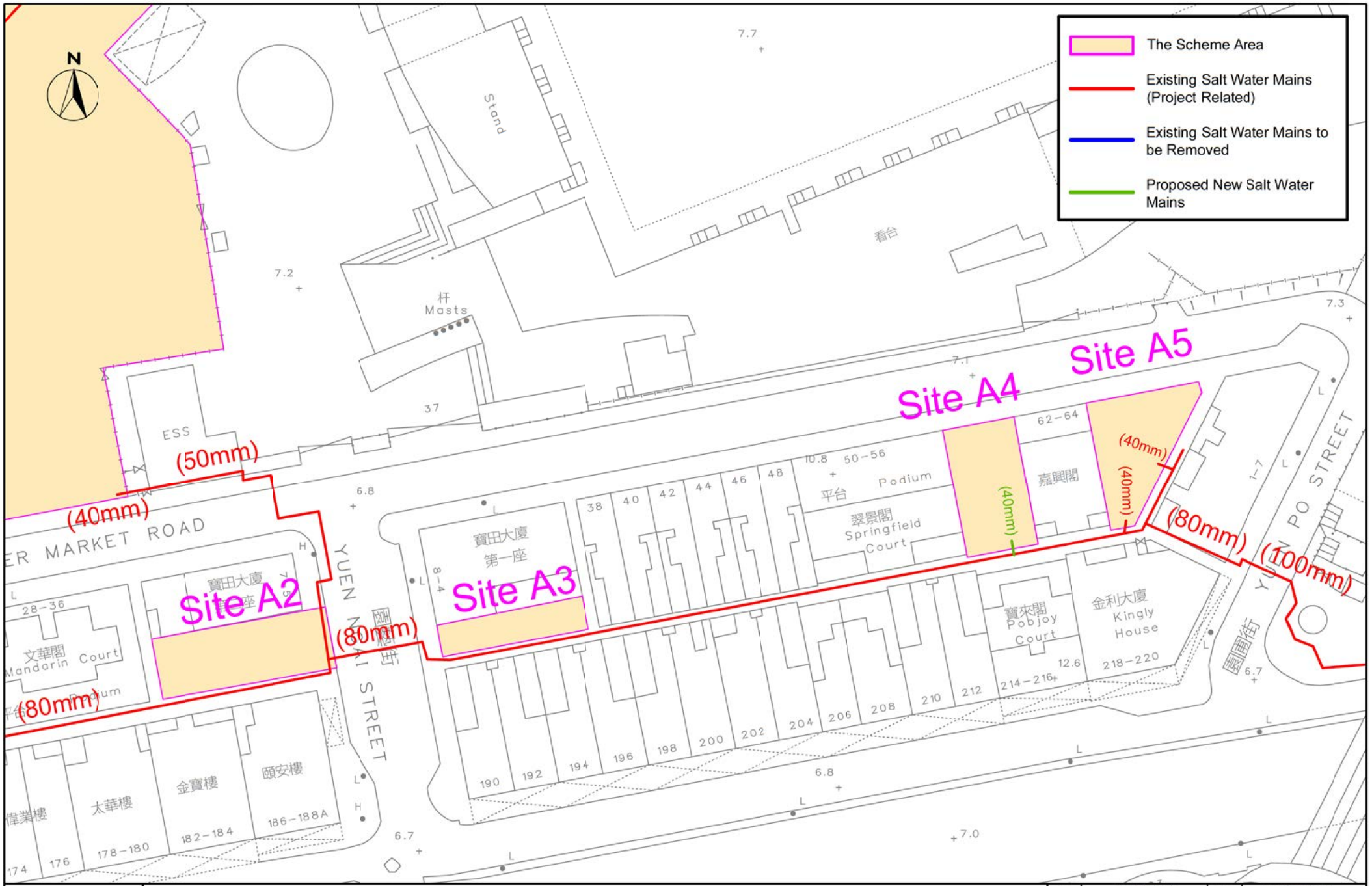
		REV	-



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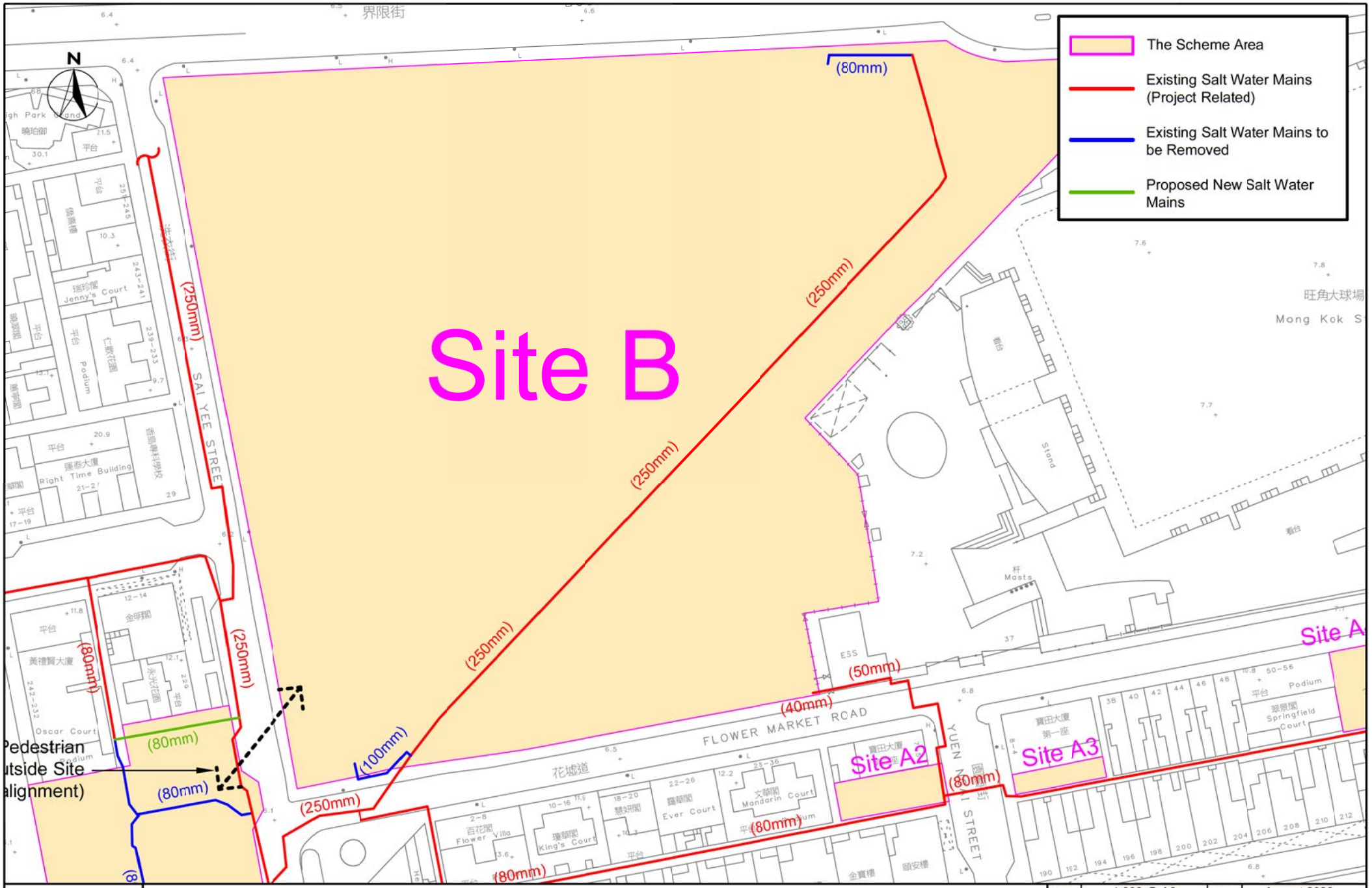
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Salt Water Mains in the Vicinity (Sites A2 to A5)

SCALE	1:500 @ A3	DATE	August 2023
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-2c
		REV	-



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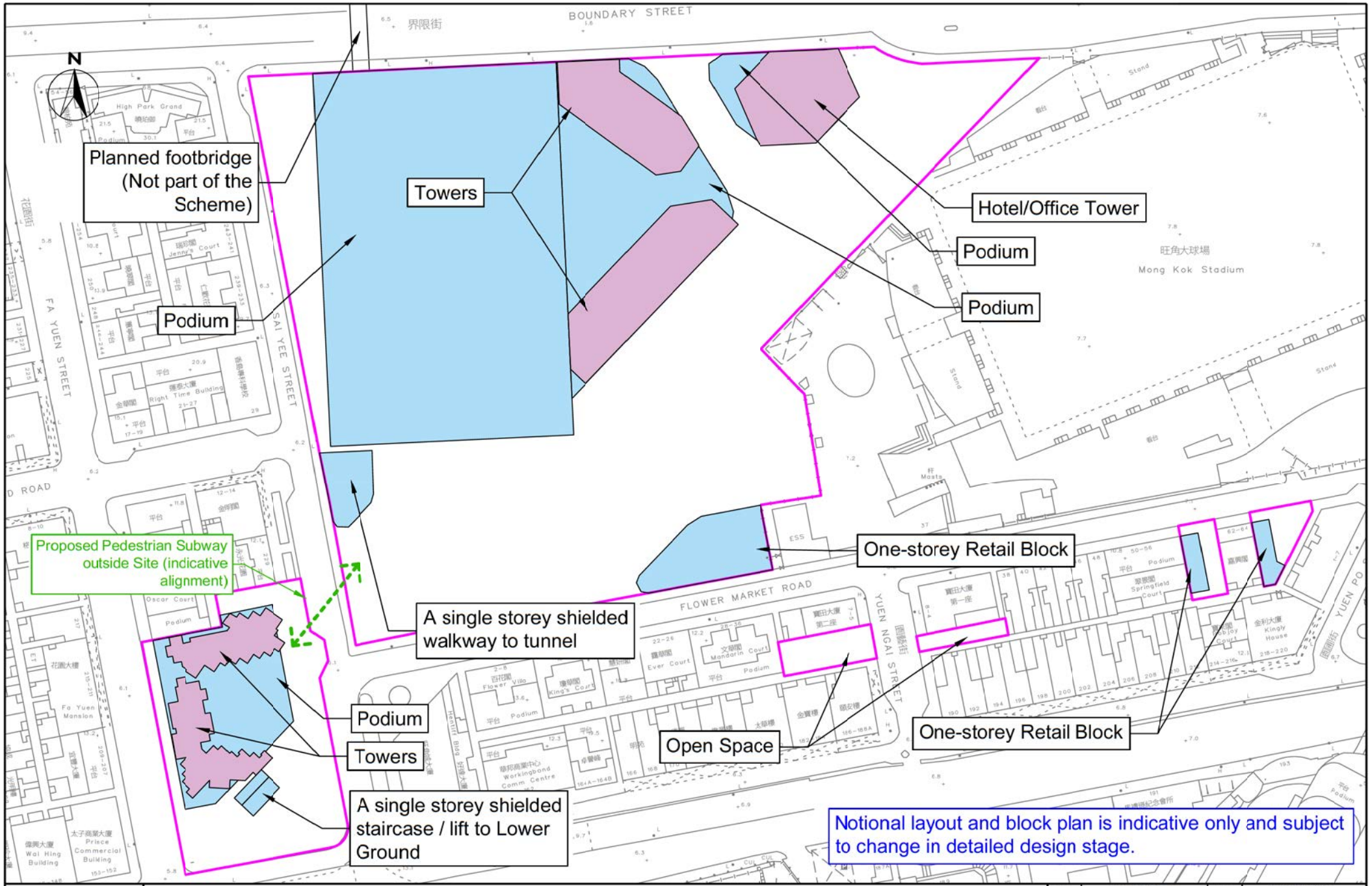
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Salt Water Mains in the Vicinity (Site B)

SCALE	1:800 @ A3	DATE	August 2023
CHECK	LL	DRAWN	CC
JOB No.	IA19021-YMAA1-01-P1	DRAWING No.	Fig. 3-2d
		REV	-

APPENDIX I
NOTIONAL PLAN OF THE PROPOSED SCHEME



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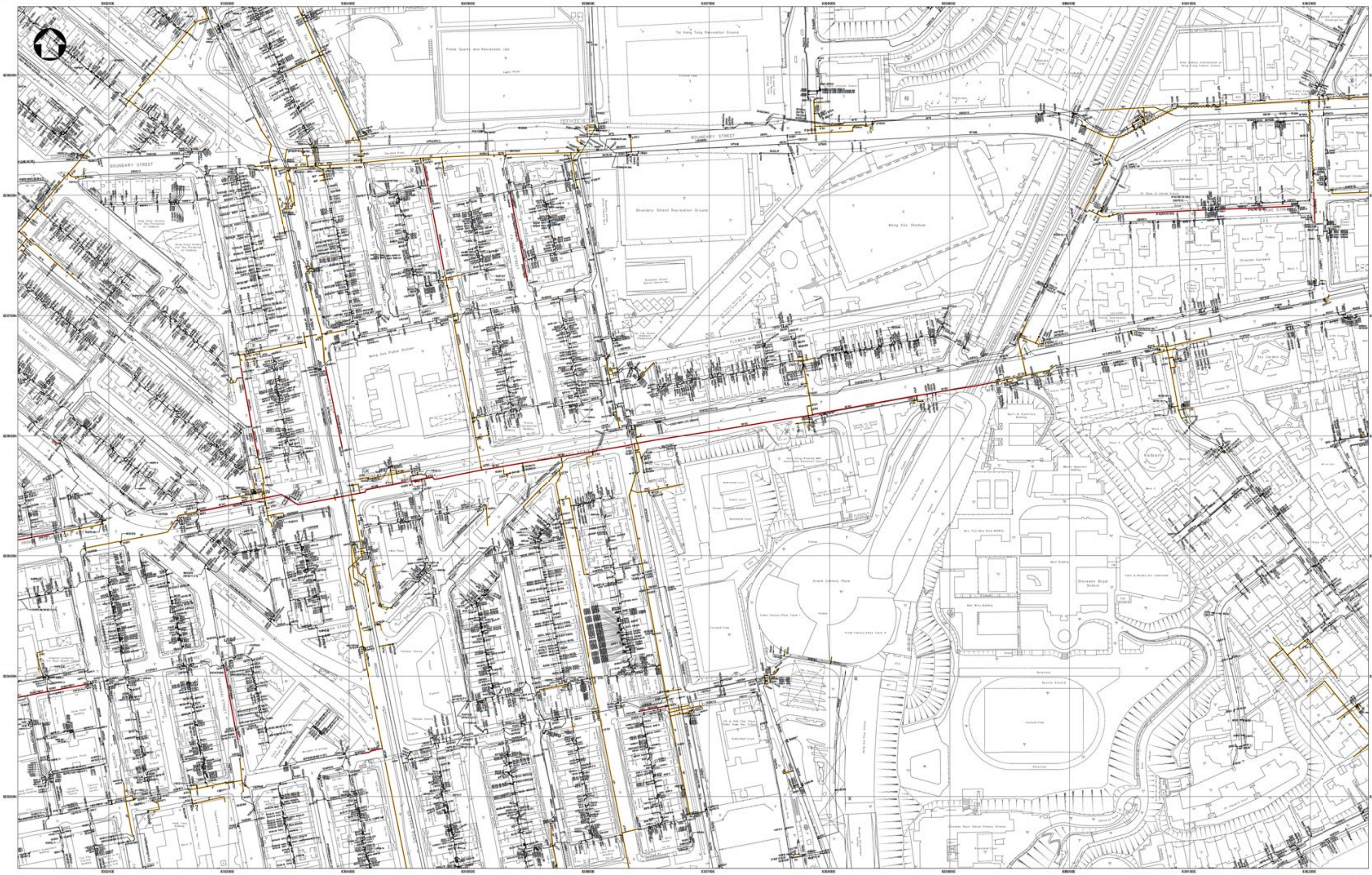
Urban Renewal Authority Sai Yee Street / Flower Market Road Development Scheme (YTM-013)

Notional Plan of the Proposed Scheme

SCALE	1:1000 @ A3	DATE	March 2024
CHECK	KS	DRAWN	CC
JOB No.	IA19021-YMAA101P1	DRAWING No.	--
		REV	-

APPENDIX II
FRESH WATER MAINS RECORD PLAN



LEGEND :

1. FRESH WATER MAINS WITH AC MATERIAL
2. FRESH WATER MAINS WITH UNKNOWN MATERIAL

SUPPLEMENTARY INFORMATION OF ASBESTOS CEMENT (AC) OR UNKNOWN WATER MAINS

IMPORTANT: Please note that existing asbestos cement (AC) or unknown water pipes are identified in the vicinity of your project/works area. It is very likely that the unknown water pipes are AC water pipes. You are strongly advised to make special provisions including monitoring measures as necessary to protect these water pipes that are vulnerable to damage. Should diversion/replacement of AC or unknown water pipes be found necessary to be carried out in conjunction with your proposed works after detailed investigations or studies, you should instruct your consultants and/or contractors (as the case may be) to take all necessary measures during design and/or construction stages (as the case may be) to comply with all prevailing statutory requirements for the safe handling, removal, transportation and disposal of AC pipes.

PART COPY OF FRESH WATER MAINS RECORD PLAN(S)

FILE REF: DOK23_140

SHEET 1 OF 1 | SCALE 1:1000

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Water Supplies Department

APPENDIX III
SALT WATER MAINS RECORD PLAN

LEGEND :

1. SALT WATER MAINS WITH AC MATERIAL
2. SALT WATER MAINS WITH UNKNOWN MATERIAL

SUPPLEMENTARY INFORMATION OF ASBESTOS CEMENT (AC) OR UNKNOWN WATER MAINS

IMPORTANT: Please note that existing asbestos cement (AC) or unknown water pipes are identified in the vicinity of your project/works area. It is very likely that the unknown water pipes are AC water pipes. You are strongly advised to make special provisions including monitoring measures as necessary to protect these water pipes that are vulnerable to damage. Should diversion/replacement of AC or unknown water pipes be found necessary to be carried out in conjunction with your proposed works after detailed investigations or studies, you should instruct your consultants and/or contractors (as the case may be) to take all necessary measures during design and/or construction stages (as the case may be) to comply with all prevailing statutory requirements for the safe handling, removal, transportation and disposal of AC pipes.

SUBJECT SITE

PART COPY OF SALT WATER MAINS RECORD PLAN(S)

WR7681/11-NW-14C, 14D, 15C, 19A, 19B & 20A

FILE REF: DOK23_140

SHEET 1 OF 1 | SCALE 1:1000

水 務 署
Water Supplies Department

APPENDIX IV
DETAILED WATER DEMAND CALCULATION

Table A1 - Unit Daily Demand

Zone Type		Unit Demand Fresh Water [1]	Unit Demand Salt Water [2]	(unit)
Residential	R	0.35	0.11	m^3/head/day
Commercial	C	300	100	m^3/ha/day
Government, Institution/Community	G/IC	300	100	m^3/ha/day
Hotel	H	1	0.36	m^3/room/day
Park (Irrigation) [3]	IRR	700	0	m^3/ha/day

[1] Unit Demand Fresh Water recommended by ***WSD*** :

- Residential - 0.35 m^3/head/day, including service trade allowance.
- Commerical & G/IC - 300 m^3/ha/day, only applies to site without any residential development atop.
- Hotel - 1 m^3/room/day
- Irrigation Area - 70 litre / sq. meters of irrigation area / day.

[2] Unit Demand Salt Water recommended by ***WSD*** :

- Residential - 0.11 m^3/head/day, including service trade allowance.
- Commerical & G/IC - 100 m^3/ha/day, only applies to site without any residential development atop.
- Hotel - 0.36 m^3/room/day

Table A2 - Flow Velocity Limit

Pipe Diameter	Fresh Water Distribution Mains	Salt Water Distribution Mains	(unit)
≥ DN1000		≤ 3.0	m/s
DN900 - DN800		≤ 2.5	m/s
> DN700	≤ 3		m/s
DN700 - DN525	≤ 2.5	≤ 2	m/s
DN450 - DN375	≤ 2		m/s
DN450 - DN300		≤ 1.5	m/s
DN300 - DN200	≤ 1.5		m/s
< DN300		≤ 1.5	m/s
< DN200	≤ 1.5		m/s

[1] Refer to ***WSD Departmental Instruction 1309***

Table B1 - Existing Development

Site A1

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	**122**	**510**
- Prince Edward Building	54	
- 224 to 230 (even) Fa Yuen Street	32	
- 215 to 227 (odd) Sai Yee Street	36	

Non-Residential Area

	GFA (m^2) [2]	GFA (ha)
Shop and Retails	1,481.50	**0.14815**

Site A2

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	**6**	**25**
- 1 & 3 Yuen Ngai Street	6	

Non-Residential Area

	GFA (m^2) [2]	GFA (ha)
Shop and Retails	195.5	**0.01955**

Site A3

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	**3**	**15**
- 2 Yuen Ngai Street	3	

Non-Residential Area

	GFA (m^2) [2]	GFA (ha)
Shop and Retails	67.8	**0.00678**

Site A4

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	**6**	**25**
- 58 & 60 Flower Market Road	6	

Non-Residential Area

	GFA (m^2) [2]	GFA (ha)
Shop and Retails	133.7	**0.01337**

Site A5

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	**6**	**25**
- 66 & 68 Flower Market Road	6	

Non-Residential Area

	GFA (m^2) [2]	GFA (ha)
Shop and Retails	131.4	**0.01314**

Site B

Existing Buildings

	GFA (m^2) [2]	GFA (ha)
Government, Institution/Community	5,500	**0.55**

Public Open Space

	Area (m^2) [2]	GFA (ha)
Garden, Play Ground and Sitting-out Area	18,700	**1.87**

Note:
[1] The number of flats and population are estimated by URA.
[2] Estimated values.

Table B2 - Existing Water Demands

Site A1

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	510	0.350	0.110	178.5	56.1

Non-Residential Area

	Category	GFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Shop and Retails [2]	N/A	0.148	0.000	0.000	0.0	0.0

Site A2

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	25	0.350	0.110	8.8	2.8

Non-Residential Area

	Category	GFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Shop and Retails [2]	N/A	0.020	0.000	0.000	0.0	0.0

Site A3

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	15	0.350	0.110	5.3	1.7

Non-Residential Area

	Category	GFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Shop and Retails [2]	N/A	0.007	0.000	0.000	0.0	0.0

Site A4

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	25	0.350	0.110	8.8	2.8

Non-Residential Area

	Category	GFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Shop and Retails [2]	N/A	0.013	0.000	0.000	0.0	0.0

Table B2 - Existing Water Demands

Site A5

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	25	0.350	0.110	8.8	2.8

Non-Residential Area

	Category	GFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Shop and Retails [2]	N/A	0.013	0.000	0.000	0.0	0.0

Site B

Existing Buildings

	Category	GFA (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Government, Institution/Community	G/IC	0.55	300.000	100.000	165.0	55.0

Garden and Sitting-out Area (Area of Public Open Space)

	Category	Area (ha) [1]	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Boundary Street Sports Centre No.1 & 2	IRR	0.67	700.000	0.000	468.0	0.0

Summary

	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Site A1	178.5	56.1
Site A2	8.8	2.8
Site A3	5.3	1.7
Site A4	8.8	2.8
Site A5	8.8	2.8
Site B	633.0	55.0
Total	**843.0**	**121.0**

Note:
[1] Estimated planting area
[2] The commerical areas are having residential development atop, thus the unit fresh/salt water demands are not applicable.

