Staff Report to Council

Planning and Development

FILE: 3060-20-2019-06

REPORT DATE:	March 15, 2021	**MEETING DATE:**	March 30, 2021
TO:	Mayor and Council		
FROM:	Anne Berry, Director of Planning and Development		
SUBJECT:	**Development Permit Application for Golden Ears Business Park Phase 4**		

CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:

RECOMMENDATION(S): THAT Council:

A. Receive for information the Staff Report titled "Development Permit Application for Golden Ears Business Park Phase 4" and dated March 15, 2021; OR

B. Other.

PURPOSE

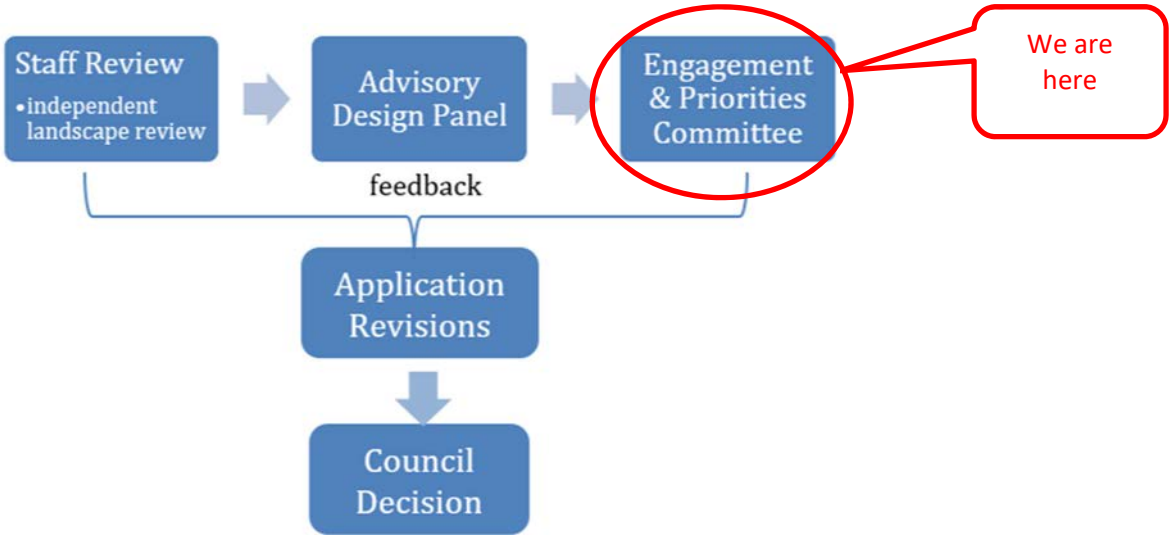
To present the development permit application for Phase 4 of the Golden Ears Business Park for public engagement.

☒ Information Report ☐ Decision Report ☐ Direction Report

DISCUSSION

Background:

At the February 25, 2020, Regular Meeting, Council endorsed the following review process for Phases 3 and 4 of the Golden Ears Business Park:



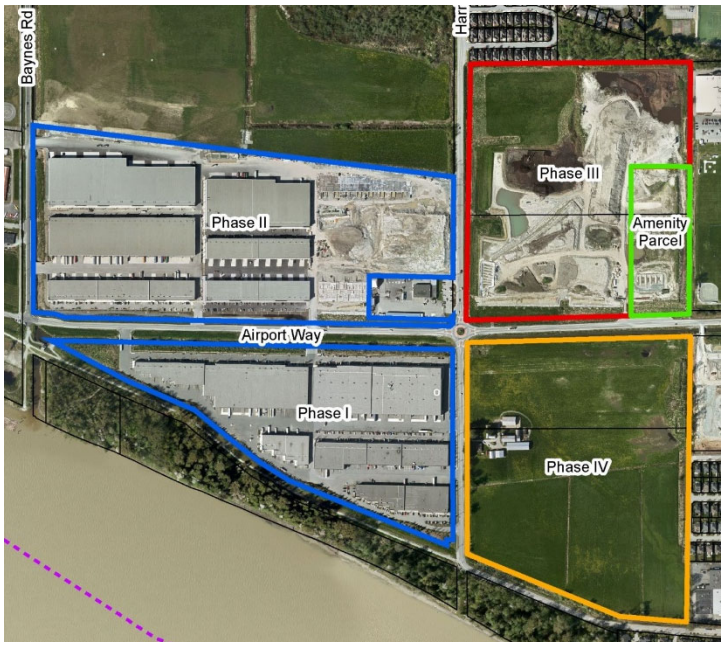
Roles and Responsibilities:

Role	Responsibilities	Status
Staff Review	• Review of development permit guidelines - South Harris Business Park Design Guidelines (formerly the IBI guidelines). • Independent review of landscape proposal. • Consider the ADP comments. • Consider the public's comments heard at the EPC meeting. • Consider Council's comments. • Present final Development Permit to Council for consideration.	Ongoing - until all permits are ready to be issued.
Advisory Design Panel	• Meets with the developer, staff, and some Council members to discuss the application's form and character aspects. • Provide feedback to the developer and the City.	Complete

Engagement and Priorities Committee (EPC) with the community	• Dialogue between Council, the developer and the community regarding the form and character of the development. • The community provides feedback to Council and the developer.	March 30, 2021
Council decision on development permit	• Receives input from multiple sources • Council decides on the DP issuance.	Ongoing – the development permit will be presented at an upcoming meeting.

This application was presented to the City's Advisory Design Panel (ADP) initially in the summer of 2020 and again this winter, as discussed later in this report.

<u>Application Background</u>



Applicant:	Onni Group
Civic Address:	19265 Airport Way
Property Size:	16.4 ha/40.5 ac
OCP Designation:	Business Park
Zoning:	I-3 (Light Industrial Business Park)
Development Permit Area:	No. 4 Business Park

Golden Ears Business Park Phase 1 is entirely constructed, and Phase 2 is nearing completion. The development permit and portions of the building permits for Phase 3 were recently issued and Phase 4 is the final phase of this business park development.

The development of phase 4 proceeds as follows:

A development permit (DP) specifies how development can occur on a property that has been designated in an Official Community Plan (OCP) as being in a Development Permit Area (DPA). DPA's include guidelines specifying the City's objectives for each area and type of development. For example, the form and character of industrial development. It is important to understand a DP cannot vary use or density. Its purpose is to focus on the form and character of a building, which looks at the following:

- The predominant form of development, i.e. building mass and height.
- Whether the neighbourhood is homogenous or diverse in terms of the built form, scale and character, i.e. setbacks, space around properties, site coverage.
- Architectural and landscape features.
- Types of front fences, including style and height.

Deciding the use and density of a site happens during the rezoning stage. Once this has been approved (rezoning application), a more detailed design and site layout issues are completed. These factors are typically addressed through a DP application.

If the property changes ownership, market conditions change, or the project scope changes, this does not impact the rezoning. The use is still permitted, and the design and layout can be determined without requiring another rezoning application, provided the use has not changed, and the density is not exceeded.

A DP application is reviewed by staff and is compared to the applicable OCP DPA guidelines. Depending on the development, it may not meet all the requirements, but it must meet the guidelines' intent to the best of its ability.

Local government discretion in issuing or refusing a development permit is limited to the development permit area guidelines' parameters. Form and character are the most common considerations involved in the DPA for a large project. For example, if a DPA guideline states that pitched roofs are preferred, but an application shows a flat roof, this would be an area where the application is not in compliance with the DPA guidelines. However, as noted above, if there is a reasonable rationale for the difference and the change meets the guidelines' overall intent, Council can accept the non-compliance.

If an application is compliant with the applicable guidelines in the DPA, the development permit should be issued. If issuance is refused, reasons for refusal should be provided.

Relevant Policy, Bylaw or Legislation:

Under the City's Official Community Plan Bylaw No. 2352, 2007, Development Permit Area No. 4 Business Park applies to the properties.

The properties were rezoned to I-3 (Light Industrial Business Park) on May 22, 2018.

Analysis:

Golden Ears Business Park Phase 4

Before adoption of the rezoning, a development covenant was registered on title to the properties, addressing numerous issues such as:

- Amenity contribution (amenity parcel);
- Road improvements;
- Buffers, berms and trails; and
- Public consultation.

A statutory right-of-way for berms, buffers and trails to provide and maintain public access is secured over the portions highlighted in yellow along the east and south property lines in Figure 1:

Figure 1: Statutory Right-of-Way

The traffic improvements to be built by the developer include:

- Upgrading Airport Way to four lanes between Baynes Rd and Golden Ears Way;
- Signalized intersections at Airport Way and Bonson Rd and Airport Way and Harris Rd;
- Sidewalk construction on the east side of Harris Rd from Fraser Way to Fieldstone Walk and west side of Harris Rd from Airport Way to Fieldstone Walk;
- Construction of 4 metre wide trails along Airport Way and east sides of both sites;
- Bike lanes on Bonson and Harris Roads between Fraser Way and Airport Way;
- Mid-block, at-grade, signalized pedestrian crossing on Airport Way;
- At-grade, signalized pedestrian crossing on Harris Rd, near Fieldstone Walk; and
- Two new bus shelters on Bonson Rd.

Drawings for the traffic improvements and other off-site work, such as servicing connections to the amenity lands, form part of the Servicing Agreements. The Servicing Agreement and storm water management plans and erosion and sediment control plans are reviewed by staff before the building permit issuance.

The applicant has applied for permissions to culvert the ditch along Harris Road, which is why the streamside protection and enhancement area (SPEA) is not shown on the

Western boundary drawings. When a ditch containing riparian habitat is proposed to be culverted or filled-in, provincial regulations require habitat compensation or rehabilitation to be undertaken elsewhere by the applicant. It is expected that appropriate levels of government will grant these applications to culvert the Harris Road ditch. If the approvals to remove the ditches are not given, then the City will require the drawings to be revised to show SPEA's and the design to comply with the provincial *Riparian Areas Protection Regulation*.

Development Permit Area No. 4 Business Park (also known as the IBI Guidelines)

Development Permit Area (DPA) No. 4 applies to the site. The objectives of this DPA are:

- To encourage high standard industrial development that is cohesive and integrated into the surrounding environment; and,
- To create sustainable and environmentally friendly development by applying green building technology and sustainable building practices.

These DPA guidelines were developed by an independent consultant (IBI Group) and adopted by Council in April of 2019. The guidelines contain sections on the streetscape, greenway, buildings, landscape, employee and community amenity, lighting, signage and parking, loading and storage.

The DP application may not be able to meet all the guidelines but must meet the intent of them.

Project Overview

Building Design

Development in Phase 4 is proposed to consist of one large building of 80,248 m² (863,785 ft²). The majority of the building occupancy will be light industrial warehouse space, with 4,177 m² (44,963 ft²) proposed for office use.

The maximum amount of floor area permitted for the site based on the I-3 zoning is 192,645 m² (2,073,613 ft²).

The building is to be constructed of tilt-up concrete panels. The building proposes corner architectural treatments that are relatively extensive, including glazing, colour variations, canopies, and articulated massing. The building is proposed at 11.9 m in height, just under the Zoning Bylaw's 12 m limit.

Figure 2: Rendering

As proposed, the size, height, lot coverage, and siting of the building conform to the Zoning Bylaw requirements.

Site Access, Parking and Loading

Access to the Phase 4 site is proposed off both Airport Way and Harris Road via multiple access points differentiated for heavy trucks and vehicles. The figure below outlines access points and general site circulation. Two access points are proposed for Airport Way, the western access is truck ingress only, and the eastern access is all movement for general traffic (not trucks). Harris Rd proposed two egress points, the northern egress for trucks and the southern egress for general traffic.

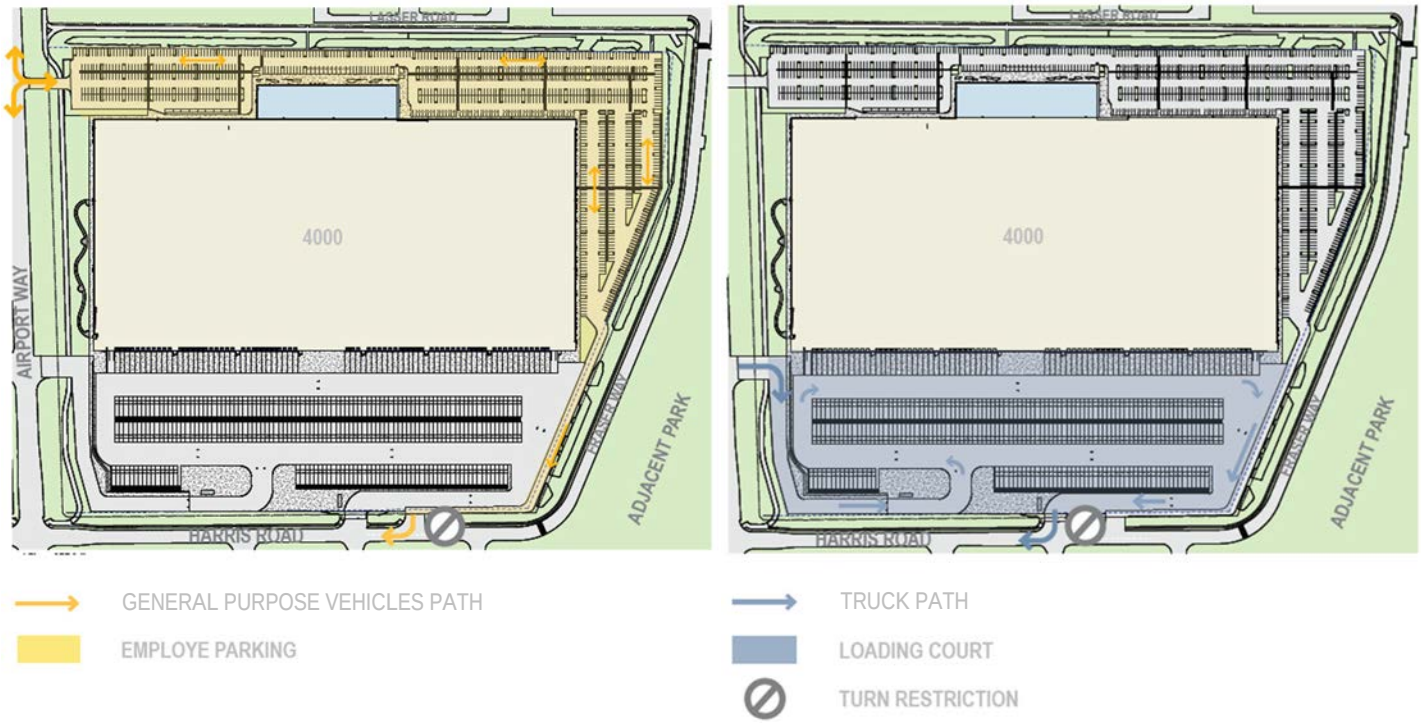


Figure 3 – Phase 4 Site Access and Circulation

These access points are necessary to accommodate the volume of vehicles and operation of the site. Reducing the number of access points would increase queuing from all directions, leading to driver frustration and increase the potential for unsafe maneuvering. Based on the modelling, approximately 35% of general purpose vehicles are expected to use the Harris Rd exit; however, it varies throughout the day. All-access points are expected to operate at a Level of Service A, the highest service rating. Further details of on-site access and associated traffic impacts are discussed in the Traffic Section below.

A total of 915 vehicle parking spaces are proposed for employees and visitors, oriented along the building's east and south sides. Bicycle parking spaces are also required and will be provided by the tenant. A loading court with 319 loading spots is proposed on the west side of the building, as far away from residential development as possible. The parking proposed exceeds the minimum required by the City's Zoning Bylaw (854).

Greenway and Landscaping

Along the site's perimeter on the south and east sides, green space buffers with trails and berms in some areas are required as part of a development covenant. A multi-use path is proposed alongside Airport Way. Connectivity through and into the site and onto surrounding City trails and sidewalks is important.

Landscaping is essential along the sites' perimeter, which is why an independent third-party consultant reviewed the landscape drawings. The plans were revised to incorporate all of the comments provided by that landscape review.