Table C1 - Proposed Development

Site A1

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	**474**	**2.5**	**1,185**

Non-Residential Area

	GFA/Area (m^2) [1]	GFA (ha)
Retails/Restaurant	6576	**0.6576**
Garden, Play Ground and Sitting-out Area	500	**0.05**

Site A2

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	**0**	**2.5**	**0**

Non-Residential Area

	GFA/Area (m^2) [1]	GFA (ha)
Shop and Retails	0	**0**
Garden, Play Ground and Sitting-out Area	200	**0.02**

Site A3

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	**0**	**2.5**	**0**

Non-Residential Area

	GFA/Area (m^2) [1]	GFA (ha)
Shop and Retails	0	**0**
Garden, Play Ground and Sitting-out Area	100	**0.01**

Site A4

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	**0**	**2.5**	**0**

Non-Residential Area

	GFA/Area (m^2) [1]	GFA (ha)
Shop and Retails	100	**0.01**
Garden, Play Ground and Sitting-out Area	0	**0**

Site A5

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	**0**	**2.5**	**0**

Non-Residential Area

	GFA/Area (m^2) [1]	GFA (ha)
Shop and Retails	100	**0.01**
Garden, Play Ground and Sitting-out Area	0	**0**

Site B

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	**880**	**2.5**	**2,200**

Non-Residential Area

	GFA/Area (m^2) [1]	GFA (ha)
Retails/Restaurant	11,000	**1.1**
G/IC	30,000	**3**
Garden, Play Ground and Sitting-out Area	8,800	**0.88**
Hotel/Office Tower	18,350	**1.835**

Note:

[1] The development parameters are provided by Project Proponent

[2] According to the Population Census 2021, the average domestic household size is 2.3 for Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222; and 2.5 for Yau Tsim Mong District. For conservative assessment household size of 2.5 has been adopted.

Table C2 - Water Demands under the Proposed Scheme

Site A1

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	1,185	0.350	0.110	414.8	130.4

Non-Residential Area

	Category	GFA/Area (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Retails/Restaurant [2]	N/A	0.658	0.000	0.000	0.0	0.0
Garden, Play Ground and Sitting-out Area [1]	IRR	0.025	700.000	0.000	17.5	0.0

Site A2

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	0	0.350	0.110	0.0	0.0

Non-Residential Area

	Category	GFA/Area (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Retails/Restaurant	C	0.000	300.000	100.000	0.0	0.0
Garden, Play Ground and Sitting-out Area [1]	IRR	0.010	700.000	0.000	7.0	0.0

Site A3

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	0	0.350	0.110	0.0	0.0

Non-Residential Area

	Category	GFA/Area (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Retails/Restaurant	C	0.000	300.000	100.000	0.0	0.0
Garden, Play Ground and Sitting-out Area [1]	IRR	0.005	700.000	0.000	3.5	0.0

Site A4

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	0	0.350	0.110	0.0	0.0

Non-Residential Area

	Category	GFA/Area (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Retails/Restaurant	C	0.010	300.000	100.000	3.0	1.0
Garden, Play Ground and Sitting-out Area	IRR	0.000	700.000	0.000	0.0	0.0

Table C2 - Water Demands under the Proposed Scheme

Site A5

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	0	0.350	0.110	0.0	0.0

Non-Residential Area

	Category	GFA/Area (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Retails/Restaurant	C	0.010	300.000	100.000	3.0	1.0
Garden, Play Ground and Sitting-out Area	IRR	0.000	700.000	0.000	0.0	0.0

Site B

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m^3/head/day)	Unit Demand Salt Water (m^3/head/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Residential Accommodation, Management and Club House Staff	R	2,200	0.350	0.110	770.0	242.0

Non-Residential Area

	Category	GFA/Area (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Retails/Restaurant [2]	N/A	1.10	0.000	0.000	0.0	0.0
G/IC	G/IC	3.00	300.000	100.000	900.0	300.0
Garden, Play Ground and Sitting-out Area [1]	IRR	0.440	700.000	0.000	308.0	0.0

Non-Residential Area (Hotel/Office Tower) [3]

	Category	GFA/Area (ha)	Unit Demand Fresh Water (m^3/ha/day)	Unit Demand Salt Water (m^3/ha/day)	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Hotel/Office Tower - Fully **Office** Scenario	C	1.84	300.000	100.000	550.5	183.5
		No. of Room [5]	**(m^3/Room/day)**	**(m^3/Room/day)**		
Hotel/Office Tower - Fully **Hotel** Scenario	H	612	1.000	0.360	612.0	220.3
Adopted water demand for the Hotel/Office Tower					**612.0**	**220.3**

Summary [4]

	Daily Demand Fresh Water (m^3/day)	Daily Demand Salt Water (m^3/day)
Site A1	453.9	136.9
Site A2	7.4	0.0
Site A3	3.7	0.0
Site A4	3.2	1.1
Site A5	3.2	1.1
Site B	2719.5	800.4
Total	**3190.7**	**939.4**

Note:

[1] It is anticipated that around 50% of the Garden is planting area in the worst case scenario.

[2] The commerical and G/IC areas are having residential development atop, thus the unit fresh/salt water demands are not applicable.

[3] The ratio of office and hotel for the Hotel/Office Tower is subject to detailed design. For assessment purpose, the water demand of both Fully Hotel Scenario and Fully Office Scenario were calculated. The one with higher water demand has been adopted.

[4] 5% additional demand have been included for conservative assessment.

[5] It is assume that there will be one Hotel Room per 30 m^2 GFA.

Table D - Summary of Water Demands

Fresh Water Demand

Site	Daily Demand - Fresh Water (m^3/d)		
	Existing	Proposed [1]	Net Increase
Site A1	178.5	453.9	275.4
Site A2	8.8	7.4	-1.4
Site A3	5.3	3.7	-1.6
Site A4	8.8	3.2	-5.6
Site A5	8.8	3.2	-5.6
Site B	633.0	2719.5	2086.6
Total	**843.0**	**3190.7**	**2347.7**

Note:
[1] 5% additional demand have been included for conservative assessment.

Salt Water Demand

Site	Daily Demand - Salt Water (m^3/d)		
	Existing	Proposed [1]	Net Increase
Site A1	56.1	136.9	80.8
Site A2	2.8	0.0	-2.8
Site A3	1.7	0.0	-1.7
Site A4	2.8	1.1	-1.7
Site A5	2.8	1.1	-1.7
Site B	55.0	800.4	745.4
Total	**121.0**	**939.4**	**818.4**

Note:
[1] 5% additional demand have been included for conservative assessment.

Fresh Water Reservoir Capacity

Reservoir	Capacity (x 1,000 m^3)	Supply Capacity @ Capacity Factor = 0.8 (MLD) [1]	Existing Daily Consumption (MLD) [2]	Spare Capacity (MLD)	Remarks
Ho Man Tin East FWSR	152.411	190.51	124	**133.7**	The spare capacity of 133.7 MLD >> net increase of 2.3 MLD from the Propsoed Development
Ho Man Tin West FWSR	67.434	84.29	18		

Salt Water Pumping Capacity

Pumping Station	Design Pumping Capacity (MLD)	Existing Daily Consumption (MLD) [2]	Spare Capacity (MLD)	Remarks
Cheung Sha Wan SWPS	87	69.3	**17.7**	The spare capacity of 17.7 MLD >> net increase of 0.8 MLD from the Propsoed Development

[1] For interconnected supply zone with critical consumers, the capacity of the Reservior should be (75% + 5%) = 80% of the mean daily demend.
[2] Average consumption from 2023-Jan to 2023-Jul have been adopted.

Appendix 11

Stage 1 Social Impact Assessment

Urban Renewal Authority Development Scheme

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

Sai Yee Street / Flower Market Road

Development Scheme

YTM-013

Stage 1 Social Impact Assessment

March 2024

市區重建局
URBAN RENEWAL AUTHORITY

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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 Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (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.*" Although the DURF has not conducted a SIA near the Scheme area, the URA has conducted a comprehensive study in the Yau Ma Tei and Mong Kok districts called the District Study for Yau Ma Tei and Mong Kok (YMDS), which was published in 2022. As the Scheme falls within the scope of the YMDS, this stage 1 SIA will be prepared by referring to the information and recommendations regarding social aspects mentioned in the YMDS.

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

- the population characteristics of the 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 Scheme 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 under Section 25 of the Urban Renewal Authority Ordinance (URAO) and should release the reports for public information.

2 THE DEVELOPMENT SCHEME

2.1. The Scheme is located in Mong Kok East in the Yau Tsim Mong (YTM) District. The Scheme comprises Site A and Site B, with a total gross site area of about 29,315m^2. Site A comprises five sub-areas, named Sites A1 to A5 respectively. Site A1 is broadly bounded by Sai Yee Street to the east, Prince Edward Road West to the south, Fa Yuen Street to the west, and the existing buildings to the north. Sites A2 and A3 are two smaller sites abut Yuen Ngai Street. Sites A4 and A5 are another two smaller sites abut Flower Market Road. Site B is broadly bounded by Mong Kok Stadium to the east, Flower Market Road to the south, Sai Yee Street to the west and Boundary Street to the north. **Figure 2.1** shows the location plan and demarcation of site names of the Scheme.

2.2. The Scheme covers a total of 28 street numbers of private buildings at Site A and government building lots at Site B. Site A involves 5 clusters of private residential / composite buildings, Government back lanes, and surrounding pavement where some of the affected buildings overhang on. Site B covers open space, several existing government, institution or community (GIC) facilities, Government back lanes and surrounding public pavement. Details of the street numbers of buildings and land parcels included in each site are described in **Table 2.1** below.

Table 2.1 Street Numbers of Buildings and Land Parcels within the Scheme Area

Site	Site Name	Comprises of:
A	A1	• 222G – 222H Fa Yuen Street & 224 – 230 Fa Yuen Street (even nos.); • 152A – 152D Prince Edward Road West; • 215 – 227 Sai Yee Street (odd nos.); and • Some Government back lanes and surrounding public pavement.
	A2	• 1 – 3 Yuen Ngai Street (odd nos.); and • Surrounding public pavement within the site boundary.
	A3	• 2 Yuen Ngai Street; and • Surrounding public pavement within the site boundary.
	A4	• 58 – 60 Flower Market Road (even nos.); and • Surrounding public pavement within the site boundary.
	A5	• 66 – 68 Flower Market Road (even nos.); and • Surrounding public pavement within the site boundary.
B	B	• Boundary Street Recreation Ground; • Boundary Street Sports Centres Nos. 1 and 2; • Sai Yee Street Children's Playground; • Boundary Street Amenity Plot; • Leisure and Cultural Services Department (LCSD) Boundary Street Nursery; • Sai Yee Street (Flower Market Road) Refuse Collection Point (RCP); • Sai Yee Street Public Toilet (PT);

Site	Site Name	Comprises of:
		• CLP Power Hong Kong Limited Boundary Street Sports Ground Substation; • The whole of Flower Market Path; and • Surrounding public pavements within the site boundary.

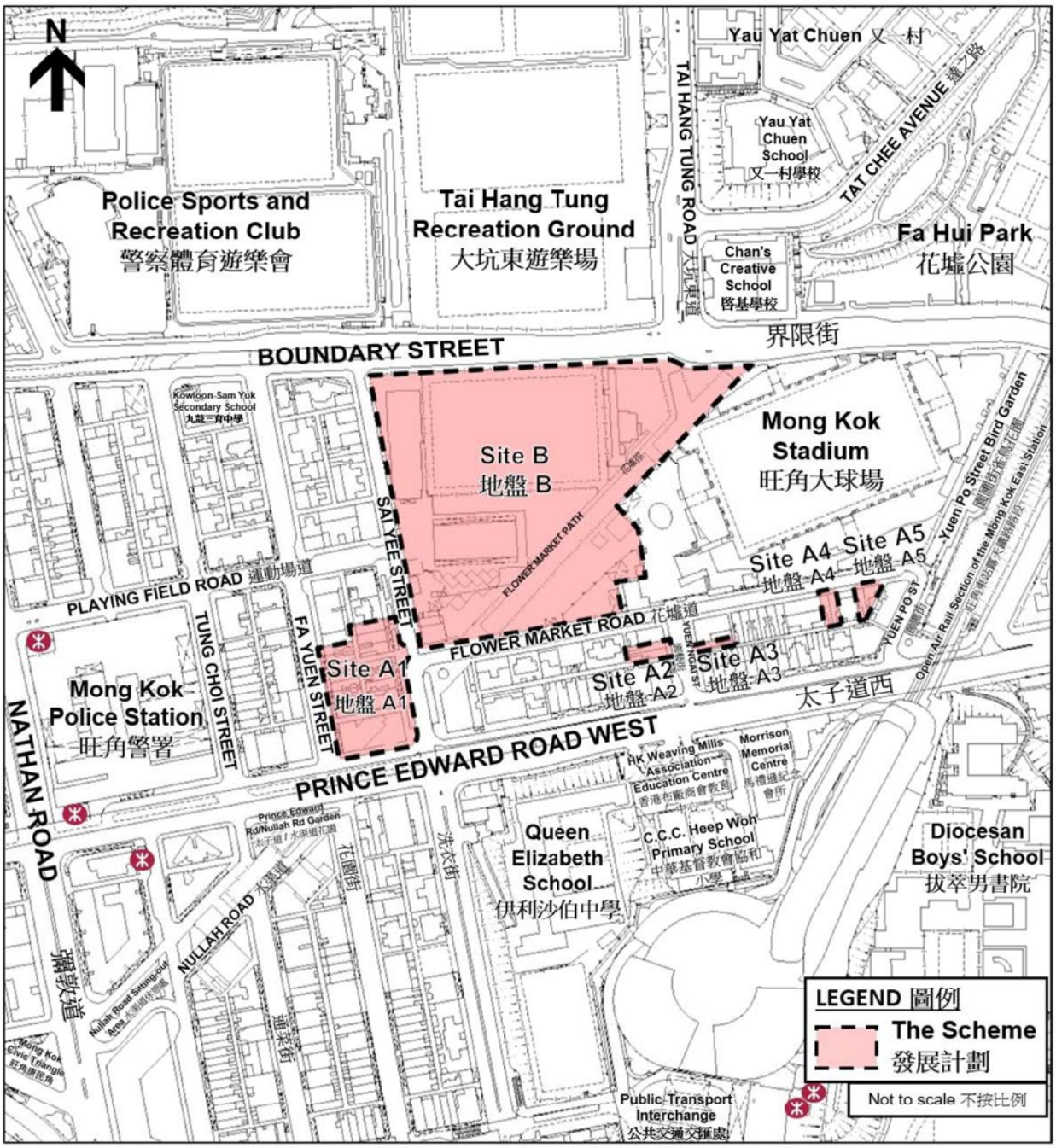


Figure 2.1 Location Plan and Demarcation of Site Names

Planning Objectives

2.3. The Scheme aims to echo with the directives of the 2023 Policy Address (PA), which include implementing the recommendations of the District Study for Yau Ma Tei and Mong Kok (YMDS) and commencing redevelopment projects for the "Nullah Road Urban Waterway" in Mong Kok East.

2.4. The Scheme is the first implementation of a project proposed under the recommendations of the Master Urban Renewal Concept Plan ("MRCP") as devised from YMDS. It forms a part of the "Mong Kok East – Nullah Road Urban Waterway Development Node" ("Nullah Road DN") as illustrated in **Figure 2.2**. The development theme of Nullah Road DN is to construct an Urban Waterway on a section of decked nullah from Nathan Road to Boundary Street and create a blue-green feature along the Urban Waterway so as to rejuvenate the city image of the commercial area of Mong Kok. According to p.18 of the YMDS Information Booklet, the Nullah Road DN includes the following parts:

- *New Waterway Park to become a green hub for public leisure and recreation, with a new multi-purpose complex building accommodating existing and future uses under the "single site multiple use" initiative;*

- *Concentration of commercial / service apartment (high rise gateway tower & low-rise strip) and residential / service apartment development along the Urban Waterway, with special architectural design to further promote vibrancy and synergy along existing character streets;*

- *Pedestrian subway connecting between north and south sides of the Urban Waterway will be proposed; and*

- *Integrated character street, heritage preservation, open space, reprovision of public facilities and underground carpark.*

Figure 2.2 Development Nodes (Extract of the YMDS – Information Booklet)

2.5. As a part of the Nullah DN, the Scheme aims to carry out replanning and restructuring of the area through redevelopment in order to realise the proposed Waterway Park, which includes mixed-use development to catalyse urban regeneration and materialise planning gains. The Scheme will become an initial anchor of the proposed Urban Waterway which will run through the heart of Mong Kok East under the MRCP framework. The Waterway Park will also serve as a new public realm and integrate with the proposed mixed-use development providing various sports and GIC facilities to shape the Nullah DN as a socio-economic activity hub for multiple activities including leisure, sports and events, and thus enhance the long-established Flower Market characters and become a "connector" between the Urban Waterway, the Flower Market and Surrounding Community Facilities.

2.6. The Scheme adopts an integrated urban renewal approach with an aim to restructure, replan and connect the area through redevelopment (R1), rehabilitation (R2), preservation (R3), and revitalization (R4) initiatives, which is in line with the objectives of urban renewal under the URS issued in 2011. The URS promulgates a comprehensive and holistic approach to carry out urban renewal with the following objectives:

- Restructuring and replanning of concerned urban areas;
- Rationalising land uses within the concerned urban areas;
- Redeveloping dilapidated buildings into new buildings of modern standard and environmentally-friendly design;
- Promoting sustainable development in the urban areas;
- Preserving as far as practicable local characteristics;
- Providing more open space and community/ welfare facilities; and
- Enhancing the townscape with attractive landscape and urban design.

Key Planning Proposals of the Scheme

2.7. To achieve the objectives of URS and to realise the planning visions of the area devised in the YMDS, the Scheme will include the following key proposals:

i. **Holistic Replanning of Land Uses to Create a Development Node:** Through holistic replanning and restructuring of land uses, the existing recreation ground and GIC facilities will be reprovisioned or upgraded in a multi-purposed GIC complex with new GIC facilities, with an aim to provide about 20,000m^2 GIC GFA, subject to confirmation of funding availability and operational arrangement of the relevant Government Bureaux/ Departments. Mixed-use development is proposed in the Scheme with a combination of residential and/or hotel/ office developments, with retail and food & beverage/ recreation/ sports and community facilities to create a vibrant and diverse development node.

ii. **Forming an iconic "Waterway Park" as a Connector with Surrounding Facilities:** To revive the previous spatial setting of the decked nullah by creating a new Waterway Park above and along the nullah. The Waterway Park will serve as an iconic public leisure ground, presenting the history and local identity while providing a sizable open space with distinctive blue-green features so as to enhance cityscape and become a public realm for public enjoyment. The design of the Waterway Park will use the Urban Waterway as the central axis to connect multiple surrounding facilities, including the proposed multi-purpose complex building, the adjacent Mong Kok Stadium and the Flower Market area, becoming a leisure and recreational place to interconnect the flow of people, large-scale football matches, and recreational and sports activities. Subject to further liaisons with / design by the LCSD, the Waterway Park will be designed with colourful horticultural landscape and planted with flowers, marking it a "Flower Viewing Waterway Park" by leveraging its geographical advantage of being adjacent to the Flower Market, and providing room for catering future activities in the Flower Market. Upon completion of construction, the Waterway Park will be handed over to the LCSD for ownership and management.

iii. **Creation of Sports Hub and GIC Complex:** To redevelop the existing GIC/ recreation/ sports facilities and provide new sports facilities by adopting the "single site, multiple use" ("SSMU") initiative, with an aim to provide about 20,000m^2 non-domestic GFA for GIC/ recreation/ sports uses to become an attractive venue for sports and recreation, subject to confirmation of funding availability and operational arrangement of the relevant Government Bureaux/ Departments. Opportunities are also taken through redevelopment and landscape design to enhance the interface between the Waterway Park and the western entrance plaza of the adjoining Mong Kok Stadium, and to create a synergy effect for recreation and sports facilities of the two premises.

iv. **Manifest "Park n Walk" concept and create multi-level pedestrian network for enhancing Walkability and Accessibility**: An underground public vehicle park (PVP) is proposed within the Scheme to address district parking needs and the traffic problems associated with Mong Kok Flower Market (MFM). Besides, several pedestrian connections are proposed to connect the PVP in different directions, promoting the "Park n Walk" concept and enhancing the walkability and accessibility of a wider area.

v. **Developing a diverse shopping environment to reinforce local characters of the MFM area:** Creating space for street-front retail shops including podium setback and new retail frontage along Sai Yee Street and Waterway Park to accelerate flower market activities and manifest local characters. Separate revitalisation initiatives are proposed for enhancing the streetscape at Flower Market Road and Yuen Ngai Street, including shaping the back lanes

abutting the Scheme as the "Third Street" of the Flower Market by facelifting them in conjunction with the preservation features and atmosphere of the adjacent URA preservation and revitalization project - Prince Edward Road West/Yuen Ngai Street Project MK/02). This will not only increase the space for pedestrian but also create synergy effects through various urban renewal initiatives, in order to strengthen the local characters and create a vibrant shopping environment for MFM area.

URA Projects in the Vicinity

2.8. There are various completed and ongoing URA projects in Mong Kok (**Figure 2.3** refers). To the immediate south of the Scheme is the URA Prince Edward Road West / Yuen Ngai Street Development Scheme (MK/02), which is a preservation-revitalisation project to preserve a row of pre-war buildings and renovate into commercial and cultural uses, close to the bustling MFM and bird garden in Mong Kok. The project was completed and is used for florists on the ground floors, and commercial and cultural uses on the upper floors.

2.9. Several other completed URA projects can be found further south and southwest of the Scheme. These projects include the MacPherson Stadium Project (named "Macpherson Place"), Sai Yee Street Project (named "Skypark"), Shanghai Street / Argyle Street (named "618 Shanghai Street"), Argyle Street / Shanghai Street Project (named "Langham Place"), Reclamation Street Project (named "MOD595"), and Reclamation Street / Shantung Street (named "One Soho"). Besides, there is an ongoing redevelopment project, Shantung Street / Thistle Street Development Scheme (YTM-012), located within the YTM District. The project was commenced in October 2020 and proposed for redevelopment into modern residential buildings-cum-commercial/ retail/ GIC uses and open space.

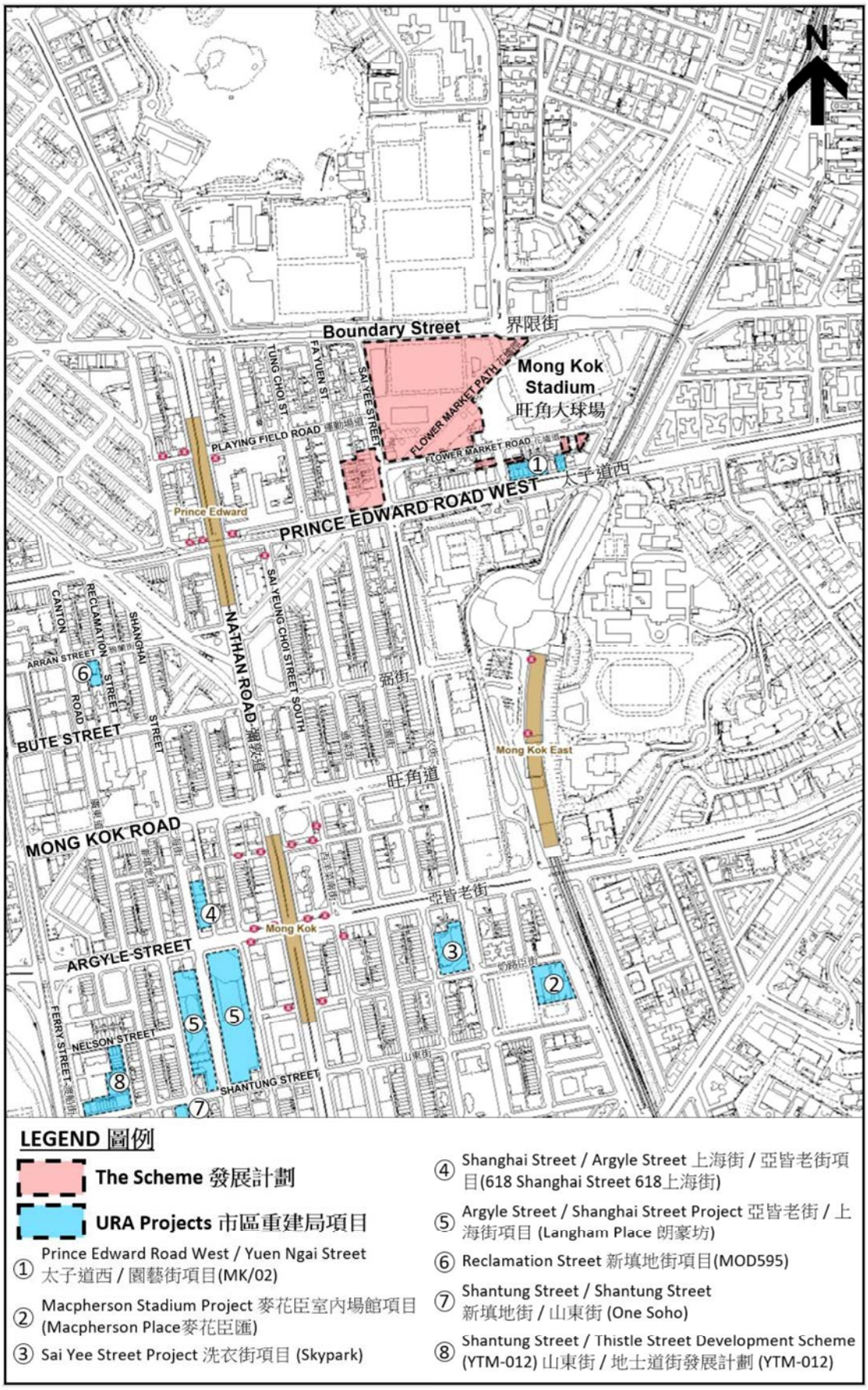


Figure 2.3 URA Projects in the Vicinity

3 HISTORICAL BACKGROUND AND LOCAL CHARACTERISTICS

Historical Background

3.1. Mong Kok is part of the YTM District located in the western part of Kowloon. The Mong Kok area used to be a Hakka settlement. A Mong Kok Village ("芒角村") was located in an area recorded as Mong Kok Tsui ("芒角咀") in the 1819 edition of the Xinan Gazetteer. It is located close to the junction of today's Mong Kok Road and Fa Yuen Street. The Mong Kok Village grew steadily throughout the eighteenth and nineteenth centuries. In the 1930s, the Chinese name of Mong Kok Tsui was renamed to "旺角", which means 'the Point of Prosperity'. The English name of "Mong Kok" remained unchanged.