Lighting and Signage

The developer has submitted a draft comprehensive sign plan. A monument sign is proposed on the northwest corner of the Airport Way and Harris Rd intersection, as suggested by the DPA guidelines.

Sign Bylaw variances are requested to increase the number, height, and area of free-standing directional and tenant signs permitted. Directional signs are the larger, free-standing signs proposed at the driveway entrances to direct traffic. Separate, also free-standing signs with the tenant name are proposed at the building corners.

The variances are supported by staff due to the site's large size and the multiple access points. Emergency Services require signage that can be easily and quickly identified in the case of an emergency. The regulations in the Sign Bylaw were designed for smaller sites with one access. Pitt Meadows does not have many large development sites.

Preliminary lighting concepts have also been provided, and staff have no concerns about lighting at this point.

Staff Comments

Staff review of the DP drawings is ongoing; some preliminary and high-level comments are provided in the following section. A more detailed assessment will occur when the DP report is presented to Council for consideration. This will include a table outlining how the proposal meets or does not meet the development permit guidelines, as was done with the Phase 3 development permit.

Permitted Uses

The existing I-3 zoning permits a limited range of uses as follows:

Principal Uses	Accessory Uses
▪ *Light Industrial* ▪ *Indoor Recreation* ▪ *Commercial Schools* ▪ *Vehicle Body Repair* ▪ *Micro-brewery* ▪ *Restaurant* ▪ *Child Daycare* ▪ *Office* ▪ *Retail* ▪ *Personal Service* ▪ *Dog Daycare* ▪ *Government Service*	▪ *Office* ▪ *Caretaker Unit* ▪ *Restaurant* ▪ *Retail Use* ▪ *Child Daycare accessory* to industrial and/or business park *use*

While the above uses are permitted, they are not required. There is no mechanism for the City to require a landlord to include any of the listed uses in the development. As long as each tenant conforms to one of the listed uses and any other relevant City regulations, its business licence will be issued. The City has suggested that the developer consider providing a diverse range of services in phases 3 and 4.

Advisory Design Panel

The City's Advisory Design Panel (ADP) is a technical advisory committee that provides professional and community advice on matters related to evaluating the design and construction of developments. Membership of the ADP consists of an architect, landscape architect, and community members with knowledge of the visual arts, accessibility and sustainability.

The ADP considered this application at meetings held on June 24, August 5 and December 16, 2020, and January 13 and March 3, 2021. Discussions by the Panel were structured based on their Terms of Reference and included the following topics:

- Public concerns
- Streetscape
- Environmental concerns
- Site planning
- Neighbourhood context
- Building design
- Site context
- Landscaping

After each ADP meeting, the developer's team considered the Panel's comments and further refined the design as the discussions progressed, including the following ways:

- Relocated loading from the east side of the building to the west side, further away from residences.
- Employee parking relocated solely to the east side of the building so that traffic noise closest to residences is vehicles and not trucks.
- Access points adjusted to differentiate between employee/visitor vehicles and trucks.
- Moved office space to the east side of the building to soften the residential area transition by Lasser Rd to the warehouse building.
- Additional berms added along Fraser Way for increased noise mitigation and screening from nearby residences.
- Trees were added to the tops of berms for increased screening.
- Addition of grassy filter strips throughout the parking area to help with runoff and stormwater infiltration.
- Increased and improved outdoor employee amenity areas.
- The lighting added to a path running along the east property boundary.
- Revised colour palette to more muted, natural tones.
- It incorporated faux wood elements into the design.

The developer also summarizes the changes made to the design as suggested by the ADP (see Attachment C).

Unfortunately, the quorum was not achieved at the final ADP meeting held on March 3, 2021, so no motion could be passed. However, this meeting was intended to be an informational update on how past comments were incorporated and a number of comments were made by the attending members of the ADP at that meeting (see Attachment D). Further, members who were present at the meeting did express their support for the application and noted that a motion of support would have been suggested, had quorum been achieved.

Sound

Earlier designs for this project proposed loading activities on both the east and west sides of the building, with the east side of the building being considerably closer to residents than the west side. At that time, the developer's acoustical report indicated

that an acoustical sound wall atop the berm along the east property line would help reduce noise levels at the surrounding residential neighbourhoods. The site layout was subsequently redesigned. Loading is now only proposed on the west side of the building, several hundred feet away from any closest residential areas (see Figure 4).

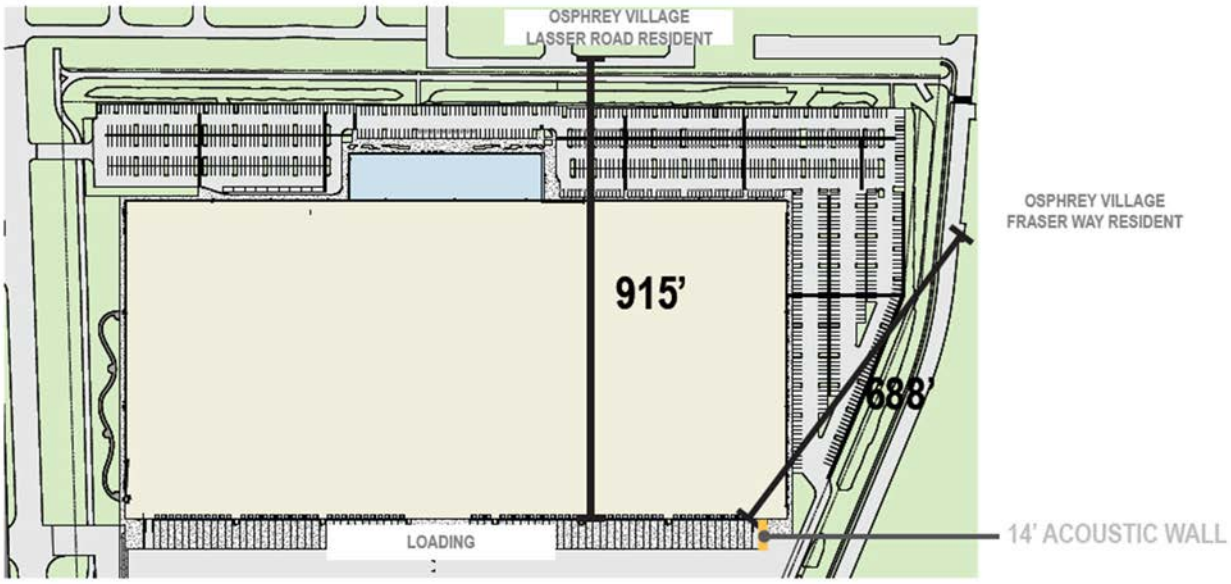


Figure 4: Distance from the loading area to residents

Based on the revised layout, the developer's acoustical engineering consultant completed an updated assessment of potential noise (see Attachment E). The report indicates that noise generated by the business park activity will fall below the City's maximum levels established by the Noise Control Bylaw No. 2138, 2003, as summarized in the table below:

GEBP Phase 4 warehouse building	Noise Bylaw – Quiet Zone 75 decibels (DB) nighttime	Acoustic report – highest predicted noise levels at closests residents	Acoustic report – highest predicted noise with 4 m high sound wall
Lasser Rd residents	75	47	47
Fraser Way residents	75	52	52

Table 1: Acoustic Study Results

The acoustic report indicated that no additional noise reduction would be achieved with the addition of a sound wall atop the berm along the eastern property line.

Regardless, the developer is proposing an acoustical wall at the end of the loading area at the southwest corner of the building to buffer noise further (see Figure 4). As

recommended by the ADP, the developer has also agreed to complete a follow-up acoustic study when the site is operational and has committed to building a sound wall if that study deems it necessary. These terms will be laid out in a legal agreement with the City.

Separate from this development, staff are undertaking a feasibility study for noise mitigation along the south side of Airport Way from the Golden Ears roundabout to the northwest corner of the Nature's Walk development. This study will review the location, conceptual design (material and height), noise reduction impacts and radius of affected residents, cost and financing options. Staff will update the Council and the community at an upcoming EPC meeting once the requested analysis is complete.

Traffic and Access Assessment for Phase 3 and 4

While a traffic study to this extent is not typically undertaken at the Development Permit stage, it was necessary to conduct this work to understand the impact on area traffic patterns, additional loads on intersections, proposed improvements to roads, and a rationale for the vehicle access points.

As previously mentioned, an initial traffic study was completed for the area by McElhanney in 2016, which recommended the four-lane widening of Airport Way and signalized intersections at Harris Rd and Bonson Rd. This study assumed right-in/right-out access points for GEBP Phase 3 and 4 and did not account for the sites' specific operations. CTS, Onni's traffic engineer, recently completed an updated traffic study to account for the nine access points shown below and associated impacts on Airport Way and Harris Rd. Similar to the 2016 McElhanney report, annual growth (2%), GEBP Phase 1 and 2, the Nature's Walk development and the potential school site were considered in the updated study. A third-party peer review was also completed by McElhanney to ensure continuity with the 2016 information and provide assurances to the City that all aspects were considered. CTS's updated traffic study is outlined in Attachment F.

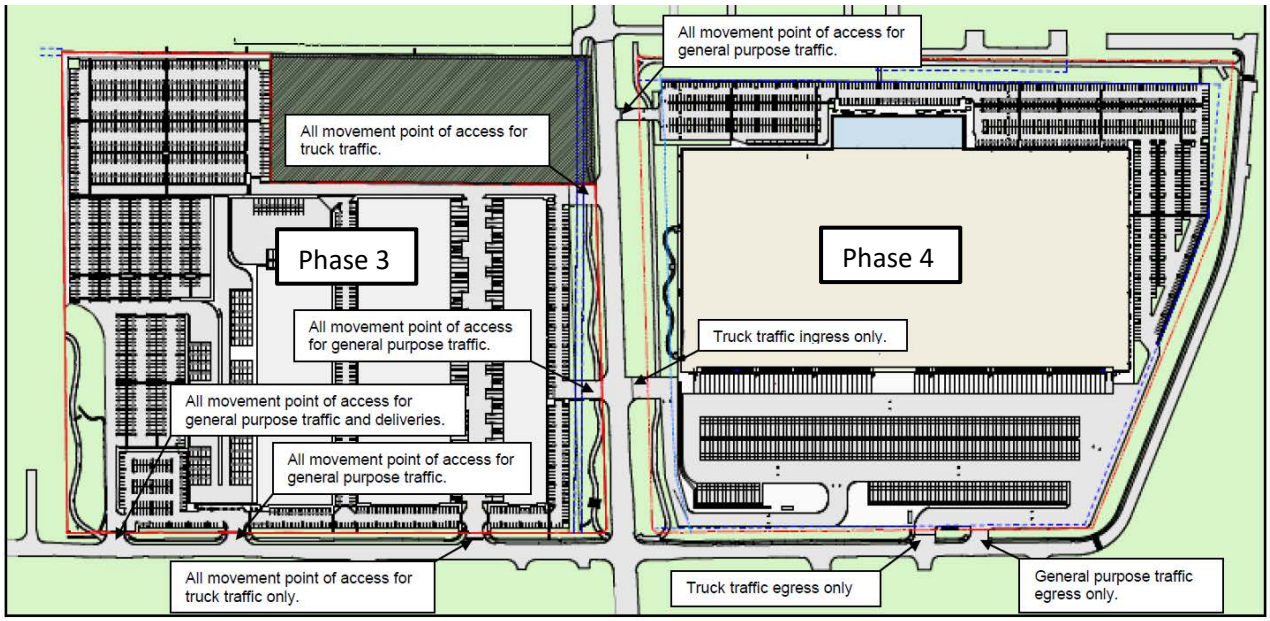


Figure 5 – Site Access Points for GEBP Phase 3 and 4

Staff, CTS, Onni and McElhanney have been in discussions for the past few months regarding the revised traffic study. Since the EPC presentation regarding GEBP Phase 3, a few revisions have been made to the final report and design to accommodate GEBP Phase 4. The changes include:

- There has been a slight increase in the proposed building size for Phase 4, which has resulted in an increase of vehicles as it is directly tied to area. The peak has risen from 499 to 545 vehicles per hour. Peak levels are still expected to be between 8-9am and 4-5pm with the majority of traffic occurring between 7am-7pm. This increase has not affected the level of service of the City's road network.
- The access point on the eastern access point on Airport Way was moved slightly east to better align with the parking lot and avoid sharp turns. This change does not impact the operation of this access point or adjacent access points.
- The western access point on Airport Way changed to 'truck ingress only' instead of the previously proposed 'all movement' access point. This change improves circulation of the site, level of service and eliminates left-turns out of the site.
- The northern access point on Harris Rd changed to 'truck egress only' instead of the previously proposed 'all movement' access point. Like the item above, this improves site circulation, reduces westbound truck traffic at the Harris Rd/Airport Way intersection, and eliminates southbound truck traffic on Harris Rd south of Airport Way associated with the Phase 4 development.
- A dedicated northbound right-turn lane was added on Harris Rd just south of Airport Way. This addition is necessary to accommodate the item above and improve the Harris Rd/Airport Way intersection's overall level of service.

- The southern access point on Harris Rd was added for 'general vehicles egress.' This additional egress point will reduce the left-hand turns out of the eastern access point on Airport Way as it will be more efficient for vehicles heading northbound to use this exit. This also helps vehicle circulation on site.

With these changes, the GEBP Phase 3 and GEBP Phase 4 development is still significantly smaller than the assumptions in the 2016 traffic study (1,356,907ft^2 over four buildings, instead of 1,867,700ft^2 over eight buildings), resulting in substantially less vehicle traffic and improved levels of service. As outlined in the attached traffic study, all assessed intersections and access points operate within acceptable levels of service.

As previously stated, the roundabout at the east end of Airport Way at Golden Ears Way (GEW) will not be able to accommodate the volume of traffic expected in the next 2.5 years and significant modifications are recommended. That said, the proposed development being significantly smaller (approximately 27%) than the assumptions in the 2016 traffic study, it can be concluded based on the recent traffic analysis that traffic congestion at the GEW roundabout would experience worse congestion had, instead, the originally envisioned build-out occurred. The City has shared the study and preliminary designs for the Airport Way widening with TransLink for further discussion and necessary planning.

Appendix D of the Traffic Study includes preliminary design drawings for the Airport Way widening, which McElhanney has reviewed. The design shows the road cross-sections, access points, adjacent trail network, amenity land access and pedestrian crossings. The widening of Airport Way is to be constructed at 50% build-out of Phase 3 and 4, which is expected to occur before 2024. Based on the traffic study and associated peer review, no left-hand turn lanes or medians are necessary along Airport Way or Harris Rd north of Airport Way. There are sufficient gaps in the traffic to accommodate the vehicle movements. A median and signage is planned by the 'general vehicle egress' of Phase 4 on Harris Rd to prevent vehicles from using Fraser Way to head eastbound instead of the intended Airport Way. Signage is also planned for the other exit onto Harris Rd. The idea of a raised crosswalk at the curve of Harris Rd/Fraser Way was previously mentioned; however, staff do not support this as vertical deflection is not generally installed in a curve and the road is a collector with future plans for a transit route. Having said that, Onni has agreed to coordinate a third-party review of the roadworks operation one year after completion to ensure the performance/operations meet the design's intent. If defects are observed, the issues would be remedied at Onni's cost.

Stormwater Management

A stormwater management plan (SWMP) is not typically mentioned during the development permit stage and is reviewed by staff before issuance of a building permit; however, staff have provided a high-level update.

There will be both an on-site and off-site SWMP for Phase 4. The culvert design for the Harris Rd (south of Airport Way) and Fraser Way ditches will be shown, and all the

stormwater from on-site and within the new culverts will be directed towards the Fraser River via a separate gravity-fed outlet. The outlet will extend through the dike along Fraser Way. Re-directing this stormwater away from the Baynes Rd pump station will alleviate some of the higher water levels observed in the area and help to counteract the additional runoff anticipated from widening Airport Way.

Conclusion

The City wishes to ensure that this project achieves the highest possible design level while acknowledging that a light industrial development has specific tenant needs. The City's Advisory Design Panel has thoroughly reviewed this application and provided excellent technical advice and thoughtful design comments, many of which the developer was able to incorporate into the plans.

At this point, the City would like to hear from members of the public about the overall form and character of the proposed design. It is important to note that this input is limited to the design's form and character, and comments about the actual use of the land as a business park will not be considered.