3.2. The Mong Kok Village, before it was cleared in 1926, had access to agricultural land to the south of the main village. Nowadays, many of the street names in the area have taken their names from the old trades practiced in the area, such as Flower Market Street, Soy Street (Soy Sauce Street), Fa Yuen Street (Flower Garden Street), Tung Choi Street (Water-Spinach Street), Sai Yeung Choi Street (Watercress Street), etc. From these street names, it appears likely the flower and vegetable growers concentrated on the fertile fields north of Mong Kok Village, while industrial trades were mostly found in the hamlets situated in the stream valleys south of the village.

3.3. Following periodic reclamation which extended the urban land westwards from Shanghai Street, the area was developed for the light industry during the 1920s and 1930s. It became renowned for cigarette making, cotton spinning and metallic goods manufacturing, although most of the developments were intended for tenement housing. After World War II, many factories in the district moved to Tai Kok Tsui on the west coast of Mong Kok. The last reclamation, which commenced in the 1990s, is the largest reclamation project in Hong Kong, creating the West Kowloon District for the provision of housing, transport infrastructure, GIC and recreational facilities.

Decked Nullah

3.4. Historic maps show that the existing decked nullah running in a northeast-to-southwest direction in the YTM district was originally a tributary of an unnamed river that originated at Beacon Hill. It was the main source of irrigation water for previous farmlands along Sai Yee Street, Tung Choi Street and Sai Yeung Choi Street in the Mong Kok Village. The tributary was channelized in 1924 due to urban development and became a nullah. A section of the nullah was located between the current Mong Kok Stadium and Boundary Street Recreation Ground, while the areas on both sides of this section were reserved as open spaces.

3.5. The nullah gradually caused serious mosquito and odor problems due to sewage discharged by shop operators on both sides of the nullah into it. The government completed the decking with landscaping works for the nullah in 2010, in order to minimize the nuisance to the residents nearby and improve the overall environment. After the decking works, the decked nullah underneath continue to serve to collect runoff from the upstream areas, including urban areas, i.e. Shek Kip Mei, Kowloon Tong, Kowloon City near Waterloo Road, and the mountainous area to the north of Lung Cheung Road, to reduce flooding risks in the downstream areas.

Characters Streets / Themed Shopping Streets

3.6. Today, Mong Kok is one of the major shopping/ commercial/ entertainment attractions in Hong Kong, with commercial/ retail activities mainly concentrated along Nathan Road. As promoted by the Hong Kong Tourism Board, there are several character streets/ themed shopping streets including "Ladies' Market" at Tung Choi Street, "Sneakers' Street" at Fa Yuen Street and the MFM in the area adjoining Flower Market Road, Yuen Ngai Street, Sai Yee Street and Playing Field Road. These themed shopping streets are also identified as "key character streets" in YMDS. A high concentration of retail shops selling construction materials and hardware was also observed within the area between Reclamation Street, Dundas Street, Canton Road, and Argyle Street, forming a "construction materials and hardware street". The Mong Kok area is primarily composed of mixed commercial and residential uses. There is a concentration of old and dilapidated residential buildings with commercial/ retail/ eateries on the ground floor particularly along the inner streets in the outer area of the district. **Figure 3.1** shows the locations of places with historical backgrounds identified and local characters in this part of Mong Kok.

Tung Choi Street (also known as Goldfish Street)

3.7. Goldfish Street is located in the northern section of Tung Choi Street, between Mong Kok Road and Nullah Road in Mong Kok. It is lined with many aquariums and pet shops that sell a wide variety of ornamental fish, aquarium products, pet supplies, as well as a range of pets, including cats, dogs, lizards, tortoises and frogs. Goldfish Street is a popular spot for shopping for ornamental fish, aquarium accessories and pets.

Fa Yuen Street

3.8. Fa Yuen Street is divided into three sections; one is from Argyle Street to Soy Street, which is "Sneakers Street" with dozens of shops selling sports shoes and sports goods; one is from Soy Street to Dundas Street with mostly restaurants in this section; one is from Mong Kok Road to Prince Edward Road West which is a stall area selling ready-made clothes, vegetables and fruits. The concentration of hawkers and on-street market activities has a long history on this street.

Mong Kok Flower Market

3.9. The history of the MFM begins at the time the Qing government ceded the Kowloon Peninsula to the United Kingdom. With foreigners who used to decorate their homes with flowers settled in Hong Kong and Kowloon, flower growers from the present-day New Territories came to Boundary Street to do business every day. Flower sales near Boundary Street gradually became a market, and Flower Market Road, Flower Market Path, Fa Yuen Street, Yuen Po Street, and Yuen Ngai Street were named in response to the MFM operation.

3.10. The MFM area mainly covers the area adjoining Flower Market Road, Yuen Ngai Street, Sai Yee Street and Playing Field Road. Over the years, the MFM area has developed from an on-street trading place to shop operations. To date, the MFM area has become a major flower wholesale and retail distribution centre with over 110 florists, offering an abundance of local and exotic blossoms, houseplants, garden supplies, etc. The MFM is now a favourite spot, it is naturally overflowing with visitors, especially during the festival periods, such as Lunar New Year and Valentine's Day.

3.11. The MFM area is identified as one of the key character streets in the YMDS and its local identity and characteristics should be embraced and enhanced by promoting street vibrancy and improving the public realm environment.

Mong Kok Stadium

3.12. Mong Kok Stadium, formerly known as the Army Sports Ground, was taken over by the former Urban Council for management in 1961. It is now under the management of the LCSD and is the major venue used by the Hong Kong Football Association for Hong Kong Premier League Cup competitions, international football matches such as the Asian Football Confederation Cup and training sessions for Hong Kong Football Representative Teams.

Tai Hang Tung Recreation Ground and Stormwater Storage Tanks

3.13. The historical map recorded in 1947 indicates that the Tai Hang Tung Recreation Ground was originally a Polo Ground and later converted into a Recreation Ground in 1982. Due to severe flooding in the area in 1997 and 1998, coupled with urbanization that increased the amount of surface runoff downstream, this site was selected for the construction of underground stormwater storage tanks because of its strategic location just above the bottleneck allowed for interception of the heavy flow. The project, with a capacity of 100,000m^3, was completed in September 2004.

Fa Hui Park

3.14. Back in 1947, the Government of Hong Kong allocated around 6,000ft^2 of land near the hillside to the north of Boundary Street to establish an official flower wholesale market (the current location of Fa Hui Park). The market, with over a thousand wooden houses, became commonly known as "Flower Market Hill" and "Flower Market Village" due to its bustling flower displays and flower fields. However, due to three major fire disasters in the “Flower Market Village” in 1951, 1955, and 1956, the former Urban Council decided in 1957 to redevelop the area into Fa Hui Park. The adjacent flower wholesale market was forced to relocate to Boundary Street outside the original site. In 1984, due to safety concerns, the flower wholesale market was moved southward from Boundary Street to the area around Flower Market Road.

Yuen Po Street Bird Garden

3.15. “Bird Street” was situated at Hong Lok Street in Mong Kok. It was once famous for its proliferation of stalls selling pet birds but was demolished due to urban development. To preserve the characteristics and spirit of “Bird Street”, the former Land Development Corporation (now known as the URA) built the Yuen Po Street Bird Garden in Yuen Po Street. It is a Chinese-style theme park, with about 70 stores selling various kinds of pet birds, bird seeds and related products.

Mong Kok Dawn Market

3.16. The Mong Kok Dawn Market (the Market) was originated in the 1950s and initially located on a slope and along the roadside outside Mong Kok Station (now known as Mong Kok East Station) on Luen Wan Street. In the early 1980s, due to the reconstruction of Mong Kok Train Station, the Market was relocated to its current location at the junction of Boundary Street and Flower Market Path. The Market is a mobile hawkers’ market, operated by a group of vendors/hawkers who start their businesses from around 5am until around 8am when the sunrises every day. During its heyday, the Market had over 100 vendor stalls, including street stalls and truck shops, renowned for retailing and wholesaling of goldfish. In addition to goldfish, fish feed, aquarium animals, aquarium equipment and supplies, small poultry, potted plants, and cooked food were also sold in the Market. The prices of goods at the Market are generally cheaper compared to many other places/shops. Over the time, the scale of Mong Kok Dawn Market has substantially declined. Although there are still over 40 stalls operating at weekends, the number of stalls has significantly reduced on weekdays. The vendors now primarily sell goldfish, aquarium animals, aquarium equipment and supplies, with a few stalls selling local snacks.

Local Grid Street Pattern

3.17. A historic map recorded in 1841 indicates that settlements were found near the Scheme area which was named Kowloon Tong in 1888. The settlements were found enlarging in 1904. With the operation of the Kowloon-Canton Railway in 1910 (renamed as the Mass Transit Railway (MTR) in 2007) and the establishment of the Town Planning Committee in 1922, a grid street pattern in Mong Kok (except Site B of the Scheme) began to take shape on the 1926 historic map, along with several main roads including Prince Edward Road West, Boundary Street, and Nathan Road. Settlements near the Scheme area became scattered along the railway on the 1928 historic map. The grid street pattern in Mong Kok has been completely developed in 1947 and maintained up to now. The grid street pattern has a long history and become one of the urban form characters of the area.

Historic Buildings

3.18. Numerous historic buildings that have shaped the local history of the area can be found, including:

190-204 and 210-212 Prince Edward Road West (Grade 2, URA's preservation-revitalisation project - Prince Edward Road West / Yuen Ngai Street (MK/02)) – a cluster of 10 pre-war buildings which have been revitalised for commercial and cultural uses.

130-132 Ki Lung Street (Grade 3) – completed in the late 1940s. The buildings hold social value due to their historical role in the commercial development of Sham Shui Po and their provision of affordable residential accommodation.

Lui Seng Chun (Grade 1 and Declared Monument) – completed in 1931. The ground floor was occupied by a Chinese bone-setter and herbalist medicine shop "Lui Seng Chun", and the upper floors were residential units.

1235 Canton Road (Grade 3) – built in 1930. It seemed to be one of a group of four shophouses, three of which (1231, 1233 and 1237 Canton Road) were demolished in the early 1960s.

1166 and 1168 Canton Road (Grade 3) – a pair of 4-storey tenement houses probably built in the 1930s. Typical as other pre-WWII shophouses, they have been used for commercial purposes on the ground floor and residential flats on the upper floors.

618 Shanghai Street – it is a preservation-revitalisation project (Shanghai Street / Argyle Street (MK/01)) of the URA, comprising a cluster of 14 buildings of 3- to 6-storey from Nos. 600 to 626 Shanghai Street. Among the buildings, 10 balcony-type tenement houses of 3- to 4-storey built

between 1920 and 1926 were rated Grade 2 historic buildings in 2010, while the remaining four post-war reinforced concrete buildings each of 6-storey were built between 1962 and 1964.

1 and 3 Playing Field Road (Grade 3) – the exact construction year cannot be ascertained, but from the land records during the Japanese Occupation (1941-1945), it is believed that they were built around 1932. These buildings were re-registered by the Japanese authorities in 1942.

729 Nathan Road (Grade 3) – built in 1929. During the Japanese Occupation, the building was re-registered by the authorities. The building is a typical pre-war verandah-type shophouse of 3-storey high with the front first-floor and second-floor verandahs projecting over the pavement and supported on columns to form a covered walkway in front of the ground-floor shop.

Old Kowloon Police Headquarters (Grade 2) – completed in 1925. It was used as temporary premises by the Diocesan Boys' School from 1926 to 1932, the Police Training School from 1932 to 1941, and the detention centre during the Japanese Occupation. It became the office of the Kowloon Police Headquarters from 1947 to 1975. One of the two blocks was demolished in 1975 for the construction of MTR Prince Edward Station.

Ex-Sham Shui Po Service Reservoir (Grade 1) – completed in 1904 on Chu Kau Shan (literally means "Bishop Hill") and regained attention in 2020 after being decommissioned for a few decades. Featuring European-style granite pillars and red brick arches imitating Roman civil engineering works, the structure shows Hong Kong's water supply history over the past 100 years.

177 and 179 Prince Edward Road West (Grade 3) – constructed in 1937 and re-registered by the Japanese authorities. They are common pre-war 4-storey high verandah shophouses with front verandahs projecting out over the pavement supported on columns to form a covered walkway, the ground floor for retails and the upper floor for flats.

Main Building, Diocesan Boys' School (Grade 2) – founded by the Anglican Church on Bonham Road on Hong Kong Island in 1869, the Diocesan Boys' School was named Diocesan Home and Orphanage. It became a boys' school in 1892, moved to its present site in 1926 and acquired its present name in the 1930s. During the Japanese Occupation, it was requisitioned by the Japanese Army as a military hospital and restored after the war and re-opened.

St. Teresa's Church (Grade 1) – found by Bishop Henry Valtorta in 1932. During the Japanese Occupation, the Church's pastors were allowed to pay services to the internees in the Argyle Street Prisoners-of-War Camp. In 1949, many Chinese missionaries settled in Hong Kong and joined the Church's team, enabling St. Teresa's Parish to run new schools and social welfare centres.

CLP Power Hong Kong Limited Administrative Building (Grade 1) – built between 1938 and 1940 as the headquarters to cater for the increasing electricity demand in Kowloon and New Territories after the CLP was established in Guangzhou in 1901 and later moved to Hong Kong.

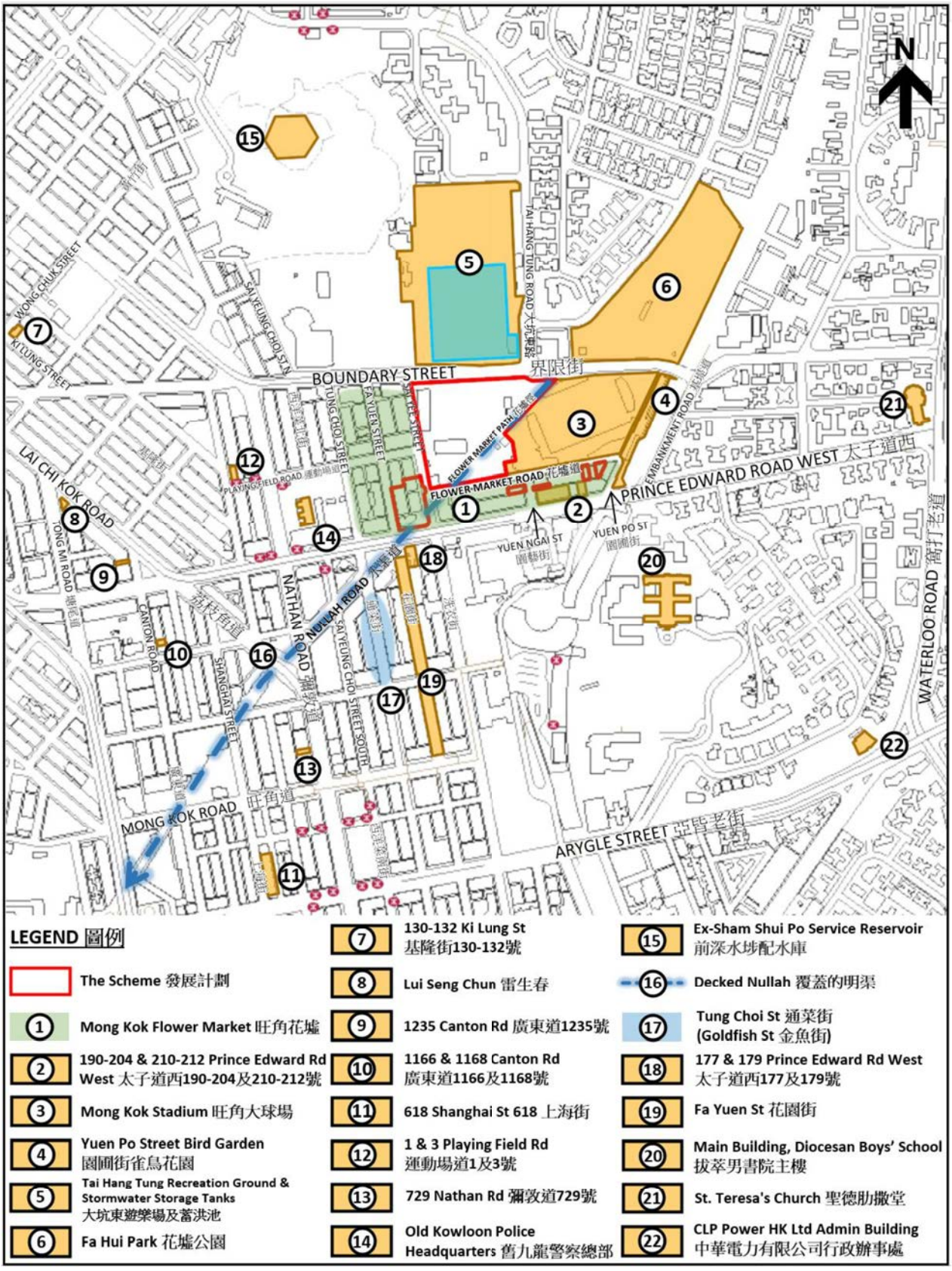


Figure 3.1 Places with Historical Background and Local Characters in Mong Kok and its Surrounding Area

Source: Geographic Information System on Hong Kong Heritage, as of November 2023.

4 POPULATION AND SOCIO-ECONOMIC CHARACTERISTICS

4.1. In preparation for this Stage 1 SIA, a combination of the 2021 Population Census results and the experience from other URA projects are also used to assess the population and socio-economic characteristics of the Scheme. The accommodation assessment is then based on the inspection of approved building plans and on-site non-obtrusive observation. Given the general and non-obtrusive nature of data sources available to carry out this Stage 1 SIA, the assessments derived should only be considered indicative and for reference use only and subject to the FS upon project commencement.

4.2. The Census and Statistics Department's website provides the 2021 Population Census results. Depending on the type of information, the most disaggregated data are down to various geographical division levels, including Tertiary Planning Units (TPU), District Council Constituency, Large Subunit Groups (LSG) and Small Subunit Groups (SSG).

4.3. The Scheme is within the TPU 222 and Mong Kok East Constituency (E14) (based on 2020 – 2023 Boundary Maps of District Council Geographical Constituencies) of the YTM District (**Figure 4.1** refers). Due to the unavailability of census data for the geographical constituencies of the District Council in the 2023 District Council Ordinary Election, this report adopts the existing data from the 2021 Population Census, which corresponds to the delineation of the 6th term of District Council (from 1 Jan 2020 to 31 Dec 2023).

4.4. The Scheme lies within the SSG Nos. 222/08, 222/09, 222/05, 222/10 and 222/31. It is also within the LSG Nos. 222/05, 222/08-10 and 222/31 (**Figure 4.2** refers). Despite the SSGs and the LSGs having the closest area coverage with the Scheme area, the SSGs and LSGs cover a wider area, which includes newer residential buildings, namely The Celebrity (164A Prince Edward Road West), Circle Garden (229 Sai Yee Street) and Flower Villa (2 – 8 Flower Market Road). As such, it may have different household composition and other socio-economic characteristics as compared to the buildings within the Scheme, which were completed between 1948 and 1960 (i.e. ranging from 63 to 75 years). Therefore, the data from the various geographical division levels should only be used for reference.

4.5. Based on URA's experience, the average household size of those within the Scheme is assumed to be around 2.1. The tenure split between owner-occupied and tenanted households is assumed to be 30:70 for this Stage 1 SIA. Site observation indicates some existing units in the Scheme appear to have been converted into sub-divided units. Given similar sub-division situations were found in various past URA projects, it is estimated that the degree of sharing in

the Scheme is about 2 based on the URA experience. Actual numbers will be ascertained as far as practicable at the Stage 2 SIA.

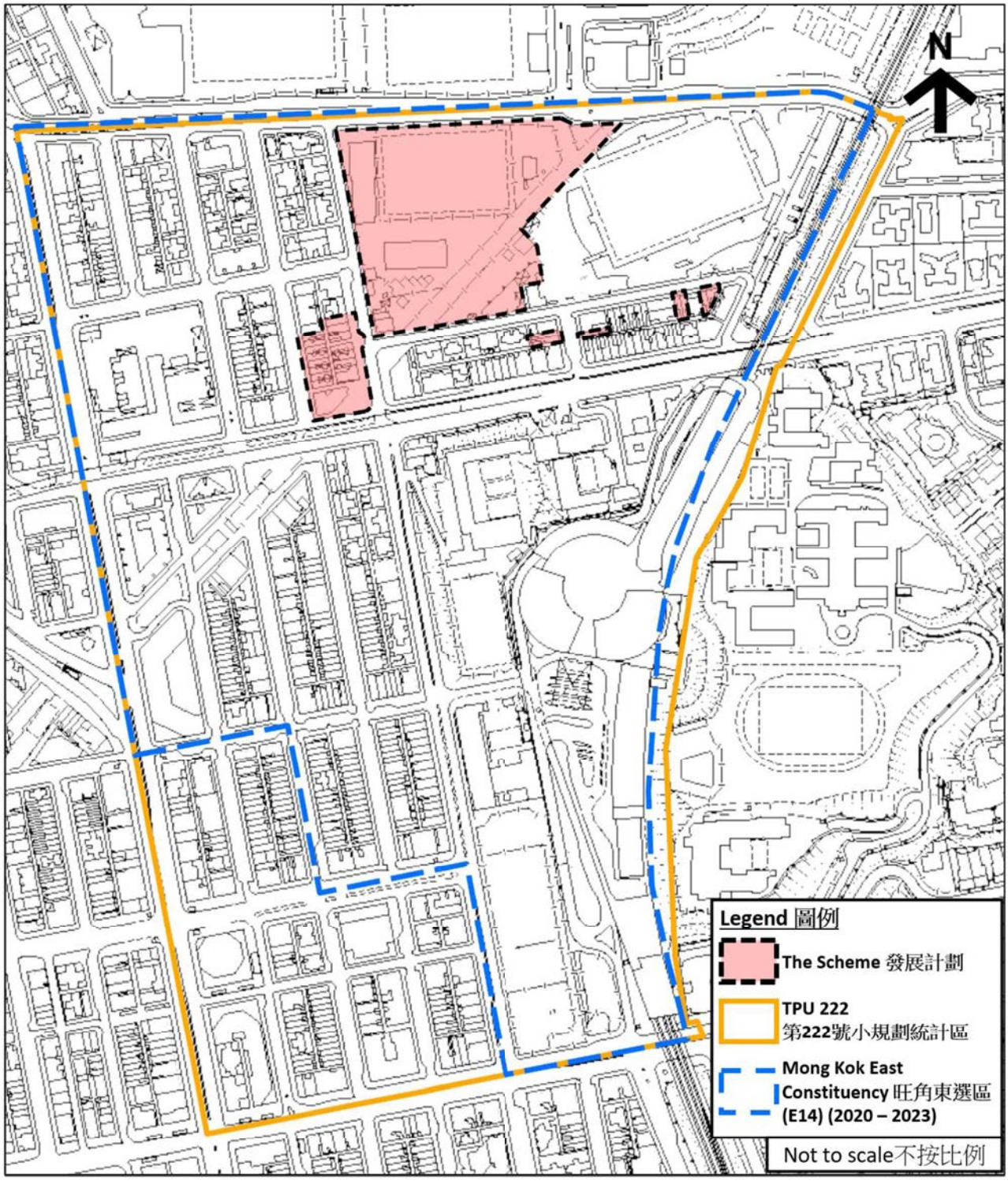


Figure 4.1 Boundaries of TPU 222 and Mong Kok East Constituency (E14) (2020 – 2023)*

** The constituency boundary of the Mong Kok East Constituency (E14) from the 6th term of District Council (from 1 Jan 2020 to 31 Dec 2023) is adopted in this report, due to the unavailability of census data of the 7th term of District Council.*

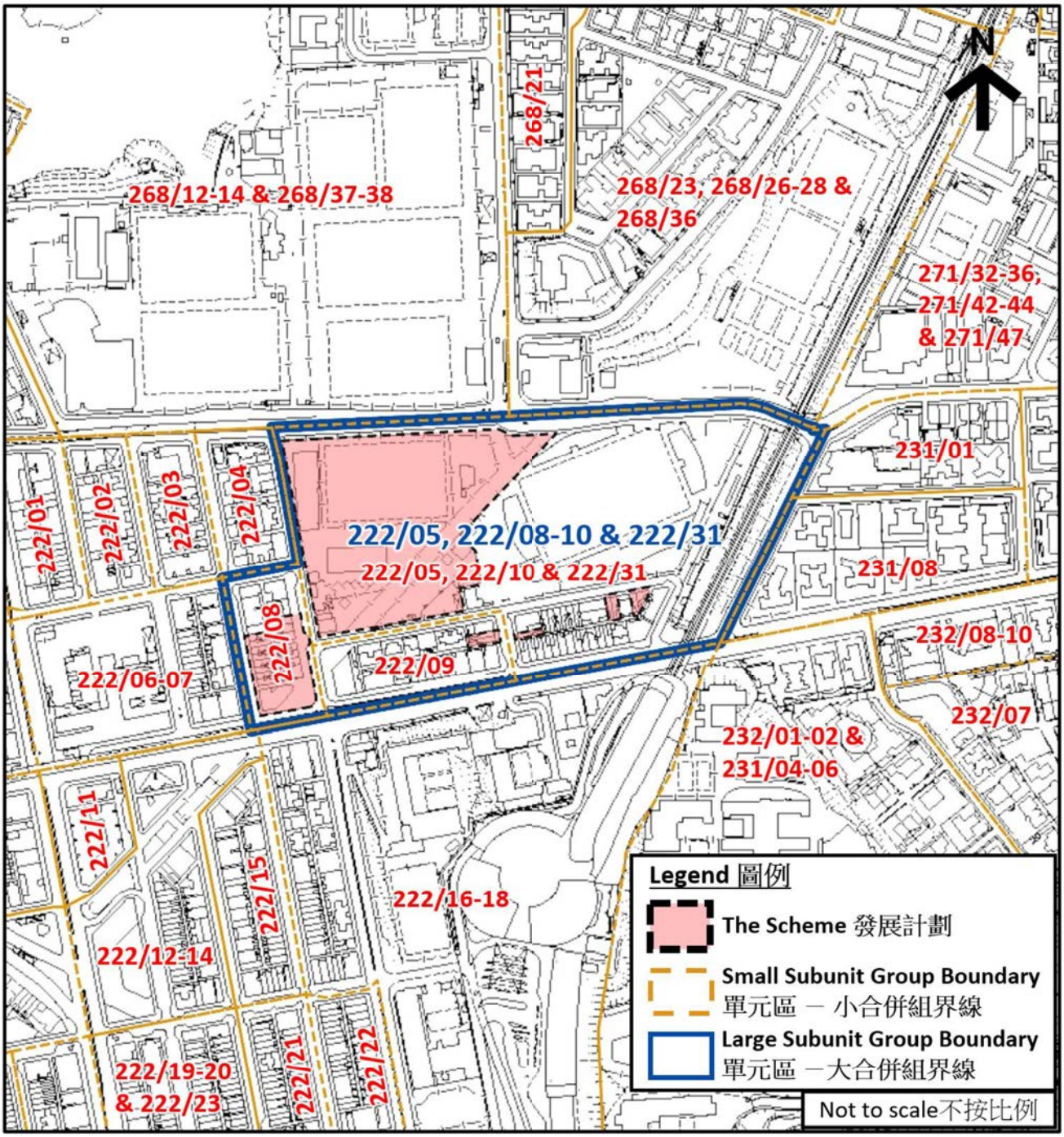


Figure 4.2 Subunits Boundaries Covering the Scheme

Overview of Housing & Population Characteristics of the YTM District

4.6. As revealed in the 2021 Population Census, the YTM District had a population of about 310,647. In terms of monthly household income, the Mong Kok East Constituency (E14) (2020 – 2023) had a median monthly domestic household income of $20,180, which was lower than the median of $26,080 for the YTM District. The household income level, including the number of households with Comprehensive Social Security Assistance (CSSA) Recipients, and the social characteristics of the affected in the Scheme will be ascertained in the FS upon commencement.

4.7. According to the 2021 Population Census, private housing blocks were the major type of living quarters in the YTM District (about 90%) which was much higher than the territorial percentage of about 53%. On the other hand, there were only about 6% of living quarters in Public Rental Housing (PRH) / Subsidized Home Ownership Housing (SHOH) which was much lower than the territorial average of 46%. The remaining living quarters (about 4%) were in other types of housing. There was no PRH or SHOH within the Scheme, TPU 222 and Mong Kok East Constituency (E14) (2020 – 2023).

Household Composition

4.8. Under the approved General Building Plans (GBPs) of the buildings in the Scheme, the total number of upper-floor residential units (excluding ground-floor units for shops within the Scheme is 143 units. Based on the 2021 Census, the degree of sharing of the YTM District and territory was 1.0 (i.e. one household per unit). However, based on the URA experience, the degree of sharing within redevelopment projects is generally about 2 due to the existing sub-divided units. By adopting the degree of sharing of 2, the total number of households within the Scheme is estimated to be about 275 households with overcrowded and unsatisfactory living conditions which are commonly found in the URA redevelopment projects. The actual number of domestic units may be different from that under the approved GBPs. The household composition will be verified in the FS upon commencement.

4.9. According to the 2021 Census, the overall proportion of singleton (33%), doubletons (26%) and 3-person or above households (41%) in the LSG (which was the closest area coverage as the Scheme) were similar to the proportions under the various geographical division levels (**Table 4.1** refers), except the territorial level. The actual proportion of household types in the Scheme will be verified in Stage 2 SIA.

4.10. Based on the Census results and the URA experience as stated in paragraph 4.5 above, the average household size within the Scheme is estimated to be around 2.1, which is lower than the average household sizes of the YTM District (2.5) and the territory (2.7). The assessment

adopts a lower household size to reflect the presence of lots of sub-divided units and/ or cubicle apartments in previous URA projects, which can be assumed to be occupied by some singleton and doubleton households.

Table 4.1 Proportions of Singletons, Doubletons, and 3-person or above Households by Geographical Division Levels

	Singletons	Doubletons	3-person or above households
LSG 222/05, 222/08-10 and 222/31	**33%**	**26%**	**41%**
TPU 222	34%	31%	35%
Mong Kok East Constituency (E14) (2020 – 2023)	33%	31%	36%
YTM District	30%	29%	41%
Territorial	20%	29%	51%

Population

4.11. According to paragraph 4.8, the estimated number of households within the Scheme is about 275. With the estimated average household size of 2.1, the number of residents living within the Scheme is estimated to be around 580 persons. The Stage 2 SIA will verify the number of households, living quarters and population affected.

4.12. **Table 4.2** compares the distribution of the percentage of the working population and elderly residents (aged 65 or above) among the various geographical division levels. The LSG data, which covers the Scheme, indicates that the percentage of the working population was similar to that of the YTM District and territorial level. Besides, the percentage of elderly in the LSG was slightly lower than the TPU and Mong Kok East Constituency (E14) (2020 – 2023), but slightly higher than the wider district/ territory. Particular attention would be paid to elderly residents and their needs when the Scheme is implemented.

Table 4.2 Percentages of Working Population and Elderly Residents by Geographical Division Levels

	Percentage of working population	Percentage of elderly residents
LSG 222/05, 222/08-10 and 222/31	**71.0%**	**20.1%**
TPU 222	67.3%	23.5%
Mong Kok East Constituency (E14) (2020 – 2023)	66.1%	24.5%
YTM District	70.5%	17.9%
Territorial	69.5%	19.6%

4.13. As presented in **Table 4.3**, the percentages of ethnic minorities residing in the LSG, TPU 222 and Mong Kok East Constituency (E14) (2020 – 2023) were similar to the territorial percentage, while the percentage of the YTM District was above 17% which was higher than the percentages of all levels. Nevertheless, special attention would be paid to residents of ethnic minorities and their needs when the Scheme is implemented. The FS and Stage 2 SIA will ascertain the actual number of households and residents of ethnic minorities as far as practicable.

Table 4.3 Percentages of Ethnic Minorities by Geographical Division Levels

	Percentage of ethnic minorities
LSG 222/05, 222/08-10 and 222/31	**10.4%**
TPU 222	9.1%
Mong Kok East Constituency (E14) (2020 – 2023)	8.1%
YTM District	17.2%
Territorial	8.4%

4.14. **Table 4.4** shows the comparison of percentages of owner-occupiers and tenanted occupiers among the various geographical division levels. In accordance with the LSG data, the percentages of owner-occupiers and tenanted occupiers were very evenly distributed, i.e. 50:50, which was also similar to the data under various geographical division levels. Nevertheless, based on the URA's experience obtained from previous redevelopment projects, a higher proportion of tenanted households (70%) is assumed in the Scheme in consideration of the existence of sub-divided units which are mainly for rental in the tenement buildings in the older district. The composition will be ascertained in the FS and reported in the Stage 2 SIA.

Table 4.4 Percentages of Owner-Occupiers and Tenanted Occupiers by Geographical Division Levels

	Percentage of owner-occupiers	Percentage of tenanted occupiers
LSG 222/05, 222/08-10 and 222/31	**50%**	**50%**
TPU 222	46%	54%
Mong Kok East Constituency (E14) (2020 – 2023)	50%	50%
YTM District	48%	52%
Territorial	49%	51%

4.15. As shown in **Table 4.5**, higher median monthly rents of all housing types were recorded in the LSGs than in the TPU, Constituency, YTM District and the whole territory. It may be due to the absence of public rental housing in the LSGs. The median rents of private permanent housing at the LSG level are also higher than all other geographical levels. This is probably due to the proximity to (1) two MTR stations, namely Mong Kok East Station and Prince Edward Station,

(2) several large-scale POSs, namely the Boundary Street Recreation Ground, Mong Kok Stadium, Tai Hang Tung Recreation Ground and Fa Hui Park, leading to a significant increase in median monthly household rents, and (3) the existence of several relatively newer residential buildings within the LSGs as stated in paragraph 4.4 that have higher rental prices. Besides, median monthly household rents of private permanent housing at TPU, Constituency and YTM District levels recorded a much lower median monthly household rents in comparison with LSGs and the whole territory. This is probably caused by the relatively poor building conditions and living environment of the Scheme's vicinity as compared to the general private housing and therefore the median rents were lower.

Table 4.5 Median Monthly Household Rents by Geographical Division Levels

	Median monthly household rents of all housing types	**Median monthly household rents of private permanent housing**
LSG 222/05, 222/08-10 and 222/31	**$13,000**	**$13,000***
TPU 222	$6,500	$6,500*
Mong Kok East Constituency (E14) (2020 – 2023)	$7,000	$7,000*
YTM District	$7,000	$7,200
Territorial	$2,900	$11,000

** As the housings in LSG 222/05, 222/08-10 and 222/31, TPU 222 and the Constituency do not include public housings, the median monthly household rents of private permanent housings are assumed to be the same as the ones of all housing types.*

4.16. In conclusion, the presence of newer residential developments, namely The Celebrity (164A Prince Edward Road West), Circle Garden (229 Sai Yee Street) and Flower Villa (2 – 8 Flower Market Road) within the LSGs may have different household compositions, which mean such data should be for reference only.

4.17. The Stage 2 SIA to be conducted upon project commencement will give clearer and more accurate information concerning those living and working within the Scheme.

5 HOUSING AND ENVIRONMENTAL CONDITIONS

Existing Uses

Sites A1 – A5

5.1. Based on non-obtrusive site observations conducted in November 2023, buildings within Sites A1 – A5 of the Scheme are mainly for commercial uses on the ground floor and for domestic use on the upper floors. There are also some non-domestic uses noticed on the upper floors of the residential buildings along Sai Yee Street and Fa Yuen Street at Site A1, including a foot massage parlour, a boxing training centre, several guesthouses, a flower workshop, a Buddhist organization and a church, i.e., the Evangelical Free Church of China – Tin Chuen Church.

Site B

5.2. Site B mainly comprises sports, recreational and GIC facilities. Existing GIC buildings within Site B include Boundary Street Sports Centres Nos. 1 and 2, CLP Power Hong Kong Limited Boundary Street Sports Ground Substation, RCP and PT. The Boundary Street Sports Centres Nos. 1 and 2 are operated by the LCSD, providing a wide range of leisure facilities and monthly sports and recreational programmes for the public. The RCP and PT are managed by the Food and Environmental Hygiene Department (FEHD). Besides, Boundary Street Recreation Ground, Boundary Street Amenity Plot, LCSD Boundary Street Plant Nursery, and Sai Yee Street Children's Playground are the existing open space managed by LCSD within the Scheme area.

5.3. There is an existing northeast-southwest pavement included in Site B, i.e. Flower Market Path, connecting Boundary Street and Flower Market Road.

5.4. The detailed uses of the units found within the Scheme will be verified in the FS and reported in the Stage 2 SIA as far as practicable. The replanning and restructuring of the GIC buildings, road sections and other land uses are detailed in the Planning Report of the draft DSP.

Building Age

5.5. The Scheme (at Site A1 to A5 only) consists of six clusters of residential buildings ranging from 4 – 10 storeys high, with the majority of the buildings not more than 5 storeys. The buildings were completed between 1948 and 1960 (i.e. aged from 64 - 76), with the majority being more than 69 years old. According to GBP records, most of the buildings (about 78%) are without lifts. For GIC facilities within Site B of the Scheme, the operations of the Boundary Street Sports Centres Nos. 1 and 2 were commenced in 1976 and 1987 respectively. The completion years of the RCP and the PT cannot be ascertained.

Building and Living Conditions

5.6. Based on the latest building conditions recorded by URA's Building Care Management Information System (BCMIS), the building blocks within the Scheme are in different building conditions, ranging from "Varied" to "Acceptable". 2 out of the 23 buildings within Site A of the Scheme (about 9%) are of "Varied" condition. Based on the URA's experience and the consultant's advice, major repair works will be required for buildings of "Varied" condition as their structural elements, components, finishes and facilities are observed in decay condition due to lack of building repairs and ongoing maintenance. 21 out of the 23 buildings (about 91%) are of "Acceptable" condition, probably because these buildings have recently completed/ carrying out rehabilitation works from 2019 to 2023. Minor defects are found in the structural elements. Appropriate building repairs and ongoing maintenance works will be required to maintain the habitability and avoid further deterioration of the building. Some structures on the roof of the buildings and at the back lanes in the Scheme were suspected to be Unauthorized Building Works. Except for residential buildings at 215, 217, 219 and 221 Sai Yee Street and 222G – 222H Fa Yuen Street, the rest of the private buildings within the Scheme are without lifts (about 78%).

5.7. According to Home Affairs Department ("HAD")'s "Database of Private Buildings in Hong Kong" as of January 2024, 5 of the 23 building blocks within Sites A1 – A5 of the Scheme (about 22%) are "3-nil" buildings without building management bodies.

5.8. According to the latest Buildings Department's records held by the URA, 18 buildings (about 78%) within Sites A1 – A5 of the Scheme have outstanding statutory orders on Drainage Works under S28 of the Buildings Ordinance (Cap. 123) ("the Ordinance") and Mandatory Building Inspection Scheme under S30B of the Ordinance. Besides, these buildings also received Fire Safety Directions (FSDN) under the Fire Safety (Buildings) Ordinance.

5.9. Twelve (12) building blocks have completed building rehabilitation works of Operation Building Bright 2.0 under the Integrated Building Rehabilitation Assistance Scheme (IBRAS) within the Scheme. Five (5) building blocks within the Scheme have applied for the Common Area Repair Works Scheme under the IBRAS to carry out common area repair works. It is understood that the IBRAS works comprise mainly repairing defects (e.g. major cracks, spalling) in common or public areas of the buildings. Repair works to the interior of private units are not included. Based on URA's experience in rehabilitation works, even buildings that have undergone repair work need to undertake comprehensive building rehabilitation regularly to avoid deterioration. Appropriate building repairs and ongoing maintenance works will be required to maintain the habitability and avoid further deterioration of the building. Besides, four buildings within the

Scheme have applied for the Mandatory Building Inspection Subsidy Scheme (MBISS). One (1) building block within the Scheme has applied for the Fire Safety Improvement Works Subsidy Scheme (FSWS).

5.10. Non-obtrusive site observations conducted in November 2023 found that some of the original units as shown in the approved GBPs were suspected to be sub-divided into smaller units, which will be ascertained in the FS.

Traffic and Pedestrian Network

5.11. There are two primary distributors (i.e. Boundary Street and Prince Edward Road West) in east-west directions to the north and the south of the Scheme. Besides, there is one district distributor (Sai Yee Street) in north-south directions and four local distributors (Fa Yuen Street, Flower Market Road, Yuen Ngai Street and Yuen Po Street) in east-west or north-south directions surrounding the Scheme. With the MFM concentrated mainly at the street blocks along Flower Market Road and Prince Edward Road West, traffic congestion often appears along the sections of Sai Yee Street and Fa Yuen Street abutting Site A1, and Prince Edward Road West and Embankment Road especially during weekends and festive days, such as Lunar New Year and Valentine's Day when people come from other districts by private cars for purchasing flowers at ground-floor shops.

5.12. The high volume of traffic also leads to illegal parking issues in the community. While there are two public vehicle parks at Grand Century Place and Mong Kok Stadium, as well as some on-street parking spaces along a few inner streets in the vicinity, it is common to observe vehicles occupying public roads, which exacerbates traffic congestion. Illegal parking is commonly found in the area and creates traffic congestion and an unpleasant walking environment that contributes to pedestrian-vehicle conflict.

5.13. The MFM area is distinctive as described in the YMDS that attracts visitors from other districts and creates a high level of pedestrian flow. The MTR Prince Edward Station and Mong Kok East Station are located within 5 - 10 minutes walking distance away from the MFM area. Pedestrian flows in the MFM area concentrate mainly along Flower Market Road, Yuen Ngai Street, Yuen Po Street, the portion of Sai Yee Street near the Scheme and Playing Field Road.

5.14. Pedestrian connectivity and environment in the MFM area is poor, as the pavements and public roads within the Scheme area are always occupied by goods placed by some shop operators or illegal parking, endangering public and traffic safety in particular when the pedestrian flow in the area is anticipated to increase during Lunar New Year and Valentine's Day, resulting in a congested and unpleasant walking environment.

5.15. Several sports and recreational facilities are observed at the Tai Hang Tung Recreation Ground and Fa Hui Park located to the immediate north and northeast of Site B across Boundary Street. Users of these facilities coming from the south could only access through the at-grade crossing at the junction of Boundary Street and Tai Hang Tung Road.

Environmental and Hygiene Conditions

5.16. With Prince Edward Road West and Boundary Street being the primary distributors in the area and several distributor roads in the surroundings, the Scheme is envisaged to be subject to some traffic noise and air pollutants generated from these heavily trafficked roads.

5.17. The portions of Sai Yee Street, Flower Market Road, Yuen Po Street and Yuen Ngai Street within the Scheme are often occupied by goods, used for loading/unloading activities or illegal parking, creating nuisances and an unpleasant environment to pedestrians and residents. The back lanes within the Scheme are commonly used for the storage of goods or personal stuff, causing potential hygienic and safety issues.

Planning Intention under the Outline Zoning Plan (OZP) and Major Planned Development in the Vicinity

5.18. The YMDS recommended several amendments to the Mong Kok OZP to tackle urban renewal issues and incentivise private sector participation in the urban renewal process. These amendments included but not limited to: (1) rezoning of street blocks bounded by Prince Edward Road West, Sai Yee Street, Flower Market Road and Yuen Po Street to "Other Specified Uses" annotated "Mixed Use" ("OU(MU)") with stipulation of BHR of 115mPD; (2) relaxation of BHR for "Residential (Group A)", "Residential (Group A)3" and "Residential (Group E)" zones to 115mPD; and (3) relaxation of BHR for "Commercial" zones on both sides of Nathan Road to 140mPD and 160mPD. These amendments were approved by the Chief Executive in Council on 30 May 2023 and were incorporated into the current Approved Mong Kok OZP no. S/K3/36.

5.19. Building height bands in the area generally steps down from the "C" zones along Nathan Road with BHRs of 140 and 160mPD to the "R(A)", "R(E)" and "OU(MU)" zones with BHR of 115mPD towards the east and west, with exemptions like the planned development with BHR of 320mPD on the "C(4)" zone at Sai Yee Street.

5.20. The Scheme is zoned "R(A)" at Site A1 of and "OU(MU)" at Sites A2 to A5. Site A also covers pavement areas shown as 'Road'. Site B covers areas zoned "Government, Institution or Community" and "Open Space", and the Flower Market Path shown as 'Road'. Both "R(A)" and "OU(MU)" zones are intended primarily for high-density residential developments, with commercial uses always permitted on the lowest three floors of the buildings at the "R(A)" zone

and flexibility allowed for a combination of various compatible uses at the "OU(MU)" zone. The area where the Scheme locates is a residential neighbourhood with commercial uses on the group floor.

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

6.1. The Scheme is located in an older part of the Mong Kok area within the YTM District, and its vicinity is predominantly mixed with commercial and residential developments, open spaces, and GIC facilities. Most of the ground-floor commercial and residential buildings in the area are mainly commercial uses.

6.2. To the immediate south of Site B is part of the MFM area, where Sites A1 - A5 of the Scheme are located. It consists of clusters of tenement buildings and modernized residential buildings with ground-floor shops primarily used for florists, and upper floors mainly for domestic uses.

6.3. To the immediate east of the Scheme is the Mong Kok Stadium, which provides an international standard natural grass pitch. It is a major base for staging high-level local soccer matches and other events. In Hong Kong, there are two venues that meet the Asian Football Confederation (AFC) standards for hosting AFC-sanctioned international matches, one of which is the Mong Kong Stadium.

6.4. To the immediate north and northeast of the Scheme across Boundary Street are the Tai Hang Tung Recreation Ground and Fa Hui Park. They provide spaces for active and passive recreational activities. Fa Hui Park has been one of the venues of Lunar New Year fairs in Hong Kong, where wet goods, dry goods, and fast food are sold. It also hosts Farmfest, which offers local agricultural products, and the Hong Kong Food Fiesta, where special snacks, health food, ginseng, and dried seafood are sold.

6.5. As mentioned in Chapter 3 above, the MFM area is a renowned district for florists. Local residents, as well as outsiders, often visit the MFM area to buy fresh flowers or horticultural accessories and tools. Site observation conducted in November 2023 found approximately 116 ground-floor florists within the area. Among these, about 20 shops are located within the Scheme, accounting for about 17%.