Based on this public input, further changes to the design may be considered. Once the final design plans are submitted and the developer has provided the City with all the outstanding items, the draft development permit will be brought to Council for final consideration of the permit's issuance. At that time an analysis of the application against the Development Permit Area guidelines will be presented to Council to identify how the proposal meets the intent of the guidelines.

COUNCIL STRATEGIC PLAN ALIGNMENT

☒ Principled Governance ☒ Balanced Economic Prosperity ☐ Corporate Excellence
☐ Community Spirit & Wellbeing ☒ Transportation & Infrastructure Initiatives
☐ Not Applicable

Community Voice. Engage stakeholders in meaningful discussion around the current and future success and prosperity of Pitt Meadows.

Employment. Help residents improve their quality of life by encouraging and sustaining diverse, well-paying employment opportunities close to home.

FINANCIAL IMPLICATIONS

☒ None ☐ Budget Previously Approved ☐ Referral to Business Planning
☐ Other

PUBLIC PARTICIPATION

☒ Inform ☒ Consult ☐ Involve ☐ Collaborate ☐ Empower

Comment(s):

This EPC meeting is held specifically for members of the public to provide feedback on and input to the form and character of design for Golden Ears Business Park Phase 4.

KATZIE FIRST NATION CONSIDERATIONS

Referral ☐ Yes ☒ No

SIGN-OFFS

Written by:	Reviewed by:
Allison Dominelli, Development Services Technician	Alex Wallace, Manager of Community Development
Anne Berry, Director of Planning & Development	Samantha Maki, Director of Engineering and Operations

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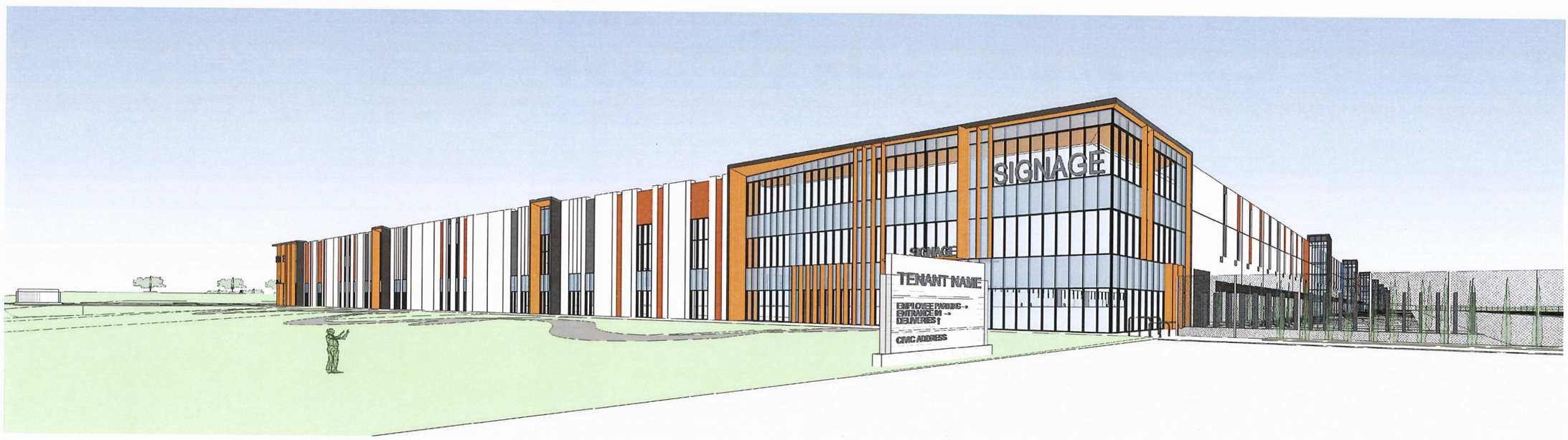
ATTACHMENTS:

A. Development Permit Architectural Drawings for Golden Ears Business Park Phase 4
B. Development Permit Landscape Drawings for Golden Ears Business Park Phase 4
C. Onni's Record of Drawing Changes based on ADP Feedback
D. ADP Minutes March 3, 2021
E. Acoustic Report
F. Golden Ears Business Park – FINAL Access Assessment, March 1, 2021, by CTS (Condensed Version)

TKA+D
onni group

Attachment A



Golden Ears Industrial Park

Phase 4 - Build to Suit - Building 4000

Re-Issued for Development Permit - 2021 March 5th

TKA+D
ARCHITECTURE + DESIGN INC
GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows
Cover Sheet
PLOT DATE 2021-03-05 9:45:42 AM
A000

GEBP - PH4 - Build to Suit

Onni Group

11208 Harris Road, Pitt Meadows

Re Issued for DP submission

ZONING SUMMARY

PROJECT NAME	Golden Ears Business Park Phase 4 - Built to Suit Option
PROJECT ADDRESS	19300 Airport Way 11208 Harris Road
AUTHORITY	City of Pitt Meadows
ZONE	I-3
LEGAL DESCRIPTION	(Phase 4): LOT 1 - DL 254
USES	Light Industrial
SITE AREA	(47.69 acres)

PH4 - A Gross Area	2,073,613 SF	192,645 m²
PH4 - B Developable Area 1 (Setback)	1,934,307 SF	179,703 m²
PH4 - C Developable Area 2 (SPEA)	1,914,402 SF	177,854 m²

Refer to the Keyplan 3 for outline sketches of Areas A, B and C.

*Area A (Gross) used for Density and Lot Coverage Calculations

DENSITY (FAR)

Permitted:	1.0
Proposed (Phase 4):	0.42**

**Total Gross Floor Area / Site Area (Gross)

LOT COVERAGE

Permitted:	TBA
Proposed (Phase 4):	41.7%***

***L1 Gross Floor Area / Site Area (Gross) x 100

HEIGHT

Permitted:	12.0 m (39.37 ft)
Main height Proposed :	11.9 m (39 ft)
Pop out and front entrances	40ft

SETBACKS

Front Yard : Airport Way (North):

Required:	7.5 m (24.6 ft)
Proposed:	(min.) 41.8 m (137ft)

Side Yard (East):

Required:	7.5 m (24.6 ft)
Proposed:	(min.) 50 m (164 ft)

Rear Yard (South):

Required:	7.5 m (24.6 ft)
Proposed:	(min.) 21.1m (69'-2")

Side Yard (West):

Required:	7.5m (24.6 ft)
Proposed:	(min.) 157.9 m (508'-3" ft)

AREA SUMMARY

Area Summary - By Level

Description	Area (SF)	Area (SM)
Level 1		
	863,785 SF	80,248 m²
	863,785 SF	80,248 m²

Area Summary - By Occupancy

Occupancy	Area (SF)	Area (SM)
Industrial	818,822 SF	76,071 m²
Office	44,963 SF	4,177 m²
	863,785 SF	80,248 m²

PARKING REQUIREMENTS

Parking Dimensions

Regular Stall	5.5 m (18 ft) x 2.6 m (8.53ft)
Small Stall (MAX. 25%)	4.8 m (15.75 ft) x 2.4 m (7.87 ft)
Stall for persons with disabilities	5.5 m (18 ft) x 3.6 m (11.8 ft)
Parallel Stall	6.7 m (22 ft) x 2.6 m (8.53ft)

Aisle Dimensions

Aisle (2 Way Traffic)	7.0 m (23ft)
Aisle (1 Way Traffic)	3.8 m (12'-6")

Parking Ratios

Industrial	1/100 m² (1/1076 ft²)
Office	1/45 m² (1/484 ft²)
Parking Required for Persons with Disabilities - As per BCBC 2018 [3.8.3.4.(2)]	1/100 parking stalls

PARKING PROVIDED

Note : Additional parking is provided beyond bylaw requirements to meet specific needs of the tenants and their intended uses.

Parking Required - Phase 4

Occupancy	Area (SF)	Parking Req'd Factor (1/Area)	Parking Req'd Spaces
Industrial	818,822 SF	1,076.0	761
Office	44,963 SF	484.0	93
	863,785 SF		854

Required:	1 per every 100 stalls provided for all other uses
Provided:	9

Required Parking Space for Persons with Disabilities

Total Parking Provided

STALL TYPE		COUNT
		9
DISABILITY 3.6m x 5.5m		10
REGULAR 2.6m x 5.5m		728
SMALL CAR 2.4m X 4.8m	23% of small car provided	168
		915

LOADING REQUIREMENTS

Note : Not all truck movements to all dock positions may be possible with trucks and/or trailers parked in all bays

Large Bay Dimensions:	3 m (9.9 ft) x 9 m (29.5 ft)
Required:	NA

Loading provided

STALL TYPE	COUNT
DOCK LOADING BAY	69
GRADE LOADING BAY	2
TRAILER PARKING	248
	319

BICYCLE PARKING

Required for Industrial Use

Required Class 1	10% of the Parking requirement
Required Class 2	Not required
Dimensions (Class 1)	1.8 m (5.9 ft) x 0.6m (2 ft)
Required for PH4 :	77 stalls
Provided	Bike Enclosure Provided per tenants

Required for Office Use

Required Class 1	1 per 750m² gfa
Required Class 2	Min 6 spaces for developments greater than or equal to 2,000 m²
Dimensions (Class 2) Req'	Min Aisle clearance : 1.2m
	Class 1 : 6 Class 2 : 6
Provided	Bike Enclosure Provided per tenants

Total Required

Required Class 1	83 stalls
Required Class 2	6 stalls

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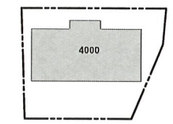
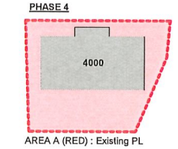
KEYPLAN

PHASE 4

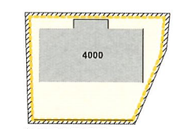


KEYPLAN 3

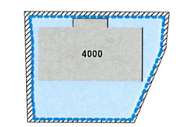
PHASE 4



AREA A (RED) : Existing PL

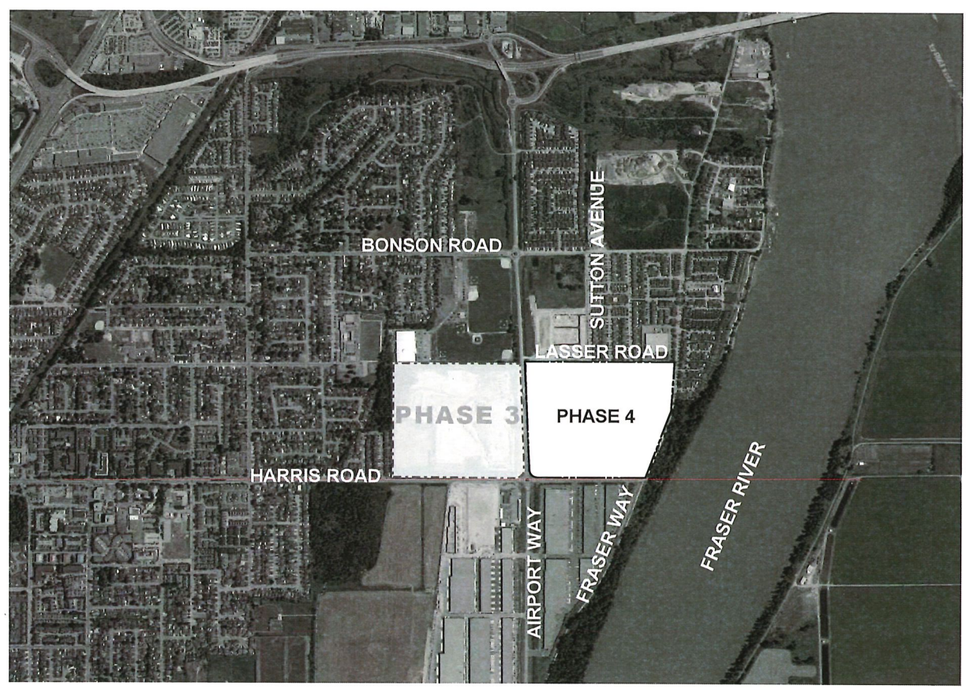


AREA B (YELLOW):
7.5m SETBACK from existing PL



AREA C (BLUE) :
7.5m SETBACK FROM
EXISITING PL + Katzie Slough.

CONTEXT PLAN



GRAPHIC & SYMBOL LEGEND :

- Existing construction; to be retained
- Existing construction; to be demolished
- New stud wall; construction as indicated
- New insulated stud wall; construction as indicated
- Demolition Tag
- Room Tag
- Door / Window Tag
- Wall / Floor / Roof Type Tag
- Material / Finish Keynote Tag
- Millwork Tag
- Specialty Equipment Tag
- Centre Line
- Property Line
- Fire Hydrant
- Manhole Cover
- Catch Basin
- Detail Reference
- Wall / Detail Section Reference
- Building Section Reference
- Interior Elevation Reference
- Matchline View Reference
- Grid Reference
- Level Reference
- Spot Elevation (Relative to Topographical Survey)
- Spot Elevation (Relative to Project Base)
- North Arrow
- Ceiling Type Tag

DRAWING INDEX:

ARCHITECTURAL	
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A001	Project Data
A004	Design Rationale
A005	Precedents images
A006	3D Views
A010	Signage Location
A011	Site Signage
A012	Building Signage
A050	Site Plan - Fire Escape Route
A101	Site - Key Plan
A102	Site Plan - NE
A103	Site Plan - SE
A104	Site plan - W
A110	Level 1
A300	Overall Building Elevation
A301	Enlarged North Elevation
A302	Enlarged South Elevation
A303	Enlarged East Elevation
A304	Enlarged East Elevation
A305	Enlarged West Elevation
A306	Enlarged West Elevation
A400	Building Section
A401	Building Section

PROJECT TEAM

DEVELOPMENT MANAGER — ONNI GROUP
200 - 1010 Seymour Street, Vancouver, BC
P. 604.628.3203
Eric Hughes

ARCHITECTS — TKA+D Architecture + Design Inc.
306 -1550 Pandora Street, Vancouver, BC
P. 604.569.3499 F. 604.569.1394
Craig Taylor, Architect AIBC

CIVIL ENGINEER — Binnie
300 - 4940 Canada Way
Burnaby, BC, V5G 4K6
Brad Gilmore

LANDSCAPE ARCHITECT — Durante Kreuk Ltd.
102, 1637 W 5th Avenue Vancouver BC V6J 1N5
P. 604.684.4611
Peter Kreuk

REV	DATE	DESCRIPTION
3	2020-03-05	Re-issued for Development Permit
2	2020-05-08	Re-issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE As indicated	DATE.	DRAWN. Author
PROJECT NUMBER		18038
FILE PATH	PLOT DATE	2021-03-05 9:39:32 AM

TKA+D
ARCHITECTURE + DESIGN INC
306 - 1550 PANDORA STREET - VANCOUVER VFL 2C7 P 604 569 3499

GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Project Data

PLOT DATE: 2021-03-05 9:38:32 AM

A001

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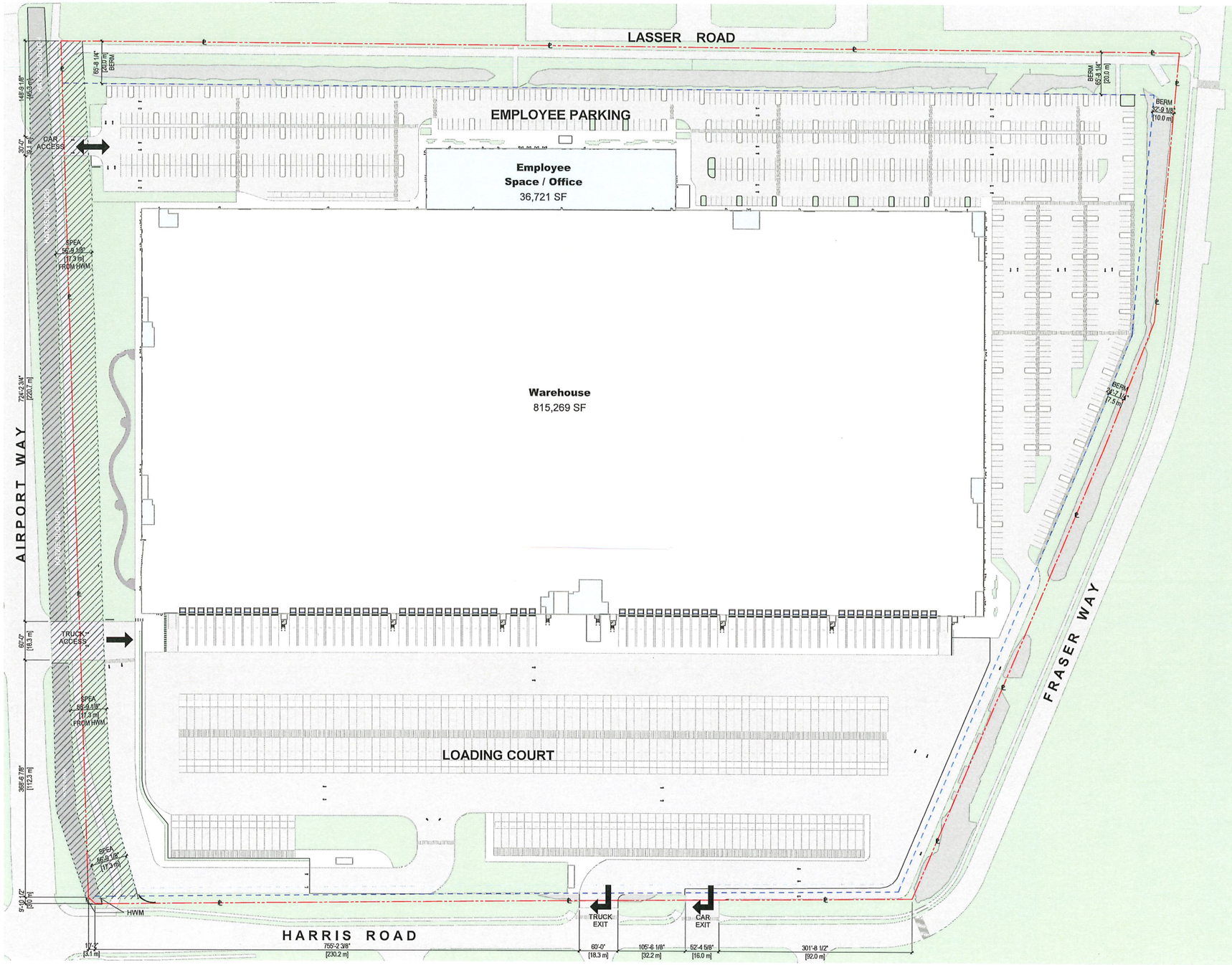


1 **Context Plan**
1" = 60'-0"

REV	DATE	DESCRIPTION
3	2020-03-05	Re-issued for Development Permit
2	2020-05-08	Re-issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: 1" = 60'-0" DATE: DRAWN: Author
PROJECT NUMBER 18030
FILE PATH: PLOT DATE: 2021-03-05 9:39:17 AM

TKA+D
ARCHITECTURE + DESIGN INC
300 - 1550 FALCONA STREET VANCOUVER V5L 0C7 P 604 569 3400

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

Context plan

PLOT DATE: 2021-03-05 9:38:47 AM

A003

DESIGN RATIONALE

Site organization

Situated at the intersection of Harris Road and Airport Way, West of the Golden Ears Bridge, Phase 4 of the Golden Ears Business Park consists of one single tenant industrial building. It is designed in line with the requirements of the Pitt Meadows Design Guidelines for the site as well as the needs of the future tenants. The building will be constructed of high-quality tilt up concrete panels that celebrate a carefully articulated and aesthetically pleasing façade.

The building is setback from the property line to lower its impact on the neighboring street and the pedestrian path. The north side of the site is adjacent to a Streamside Protection and Enhancement Area (SPEA) associated with Katzie slough. A 20m landscape area is provided on the east side of the site including a pedestrian path connecting Airport Way to the existing trails on Fraser Way, and local, residential streets On the eastern side of the site is a large, heavily planted employee parking area, with trees planted at a density of one for every 6 stalls.

Architecture and Massing

TKA+D Architecture + Design inc., who have been engaged as architects for this project, are renowned for creating high quality public, residential, commercial, and industrial architecture. They have received many design awards for their work including the Architectural Institute of BC's prestigious Innovation award as well as 4 UDI awards and 3 NAIOP awards for their industrial projects.

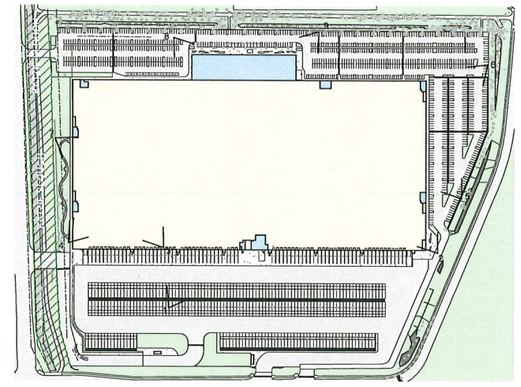
Given the proximity of the development to the single-family residential neighborhood to the east of the site, careful attention has been given to the façade treatment, articulation and massing of the building to ensure an aesthetically pleasing and human-scale streetscape is maintained.

All corners are punctuated with significant areas of glazing, to bring more natural light to the building, as well as facilitating a high degree of flexibility of the building to accommodate a variety of tenants sizes. The Design also incorporate a significant amount of faux wood elements into the soffits, vertical fins and canopies at the corners.

The West façades is designed in modules featuring dock and grade loading doors, and high level windows. A carefully composed arrangement of architectural reveals and panel joints help to further articulate this massing to ensure an aesthetically pleasing and human-scale streetscape is maintained.

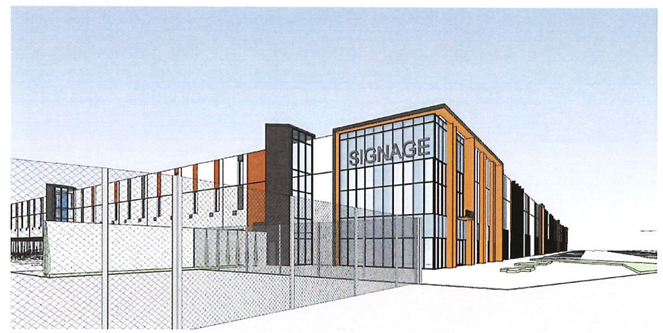
Additionally, a projecting "pop out" form is located at each exit to bring natural light into the building, as well as to allow for safe egress. The creation of these smaller elements also visually break down in the height of the building, and to strengthen the different rhythms of this facade.

Long lengths of walls on the north and south sides are punctuated by a rhythm of glazing and solid tilt-up panels, variations in color and wall height, recessed entries, and canopies.



Location Plan

View 1



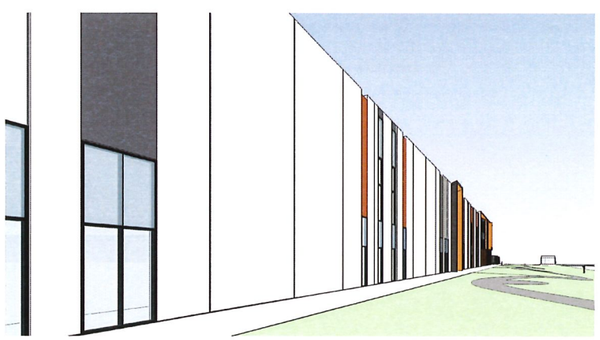
View 2

View 3

View 4

View 5

View 6



View 7

View 8

View 9

REV	DATE	DESCRIPTION
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2	2020-05-08	Re-issued for Development Permit
1	2020-03-10	Issued for Development Permit

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PROJECT NUMBER: 18038

FILE PATH: | PLOT DATE: 2021-03-05 9:39:12 AM

TKA+D ARCHITECTURE + DESIGN INC.
400 - 1550 FRACOMA STREET VANCOUVER V5L 4C7 P 604 525 3456

GEBP - PH4 - Build to Suit

11208 Harris Road, Pitt Meadows

Design Rationale

PLOT DATE: 2021-03-05 9:39:12 AM

A004

PRECEDENT IMAGES

TKA+D

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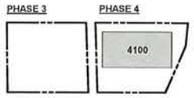
KEYPLAN 1



REV	DATE	DESCRIPTION
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2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

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PROJECT NUMBER: 18208

FILE PATH: | PLOT DATE: 2021-03-05 9:39:15 AM

TKA+D
ARCHITECTURE + DESIGN INC
305 - 1066 PACIFIC STREET VANCOUVER V6E 1C7 P 604 569 3400

GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Precedents images

PLOT DATE: 2021-03-05 9:39:15 AM

A005

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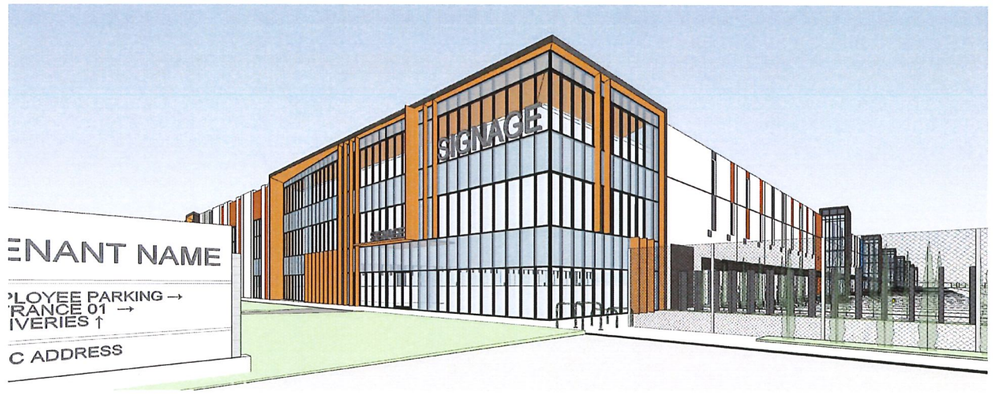
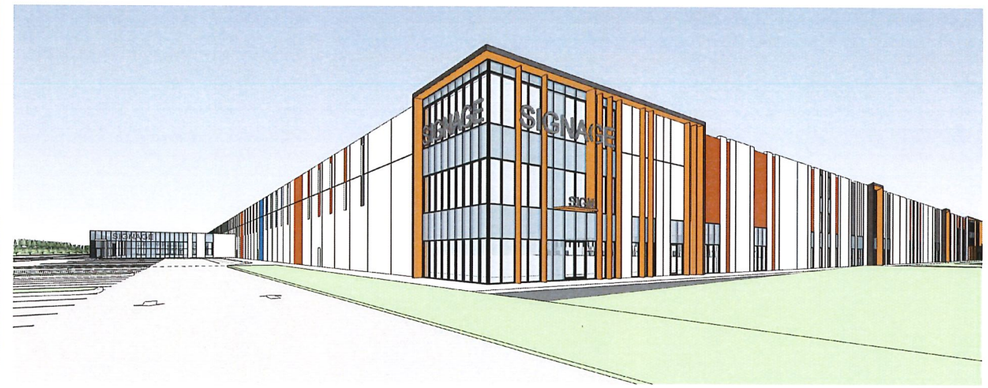
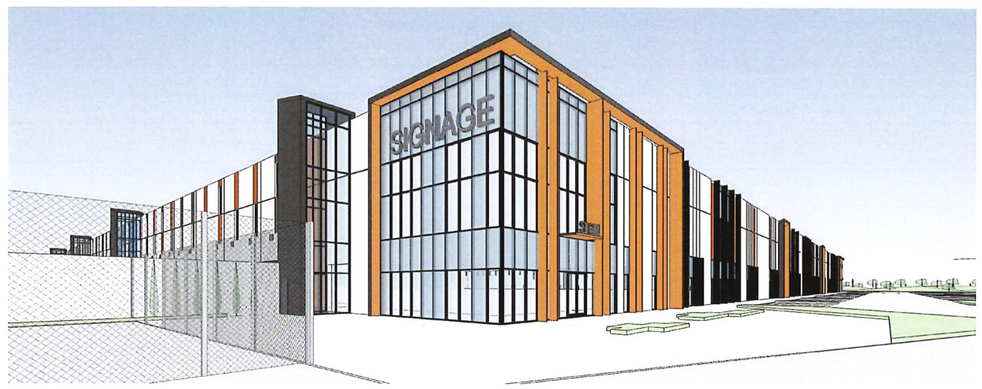


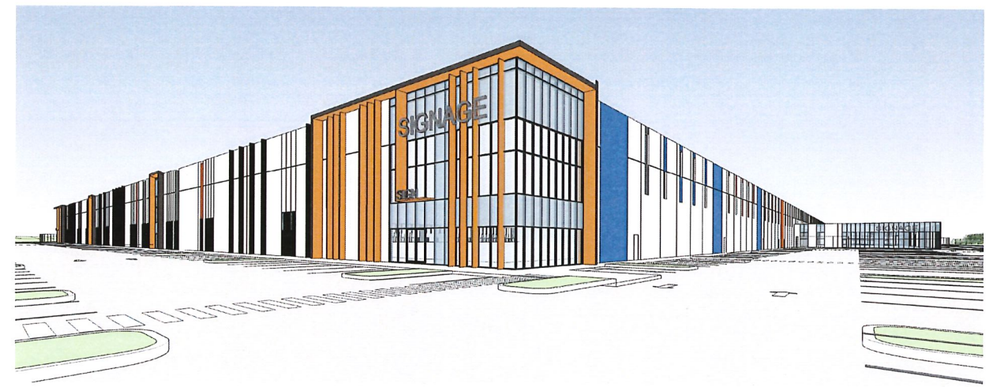
1 **NW Corner**



2 **NE Corner**



3 **SW Corner**



4 **SE Corner**

5 **NE Office Corner**

6 **SE Office Corner**

REV	DATE	DESCRIPTION
3	2120-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE:	DATE:	DRAWN: Author
PROJECT NUMBER		18038
FILE PATH	PLOT DATE	2021-03-05 9:39:28 AM

TKA+D
ARCHITECTURE + DESIGN INC
202 - 1550 PANDORA STREET | VANCOUVER | V5L 0C7 | P 604 569 3490

GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

3D Views

PLOT DATE: 2021-03-05 9:39:28 AM

A006

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REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-02-06	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE:	DATE:	DRAWN:	Author
PROJECT NUMBER			18038
FILE PATH:		PLOT DATE:	2021-03-05 9:39:29 AM