6.6. Based on non-obtrusive observation conducted in November 2023, about 33 ground-floor shops were identified within the Scheme area at Sites A1 to A5. No ground-floor shop was found at Site B. Among these, 20 ground-floor shops were florists (about 61%), 8 ground-floor shops were restaurants or food retails (about 24%), 1 shop was suspected vacant, and the remaining 4 shops were of different types. The addresses and business activities on the ground floor of buildings within the Scheme are listed in **Table 6.1** below. **Figure 6.1** shows the distribution of florists on the ground floor within the Scheme area.

6.7. In addition, some business activities were observed on the upper floors of the buildings within the Scheme based on non-obtrusive observations conducted in November 2023, including a foot massage parlour, a boxing training centre, guesthouses, an art museum, a flower workshop, a Buddhist organization and a church. The exact number and business nature of the ground-floor and upper-floor uses within the Scheme will be verified in the FS upon commencement of the Scheme and will be reported in the Stage 2 SIA.

Table 6.1 Ground-Floor Business Activities Observed within the Scheme (Sites A1 - A5)

Site Name	No.	Address	Current Use*
A1	1.	215 Sai Yee Street	Florists
	2.	217 Sai Yee Street	Florists
	3.	219 Sai Yee Street	Florists
	4.	221 Sai Yee Street	Florists
	5.	223 Sai Yee Street	Florists
	6.	225 Sai Yee Street	Church
	7.	227 Sai Yee Street	Church
	8.	224 Fa Yuen Street	Eatery
	9.	224A Fa Yuen Street	(Suspected vacant)
	10.	224B Fa Yuen Street	Eatery
	11.	224C Fa Yuen Street	Eatery
	12.	226 Fa Yuen Street	Eatery
	13.	226A Fa Yuen Street	Florists
	14.	228 Fa Yuen Street	Eatery
	15.	230 Fa Yuen Street	Eatery
	16.	152A – D Prince Edward Road West, 222G – H Fa Yuen Street	Bakery
	17.		Florists
	18.		Florists
	19.		Florists
	20.		Florists
	21.		Florists
	22.		Pharmacy
	23.		Coffee shop
	24.	Back lane of 152A – D Prince Edward Road West, 222G – H Fa Yuen Street	Florists
	25.		Barbershop
A2	26.	1 Yuen Ngai Street	Florists
	27.	3 Yuen Ngai Street	Florists
A3	28.	2 Yuen Ngai Street	Florists
A4	29.	58 Flower Market Road	Florists
	30.	60 Flower Market Road	Florists
A5	31.	66 Flower Market Road	Florists
	32.	68 Flower Market Road	Florists
	33.		Florists

(Based on non-obtrusive observation conducted in November 2023)
** Nature/ details of business activities are subject to FS and Stage 2 SIA*

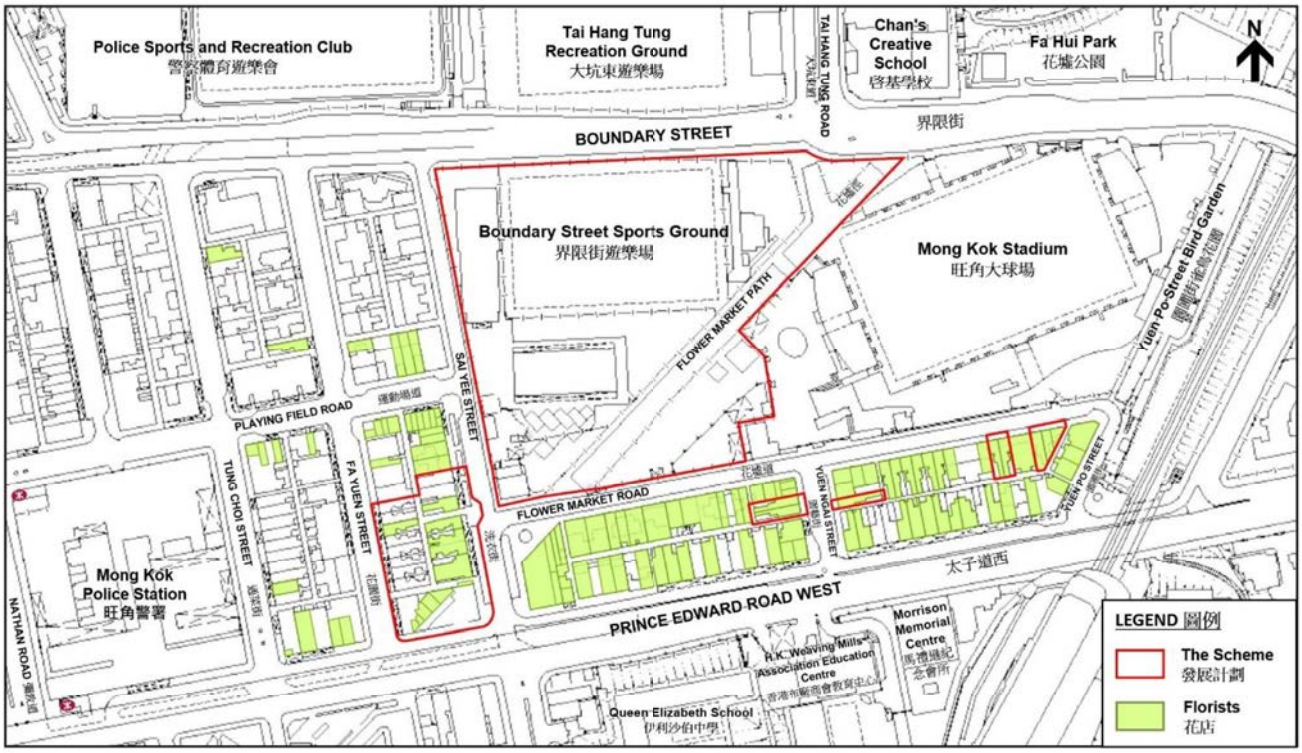


Figure 6.1 Distribution of Ground-Floor Florists within and in the Vicinity of the Scheme (based on site visits in November 2023)

Florist Operators and Customers Surveys for Mong Kok Flower Market

6.8. With the aims of understanding the concerns of stakeholders and enhancing the local characters of the MFM area, URA conducted two opinion surveys in January 2024, targeted the florist operators and customers of the MFM, respectively. The two surveys would help to identify the urban renewal needs of the MFM area and any potential social impacts to the stakeholders of the MFM area, and formulate necessary mitigation measures. The two surveys successfully interviewed a total of 63 business operators of the florists and 728 customers, respectively.

Survey Results (Florist Operators)

6.9. First of all, in terms of overall business conditions, the three most common problems that florist operators interviewed considered as hindrances to their operations were: (i) lack of spaces to display more goods, (ii) insufficient parking spaces, and (iii) lack of places for loading and unloading goods. Regarding the issue of (i) lack of spaces to display more goods, more than 80% of the surveyed florist operators considered that there is an urgent need for improvement. As for the issue (iii) concerning the places for loading and unloading goods, over 80% of the florist operators interviewed expressed that there was inadequate legal loading and unloading bays near their stores. This result reflects that there is a demand of more loading/ unloading bays for vehicles in the MFM area.

6.10. In terms of satisfaction with various aspects of business operations in the MFM, the florist operators interviewed were mainly very dissatisfied/dissatisfied with the following aspects: (i) the current pavement design in the MFM was too narrow, (ii) lack of spaces for storing and displaying goods, (iii) lack of opportunities for business expansion, and (iv) insufficient provision of loading and unloading facilities.

6.11. In terms of views on urban renewal, assuming that they would be affected by urban renewal projects, all interviewed florist operators, except for one who planned to close business, expressed their desire to continue the businesses. In addition, the majority of these operators hoped that URA could provide them with assistance in the following ways: (i) offering compensation or relocation allowances, (ii) helping them find new shops within the same district / in other districts to continue operations without the need for relocation, and (iii) expediting the project timeline to minimize disruption to their businesses. If relocation becomes necessary due to reconstruction, nearly 90% of the surveyed florist operators who planned to continue businesses expressed their preference for operating in the vicinity near the MFM.

Survey Results (Customers)

6.12. In terms of shopping habits, over half of the surveyed 728 customers expressed that they visited MFM by taking the MTR, indicating the importance of the pedestrian network between the MTR stations and MFM. Furthermore, nearly all of the customers who chose to drive to MFM mentioned that the existing parking spaces within MFM were insufficient, indicating the need for additional public parking facilities in the MFM area.

6.13. In terms of opinions regarding the current state of the MFM and its surrounding environment, the interviewed customers expressed the following 4 most dissatisfied aspects: (i) overcrowding, (ii) poor pedestrian environment, (iii) lack of resting area, and (iv) insufficient parking spaces. Regarding the issue of (ii) poor pedestrian environment, more than 70% of the interviewed customers considered that improvements would be needed for the pedestrian environment in the MFM area. Concerning the issue of (iv) insufficient parking spaces, over half of the interviewed customers considered that the traffic or road facilities in the MFM need improvements. Additionally, more than 90% of the interviewed customers agreed that more parking facilities should be provided near the MFM, reflecting a strong demand for parking spaces among the customers of MFM.

Overall Recommendations from the Interviewees (Florist Operators and Customers)

6.14. In terms of suggestions for improving the facilities and amenities of the MFM, the majority of the interviewed florist operators and customers recommended (i) providing public vehicle park and loading/unloading areas near MFM, and (ii) widening pedestrian pavements / increasing space for pedestrians. In addition, some of the interviewed florist operators suggested (iii) increasing / improving the resting areas within MFM by providing small parks / gathering spots / seats.

6.15. In terms of suggestions for enhancing the characteristics of MFM, both interviewed florist operators and customers expressed that the following three recommendations would greatly improve the characteristics of MFM: (i) improving the design of public spaces surrounding the MFM to create the theme of "flower viewing hotspots", (ii) introducing more varieties of shops / malls / restaurants to facilitate other forms of entertainment/activities, and (iii) removing fences separating the MFM and its surrounding public spaces to allow easier access and create a more spacious and integrated visual comfort.

Relevant Recommendations under the Scheme

6.16. Under the "integrated planning approach" adopted in the Scheme, it is believed that some of the urban renewal suggestions proposed in the Scheme can address the opinions and concerns of some stakeholders of MFM. According to interviewed florist operators, there is a lack of opportunities for business expansion in the MFM. The proposed retail frontage and other retail floor areas of the Scheme will provide opportunities for them to expand their businesses. Some interviewees have expressed dissatisfaction with the current pedestrian facilities in MFM. The proposed pedestrian facilities in the Scheme aim to enhance the connectivity with the surrounding areas, creating a multi-level pedestrian network and improving the existing pedestrian environment in MFM. Additionally, URA will explore the feasibility of extending the proposed underground pedestrian walkway within the Scheme to the direction of MTR Prince Edward Station, aiming to enhance the connectivity between MFM and the public transportation network and echo with the recommendations of YMDS. The Scheme also includes several recommendations such as shaping MFM into a distinctive "flower viewing hotspots", providing an underground public vehicle park to increase parking spaces, constructing pedestrian facilities to improve accessibility in the MFM area, and removing fencing between MFM and its surrounding public spaces to enhance connectivity. These suggestions will further address the existing issues of MFM and enhance the user experience for stakeholders.

6.17. URA will refer to the data and opinions collected from the two surveys and, after the commencement of the Scheme, gather information and feedback from those affected by the

Scheme through SIA questionnaires and the "Project Engagement" Programme, so as to propose practical and feasible mitigation measures. For example, the Social Service Team (STT) will provide assistance to those in need after the commencement of the Scheme (details in **Chapter 8** of this SIA1) in order to minimize the impacts on the stakeholders of MFM, particularly florist operators, and enhance the local characteristics of the MFM and promote its development.

7 RECREATIONAL, AMENITY, COMMUNITY AND WELFARE FACILITIES

7.1. **Figure 7.1** shows the locations of various existing POSs and GIC facilities within the 500m radius area of the Scheme. Boundary Street Recreation Ground, Sai Yee Street Children's Playground and Boundary Street Amenity Plot are located at Site B within the Scheme. Adjoining the Scheme area, Tai Hang Tung Recreation Ground and Fa Hui Park are located to the immediate north and northeast across Boundary Street. Besides, the Mong Kok Stadium is located to the immediate east of the Scheme.

7.2. The Boundary Street Recreation Ground is part of the Scheme area, which provides a variety of sports and recreational facilities, including three outdoor table tennis tables, a children's playground, a nursery and a recreation ground (11-a-side soccer pitch) which can also be used for playing hockey. There are two 2-storey buildings, i.e. the Boundary Street Sports Centres Nos. 1 and 2, to provide indoor sports venues including basketball courts, volleyball courts, badminton courts, squash courts, table tennis tables, and activity rooms. The Boundary Street Recreation Ground has two entrances, where the west entrance is from Sai Yee Street and the south entrance is from the Flower Market Path.

7.3. The LCSD Boundary Street Plant Nursery, which is fenced for plant care and storage, acts as a supporting role to other nurseries and is a training venue for LCSD's horticultural education programmes. Individuals or general public can only visit the plant nursery upon applications under the programme, such as Primary School Guided Visits Programmes. During these visits, pupils will be guided to see facilities in nurseries and various methods of plant propagation will be demonstrated. Pupils will also have the opportunity to practice seeding and cutting by themselves.

7.4. To the immediate north across Boundary Street is the Tai Hang Tung Recreation Ground which covers about 47,000m^2 It provides two 11-a-side soccer pitches, one rugby pitch, one 7-a-side soccer pitch, two gate ball courts, a jogging track, one playground and one sitting-out area. It has four entrances, the north entrance is from Tong Yam Street, the east entrance is from Tai Hang Tung Road, the west entrance is from the pathway through Sai Yeung Choi Street North and the southwest entrance is from Boundary Street.

7.5. To the immediate northeast across Boundary Street is the Fa Hui Park, which covers about 34,800m^2 It provides two 7-a-side soccer pitches, three basketball courts, four volleyball courts and one playground. It has four entrances; the north and west entrances are from Tat Chee Avenue and the south and southwest entrances are from Boundary Street.

7.6. To the immediate east across the Flower Market Path is the Mong Kok Stadium which covers 24,000m^2 and was built in 1961. It provides spectator stands with 6,600 seats, 127 VIP seats, 42 wheelchair spaces and a car park with 20 parking spaces (16 for private cars, one for persons with disabilities, 2 for coaches and 1 for motorcycles). It has several entrances in different directions; the north entrances are from Boundary Street, the west entrance is from the Flower Market Path and the south entrances are from Flower Market Road.

7.7. Major GIC facilities within a 500m radius of the Scheme include the Hong Kong Society for the Protection of Children and the Tai Hang Tung Community Centre. There are also several educational facilities, mainly primary and secondary schools within 500m of the Scheme.

7.8. Existing social welfare facilities and services (**Table 7.1** refers) near the Scheme include family and child welfare services, social security field units, services for the elderly, rehabilitation and medical social services, services for young people, clinical psychology services, and community development and Support Services etc.

7.9. In the proposed development of the Scheme, a multi-purpose GIC complex is proposed with an aim to provide about 20,000m^2 non-domestic GFA for reprovisioning and upgrading of existing sports and recreational facilities at the Boundary Street Recreation Ground as well as providing new sports and recreation facilities, subject to confirmation of funding availability and operational arrangement of the relevant Government Bureaux/ Departments. Apart from the recreation and sports facilities, a District Health Centre (DHC) will be provided at Site B as the permanent reprovisioned facility of the temporary Yau Tsim Mong DHC currently located at the ex-Mong Kok Market site. Besides, the existing FEHD's RCP and PT at Site B will also be reprovisioned in the GIC complex/ podia of the proposed development. To minimise disruption to the existing services, early liaison with relevant government user departments and seamless relocation would be made for the facilities, subject to liaison and detailed arrangement with relevant Government departments at the implementation stage.

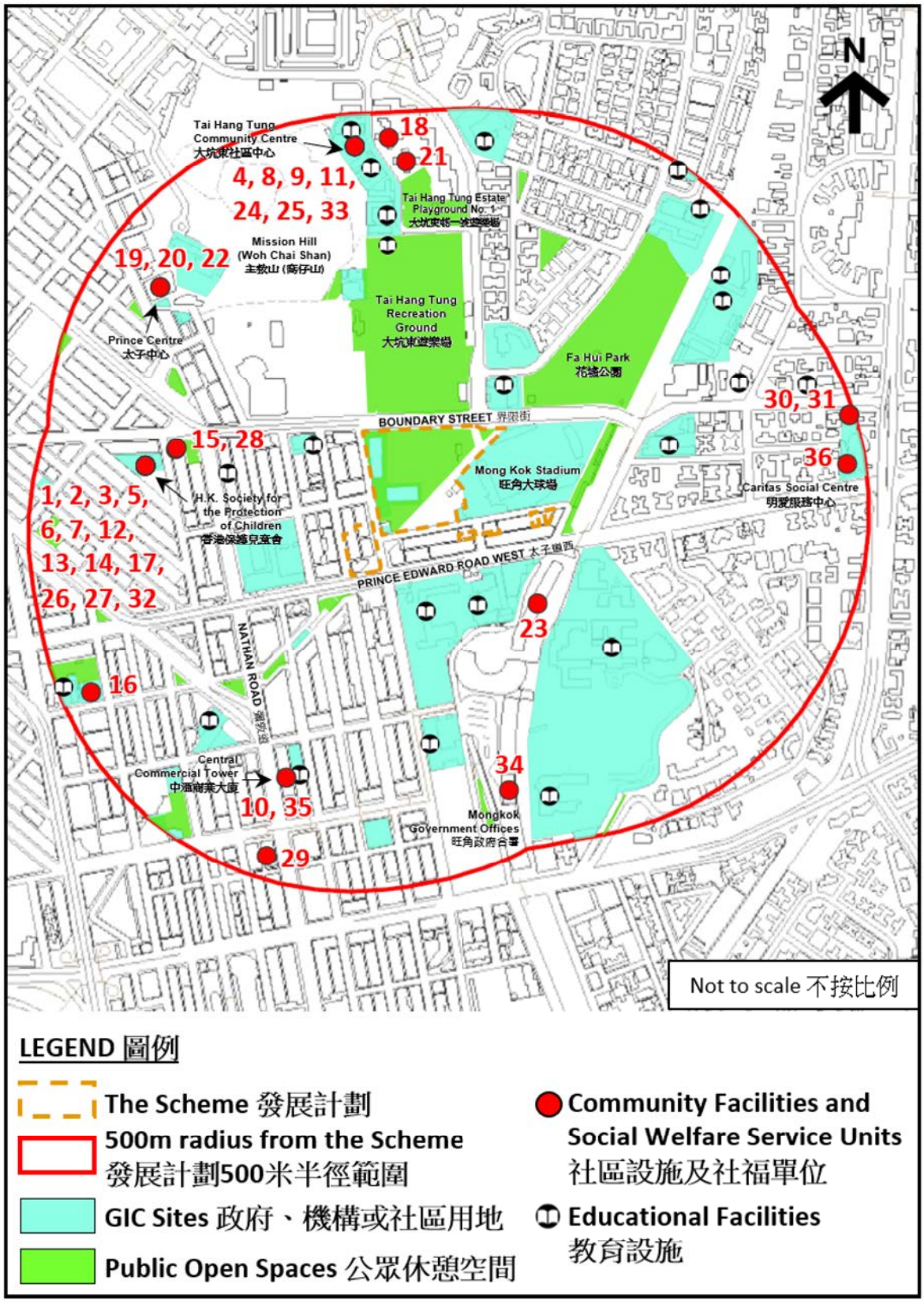


Figure 7.1 Existing Community Facilities, Amenity, and Social Welfare Service Units within 500m Radius from the Scheme

Source: Social Welfare Department's website: Local District Service Profile: Welfare Service Units Managed or Funded by Social Welfare Department (YTM), (Kowloon City) & (Sham Shui Po) as of November 2023.

Table 7.1 Existing Community Facilities and Social Welfare Service Units within 500m Radius from the Scheme

Community Facility / Service Unit	Operator	Address
A. Family and Child welfare		
Agency-based Enhancement of Professional Staff Support Services in Residential Care Homes		
1. Hong Kong Society for the Protection of Children - Agency-based Enhancement of Professional Staff Support Services in Residential Care Homes	Hong Kong Society for the Protection of Children	G/F Garden, 1/F Front Podium, 2/F, 3/F & Penthouse (Laundry), 387 Portland Street, Kowloon
Child Care Centre Service		
2. Hong Kong Society for the Protection of Children - Air Cargo Community Day Creche (with OCCS)	Hong Kong Society for the Protection of Children	1/F, 387 Portland Street, Mong Kok, Kowloon
3. Hong Kong Society for the Protection of Children - Air Cargo Community Day Creche (with OCCS)	Hong Kong Society for the Protection of Children	1/F & Portion of Penthouse, 387 Portland Street, Mong Kok, Kowloon
Extended Hours Child Care Service		
4. Hong Kong Christian Service - Tai Hang Tung Nursery School (OCCS)	Hong Kong Christian Service	4/F & Roof Playground, Tai Hang Tung Community Centre, 17 Tong Yam Street, Tai Hang Tung, Kowloon
5. Hong Kong Society for the Protection of Children - Air Cargo Community Day Creche (with OCCS)	Hong Kong Society for the Protection of Children	1/F, 387 Portland Street, Mong Kok, Kowloon
6. Hong Kong Society for the Protection of Children - Park 'N Shop Staff Charitable Fund Nursery School (OCCS)/(IP)	Hong Kong Society for the Protection of Children	6/F, 387 Portland Street, Mong Kok, Kowloon
7. Hong Kong Society for the Protection of Children - Portland Street Nursery School (OCCS)	Hong Kong Society for the Protection of Children	4/F, 387 Portland Street, Mong Kok, Kowloon
Family Aide		
8. Tai Hang Tung Integrated Family Service Centre	Social Welfare Department	2/F & 3/F, Tai Hang Tung Community Centre, 17 Tong Yam Street, Shek Kip Mei, Kowloon
Integrated Family Service Centre		
9. Tai Hang Tung Integrated Family Service Centre	Social Welfare Department	2/F & 3/F, Tai Hang Tung Community Centre, 17 Tong Yam Street, Shek Kip Mei, Kowloon
10. Yang Memorial Methodist Social Service - Mongkok Integrated Family Service Centre	Yang Memorial Methodist Social Service	G/F, Central Commercial Tower, 736 Nathan Road, Mong Kok, Kowloon

Community Facility / Service Unit	Operator	Address
Occasional Child Care Service		
11. Hong Kong Christian Service - Tai Hang Tung Nursery School (OCCS)	Hong Kong Christian Service	4/F & Roof Playground, Tai Hang Tung Community Centre, 17 Tong Yam Street, Tai Hang Tung, Kowloon
12. Hong Kong Society for the Protection of Children - Air Cargo Community Day Creche (with OCCS)	Hong Kong Society for the Protection of Children	1/F & Portion of Penthouse, 387 Portland Street, Mong Kok, Kowloon
13. Hong Kong Society for the Protection of Children - Park 'N Shop Staff Charitable Fund Nursery School (OCCS)/(IP)	Hong Kong Society for the Protection of Children	6/F, 387 Portland Street, Mong Kok, Kowloon
14. Hong Kong Society for the Protection of Children - Portland Street Nursery School (OCCS)	Hong Kong Society for the Protection of Children	4/F, 387 Portland Street, Mong Kok, Kowloon
Outreaching Team for Ethnic Minorities		
15. Hong Kong Christian Service - M.O.T.I.ON - Multicultural Outreaching Team for InclusiON (OTEM)	Hong Kong Christian Service	Room B & C, 2/F, 450-454 Portland Street, Prince Edward, Kowloon
Project of provision of Assistance-in-kind for Asylum-Seekers and Torture Claimants		
16. International Social Service Hong Kong Branch - Administering and Delivery of Assistance for Non-refoulement Claimants	International Social Service Hong Kong Branch	1/F, Li Po Chun Health Centre, 22 Arran Street, Prince Edward, Kowloon
Residential Creche		
17. Hong Kong Society for the Protection of Children - Children's Residential Home	Hong Kong Society for the Protection of Children	G/F Garden, 1/F Front Podium, 2/F, 3/F & Penthouse (Laundry), 387 Portland Street, Kowloon
B. Social Security		
Employment Support Services		
18. Hong Kong Single Parents Association - Employment Support Services	Hong Kong Single Parents Association	Unit 13-18, G/F, Tung Yue House, Tai Hang Tung Estate, Shek Kip Mei, Kowloon
C. Services for the Elderly		
Home Care Services for Frail Elderly Persons		
19. Tung Wah Group of Hospitals - Enhanced Home and Community Care Services (YTM)	Tung Wah Group of Hospitals	Unit C, 2/F, Prince Centre, 70 Tai Po Road, Kowloon
Integrated Home Care Services (Agency and District-based)		
20. Sik Sik Yuen - Ho Chung Integrated Home Care Services (Sponsored by Sik Sik Yuen)	Sik Sik Yuen	Unit E, 2/F, Prince Centre, 70 Tai Po Road, Sham Shui Po, Kowloon