TKA+D
ARCHITECTURE + DESIGN INC
#2 - 1555 PANDORA STREET VANCOUVER V5L 1C7 P 604 569 3455

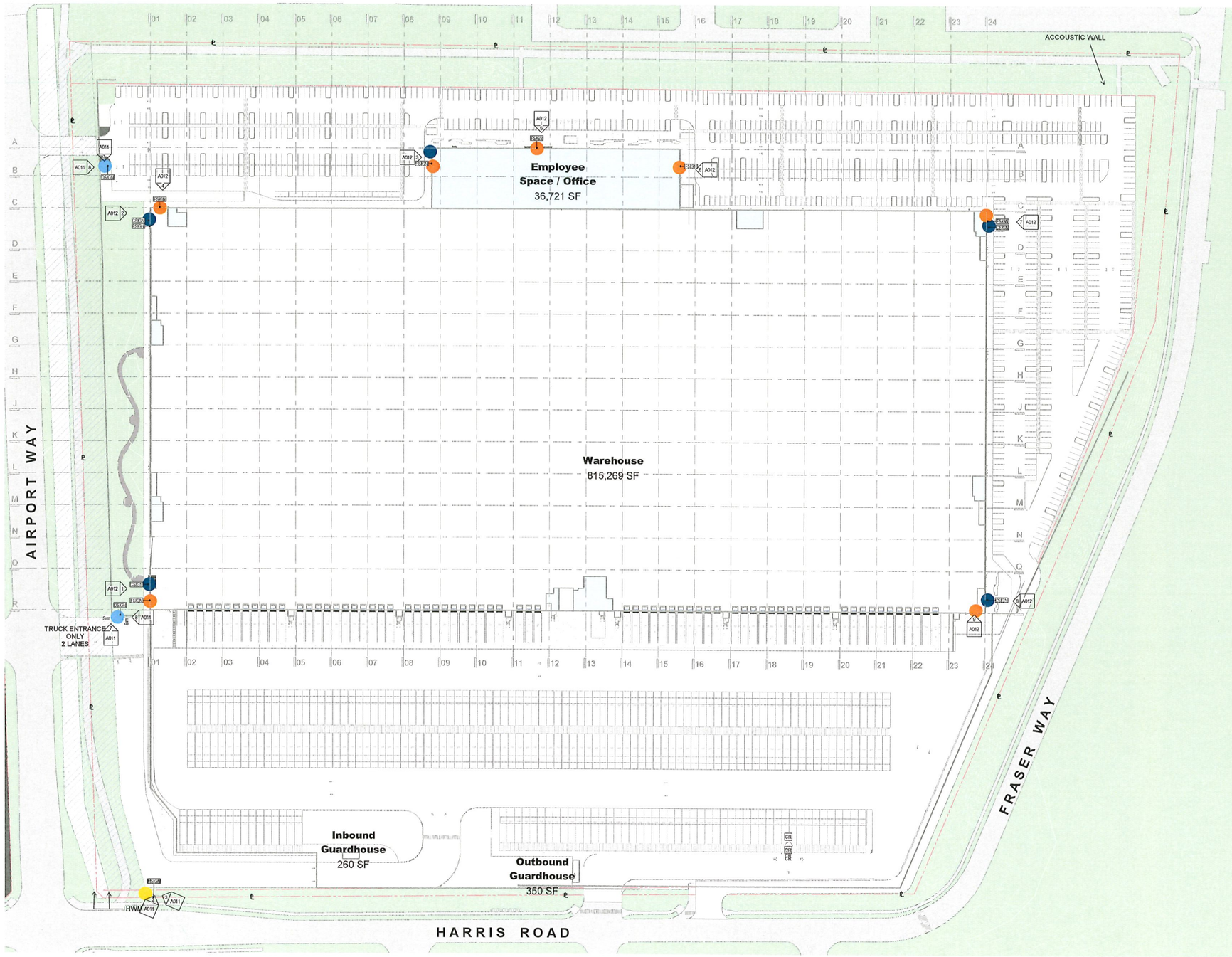
GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Rendering Image

PLOT DATE: 2021-03-05 9:39:29 AM

A007



1 **Site plan - Signage location**
1" = 60'-0"

TKA+D

onni group

Signage Legend	
SYMBOL	DESCRIPTION
CSIGN	CANOPY SIGN
DSIGN	DIRECTIONAL SIGN
FSIGN	FASCIA SIGN
MSIGN	MONUMENT SIGN

REV	DATE	DESCRIPTION
1	2120-03-05	Reissued for Development Permit

SCALE: 1" = 60'-0" DATE: DRAWN: Author

PROJECT NUMBER 18038

FILE PATH PLOT DATE 2021-03-05 9:39:10 AM

TKA+D ARCHITECTURE + DESIGN INC
308 - 1000 PACIFICA STREET VANCOUVER V6L 4C7 P 604 919 5496

GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Signage Location

PLOT DATE: 2021-03-05 9:39:43 AM

A010

SITE SIGNAGE

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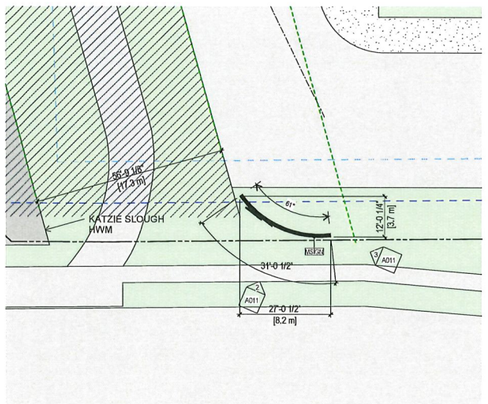
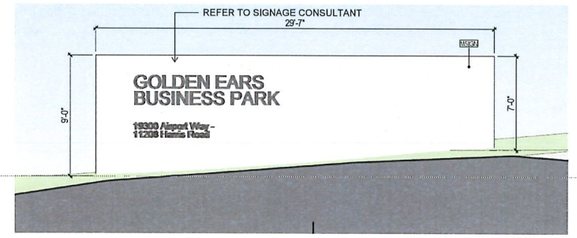
Signage Legend	
SYMBOL	DESCRIPTION
CSIGN	CANOPY SIGN
DSIGN	DIRECTIONAL SIGN
FSIGN	FASCIA SIGN
MSIGN	MONUMENT SIGN

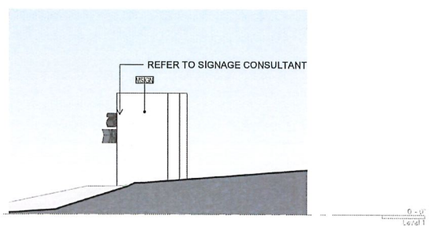


1 **Monument Sign Plan**
1/16" = 1'-0"

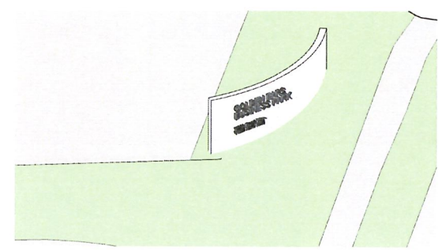


2 **Monument Sign Elevation - Front**
1/4" = 1'-0"

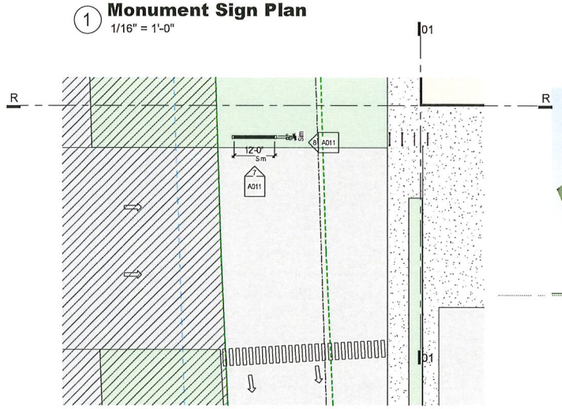
Precedent of Existing Monument Sign for Golden Ears Business Parks Phase 1 - Cnr of Harris Roand and Airport Way



3 **Monument Sign Elevation - Side**
1/4" = 1'-0"

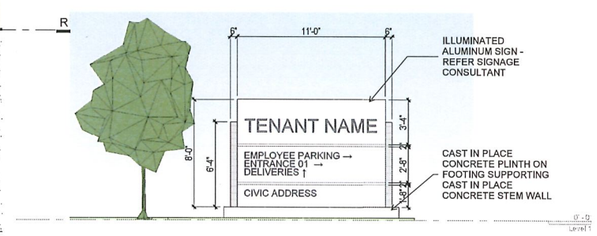


4 **Monument Sign - 3D View**



Directional Monument Sign - NW ENTRANCE

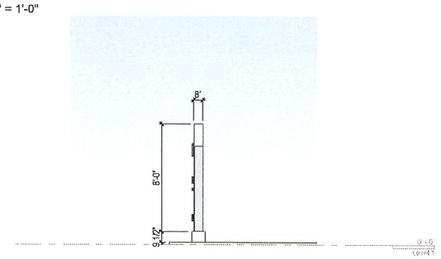
5 1/16" = 1'-0"



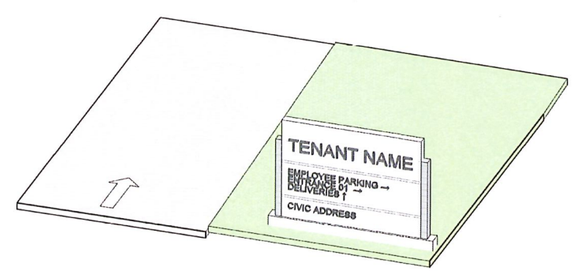
Directional Monument Sign - Front Elevation

7 1/4" = 1'-0"

6 **Directional Monument Sign- NE ENTRANCE**
1/16" = 1'-0"



8 **Directional Monument Sign - Side Elevation**
1/4" = 1'-0"



9 **Directional Monument sign - 3D View**

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-02-03	Re-Issued for Development Permit
1	2020-01-10	Issued for Development Permit

SCALE: As indicated	DATE:	DRAWN:	Author
PROJECT NUMBER			18038
FILE PATH:		PLOT DATE:	2021-03-05 9:39:58 AM

TKA+D ARCHITECTURE + DESIGN INC
VANCOUVER VancouverBC V5L 1K7 P 604 569 3456

GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

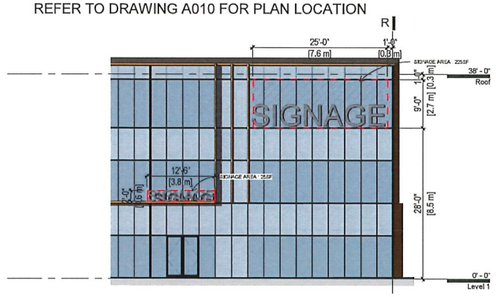
Site Signage

PLOT DATE 2021-03-05 9:39:48 AM

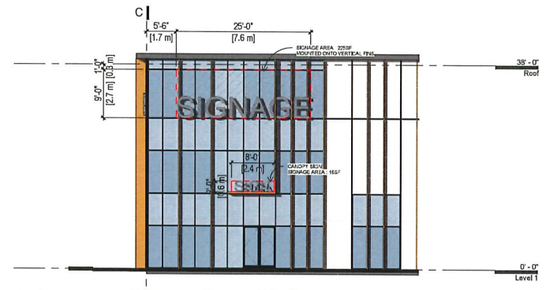
A011

BUILDING SIGNAGE

REFER TO DRAWING A010 FOR PLAN LOCATION



1 **Signage N Elevation - GL.R**
1" = 10'-0"



2 **Signage N Elevation - GL.C**
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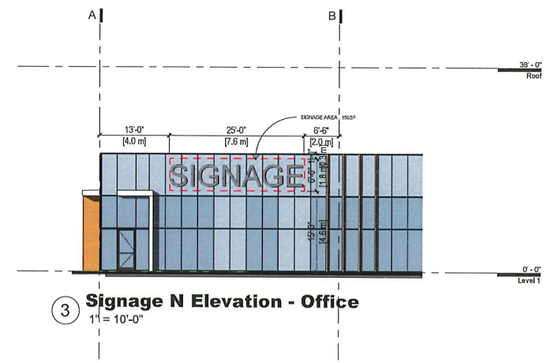

3 **Signage N Elevation - Office**
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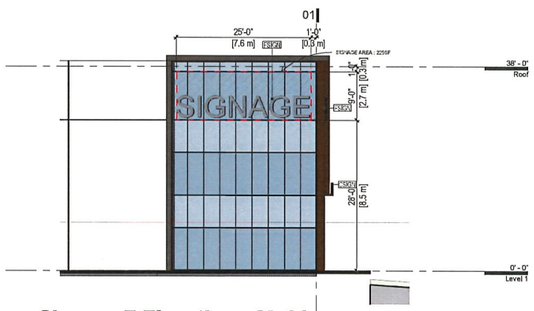

4 **Signage E Elevation - GL.01**
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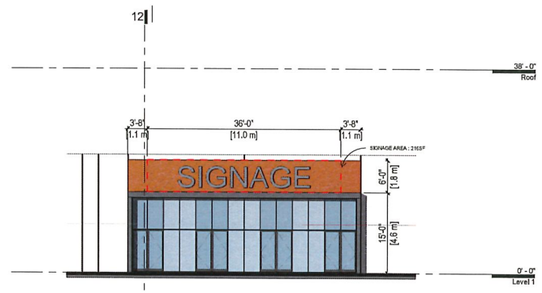

5 **Signage E Elevation - Office**
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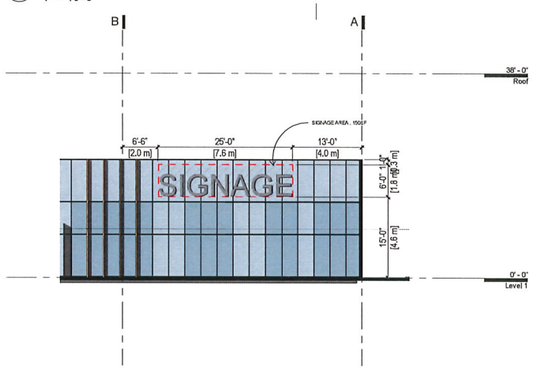
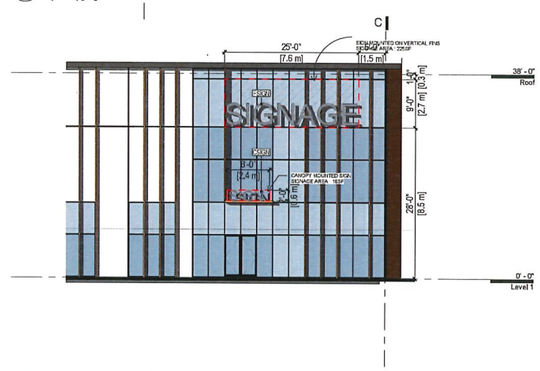
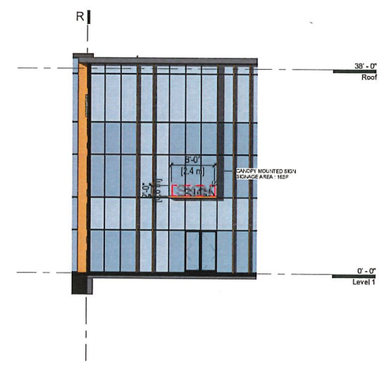


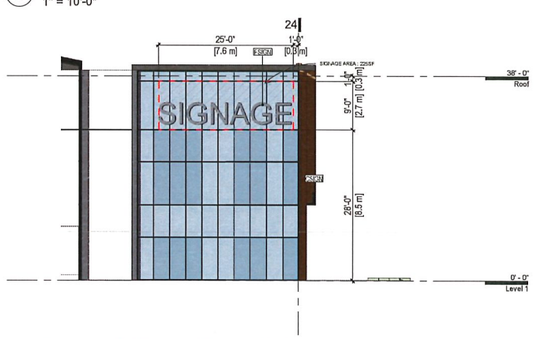
6 **Signage S Elevation - Office**
1" = 10'-0"



7 **Signage S Elevation - GL.C**
1" = 10'-0"



8 **Signage S Elevation - GL.R**
1" = 10'-0"



9 **Signage W Elevation - GL.24**
1" = 10'-0"

REV	DATE	DESCRIPTION
1	2020-03-05	Re-issued for Development Permit

SCALE: 1" = 10'-0" | DATE: | DRAWN: Author
PROJECT NUMBER: 18038
FILE PATH: | PLOT DATE: 2021-03-05 9:39:54 AM

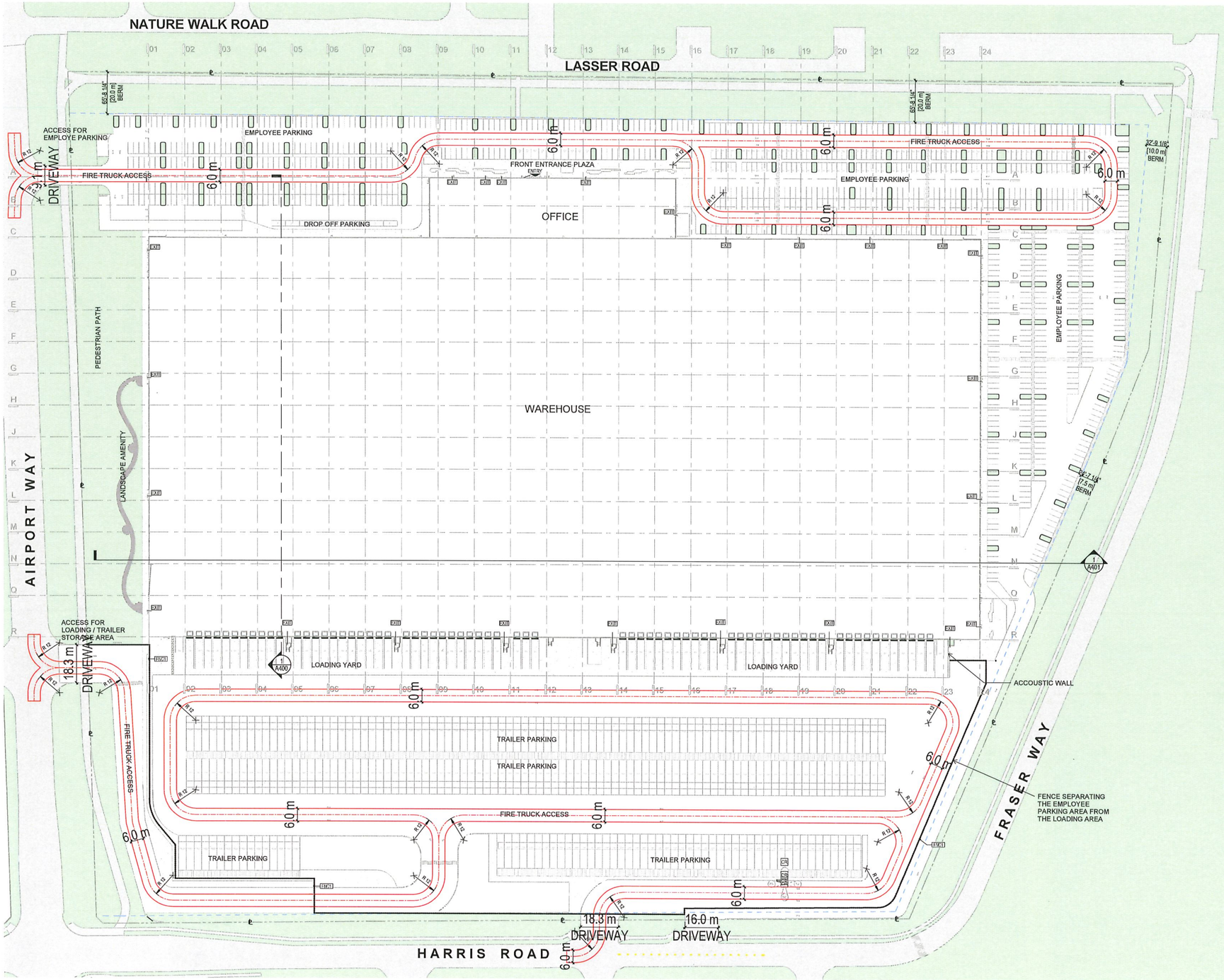
TKA+D ARCHITECTURE + DESIGN INC
305 - 1550 PANDORA STREET VANCOUVER V5L 0C7 P 604 569 3416

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

Building Signage

PLOT DATE: 2021-03-05 9:39:54 AM

A012



1 **Site plan Fire Escape route**
1" = 60'-0"

TKA+D
onni group

KEYNOTE LEGEND

TAG	DESCRIPTION
FNC1	FENCE TYPE 1: CHAIN LINK FENCING; C/W GATES AND HARDWARE, SEE SECTIONS & ELEVATIONS TO IDENTIFY HEIGHT, GALVANIZED.

REV	DATE	DESCRIPTION
SCALE 1" = 60'-0"	DATE.	DRAWN Author
PROJECT NUMBER		18038
FILE PATH		PLOT DATE 2021-03-05 9:40:08 AM

TKA+D
ARCHITECTURE + DESIGN INC
100 - 1333 RAMSON STREET | VANCOUVER | V6J 3C3 | P 604 559 3456

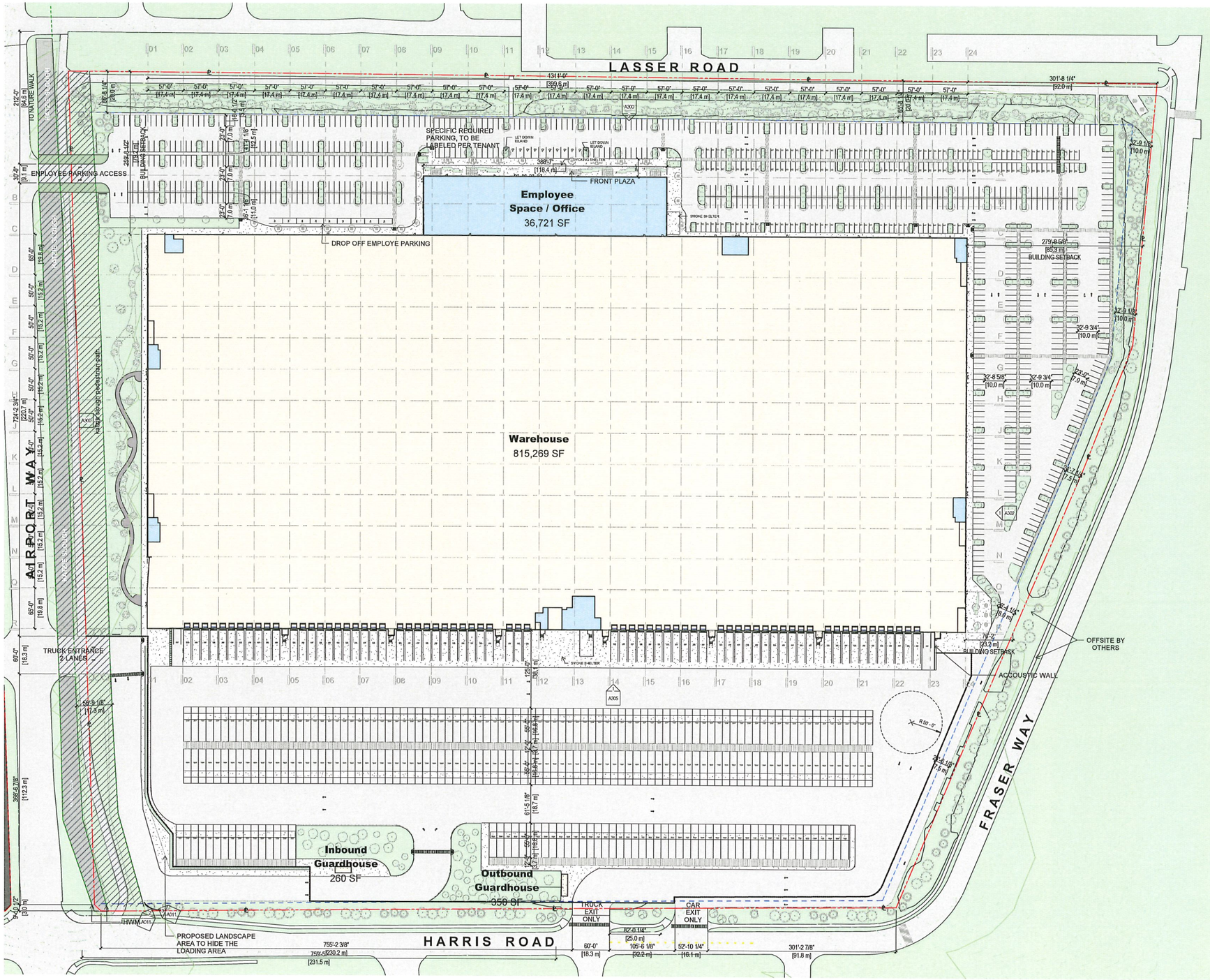
GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Site Plan - Fire Escape Route

PLOT DATE: 2021-03-05 9:40:08 AM

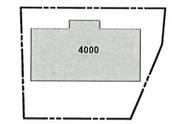
A050



1 **Overall - Site plan**
1" = 60'-0"

TKA+D
onni group

KEYPLAN
PHASE 4



REV	DATE	DESCRIPTION
3	2020-03-05	Re-issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author
PROJECT NUMBER: 18038
FILE PATH: 2019-04-05 | PLOT DATE: 9:14:22 AM

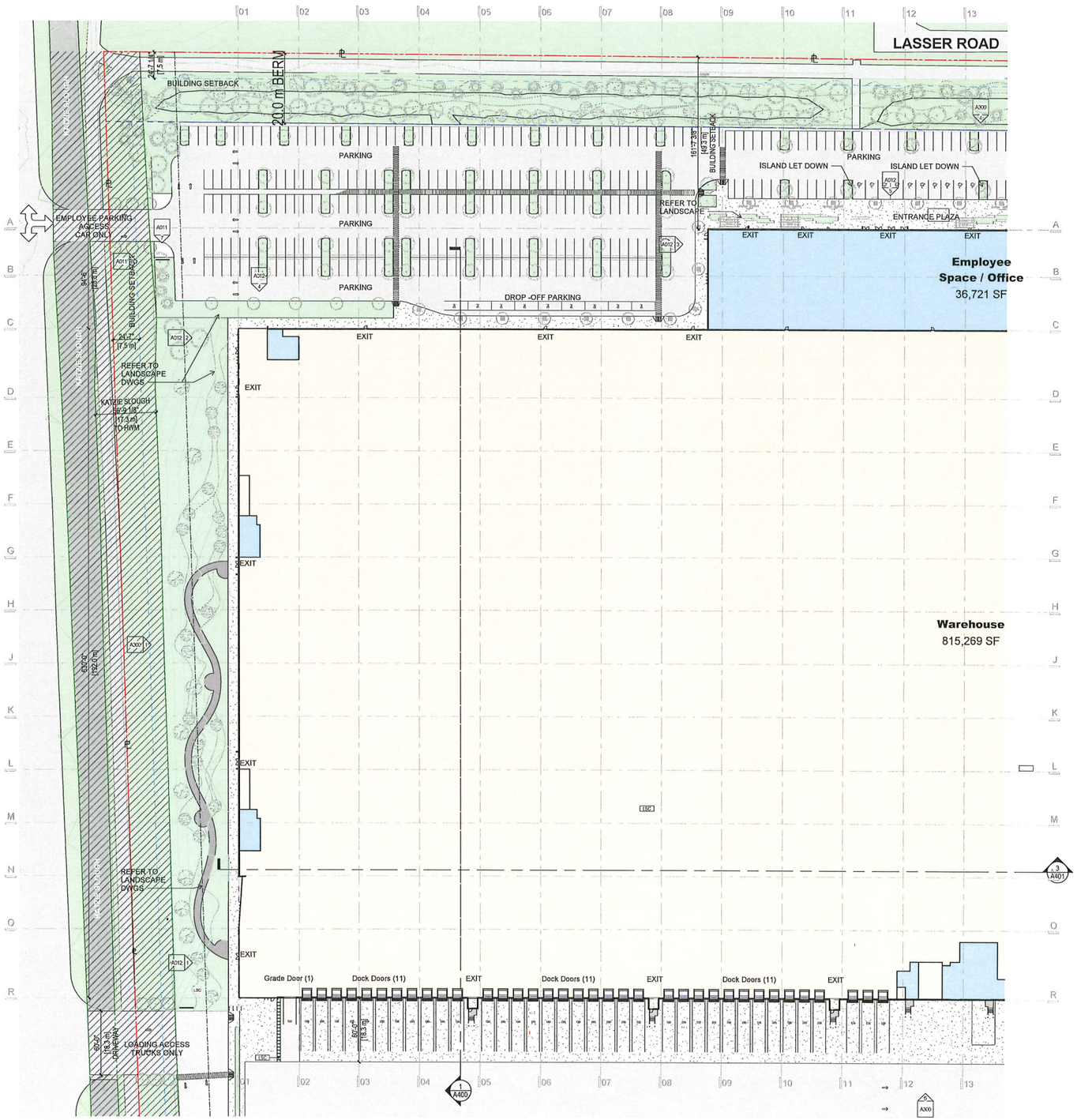
TKA+D ARCHITECTURE + DESIGN INC
308 - 1550 PARCORA STREET , VANCOUVER , V7L 0C7 , P 604 569 3436

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

Site - Key Plan

PLOT DATE 2021-03-05 9:59:22 AM

A101

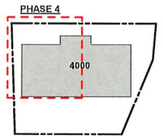


1 **Site Plan - North East**
1" = 40'-0"

TKA+D
onni group

KEYPLAN

PHASE 4

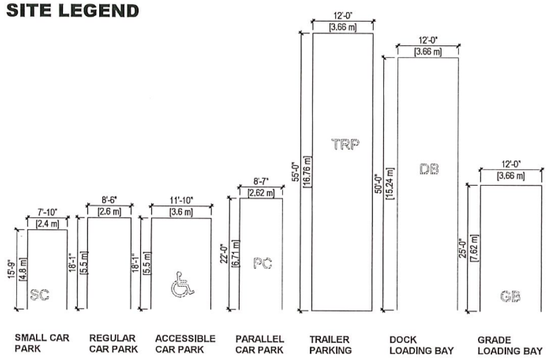


KEYNOTE LEGEND

TAG	DESCRIPTION
LSC	LANDSCAPING; SEE LANDSCAPE DETAILS

PROPERTY LINE
BERM SETBACK
HIGH WATER MARK - KATZIE SLOUGH
BUILDING SETBACK
KATZIE SLOUGH
SPEA

SITE LEGEND



PARKING LEGEND

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author
PROJECT NUMBER: 18238
FILE PATH: | PLOT DATE: 2021-03-05 9:40:28 AM

TKA+D
ARCHITECTURE + DESIGN INC
Suite 1550 PARADOX STREET VANCOUVER V7L 4K7 P 604 536 3486

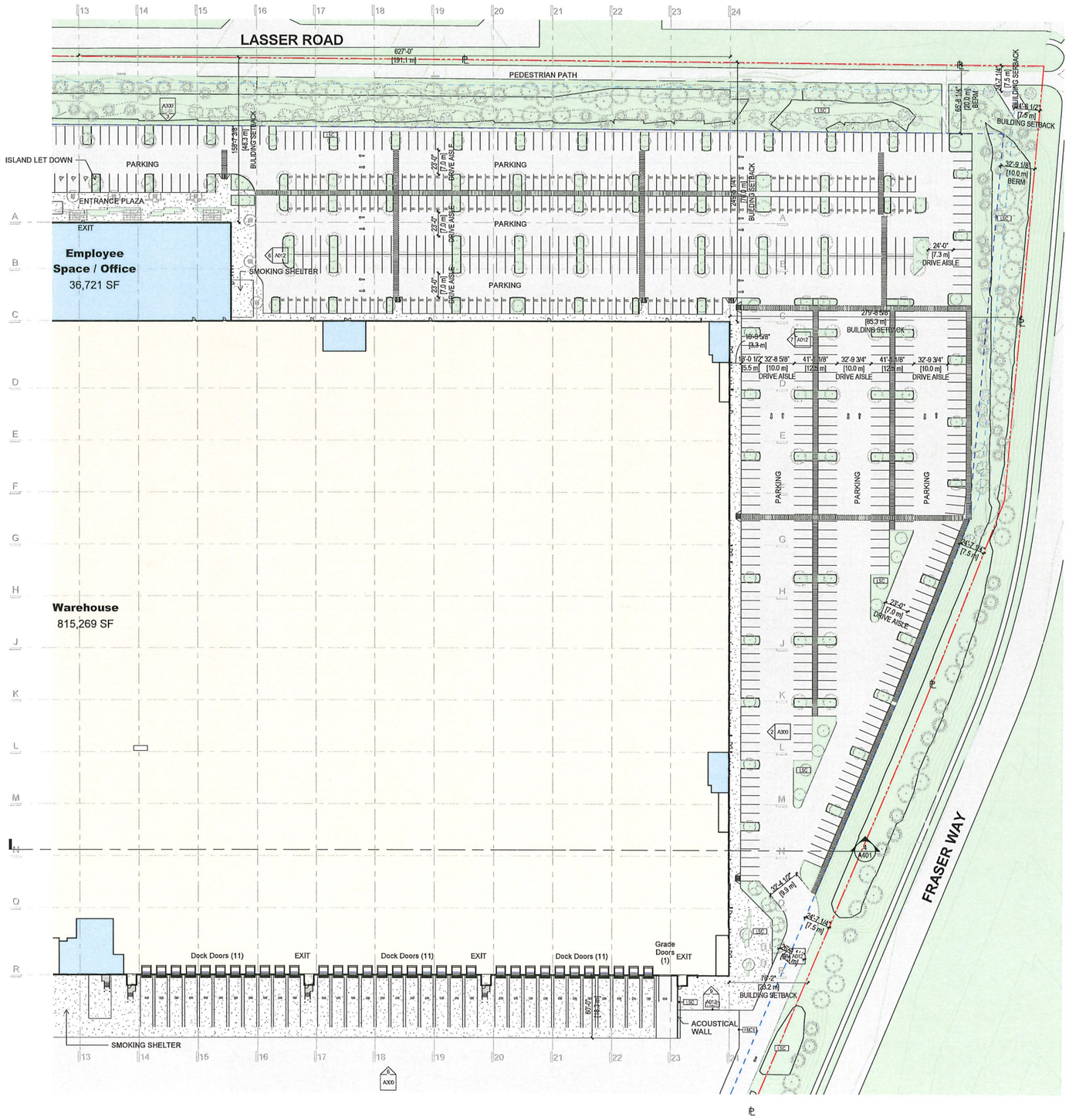
GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Site Plan - NE