Community Facility / Service Unit	Operator	Address
Neighbourhood Elderly Centre		
21. China Peniel Missionary Society Incorporation - Neighbourhood Elderly Centre of Grace	China Peniel Missionary Society Incorporation	G/F, Tung Yi House, Tai Hang Tung Estate, Shek Kip Mei, Kowloon
22. Hong Kong Sheng Kung Hui - Kei Oi Neighbourhood Elderly Centre	Hong Kong Sheng Kung Hui Welfare Council Limited	Unit A, 2/F, Prince Centre, 70 Tai Po Road, Sham Shui Po, Kowloon
23. Mongkok Kai-Fong Association Limited - Kowloon Chamber of Commerce Centre for the Elderly	Mongkok Kai-Fong Association Limited	Unit 399, 3/F, MOKO, N.193 Prince Edward Road West, Mong Kok, Kowloon
D. Rehabilitation and Medical Social Services		
Agency-based Occupational Therapist Service		
24. Wai Ji Christian Service - Agency-Based Occupational Therapy Service	Wai Ji Christian Service	Rm 115, 1/F, Tai Hang Tung Community Centre, 17 Tong Yam Street, Shek Kip Mei, Kowloon
Integrated Programme in Kindergarten-cum-Child Care Centre		
25. Hong Kong Christian Service - Tai Hang Tung Nursery School (OCCS)	Hong Kong Christian Service	4/F & Roof Playground, Tai Hang Tung Community Centre, 17 Tong Yam Street, Tai Hang Tung, Kowloon
26. Hong Kong Society for the Protection of Children - Park 'N Shop Staff Charitable Fund Nursery School (OCCS)/(IP)	Hong Kong Society for the Protection of Children	6/F, 387 Portland Street, Mong Kok, Kowloon
27. Hong Kong Society for the Protection of Children - Portland Street Nursery School (OCCS)	Hong Kong Society for the Protection of Children	4/F, 387 Portland Street, Mong Kok, Kowloon
On-site Pre-school Rehabilitation Services		
28. SAHK - FunLearn @ KG Team 1	SAHK	Unit B, C, 10/F, and Unit C, 11/F, HQ, 450-454 Portland Street, Prince Edward, Kowloon
Pilot Scheme on Professional Outreaching Team for Private Residential Care Homes for Persons with Disabilities		
29. Christian Family Service Centre - The Pilot Scheme on Professional Outreaching Team for Private Residential Care Homes for Persons with Disabilities for Hong Kong and Kowloon Regions	Christian Family Service Centre	21/F, Silvercorp International Tower, 707-713 Nathan Road, Mongkok, Kowloon
E. Services for Young People		
School Social Work Service (provided for all secondary schools and administered by offices shown below)		
30. Caritas - Hong Kong - Caritas School Social Work Service - Kowloon	Caritas - Hong Kong	2/F, Block A, 134 Boundary Street, Kowloon

Community Facility / Service Unit	Operator	Address
31. Caritas - Hong Kong - Caritas School Social Work Service - Shatin	Caritas - Hong Kong	2/F, Block A, 134 Boundary Street, Kowloon
After School Care Programme		
32. Hong Kong Society for the Protection of Children - Children & Family Services Centre (Sham Mong Districts)	Hong Kong Society for the Protection of Children	5/F, 387 Portland Street, Mong Kok, Kowloon
F. Clinical Psychology Service		
Agency-Based Clinical Psychological Service and Central Psychological Support Service		
33. Wai Ji Christian Service - Agency-Based Clinical Psychological Service	Wai Ji Christian Service	Rm 115, 1/F, Tai Hang Tung Community Centre, 17 Tong Yam Street, Shek Kip Mei, Kowloon
Clinical Psychological Service in Case Work Setting in SWD & NGOs		
34. Clinical Psychology Unit 6	Social Welfare Department	Room 108, 1/F, Mong Kok Government Offices, 30 Luen Wan Street, Mong Kok, Kowloon
35. Yang Memorial Methodist Social Service - Mongkok Integrated Family Service Centre	Yang Memorial Methodist Social Service	G/F, Central Commercial Tower, 736 Nathan Road, Mong Kok, Kowloon
G. Community Development		
Community Centre		
36. Caritas - Hong Kong - Caritas Community Centre - Kowloon	Caritas - Hong Kong	1/F, 256A Prince Edward Road West, Kowloon

Source: Social Welfare Department's website: Local District Service Profile: Welfare Service Units Managed or Funded by Social Welfare Department (Kowloon City), (YTM) & (Sham Shui Po) as of November 2023.

8 INITIAL ASSESSMENT OF POTENTIAL SOCIAL IMPACT, AND MITIGATION MEASURES

Potential Social Impact

8.1. The Scheme is estimated to affect about 275 households with about 580 residents, and about 33 businesses were identified within the Scheme during site visits. Based on non-obtrusive observation, there are some original units appeared to be sub-divided into smaller units (sub-divided units / cubicles). The exact number of affected business operators will be verified in the Stage 2 SIA. The Scheme, if implemented, will inevitably affect the domestic and non-domestic occupants within the Scheme. Generally, the most vulnerable resident groups in the Scheme are the elderly, the disabled, single-parent families, low-income households, and those who rely heavily on their social network (including receiving support/ care from their friends/ relatives who live nearby).

8.2. The Scheme aims to rationalize land uses by adopting an integrated planning-led approach for holistic planning of the area to enable more efficient land use and to bring planning gains to the local community. The Scheme offers an opportunity to replan and restructure land uses, enhance connectivity, create a walkable neighbourhood, and facilitate the expedition of the redevelopment of the existing dilapidated buildings, which are of poor serviceability without lifts and unsatisfactory living conditions such as sub-division units. Through the redevelopment, the living environment of the affected households, particularly the elderly can be improved by moving to newer units with better modern-day facilities, such as lifts.

8.3. The Scheme also aims to create new and sizable leisure spaces for public enjoyment at the city centre through the creation of a Waterway Park. It also seeks to promulgate the “single site, multiple uses” initiative to maximise land potential and provide new and modern GIC and recreation facilities, including a District Health Centre, for the benefit of the community. Upon completion of the Scheme, the overall built environment of the neighbourhood will be significantly enhanced.

8.4. During the FS, through the completion of FS and SIA questionnaires, needy cases such as households with single elderly, elderly couples, family members with disabilities or new immigrants worried about the impact of redevelopment on employment, living expenses and social network etc. will be identified. The Social Service Team (SST) commissioned by the Urban Renewal Fund (URF) will provide assistance to those in need. This SST is independent of the URA and it will directly report to the Board of the URF.

8.5. Apart from residents living within the Scheme area, shop operators operating within the Scheme will also be affected by the Scheme. As mentioned in Chapter 6 above, the Scheme and its vicinity area are the famous MFM area which attracts not only nearby residents but also citizens coming from other districts for shopping. It also agglomerates many florists to the ground-floor shops in the close vicinity of the area.

8.6. There are many florists operating within the Scheme area and their activities are considered one of the local business characteristics. The redevelopment of Site A shall take into account any social impacts on the florists and other stakeholders of the MFM area, including the visitors to the MFM. Mitigation measures to minimise social impacts to these stakeholders will be discussed in the following paragraphs and to be further developed in Stage 2 SIA upon project commencement with more detailed data obtained from the FS through the FS and SIA questionnaire.

Mitigation Measures – Acquisition and Rehousing Policies

8.7. Affected owners would receive an acquisition offer from the URA according to the prevailing URA Acquisition Policies. For affected tenanted households, rehousing or ex-gratia allowance would be offered. The URA will arrange briefing session(s)/ recording video(s) to the owners and tenants to explain the URA acquisition, rehousing and ex-gratia allowance policies. An in-house URA engagement team will visit the affected owners and tenants accordingly to care for those who are unclear about the policies and require any other assistance.

8.8. If affected owners, residents and business operators are not clear about the URA acquisition, rehousing and ex-gratia allowance policies or future arrangements, the SST will endeavour to clarify their doubts with full support from the URA. If the affected owners, residents and business operators are ethnic minorities who are not familiar with Chinese or English languages, the URA will arrange translation services for them as far as practicable. This will facilitate their understanding on URA's acquisition, rehousing and ex-gratia allowance policies and future arrangement, and will alleviate their concerns on the redevelopment.

8.9. In handling problems related to different kinds of livelihood, the SST, apart from offering counselling, will mobilise different community resources, liaise closely with Government departments and work with the URA to resolve the residents' and operators' problems and reduce their anxiety. The SST will also provide orientation assistance to those in need after their moving to the replacement flats, such as familiarisation with new neighbourhood, accommodation and local facilities.

8.10. For the vulnerable groups (including the elderly, disabled and single-parent families), SST will consider referring the cases to the Social Welfare Department, and other social service agencies for provision of the required services, such as child care/ foster services, domestic help services, etc. For low-income households, arrangements could be made with the Hong Kong Housing Authority or the Hong Kong Housing Society on public rental housing allocation if they are eligible. Domestic tenants who do not fulfil the rehousing eligibility criteria may be re-housed on compassionate grounds if they have genuine hardship arising from factors such as health, disability or special family circumstances.

8.11. If the Scheme is to be implemented, the URA will ensure the construction works follow and fulfil the mitigation measures and practices as stipulated by the Environmental Protection Department for the construction site. Appropriate measures will be proposed to mitigate potential noise and dust impact during the construction phase of the Scheme.

Acquisition & Rehousing Policies for Domestic Premises

8.12. The URA will offer an owner of domestic property the market value of his/ her property plus the applicable allowances for domestic properties such as Home Purchase Allowance (HPA), Supplementary Allowance (SA), incidental cost allowance and allowance for vacant property for purchase of his/ her property.

8.13. The URA may also offer "flat-for-flat" (FFF) (subject to any changes in the relevant legislations or URS) as an additional choice to cash acquisition offers to eligible owner-occupiers of domestic units. The amount of cash compensation and allowance offered to an owner-occupier will not be changed regardless of whether or not he/she elects to take up the choice of FFF offer.

8.14. According to the new URS, the URA will offer an allowance to eligible elderly owners of tenanted domestic properties on compassionate grounds in exceptional circumstances such as elderly owners who are compelled by health, financial or family reasons to stay elsewhere but not in the affected properties and who rely on the rental income from their affected properties to sustain their livelihood.

8.15. Eligible domestic tenants affected by URA's redevelopment projects will be provided with rehousing arrangement to units of public rental housing or units of URA's rehousing blocks, or be provided with the applicable allowance.

8.16. The URA has also introduced the "Domestic Tenants Compassionate Assistance Programme" to those domestic tenants whose tenancies commenced before the FS of this Scheme and are required to move out from the properties as requested by their landlords upon expiry or

termination of their tenancies before URA's acquisition of the properties. In general, eligible domestic tenants who meet the criteria under this programme will be offered special allowance or special rehousing such as units of public rental housing or units of URA's rehousing blocks.

Acquisition Policies and Allowances for Non-Domestic Premises

8.17. The URA will offer an owner of non-domestic property the market value of his/ her property plus the applicable allowances for non-domestic properties. For owner-occupied non-domestic properties, an allowance of 4 times the rateable value or 35% of the market value of the affected property, whichever is the higher, an Ex-gratia Business Allowance (EGBA) and an incidental cost allowance will be offered; the owner-occupiers may alternatively lodge a claim for business loss in lieu of the allowances. For owners of tenanted or vacant non-domestic properties, an allowance of 1 time the rateable value or 10% of the market value of the affected property, whichever is the higher and incidental cost allowance will be offered. In addition, the owners of vacant non-domestic properties will be offered an allowance for vacant property at 2 times the rateable value, subject to meeting certain criteria.

8.18. For non-domestic tenants of the premises, an allowance of 3 times the rateable value of the affected premises or an allowance equal to the prevailing ex-gratia allowance offered by the Lands Department on resumption by the Government, whichever is higher will be offered. An additional payment of EGBA is also payable to tenants who commenced occupying the premises for business before the date of the FS. Those non-domestic tenant-operators who have occupied the properties before the FS and are evicted by their landlords before the acquisition of the properties by the URA, can apply for the Special EGBA, which is equivalent to the EGBA as mentioned above. The minimum payment of EGBA will be subject to annual review.

8.19. According to the new URS, if requested, the URA will help identify suitable premises in the district of the redevelopment projects to enable the affected shop operators to relocate and continue operation in the same district as far as practicable.

Mitigation Measures – Others

8.20. The acquisition, rehousing and ex-gratia allowance policies are subject to prevailing policies at the time of issuing acquisition offer. The policies are published on the URA's website and will be communicated to affected persons when the acquisition of property interests for this Scheme commences. Prevailing policies relating to property acquisition, rehousing and ex-gratia allowances will be reviewed by the URA from time to time.

8.21. The Stage 2 SIA to be conducted after the FS will further assess the impact of the Scheme in detail on both domestic and non-domestic occupants and propose mitigation measures. It may also be able to highlight the psychological stress and worry for some of the affected within the Scheme. Special measures may have to be adopted under exceptional circumstances.

Phasing Redevelopment to Minimize Interruption

8.22. To materialise the planning gains as early as possible, and to minimise the disturbance to the services of existing GIC facilities and the MFM area, implementation of the proposed development will be carried out in phases. The affected GIC and recreation facilities will be reprovisioned. Among these, the 11-a-side soccer pitch in the Boundary Street Recreation Ground will be reprovisioned in the multi-purpose complex building within the Scheme upon its completion. New recreation and sports facilities may also be provided within the Scheme, subject to confirmation of needs, funding availability and operational arrangement of the relevant Government Bureaux/ Departments.

8.23. Detailed programme and phasing arrangement will be subject to the collection of views from stakeholders, detailed design, GIC facilities reprovisioning schedule, construction programme and other relevant factors at the implementation stage.

Arrangements for Continuation of Business Operation for Shops with Local Characters in the District

8.24. As indicated in YMDS, the MFM area is one of the key characters streets in Hong Kong. As there are many of the ground-floor florists within the Scheme, consideration will be given to minimise disruption to the activities in the MFM area during the redevelopment process and to preserve or enhance the MFM local characters through urban renewal works in the long run.

8.25. According to the new URS, if requested, the URA will help identify suitable premises in the district of the redevelopment projects to enable the affected shop operators to relocate and continue their businesses in the same district as far as practicable. Upon completion of the Scheme, the URA, if requested, will also assist affected shop operators in leasing and shop owners in purchasing shop premises within the Scheme area.

8.26. If there are strong locational concerns from the florist operators, the URA may explore the opportunity to allow florists, which are affected by redevelopment, to relocate to the retail shops within the Scheme. However, the feasibility and relevant restrictions of this mitigation measure will be further considered after the commencement of the Scheme and data collection.

9 CONCLUSION

9.1. The local community and the surrounding neighbourhoods are likely to experience gains and losses due to the proposed redevelopment. Residents, business operators and their employees within the Scheme will be affected in different ways and to various degrees depending on their particular circumstances. Those who currently live in overcrowded or poor building conditions within the Scheme may welcome the opportunity to improve their living environment through cash compensation or rehousing if eligible; whilst others (e.g. some business operators) may prefer to remain undisturbed and maintain the status quo. The various degrees of concerns and social impacts on the affected residents, business operators and their employees within the Scheme will be assessed in the Stage 2 SIA in detail.

9.2. For non-domestic uses, a number of ground-floor shops are witnessed in the Scheme, whereas the upper-floor non-domestic uses, if any, are to be recorded in the FS upon commencement of the Scheme under section 23 of the URAO. The needs of the affected non-domestic occupants will be assessed in Stage 2 SIA.

9.3. This Stage 1 SIA report provides a general profile of the Scheme and the surrounding area. Based on the URA's experience of similar scale and context of redevelopment projects, it can be expected that there will be some sharing of living quarters and a relatively low average household income for those within the Scheme. The assumptions in this report will be verified by the Stage 2 SIA to be carried out after the FS. The Stage 2 SIA will assess the needs of the affected households and operators and propose appropriate mitigation measures to minimise major adverse social impacts, if any.

URBAN RENEWAL AUTHORITY

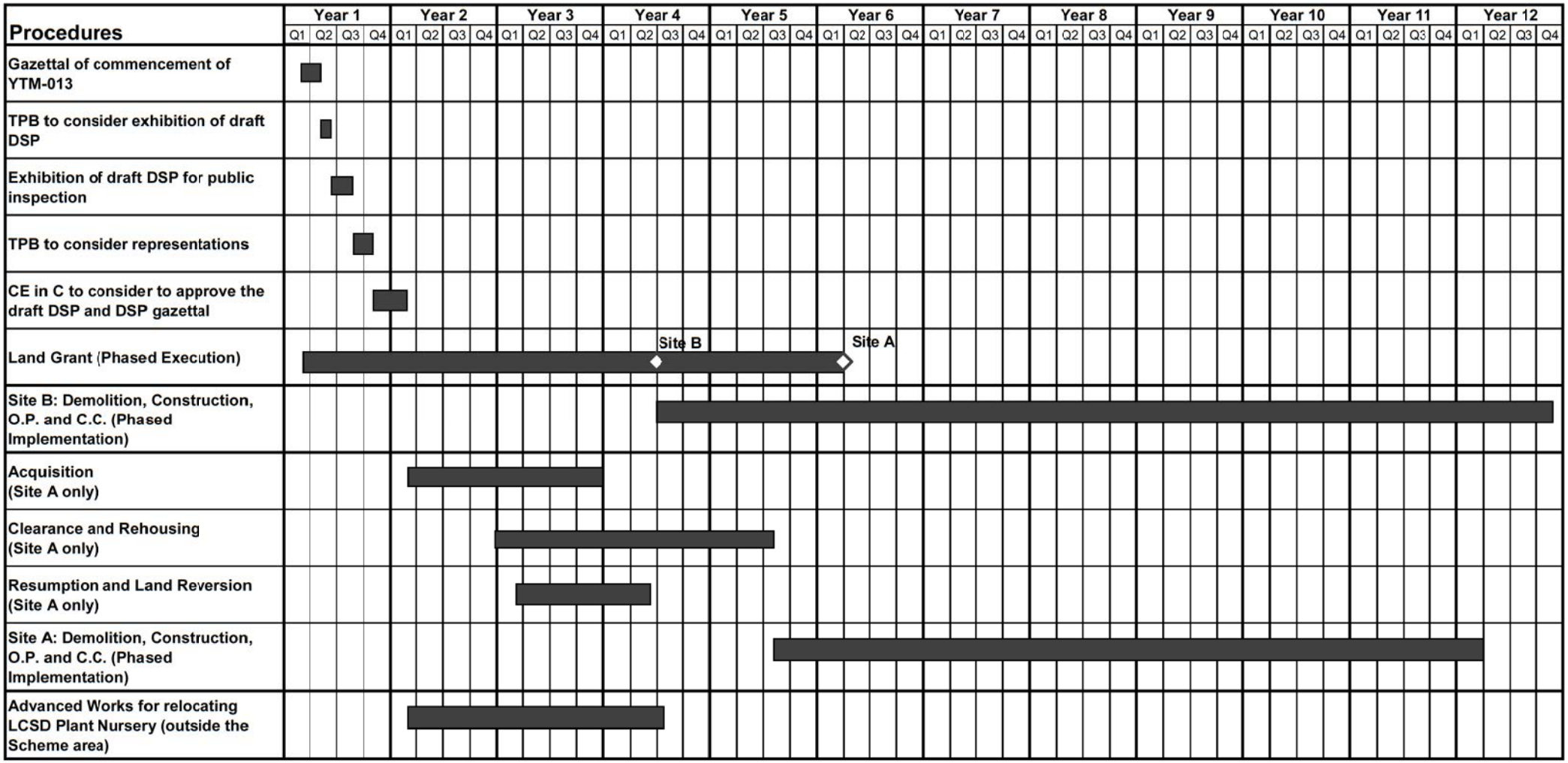
MARCH 2024

Appendix 12

Tentative Implementation Programme

YTM-013 URA Sai Yee Street / Flower Market Road Development Scheme

Tentative Implementation Programme



Appendix 13

Principles Adopted by the Urban Renewal Authority in Property Acquisition

Principles Adopted by the Urban Renewal Authority in Property Acquisition (Other than Industrial Properties)

This pamphlet briefly outlines the principles adopted by the Urban Renewal Authority ("URA") in the acquisition of properties (other than industrial properties) affected by URA's urban renewal projects ("URA Projects").

Domestic Properties

1. URA will offer an owner-occupier of domestic property within a URA Project the market value (assessed on vacant possession basis) of the affected property plus an ex-gratia allowance, namely Home Purchase Allowance ("HPA"), for purchase of the affected property. The amount of HPA payable to individual owners is the difference between the value of a notional replacement flat and the market value of the property being acquired. The notional replacement flat is based on a seven-year-old flat of a size similar to the affected property and in the same locality. The notional replacement flat is assumed to be in a comparable quality building, situated in a similar locality in terms of characteristics and accessibility. The notional replacement flat will be situated at the middle floor of a notional building with average orientation, i.e. not facing south or west, and without sea view.

2. "Owner-occupier" here means an owner who occupies the affected property as his/her sole residence. If an owner does not reside in the affected property as his/her sole residence, the occupancy status of the affected property will be treated as "Vacant" and the owner will be offered Supplementary Allowance ("SA") instead of HPA. SA is a percentage of HPA. The criteria for determining whether an owner occupies the affected property as his/her "sole residence" will be determined by URA according to URA's prevailing policy.

3. An owner-occupier will be offered HPA for a maximum of three properties and for the fourth and subsequent properties in the same redevelopment project, an Additional Allowance ("AA") will be offered instead. AA is equivalent to 5% of the market value (assessed on vacant possession basis) of the affected property. (Please see **Appendix I** for the examples of the calculation of HPA and **Appendix II** for the examples of different allowance(s) available.)

4. Property used as sole residence by an owner's "immediate family members" will be treated as being occupied by the owner himself/herself as sole residence for the purpose of ascertainment of his/her eligibility for HPA. "Immediate family members" of an owner means parents, children, dependent brothers and sisters, grandparents, grandchildren, step-parents, spouse's parents, and spouse's step-parents.

5. An owner who leaves the affected property vacant will be offered the market value (assessed on vacant possession basis) of the affected property plus SA. In addition, URA will offer an Allowance for Vacant Property ("AVP") to the owner who has (i) left the affected property vacant on the first day of the freezing survey conducted for the relevant URA Project ("FS Date") and thereafter; (ii) accepted URA's initial acquisition offer within the validity period of the offer; and (iii) sold the affected property with vacant possession to URA. AVP is equivalent to 2 times the amount of the Rateable Value of the affected property.

6. An owner who lets the affected property out will be offered the market value (assessed on vacant possession basis) of the affected property plus SA or AA.

7. An owner of tenanted or vacant properties will be offered SA for a maximum of two properties and for the third and subsequent properties in the same redevelopment project, only AA will be offered instead. (Please see **Appendix I** for the examples of the calculation of SA and **Appendix II** for the examples of different allowance(s) available.)