PLOT DATE 2021-03-05 9:40:29 AM

A102

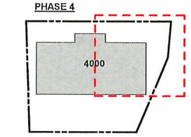


1 **Site Plan -South East**
1" = 40'-0"

TKA+D
onni group

KEYPLAN

PHASE 4



KEYNOTE LEGEND

TAG	DESCRIPTION
FNC1	FENCE TYPE 1: CHAIN LINK FENCING; C/W GATES AND HARDWARE, SEE SECTIONS & ELEVATIONS TO IDENTIFY HEIGHT, GALVANIZED.
LSC	LANDSCAPING; SEE LANDSCAPE DETAILS

PROPERTY LINE

BERM SETBACK

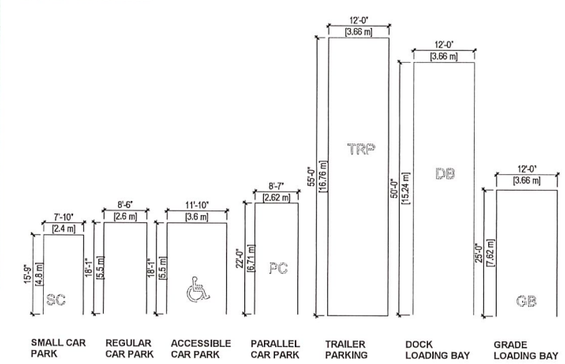
HIGH WATER MARK - KATZIE SLOUGH

BUILDING SETBACK

KATZIE SLOUGH

SPEA

SITE LEGEND



PARKING LEGEND

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author

PROJECT NUMBER 18038

FILE PATH | PLOT DATE 2021-03-05 9:10:32 AM

TKA+D
ARCHITECTURE + DESIGN INC
Suite 1000 - 1066 WEST HASTINGS STREET VANCOUVER V6E 3X2 P 604 558 3456

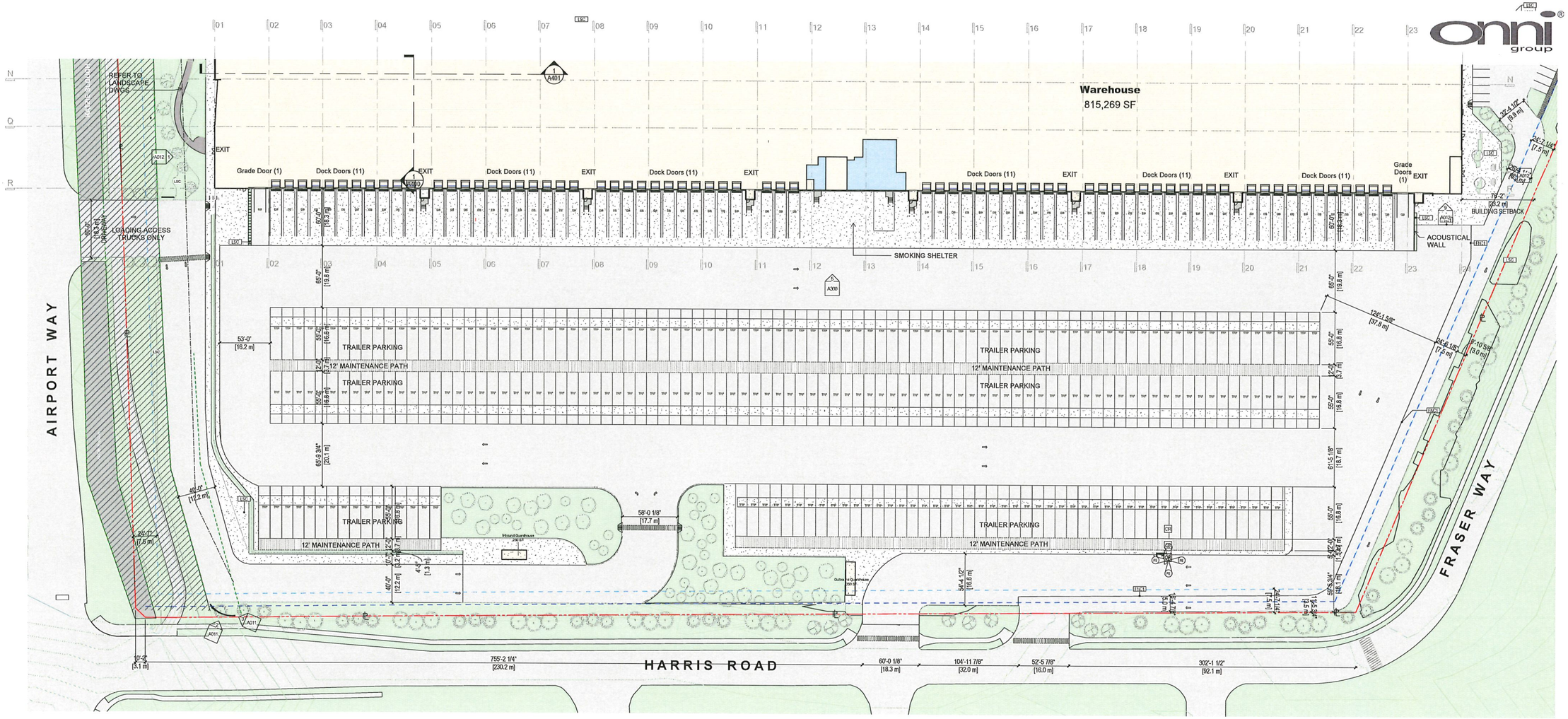
GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

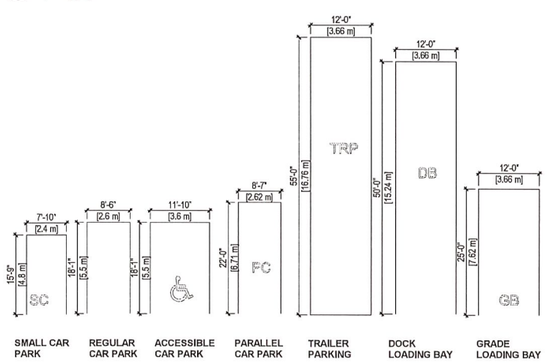
Site Plan - SE

PLOT DATE: 2021-03-05 9:40:38 AM

A103



1 **Site plan - West**
1" = 40'-0"



PARKING LEGEND

PROPERTY LINE
BERM SETBACK
HIGH WATER MARK - KATZIE SLOUGH
BUILDING SETBACK
KATZIE SLOUGH
SPEA

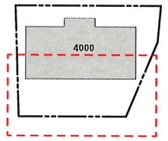
SITE LEGEND

KEYNOTE LEGEND

TAG	DESCRIPTION
FNC1	FENCE TYPE 1: CHAIN LINK FENCING; C/W GATES AND HARDWARE, SEE SECTIONS & ELEVATIONS TO IDENTIFY HEIGHT, GALVANIZED.
LSC	LANDSCAPING, SEE LANDSCAPE DETAILS

KEYPLAN

PHASE 4



REV	DATE	DESCRIPTION
1	2020-03-05	Reissued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author
PROJECT NUMBER: 18038
FILE PATH: | PLOT DATE: 2021-03-05 9:10:57 AM

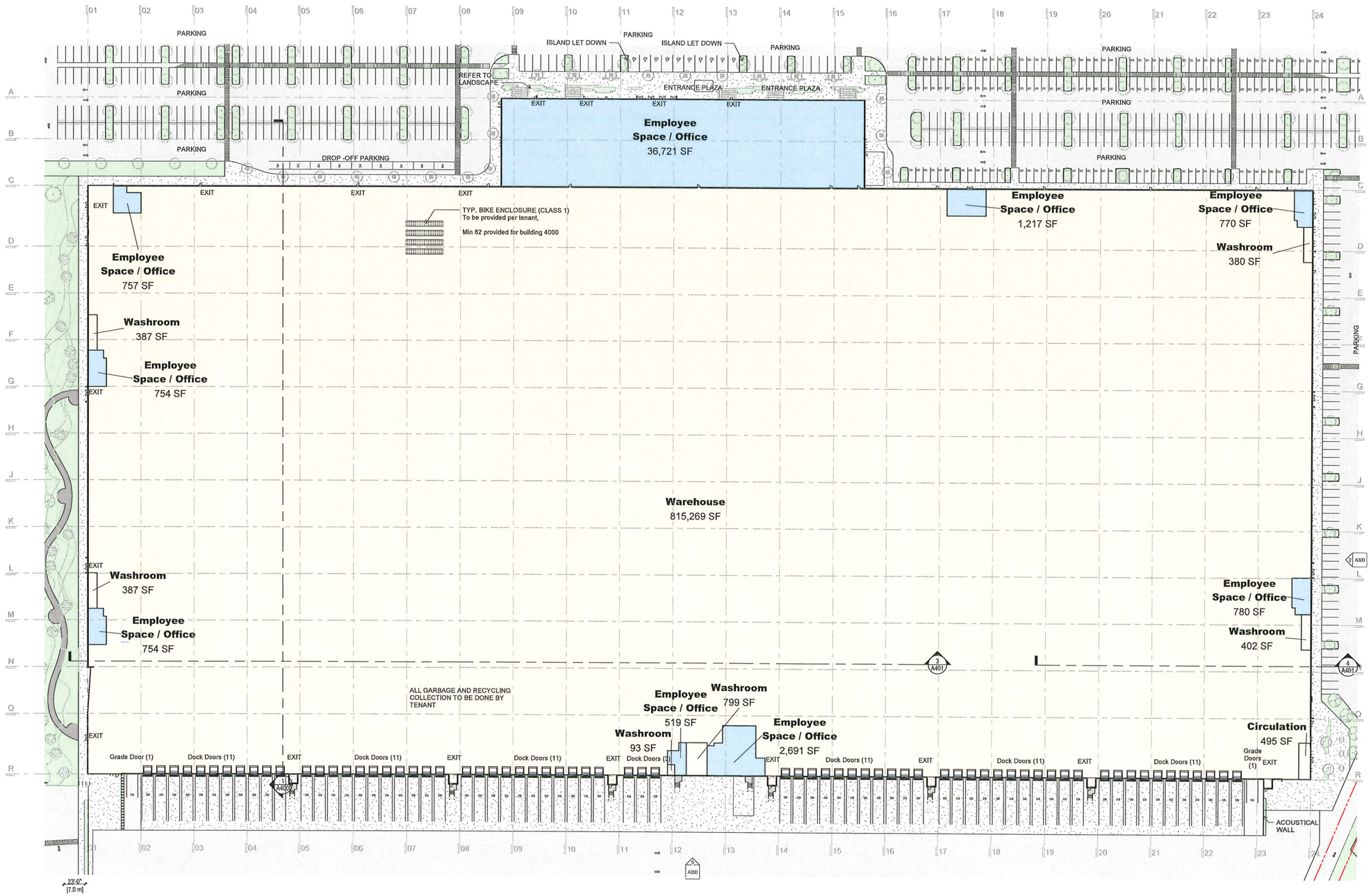
TKA+D ARCHITECTURE + DESIGN INC
305 - 1550 PANDORA STREET | VANCOUVER | V5L 0C7 | P 604 569 3456

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

Site plan - W

PLOT DATE: 2021-03-05 9:40:47 AM

A104

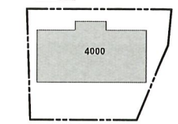


1 **Level 1 .**
1" = 40'-0"

TKA+D
onni group

KEYPLAN

PHASE 4



KEYNOTE LEGEND

TAG	DESCRIPTION

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author
PROJECT NUMBER: 18338
FILE PATH: | PLOT DATE: 2021-03-05 9:40:55 AM

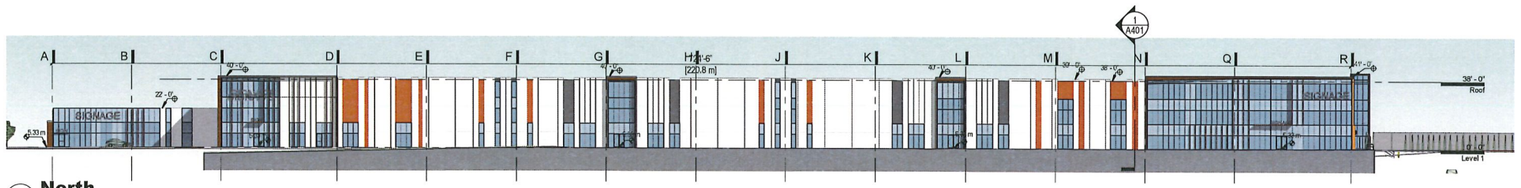
TKA+D ARCHITECTURE + DESIGN INC
200 - 1765 PARGOSA STREET VANCOUVER V5L 1C7 P 604.569.3436

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

Level 1

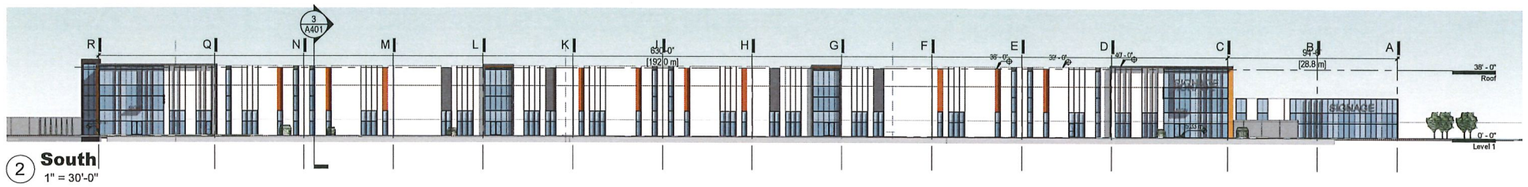
PLOT DATE 2021-03-05 9:40:55 AM

A110



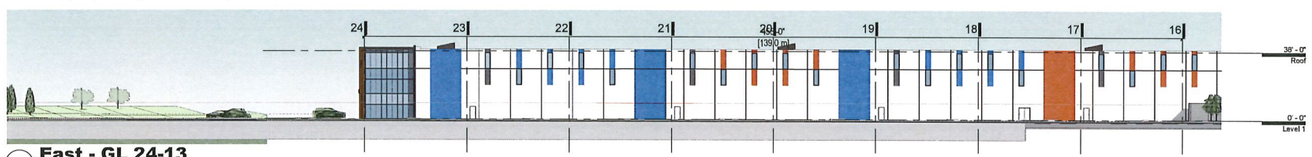
1 **North**
1" = 30'-0"

* Airport Way (north) elevation complies with City of Pitt Meadow's required 50% Glazing Ratio at Ground Floor Level.