8. In addition to HPA, SA or AA, URA will offer an Incidental Cost Allowance ("ICA") to owners of domestic properties to assist the owners' payment of removal expenses and expenditure relating to the purchase of a domestic replacement property and the legal cost incurred in the sale of the affected properties to URA. The actual amount of ICA shall be determined and announced by URA as and when an offer to purchase is made for each individual project. If the owner does not accept the initial acquisition offer within the validity period of the offer but URA still decides to negotiate with the owner for the purchase of his/her property despite the lapse of the offer (which shall be at the absolute discretion of URA whether or not to do so), the amount of ICA will be deducted by 30%.

9. If the amount of necessary and reasonable expenses actually incurred by the owner of a domestic property in selling the affected property to URA, namely (i) legal cost incurred by selling the affected property to URA; (ii) stamp duty, agency fee and legal cost incurred in purchasing a domestic replacement property and (iii) removal cost, exceeds the amount of ICA offered by URA, the owner may be reimbursed with the difference ("the Expense"). In submitting a claim for reimbursement of the Expense, the owner may choose to submit "One-to-One" or "Split" or "Combined" claim for the reimbursement of the Expense according to the number of domestic property(ies) he/she sold to URA and the number of domestic replacement property(ies) (Please see **Appendix III** for examples) subject to the following eligibility criteria:

   (a) The owner must have acquired the affected property before FS Date;

   (b) The owner must have accepted the initial acquisition offer of URA within the validity period of the offer;

   (c) The reimbursement claim must be made within 12 months from the date of the assignment of the affected property sold to URA, and the reimbursable amount must be the actual expenses already paid by the owner within 12 months after the property is sold to URA. If the owner sells more than one domestic property to URA and chooses to make one single claim for the reimbursement of the Expense against more than one affected property sold to URA, the date of the assignment of the last affected property sold to URA shall be adopted as the date of commencement of the said 12-month period to make the claim;

   (d) The domestic replacement property must be located in Hong Kong and must be purchased after the date of issuance of initial acquisition offer by URA; and

(e) The owner should be the sole registered owner or one of the registered owners of the domestic replacement property, and his/her interest in the replacement property must be recorded in the land register.

10. In general, the principles in assessing the reimbursable amount of the Expense as described in Paragraph 9 above are:

(a) The reimbursable amount for stamp duty should be calculated at the lower rates (Scale 2) of the ad valorem stamp duty payable for a domestic replacement property;

(b) The reimbursable amount for real estate agency fee should follow the general market practice but not exceed 1% of the purchase price of the domestic replacement property;

(c) The reimbursable amounts in both item (a) and item (b) above will be subject to a ceiling to be calculated on the basis of a domestic replacement property with a purchase price of 110% of the total of (i) the market value of the affected property sold to URA and (ii) the sum of HPA or SA or AA (excluding AVP and ICA) as stipulated in the initial acquisition offer of URA;

(d) For the avoidance of doubt, if the owner chooses to make one single claim for the reimbursement of the Expense against more than one affected property sold to URA, the basis for calculating the ceiling of items (a) and (b) above shall be the aggregate of the ceiling of each individual property sold to URA;

(e) The number of domestic replacement property(ies) used in making a claim for reimbursement of legal cost and removal cost in an application shall not exceed the number of domestic property(ies) sold to URA in the same application;

(f) URA will only reimburse the Expense which is reasonable, absolutely necessary and actually paid by the owner in relation to the expenses described above;

(g) The owner should provide sufficient documentary evidence for the Expenses submitted in the reimbursement claim; and

(h) URA will consider each reimbursement claim on its own merits, and URA has the sole discretion in determining the amount of the Expenses reimbursable (whether in whole or in part) in each case.

11. If a domestic property has been sub-divided into several flats with undivided shares ("sub-divided flat") before the FS date and an owner-occupier of a sub-divided flat elects not to receive the HPA or AA, subject to eligibility criteria and other requirements, such an owner-occupier will be offered re-housing.

12. The HPA or SA or AA may be payable for non-domestic property which has been issued with an occupation permit other than for domestic purpose but nevertheless has been used by the same owner for domestic purpose for a long time (generally about 10 years) in the following situation:

(a) An owner-occupier who has used the affected property for domestic purposes for a long time will be offered market value (assessed on vacant possession basis) of the affected property plus the higher of:

(i) HPA or AA and ICA as a domestic property; and

(ii) the allowances applicable to owner-occupied non-domestic properties (other than Industrial Properties).

(b) An owner of tenanted property which has been occupied for domestic purpose for a long time will be offered market value (assessed on vacant possession basis) of the affected property plus the higher of:

(i) SA or AA and ICA as a domestic property less the Ex-gratia Allowance payable to a domestic tenant occupying the whole property; and

(ii) the allowances applicable to tenanted non-domestic properties (other than Industrial Properties).

13. For URA Projects which are commenced after the promulgation of the new Urban Renewal Strategy on 24 February 2011:

(a) Subject to the conditions and provisions contained in the "Urban Renewal Authority Flat-for-Flat Pamphlet" ("the Pamphlet"), eligible owner-occupiers of domestic properties in URA Projects, who will be offered HPA, can opt to participate in URA's "Flat-for-Flat" Scheme ("the Scheme"). For details of the Scheme, please refer to the Pamphlet which will be available when an offer to purchase is made for each individual project.

(b) Elderly owners of tenanted domestic properties in URA Project may apply for the Elderly Domestic Owner-Landlords Compassionate Allowance ("EDOLCA") in addition to the market values of their properties and SA as described in Paragraph 6 above, subject to the eligibility criteria set by URA. Eligible elderly owners can apply for EDOLCA after receiving URA's initial acquisition offers. EDOLCA is only payable to eligible elderly owners who have accepted the initial acquisition offers of URA within the validity period of the offer. Please refer to the pamphlet of *"Elderly Domestic Owner-Landlords Compassionate Allowance"* for details of the eligibility criteria and the arrangement.

Non-domestic Properties (Other than Industrial Properties)

14. URA will offer an owner of a non-domestic property (other than industrial property) the market value of the affected property (assessed on vacant possession basis) and an ex-gratia allowance. The amount of the allowance for tenanted or vacant non-domestic property (other than industrial property) is equivalent to 10% of its market value (assessed on vacant possession basis) or one time its Rateable Value, whichever is higher. In addition, URA will offer AVP at 2 times the amount of the Rateable Value of the affected property to the owner who has (i) left the affected property vacant on the FS Date and thereafter; (ii) accepted URA's initial acquisition offer within the validity period of the offer; and (iii) sold the affected property with vacant possession to URA. The amount of allowance for owner-occupied non-domestic

property (other than industrial property) is equivalent to 35% of its market value (assessed on vacant possession basis) or 4 times its Rateable Value, whichever is higher. "Owner-occupier" here means an owner who occupies and operates his/her business in the affected property.

15. In addition to the allowance described in Paragraph 14 above, an additional payment of the Ex-gratia Business Allowance ("EGBA") is payable to an owner-occupier of non-domestic property (other than industrial property) who had commenced occupying the premises for business use before the FS Date and have accepted the initial acquisition offer from URA both unconditionally and within the validity period of the offer. The amount of EGBA is directly proportional to the number of years of continuous operation by the owner-occupier as business owner in the affected property. In calculating the total number of years of continuous operation, the last date of the continuous operation is set at 2 years from the date on which URA issues initial acquisition offer to the property owner. The amount of EGBA is payable at a rate of 0.1 times the Rateable Value for each year that the owner-occupier has operated the business as the business owner in the property concerned, subject to a maximum of 30 years. For an incomplete year, the amount of EGBA is calculated on a pro-rata basis to the nearest month. The amount of EGBA is subject to a maximum amount of $700,000 and a minimum amount as described in the table below:

Continuous Operation for	**Minimum Amount of EGBA**
(a) 10 years or less	HK$110,000 (effective from 1 April 2022 and subject to annual review)
(b) More than 10 years (maximum 30 years)	The minimum amount for (a) above plus an additional HK$10,000 for each completed year after 10 years.

In applying for EGBA, an owner-occupier is required to substantiate the period of continuous operation in the property as business owner. The owner-occupier may choose to claim for severance payments payable to his/her employees under the Employment Ordinance (Chapter 57) as an alternative to EGBA.

16. URA will also offer ICA to owners of non-domestic properties (other than industrial property) to assist their payment of expenditure relating to the purchase of a non-domestic replacement property and the legal cost incurred in the sale of the affected properties to URA. The amount of ICA payable is 5% of the market value (assessed on vacant possession basis) of the affected property. Payment of the ICA is subject to the condition that the owner must have accepted the initial acquisition offer of URA within the validity period.

17. If the amount of necessary and reasonable expenses actually incurred by the owner in selling the affected non-domestic property to URA, namely (i) legal cost incurred by selling the affected non-domestic property to URA and (ii) stamp duty, agency fee and legal cost incurred in purchasing a non-domestic replacement property, exceeds the amount of ICA offered by URA, the owner may be reimbursed with the difference ("the Expense for Non-domestic Property"). In submitting a claim for reimbursement of the Expense for Non-domestic Property, the owner may choose to submit "One-to-One" or "Split" or "Combined" claim for the reimbursement of the Expense for Non-domestic Property according to the number of non-domestic property(ies) he/she sold

to URA and the number of non-domestic replacement property(ies) (Please see **Appendix III** for examples) subject to the following eligibility criteria:

(a) The owner must have acquired the affected property before FS Date;

(b) The owner must have accepted the initial acquisition offer of URA within the validity period of the offer;

(c) The reimbursement claim must be made within 12 months from the date of the assignment of the affected property sold to URA, and the reimbursable amount must be the actual expenses already paid by the owner within 12 months after the property is sold to URA. If the owner sells more than one non-domestic property to URA and chooses to make one single claim for the reimbursement of the Expense for Non-domestic Property against more than one such affected property, the date of the assignment of the last affected property sold to URA shall be adopted as the date of commencement of the said 12-month period to make the claim;

(d) The non-domestic replacement property must be located in Hong Kong and must be purchased after the date of issuance of initial acquisition offer by URA; and

(e) The owner should be the sole registered owner or one of the registered owners of the non-domestic replacement property, and his/her interest in the replacement property must be recorded in the land register.

18. In general, the principles in assessing the reimbursable amount of the Expense for Non-domestic Property as described in Paragraph 17 above are:

(a) The reimbursable amount for stamp duty shall be calculated at Scale 2 rates of the ad valorem stamp duty payable for a non-domestic replacement property;

(b) The reimbursable amount for real estate agency fee should follow the general market practices but not exceed 1% of the purchase price of the non-domestic replacement property;

(c) The reimbursable amounts in both item (a) and item (b) above will be subject to a ceiling to be calculated on the basis of a non-domestic replacement property with a purchase price of 110% of the market value of the affected property sold to URA as stipulated in the initial acquisition offer of URA;

(d) For the avoidance of doubt, if the owner chooses to make one single claim for the reimbursement of the Expense for Non-domestic Property against more than one affected property sold to URA, the basis for calculating the ceiling of items (a) and (b) above shall be the aggregate of the ceiling of each individual property sold to URA;

(e) The number of non-domestic replacement property(ies) used in making a claim for reimbursement of legal cost in an application shall not exceed the number of non-domestic property(ies) sold to URA in the same application;

(f) URA will only reimburse the Expense for Non-domestic Property which is reasonable, absolutely necessary and actually paid by the owner in relation to the expenses described above;

(g) The owner should provide sufficient documentary evidence for the expenses submitted with the reimbursement claim; and

(h) URA will consider each reimbursement claim on its own merits, and URA has the sole discretion in determining the amount of the Expenses for Non-domestic Property reimbursable (whether in whole or in part) in each case.

19. An owner-occupier may choose to claim for business loss as an alternative to all the above-mentioned allowances for an affected non-domestic property.

Domestic Properties being used for Non-domestic Purposes

20. If an affected property with an occupation permit for domestic use has been used for non-domestic purpose, the owner-occupier will be offered market value (assessed on vacant possession basis) of the affected property plus the higher of:

(i) the allowances applicable to owner-occupied non-domestic properties (other than industrial properties); and

(ii) SA or AA and ICA for domestic properties.

21. An owner of an affected property with an occupation permit for domestic use being leased out for non-domestic use will be offered market value (assessed on vacant possession basis) of the affected property plus the higher of:

(i) the allowances applicable to tenanted non-domestic properties (other than industrial properties); and

(ii) SA or AA plus ICA for domestic properties less 3 times the Rateable Value of the affected property.

Separate Roof Top Interest (Not ancillary to any Domestic/Non-domestic Property)

22. The title of the rooftop property must be legal.

23. An owner of a tenanted rooftop property will be offered the market value of the property on an open roof basis (disregarding any illegal structure or any rent passing) plus an allowance at 10% of the said market value.

24. An owner of a vacant rooftop property will be offered the market value of the property on an open roof basis (disregarding any illegal structure) plus:

(a) an allowance at 10% of the said market value; and

(b) AVP at 2 times of the Rateable Value of the affected rooftop property provided that the owner has (i) left the rooftop property vacant on the FS Date and thereafter; and (ii) accepted the initial acquisition offer within the validity period

of the offer; and (iii) sold the affected rooftop property with vacant possession to URA.

25. An owner-occupier of a rooftop property will be offered the market value of the property on an open roof basis (disregarding any illegal structure) plus:

    (a) (1) an allowance at 10% of the market value (on open roof basis disregarding any illegal structure) of the property; and (2) an allowance equivalent to an ex-gratia allowance payable to a tenant occupying the property provided that the owner-occupier has accepted the initial acquisition offer within the validity period of the offer, or

    (b) If the owner-occupier fulfills the normal eligibility criteria for public rental housing application of Hong Kong Housing Authority or Hong Kong Housing Society, he/ she may opt for re-housing in lieu of all the allowances stated in Paragraph 25(a) above.

26. If an owner accepts the initial acquisition offer of URA within the validity period, he/she will also receive an ICA at 5% of the market value of the property on an open roof basis (disregarding any illegal structure). If the amount of necessary and reasonable expenses actually incurred by the owners exceeds the amount of ICA offered by URA i.e. (i) the legal cost necessarily incurred in selling the affected property to URA and purchasing a replacement property; and (ii) the stamp duty and agency fee necessarily incurred in purchasing a replacement property, the owner may claim for reimbursement of the difference in accordance with the same criteria and principles described in Paragraphs 17 to 18 above but the replacement property must be a separate rooftop interest.

Buildings in Single Ownership

27. An owner of a building in single ownership will be offered the higher of (a) and (b) below:

    (a) The total amount of the existing use values of individual units of the building plus the allowances applicable to the non-domestic units (if any) of the building and the allowances applicable to the domestic units (if any) of the building, as if the building is in multiple ownership.

    (b) The redevelopment value of the building (assuming redevelopment of the building on its own) plus:

        (i) an ex-gratia allowance at 5% of the redevelopment value; and

        (ii) ICA at 5% of the redevelopment value, subject to the condition that an owner must have accepted the initial acquisition offer of URA within the validity period. An owner may claim for reimbursement of the actual expenses in selling the affected building to URA and purchase of a replacement building in accordance with the same criteria and principles described in Paragraphs 17 to 18 above but the replacement property must be a building in single ownership.

Vacant Sites

28. An owner of a vacant site will be offered:

    (a) the redevelopment value of the vacant site (assuming redevelopment of the site on its own);

    (b) an allowance at 5% of the redevelopment value; and

    (c) ICA at 5% of the redevelopment value, subject to the condition that an owner must have accepted the initial acquisition offer of URA within the validity period of the offer. An owner may claim for reimbursement of the actual expenses in purchasing a replacement site in accordance with the same criteria and principles as described in paragraphs 17 to 18 above but the replacement property must be a vacant site.

Car-parking Space or External Wall Interest

29. An owner of a car-parking space or external wall interest will receive the market value of the car-parking space or external wall interest (assessed on vacant possession basis) plus:

    (a) an allowance equivalent to 10% of its market value (assessed on vacant possession basis); and

    (b) an allowance equivalent to the Rateable Value of the car-parking space or external wall interest if the car-parking space or external wall interest is used by the owner.

30. If an owner accepts the initial acquisition offer of URA within the validity period, he/she will also receive an ICA at 5% of the market value (assessed on vacant possession basis) of the affected car-parking space or external wall interest. If the amount of necessary and reasonable expenses actually incurred by the owners exceeds the amount of ICA offered by URA i.e. (i) the legal cost necessarily incurred in selling the affected property to URA and purchasing a replacement property; and (ii) the stamp duty and agency fee necessarily incurred in purchasing a replacement property, the owner may claim for reimbursement of the difference in accordance with the same criteria and principles described in Paragraphs 17 to 18 above but the replacement property must be a car-parking space or an external wall interest (as the case may be).

Other General Rules

31. Calculation of the market value of a property is based on the saleable area of the property. The definition of saleable area shall follow the Code of Measuring Practice issued in March 1999 and the Supplement to the Code of Measuring Practice issued in July 2014 by the Hong Kong Institute of Surveyors. Subject always to the owner having good title to the property or any part thereof, area calculations may be based on the boundary of the property as delineated on the assignment plan and the area as

measured from the latest relevant building plans approved by the Buildings Department (if any).

32. For the purpose of calculating the value of the notional replacement flat, URA will appoint seven professional surveyor firms to provide the assessments.

33. URA will provide an allowance to the owner, who has employed a professionally qualified surveyor to assess the market value of the affected property (which shall not include any allowance, such as HPA and SA etc.), as a subsidy for the owner's payment of the surveyor's fees for the relevant services. Please refer to the pamphlet of "Allowance for Surveyor's Fees" for details of the arrangement.

34. If the owner fulfills the eligibility criteria stipulated by the URA, he/she may apply for a refund of the Buyer's Stamp Duty or/and partial Ad Valorem Stamp Duty paid for the purchase of the affected property(ies). The refund is subject to the condition that an eligible owner must have accepted the initial acquisition offer of URA within the validity period of the offer. For details of the eligibility criteria and arrangement, please refer to the leaflet "Refund of Paid Buyer's Stamp Duty or/and Partial Ad Valorem Stamp Duty".

35. If an owner only purchased the affected property in the project on/after the FS Date, URA will not pay to such owner any of the above-mentioned HPA, SA, AA, AVP, EDOLCA, ICA, rehousing arrangement or any allowances applicable to non-domestic property, separate rooftop interest, car-parking space, external wall interest, single-owned building and vacant site.

36. URA will consider acquiring property from a holder of a valid adverse possessory order granted by the Court in favour of him/her. Depending on the circumstances of individual cases, URA may impose appropriate additional requirements to safeguard the interest of URA when acquiring properties with adverse possessory title.

37. URA will not purchase a structure which is not erected in compliance with the Buildings Ordinance or the terms of the Government lease and no value, compensation or allowance will be paid by URA in respect of such structure.

38. If an owner is found to have given false or misleading information to URA, URA reserves the right to revise its offers and/or take legal action against such owner and/or report the matter to relevant enforcement authorities.

39. URA's acquisition offer is made by reference to the occupancy status of an owner's property on the FS Date and in accordance with the URA's prevailing principles and practice for property acquisition. One of such prevailing principles is that an owner whose property was owner-occupied on the FS Date but is let out at the time URA's acquisition offer is made will only be offered the allowances for the acquisition of the affected property on a tenanted basis.

40. ***Particularly, URA would draw the attention to owners whose properties had been tenanted out on the FS Date that URA will <u>not</u> make a higher offer to them to acquire their properties in the following situations***:

    (a) the owners have subsequently obtained possession and occupied their properties for their own self-use; or

    (b) the owners have entered into new tenancies, whether with the existing tenants or new tenants; or

    (c) the properties are subsequently left vacant.

41. ***URA would remind owners that it is an offence for a landlord to unlawfully deprive a tenant of occupation of property or to make an unwarranted demand with menaces with a view to gaining for himself/herself or others or to defraud against URA. URA will report to the enforcement authorities on all cases of suspected criminal offences.***

For enquiries, please call URA External Relations Department:
Hotline: 2588 2333 Fax: 2827 0176
Address: 26/F, COSCO Tower, 183 Queen's Road Central, Hong Kong

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March 2023

Examples (Domestic Properties)

(Figures are based on assumption and for reference only)

Assuming the market value of a domestic flat on vacant possession (VP) basis is HK$800,000 and the value of a notional replacement flat is HK$2,000,000. The HPA will then be HK$1,200,000.

Example One

An owner of the above domestic flat who lets out the entire flat

This owner will get the market value of his flat (on VP basis) of HK$800,000 and SA of HK$600,000 (HK$1,200,000 x 50%). In total, this owner will receive HK$1,400,000.

Example Two

An owner of the above domestic flat who occupies half of the flat and leases out the other half

This owner will get the market value of his flat (on VP basis) of HK$800,000 and HPA of HK$600,000 for the owner-occupied portion and SA of HK$450,000 (HK$600,000 x 75%) for the tenanted portion. In total, this owner will receive HK$1,850,000.

Example Three

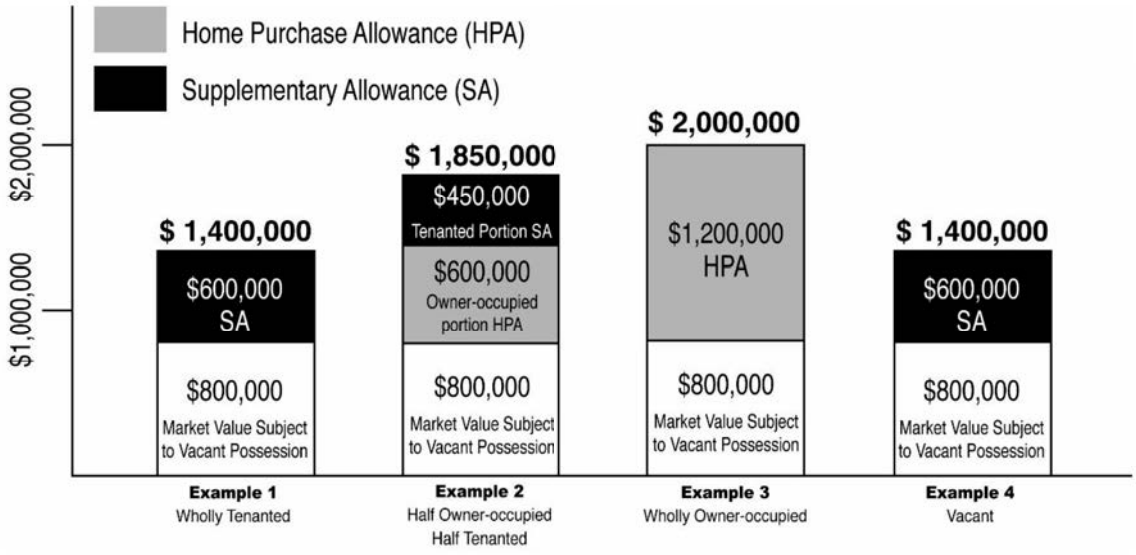
An owner of the above domestic flat who occupies the entire flat for his own use

This owner will get the market value of his flat (on VP basis), which is HK$800,000, plus HPA which is HK$1,200,000. In total, this owner will receive HK$2,000,000.

Example Four

An owner of the above domestic flat who leaves the entire flat vacant

The owner will get the market value of his flat (on VP basis), which is HK$800,000, plus SA of HK$600,000 (HK$1,200,000 x 50%). In total, this owner will receive HK$1,400,000.



Appendix II

Domestic Properties – Diagrammatic Illustration of HPA, SA, AA & EUV

One Flat

Occupation Status	HPA	SA	Market Value
1 Owner-occupied	100%		EUV(VP)
2 Partially Owner-occupied & Partially Tenanted	Owner-occupied portion: 100%	Tenanted portion: 75%	EUV(VP)
3 Wholly Tenanted		50%	EUV(VP)
4 Vacant		50%	EUV(VP)

Two Flats

Occupation Status	HPA	SA	Market Value
5 Owner-occupied	100%		EUV(VP)
Owner-occupied	100%		EUV(VP)
6 Owner-occupied	100%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied portion: 100%	Tenanted portion: 75%	EUV(VP)
7 Owner-occupied	100%		EUV(VP)
Wholly Tenanted		50%	EUV(VP)
8 Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted portion: 75%	EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied portion: 100%	Tenanted portion: 75%	EUV(VP)
9 Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted portion: 75%	EUV(VP)
Wholly Tenanted		50%	EUV(VP)
10 Wholly Tenanted		50%	EUV(VP)
Wholly Tenanted		25%	EUV(VP)
11 Vacant		50%	EUV(VP)
Vacant		25%	EUV(VP)

Abbreviations:

HPA	Home Purchase Allowance
SA	Supplementary Allowance
AA	Additional Allowance
EUV	Existing Use Value
VP	Vacant Possession

Appendix II

Domestic Properties – Diagrammatic Illustration of HPA, SA, AA & EUV

Three Flats

Occupation Status	HPA	SA	AA	Market Value
12				
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
13				
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
14				
Owner-occupied	100%			EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
15				
Owner-occupied	100%			EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted		50%		EUV(VP)
16				
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Wholly Tenanted		50%		EUV(VP)
17				
Owner-occupied	100%			EUV(VP)
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted		25%		EUV(VP)
18				
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)

Occupation Status	HPA	SA	AA	Market Value
19				
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted		50%		EUV(VP)
20				
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted		25%		EUV(VP)
21				
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted		25%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
22				
Vacant		50%		EUV(VP)
Vacant		25%		EUV(VP)
Vacant			EUV(VP) 5%	EUV(VP)

Four Flats

Occupation Status	HPA	SA	AA	Market Value
23				
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Owner-occupied			EUV(VP) 5%	EUV(VP)
24				
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted			EUV(VP) 5%	EUV(VP)
25				
Owner-occupied	100%			EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
26				
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
27				
Owner-occupied	100%			EUV(VP)
Owner-occupied	100%			EUV(VP)
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
28				
Owner-occupied	100%			EUV(VP)
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted		25%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)

Occupation Status	HPA	SA	AA	Market Value
29				
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner occupied & Partially Tenanted			EUV(VP) 5%	EUV(VP)
30				
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
31				
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
32				
Partially Owner-occupied & Partially Tenanted	Owner-occupied Portion: 100%	Tenanted Portion: 75%		EUV(VP)
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted		25%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
33				
Wholly Tenanted		50%		EUV(VP)
Wholly Tenanted		25%		EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
Wholly Tenanted			EUV(VP) 5%	EUV(VP)
34				
Vacant		50%		EUV(VP)
Vacant		25%		EUV(VP)
Vacant			EUV(VP) 5%	EUV(VP)
Vacant			EUV(VP) 5%	EUV(VP)

Appendix III

Diagrammatic Examples of Owner's Application for Reimbursement of Expenses

Examples of Application	Number of Affected Property(ies) Sold to URA	Number of Replacement Property(ies) Purchased by Owner
One-to-One	 Legal Cost and Removal Cost of the affected property can be applied for reimbursement	 Stamp Duty, Estate Agency Fee and Legal Cost of replacement property can be applied for reimbursement
Split	 Legal Cost and Removal Cost of the affected property can be applied for reimbursement	 Stamp Duty and Estate Agency Fee can be applied for reimbursement for two replacement properties Legal Cost can be applied for reimbursement for one of the replacement properties
Combined	 Legal Cost and Removal Cost can be applied for reimbursement (so forth and so on)	 Stamp Duty, Estate Agency Fee and Legal Cost can be applied for reimbursement

Notes:

1. The reimbursable amounts of stamp duty and estate agency fee will be subject to a ceiling to be calculated on the basis of 110% of the total of (i) the market value of the affected property sold to URA and (ii) the sum of HPA or SA or AA (excluding AVP and ICA) as stipulated in the initial acquisition offer of URA;
2. If the owner chooses to combine the claim for the reimbursement of the expense of more than one sold property under one claim, the basis for calculating the ceiling of stamp duty and estate agency fee in the application shall be the aggregate of the ceiling of each individual property sold to URA;
3. If the owner chooses to combine the claim for the reimbursement of the expense of more than one sold property under one claim, the date of the assignment of the last affected property sold to URA shall be adopted as the date of commencement of the 12-month period to make a claim;
4. The number of replacement property(ies) for reimbursement of legal cost and *removal cost (not applicable to non-domestic properties) in an application shall not exceed the number of property(ies) sold to URA in the same application.

Appendix 14

Principles Adopted by the Urban Renewal Authority for Tenant Re-housing and Ex-gratia Allowance

Principles Adopted by the Urban Renewal Authority for Tenant Re-housing and Ex-gratia Allowance for Projects announced under the Urban Renewal Authority Ordinance (Not applicable to Tenants of Industrial Premises)

This leaflet briefly outlines the current principles and policies adopted by the Urban Renewal Authority ("URA") for providing re-housing and ex-gratia allowance to affected tenants of projects announced by the URA under the Urban Renewal Authority Ordinance ("URAO") (other than tenants of industrial premises).

(A) Re-housing for Domestic Tenants

(I) Public Rental Housing ("PRH")

Re-housing Arrangement

1. Eligible domestic tenants living in acquired properties of the URA will be re-housed in units provided by the Hong Kong Housing Authority ("HKHA") or the Hong Kong Housing Society ("HKHS"). In addition, they may opt for other subsidized housing schemes provided by the HKHA and the HKHS, if available.

Re-housing Eligibility

2. Domestic tenants must have been genuinely living in the properties within the project area continuously before and since the first day of Freezing Survey of the project ("the date of Freezing Survey") conducted by the URA until the date of re-housing offers issued by the URA to the domestic tenants, and have no alternative accommodation during the same period.

3. Domestic tenants must fulfill the prevailing eligibility criteria for PRH of the HKHA and the HKHS.

Re-housing Eligibility of Illegal Rooftop Structure Occupiers

4. Since there is no difference between the illegal rooftop structures within the URA's redevelopment project areas and the illegal rooftop structures in other domestic buildings, the re-housing eligibility of illegal rooftop structure occupiers for PRH of the HKHA is the same as the eligibility criteria adopted by the HKHA in re-housing the illegal rooftop structure occupiers in domestic buildings affected by the enforcement actions taken by the Buildings Department. Therefore, in addition to the general eligibility criteria for PRH of the HKHA, occupiers of illegal rooftop structures have to satisfy that they have been genuinely living in the structures within the project area continuously since two years before the date of Freezing Survey until the date of re-housing offers issued by the

URA to the occupiers, and have no alternative accommodation during the same period, and that the structures were built on or before 1 June 1982 in order to be eligible for PRH of the HKHA.

5. Occupiers of the illegal rooftop structures who can only fulfill the requirement of having been genuinely living in the relevant illegal rooftop structures continuously before and since the date of Freezing Survey until the date of re-housing offers issued by the URA to the occupiers, and have no alternative accommodation during the same period, will be eligible for re-housing in the PRH of the HKHS subject to meeting the eligibility criteria for PRH of the HKHS.

(II) URA Re-housing Block

Re-housing Arrangement

1. Domestic tenants living in URA acquired properties, who due to various reasons are not provided with PRH re-housing as described in Part (A)(I) above, may be re-housed in units of Re-housing Block provided by the URA subject to fulfillment of the following eligibility criteria of the URA and the availability of Rehousing Block units.

Re-housing Eligibility

2. A tenant and his/her household members must have been genuinely living in the properties within the project area continuously before and since the date of Freezing Survey until the date of re-housing offers issued by the URA to the tenants, and have no alternative accommodation during the same period.

3. All household members of a tenant must be legally residing in Hong Kong without any conditions of stay (excluding a time limit of stay).

4. All household members of a tenant, whether personally or through a company, must not own nor have any interest in any domestic property in Hong Kong.

5. The total monthly income of all household members of a tenant (including a tenant with all household members aged 60 or above) must not exceed 3 times the prevailing PRH maximum income limit of the HKHA for ordinary family applicants according to the tenant's household size. The total net asset of all household members of a tenant (including a tenant with all household members aged 60 or above) must not exceed 84 times the prevailing PRH maximum income limit of the HKHA for ordinary family applicants according to the tenant's household size.

6. Tenants and their household members, who are eligible for registration on the Application for PRH of the HKHA, must make the application accordingly.

7. Allocation of re-housing unit is governed by the prevailing policy of the URA on household composition.

(III) Ex-gratia Removal Allowance

1. Domestic tenants who accept rehousing arrangement will also be offered an ex-gratia removal allowance of an amount equivalent to the prevailing ex-gratia allowance offered by the Lands Department on resumption by the Government ("Government EGA") or the prevailing rates of the Ex-gratia Domestic Removal Allowance of HKHA, whichever is higher.

(IV) Compassionate Re-housing

1. Domestic tenants who do not fulfill the above rehousing eligibility criteria may be re-housed on compassionate grounds if they have genuine hardship arising from factors such as ill health, disability or special family circumstances.

(B) Ex-gratia Allowances

(I) Domestic Tenants

1. According to Landlord and Tenant (Consolidation) Ordinance, domestic tenants are required to move out from the properties and are not entitled to any compensation or forms of payments if their tenancies are terminated and are not renewed. However, for tenants of the URA acquired properties who decline re-housing as described in Part (A) above or who are not provided re-housing due to various reasons and agreed to move out from the properties, the URA will still offer to them an appropriate amount of ex-gratia allowances as described below.

Tenants who commenced occupying the properties before the date of Freezing Survey

2. Subject to the exceptions described in Paragraph 4 of Part (B)(I) below, the URA will offer an ex-gratia allowance to domestic tenants who had commenced occupying the properties under valid tenancies before the date of Freezing Survey. Based on the rateable value of the properties

concerned, the ex-gratia allowance is calculated according to the method as listed in **Table 1** below:

Table 1

Rateable Value ("RV")	Ex-gratia Allowance
1st HK$10,000	9 times RV
2nd HK$10,000	8 times RV
3rd HK$10,000	7 times RV
4th HK$10,000	6 times RV
5th HK$10,000	5 times RV
6th HK$10,000	4 times RV
7th HK$10,000	3 times RV
8th HK$10,000	2 times RV
9th HK$10,000 and above	1 times RV

3. Subject to the exceptions described in Paragraph 4 of Part (B)(I) below, the total amount of ex-gratia allowance is subject to a minimum amount of HK$170,000 (1) for an one-person household and a minimum amount of HK$190,000 (1) for a two-person or larger household.

Note: (1) Effective from 1 April 2023 and subject to annual review

4. The ex-gratia allowance described in Paragraph 2 of Part (B)(I) above and the minimum amount described in Paragraph 3 of Part (B)(I) above do not apply to domestic tenants who, at any time before and since the date of Freezing Survey and until the date of ex-gratia allowance offers issued by the URA to the tenants,

(i) have alternative accommodation; or
(ii) are not genuinely residing in properties within the project.

Domestic tenants who fall under any of these circumstances will be offered an ex-gratia allowance equal to 3 times Government EGA. However, if the tenants are not legal Hong Kong residents holding valid Hong Kong Identity Card ("HKIC"), they will only be offered 2 times Government EGA.

Tenants who commenced occupying the properties on or after the date of Freezing Survey

5. Subject to the exceptions described in Paragraph 6 of Part (B)(I) below, the URA will only offer an ex-gratia allowance equal to 2 times Government EGA to domestic tenants who had commenced occupying the properties under valid tenancies on or after the date of Freezing Survey.

6. The ex-gratia allowance described in Paragraph 5 of Part (B)(I) above does not apply to domestic tenants who,

(i) at any time before and since their occupation of the properties until the date of ex-gratia allowance offers issued by the URA to the tenants,

(a) have alternative accommodation; or
(b) are not genuinely residing in properties within the project; or

(ii) have received from the URA within two years prior to the date of Freezing Survey or at any time after the date of Freezing Survey any of the following allowances or arrangement:

(a) allowances for owners of domestic properties but excluding the incidental cost allowance; or
(b) ex-gratia allowances for domestic tenant being higher than Government EGA; or
(c) Relocation Assistance; or
(d) re-housing; or

(iii) are not legal Hong Kong residents holding valid HKIC.

Domestic tenants who fall under any of these circumstances will only be offered an ex-gratia allowance equal to 1 times Government EGA.

Principal Tenants

7. Subject to the exceptions described in Paragraph 8 of Part (B)(I) below, for principal tenants who had commenced occupying their properties and whose domestic tenancies commenced before the date of Freezing Survey, the URA will offer to them an ex-gratia allowance equal to the ex-gratia allowance described in Paragraph 2 of Part (B)(I) above subject to a minimum amount described in Paragraph 3 of Part (B)(I) above, plus an additional ex-gratia allowance equal to 24 months' profit rent (i.e. rent received from the sub-tenants after deduction of the rent payable by them to their landlords).

8. The ex-gratia allowance and minimum amount described in Paragraph 7 of Part (B)(I) above does not apply to principal tenants who, at any time before and since the date of Freezing Survey and until the date of ex-gratia allowance offers issued by the URA to the tenants,

(i) have alternative accommodation; or
(ii) are not genuinely residing in their properties within the project.

Principal tenants who fall under any of these circumstances will be offered an ex-gratia allowance equal to 3 times Government EGA plus 24 months' profit rent. However, if the principal tenants are not legal Hong Kong

residents holding valid HKIC, they will only be offered 2 times the Government EGA plus 24 months' profit rent.

9. Principal tenants occupying the properties and whose domestic tenancies commenced on or after the date of Freezing Survey will be offered an ex-gratia allowance according to Paragraphs 5 or 6 of Part (B)(I) above, whichever is applicable.

10. For those principal tenants who do not occupy their properties and whose domestic tenancies commenced before the date of Freezing Survey, they will be offered a minimum amount of HK$20,000 [(1)] or 24 months' profit rent, whichever is the higher. No ex-gratia allowance will be offered to principal tenants whose tenancies commenced on or after the date of Freezing Survey.

Note: (1) Effective from 1 April 2023 and subject to annual review

11. Principal tenants will be offered rental reduction from the URA. Where any sub-tenant surrenders his leased portion to the URA before the principal tenant delivers vacant possession, the rent payable by principal tenant will be reduced accordingly.

(II) Non-domestic Tenants (Other than Tenants of Industrial Premises)

Ex-gratia Allowance

1. According to the Landlord and Tenant (Consolidation) Ordinance, non-domestic tenants are required to move out from their properties and are not entitled to any compensation or other payments if their tenancies are terminated and are not renewed. However, the URA will still offer an ex-gratia allowance equals to 3 times the RV of the affected properties or an ex-gratia allowance equivalent to the prevailing ex-gratia allowance offered by the Lands Department on resumption by the Government, whichever is higher, to non-domestic tenants (other than tenants of industrial premises) who agreed to move out from their properties.

2. In addition to the ex-gratia allowance described in Paragraph 1 of Part (B)(II) above, additional payment of ex-gratia business allowance ("EGBA") is payable to any tenant-operator of non-domestic property (other than tenants of industrial premises) who had commenced occupying their properties for business use before the date of Freezing Survey and have accepted the ex-gratia allowance offer from the URA both unconditionally and within the validity period of the offer and agreed to move out from their properties. The amount of EGBA is directly proportional to the number of years of continuous operation by the tenant-operator as business owner in the property. In calculating the number of

years of continuous operation, the expiry date of continuous operation is 2 years from the date which the URA issues initial acquisition offers to property owners. The amount of EGBA is payable at a rate of 0.1 times the RV for each year, subject to a maximum of 30 years. For an incomplete year, the amount of EGBA is calculated on a pro-rata basis to the nearest month. The amount of EGBA is subject to a maximum amount of $700,000 and a minimum amount as described in **Table 2** below.

Table 2

Continuous Operation for	**Minimum Amount of EGBA**
(a) 10 years or less	HK$110,000 (effective from 1 April 2023 and subject to annual review)
(b) More than 10 years (maximum 30 years)	The minimum amount for (a) above plus an additional HK$10,000 for each completed year after 10 years.

3. In the application for EGBA, the Tenant-operator is required to substantiate the period of continuous operation in the property as business owner. "Tenant-operator" here means a tenant who occupies his property, which is a legal premises, for his own business.

4. A tenant-operator may choose to claim for (i) severance payment (if any) paid to his/her employees under Employment Ordinance (Chapter 57); and (ii) value of an unexpired lease term and professional fee reasonably incurred (if any), as an alternative to the EGBA (if applicable).

5. A tenant-operator may also choose to claim for business loss (including the claims as mentioned in Paragraph 4 of Part (B)(II) above) as an alternative to the two allowances referred to in Paragraphs 1 and 2 of Part (B)(II) above (if applicable).

6. For car-parking space or external wall, if its tenant agrees to deliver vacant possession thereof to the URA, the URA will offer to the said tenant one of the following ex-gratia allowances, namely:

   (i) a sum equals to the amount of the rateable value of the car-parking space or external wall if the said tenant has commenced occupying the car-parking space or external wall under a tenancy commenced before the date of Freezing Survey; or

   (ii) a sum equals to half of the amount of the rateable value of the car-parking space or external wall if the said tenant has commenced occupying the car-parking space or external wall under a tenancy commenced on or after the date of Freezing Survey.

(C) Payment Arrangement

1. All applicable allowance mentioned above, half will be paid upon the execution of surrender agreement and the remaining half will be paid after the delivery of vacant possession.

(D) Other General Rules

1. Trespassers occupying properties (domestic or non-domestic) in the project, who move in on or after the date of Freezing Survey, will be required to move out without any allowance or re-housing.

2. In cases where the property is occupied for domestic and non-domestic uses simultaneously, the URA will determine whether the tenancy is domestic or non-domestic in accordance with the provisions of the Landlord and Tenant (Consolidation) Ordinance.

3. If tenants (domestic or non-domestic) refuse to accept ex-gratia allowance or re-housing offer or execute surrender documents, the URA will recover vacant possession of their properties in accordance with the laws.

4. Domestic tenants whose tenancy commenced before the date of Freezing Survey and who was requested by their landlord to move out from the affected properties due to the expiry or termination of their tenancies before the URA acquired the affected properties successfully and who are unable to receive the ex-gratia allowances according to Part (B)(I) (the "affected domestic tenants") can apply for the URA's "Domestic Tenant Compassionate Assistance Programme" ("DTCAP"). The affected domestic tenants should submit application to the URA with tenancy agreement, rent receipts, termination notice served by the landlord to the affected domestic tenants and residential proof etc., at least 1 month before moving out from the affected properties, to facilitate the URA to conduct initial assessment on their eligibility of receiving Special Ex-gratia Allowance or Special Re-housing. Amount of the Special Ex-gratia Allowance is equal to the ex-gratia allowance described in Paragraph 2 and Paragraph 3 of Part (B)(I) above.

5. To become eligible for DTCAP, the affected domestic tenants should fulfill the following eligibility criteria:

   (i) they have been genuinely residing with valid tenancy in the affected properties continuously before and since the date of Freezing Survey and have been genuinely residing in the affected properties for at least 6 months continuously before moving out from the affected properties; and

(ii) they do not have alternative accommodation elsewhere before and since the date of Freezing Survey until their moving out from the affected properties; and

(iii) they are required to leave the affected properties not because of their breach of tenancy on their part; and

(iv) after the expiry of their tenancies, they have not refused to renew their tenancies due to unreasonable grounds and circumstances; and

(v) they have not received any compensation or other payment from their landlords for vacating the affected properties; and

(vi) they are legal Hong Kong residents holding valid HKIC; and

(vii) their landlords have not served the termination notice to them before the date of Freezing Survey; and

(viii) they have registered on the Application for PRH of the HKHA; and

(ix) if Special Re-housing is to be offered, they have to fulfill the eligibility criteria of PRH laid down by the HKHA and/or HKHS or of URA re-housing.

Tenants who moved in on or after the date of Freezing Survey are not eligible for DTCAP.

6. If the affected domestic tenants are eligible for DTCAP, the URA will pay Special Ex-gratia Removal Allowance in advance. The amount is equal to the ex-gratia removal allowance as described in Paragraph 1 of Part (A)(III) above. The pre-paid amount will be deducted from the future payment of Special Ex-gratia Allowance.

After completion of the acquisition or government resumption of the affected properties, the URA will assess the eligibility of the affected domestic tenants in receiving the Special Ex-gratia Allowance or Special Re-housing.

7. Domestic tenants, who undergo the same situation as mentioned in Paragraph 4 of Part (D) above and are not eligible for DTCAP, can apply for the URA's Relocation Assistance. The affected domestic tenants must fulfill the eligibility criteria mentioned in items (i) to (vi) of Paragraph 5 of Part (D) above, and should submit application and provide sufficient evidence to the URA at least 1 month before moving out from the affected properties for URA's verification and assessment.

8. The URA will pay Relocation Assistance to the affected domestic tenants after they have moved out from the affected properties. Affected domestic tenants who have received Relocation Assistance are not eligible to apply for DTCAP described in Paragraph 4 of Part (D) above in the same project.

9. Domestic tenants who opt for receiving any ex-gratia allowance of a total amount more than 1 times the Government EGA (but excluding the 24 months' profit rent) or Relocation Assistance as described in Paragraph 7

of Part (D) above have to agree to give up their rights to public housing assistance for the next 2 years. Such tenants are only allowed to submit fresh applications for PRH and other public housing assistance after the expiry of the 2-years period.

10. Non-domestic tenant-operator (except tenants of industrial premises) whose tenancy commenced before the date of Freezing Survey and who was requested by their landlord to move out from the affected properties due to the expiry or termination of their tenancies before the URA acquired the affected properties successfully and moving out from the affected non-domestic properties after the date of Freezing Survey and who are unable to receive the ex-gratia allowances according to Part (B)(II) (the "affected non-domestic tenants") can apply for the URA's Special EGBA. The amount is equal to EGBA as described in Paragraph 2 of Part (B)(II) above. The affected non-domestic tenants should provide sufficient evidence of business operation, including tenancy agreements, rental receipts, termination notice served by their landlord and other relevant documents, at least 1 month before moving out from the affected non-domestic properties, to facilitate the URA to conduct initial assessment on their eligibility of receiving Special EGBA.

11. To become eligible for Special EGBA, the affected non-domestic tenants should fulfill the following criteria:

    (i) they are operating in a legal premises; and
    (ii) they have commenced operating business in the affected properties with valid tenancy continuously before and since the date of Freezing Survey and have been in operation for at least 6 months continuously before moving out from the affected properties; and
    (iii) they are required to leave the affected properties not because of his/her breach of tenancy terms; and
    (iv) the tenancy is terminated or not renewed by the landlord and they have not terminated the tenancy early at their own will; and
    (v) they have received no compensation or other payment from their landlord for vacating the affected properties; and
    (vi) after the expiry of the tenancy, they have not refused to renew their tenancy due to unreasonable grounds and circumstances.

    After completion of the acquisition or government resumption of the affected properties, the URA will assess the eligibility of the affected non-domestic tenants in receiving the Special EGBA.

12. The URA has drawn to the attention of landlords whose properties had been tenanted out on the date of Freezing Survey that the URA will not consider making a higher offer to them to acquire their properties in the following situations: -

    (i) properties being left vacant; or

(ii) landlords entering into new tenancies, whether with the existing tenants or new tenants; or

(iii) landlords occupying their properties for their own use.

13. The URA would remind landlords / tenants that it is an offence for landlords to unlawfully deprive a tenant of occupation of property or to make an unwarranted demand with menaces with a view to gain for himself or others or to defraud against the URA. The URA will report to the enforcement authorities on all cases of suspected criminal offences.

14. The information contained in this leaflet applies to projects announced by the URA under the URAO only (i.e. not applicable to tenants of industrial premises). The URA reserves the right to adopt different policies and procedures for its other projects.

This leaflet is issued for the purpose of general reference only. The information contained herein is with reference to the principles and practice of the Urban Renewal Authority prevailing at the date of issue of this leaflet. It shall not constitute any representation on the part of the Urban Renewal Authority or give rise to any expectation whatsoever and shall not be relied on as such. Each case will be considered on its own merits having regard to all factors and circumstances. The terms of re-housing and/or ex-gratia allowance to be offered are subject to the principles and practice of the Urban Renewal Authority prevailing at the time the offer of re-housing and/or ex-gratia allowance is made and are subject to review from time to time as the Urban Renewal Authority shall at its absolute discretion consider appropriate. The Urban Renewal Authority's right to add to, amend or delete the whole or any part of this leaflet is hereby reserved.

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February 2024