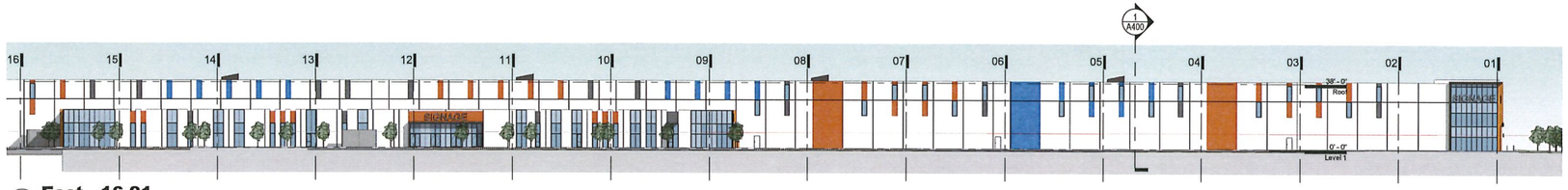


2 **South**
1" = 30'-0"

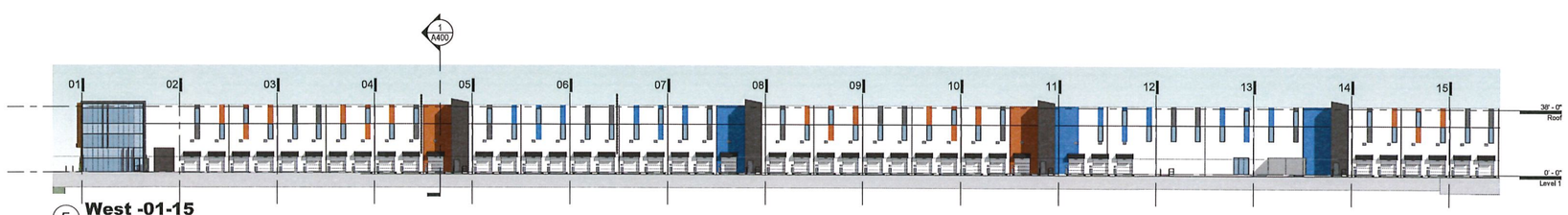
* Fraser Way (south) elevation provides 48% Glazing Ratio at Ground Floor Level.



3 **East - GL 24-13**
1" = 30'-0"



4 **East - 16-01**
1" = 30'-0"



5 **West -01-15**
1" = 30'-0"

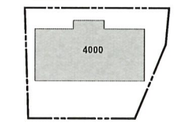
* Harris Road (west) elevation provides 8.2 % Glazing Ratio at Ground Floor Level.

6 **West - 15-24**
1" = 30'-0"

TKA+D
onni group

KEYPLAN

PHASE 4



Keyplan 2- PH4

KEYNOTE LEGEND

TAG	DESCRIPTION

REV	DATE	DESCRIPTION
3	2020-03-05	Re-issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated	DATE:	DRAWN: Author
PROJECT NUMBER		18038
FILE PATH:	PLOT DATE:	2021-03-05 9:11:08 AM

TKA+D
ARCHITECTURE + DESIGN INC
308 - 1570 PANDORA STREET | VANCOUVER | V5L 0C7 | P 604 569 3439

GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Overall Building Elevation

PLOT DATE: 2021-03-05 9:41:08 AM

A300

TKA+D
onni group

1 **Enlarged North - GL.A-H**
1" = 10'-0"

2 **Enlarged North - GL.H-R**
1" = 10'-0"

KEYNOTE LEGEND

TAG	DESCRIPTION
CSIGN	CANOPY SIGN
CTUP1	CONCRETE TILT-UP; PAINT FINISH, P1-LIGHT GREY
CTUP3	CONCRETE TILT-UP; PAINT FINISH, P3-CHARCOAL
CTUP4	CONCRETE - TILT UP - PAINTED P4 - ORANGE
FSIGN	FASCIA SIGN
GL1	VISION GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
GL2	SPANDREL GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
MC1	METAL CLADDING - CHARCOAL
MC2	METAL CLADDING - FAUX WOOD - TYP. LONGBOARD
SSH	SUNSHADE

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated	DATE:	DRAWN:	Author
PROJECT NUMBER			18038
FILE PATH		PLOT DATE	2021-03-05 9:10:18 AM

TKA+D
ARCHITECTURE + DESIGN INC
300 - 1336 PARCOVER STREET VANCOUVER V7L 2C7 P 604 518 3455

GEBP - PH4 - Build to Suit

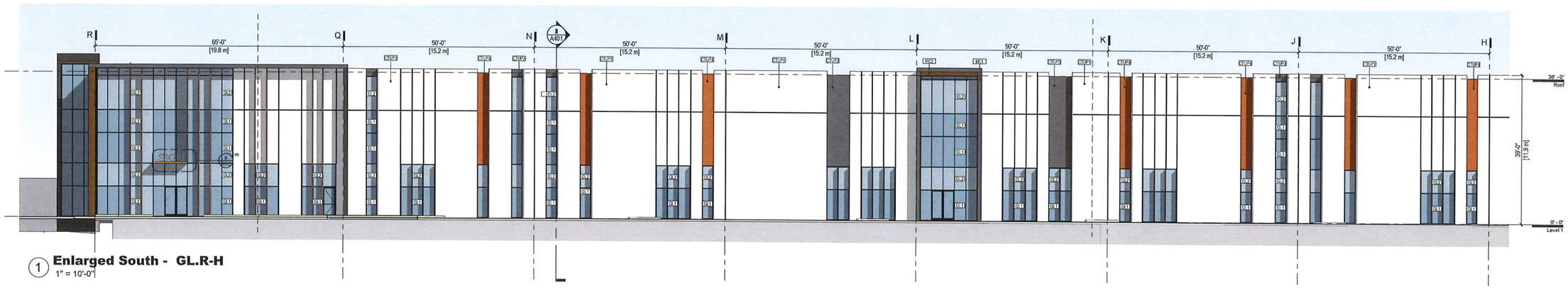
11208 Harris Road,
Pitt Meadows

Enlarged North Elevation

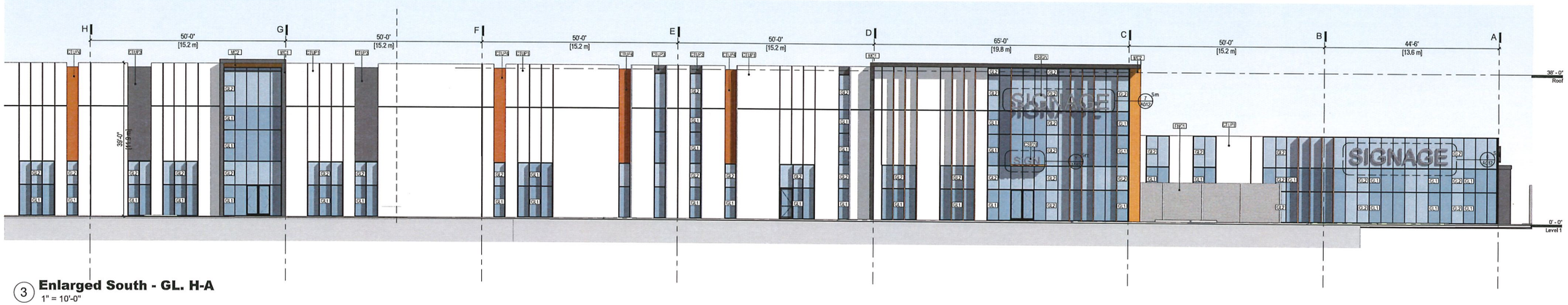
PLOT DATE: 2021-03-05 9:41:18 AM

A301

TKA+D
onni group



1 **Enlarged South - GL.R-H**
1" = 10'-0"



3 **Enlarged South - GL. H-A**
1" = 10'-0"

KEYNOTE LEGEND

TAG	DESCRIPTION
CSIGN	CANOPY SIGN
CTUP1	CONCRETE TILT-UP; PAINT FINISH, P1-LIGHT GREY
CTUP3	CONCRETE TILT-UP; PAINT FINISH, P3-CHARCOAL
CTUP4	CONCRETE - TILT UP - PAINTED P4 - ORANGE
FNC1	FENCE TYPE 1: CHAIN LINK FENCING; C/W GATES AND HARDWARE, SEE SECTIONS & ELEVATIONS TO IDENTIFY HEIGHT, GALVANIZED.
FSIGN	FASCIA SIGN
GL1	VISION GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
GL2	SPANDREL GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
MC1	METAL CLADDING - CHARCOAL
MC2	METAL CLADDING - FAUX WOOD - TYP. LONGBOARD

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: 1" = 10'-0" DATE: DRAWN: Author
PROJECT NUMBER 18038
FILE PATH PLOT DATE 2021-03-05 9:11:25 AM

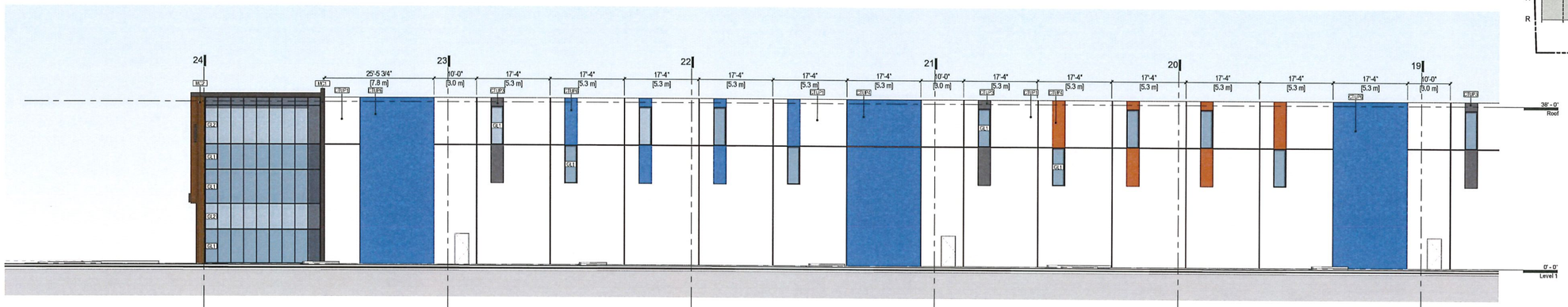
TKA+D
ARCHITECTURE + DESIGN INC
#8 - 1550 PACIFIC STREET VANCOUVER V7L 4C7 P 604 569 1646

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

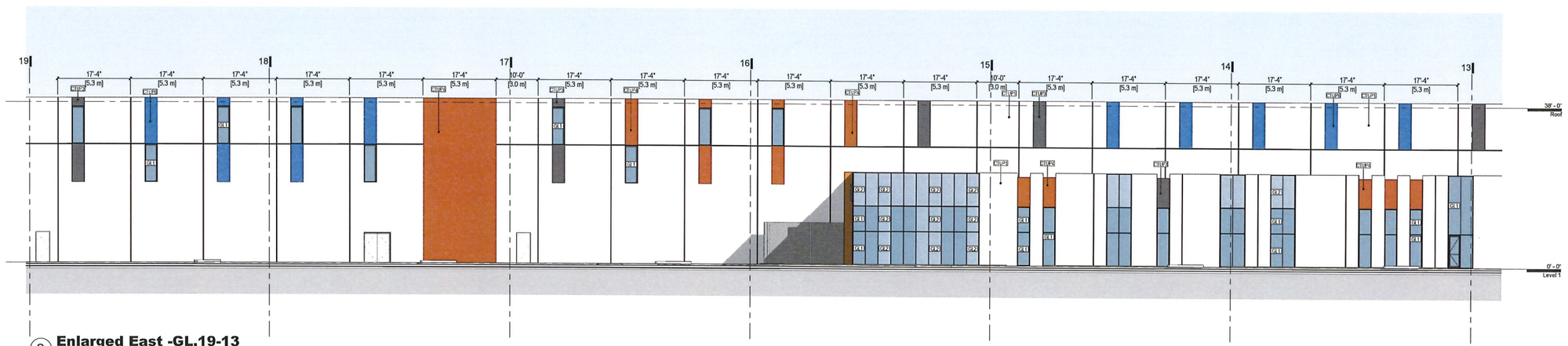
Enlarged South Elevation

PLOT DATE: 2021-03-05 9:41:25 AM

A302



1 **Enlarged East -GL.24-19**
1" = 10'-0"



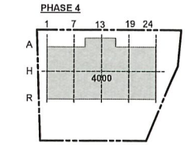
2 **Enlarged East -GL.19-13**
1" = 10'-0"

KEYNOTE LEGEND

TAG	DESCRIPTION
CTUP1	CONCRETE TILT-UP; PAINT FINISH, P1-LIGHT GREY
CTUP3	CONCRETE TILT-UP; PAINT FINISH, P3-CHARCOAL
CTUP4	CONCRETE - TILT UP - PAINTED P4 - ORANGE
CTUP6	CONCRETE - TILT UP - PAINTED P6 - BLUE
GL1	VISION GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
GL2	SPANDREL GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
MC1	METAL CLADDING - CHARCOAL
MC2	METAL CLADDING - FAUX WOOD - TYP. LONGBOARD

TKA+D
onni group

PHASE 4



REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated	DATE:	DRAWN:	Author
PROJECT NUMBER:			18038
FILE PATH:		PLOT DATE:	2021-03-05 9:41:30 AM

TKA+D
ARCHITECTURE + DESIGN INC
305 - 1550 PANDORA STREET VANCOUVER V5L 0C7 P 604 569 3456

GEBP - PH4 - Build to Suit

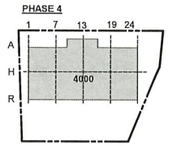
11208 Harris Road,
Pitt Meadows

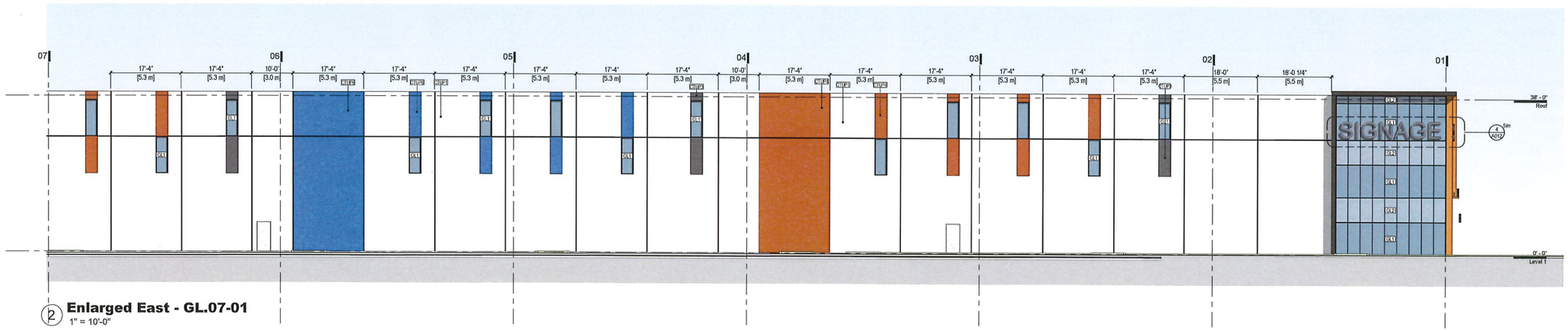
Enlarged East Elevation

PLOT DATE 2021-03-05 9:41:30 AM

A303

1 **Enlarged East -GL.13-08**
1" = 10'-0"





2 **Enlarged East - GL.07-01**
1" = 10'-0"

KEYNOTE LEGEND

TAG	DESCRIPTION
CTUP1	CONCRETE TILT-UP; PAINT FINISH, P1-LIGHT GREY
CTUP3	CONCRETE TILT-UP; PAINT FINISH, P3-CHARCOAL
CTUP4	CONCRETE - TILT UP - PAINTED P4 - ORANGE
CTUP6	CONCRETE - TILT UP - PAINTED P6 - BLUE
GL1	VISION GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
GL2	SPANDREL GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE

REV	DATE	DESCRIPTION
3	2020-03-05	Re-issued for Development Permit
2	2020-05-08	Re-issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author
PROJECT NUMBER: 18338
FILE PATH: | PLOT DATE: 2021-03-05 9:41:35 AM

TKA+D ARCHITECTURE + DESIGN INC
305 - 1550 PARGORA STREET, VANCOUVER, V7L 0C7 P 604 568 3416

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

Enlarged East Elevation

PLOT DATE 2021-03-05 9:41:35 AM

A304

1 **Enlarged West -01-07**
1" = 10'-0"

2 **Enlarged West -07-13**
1" = 10'-0"

KEYNOTE LEGEND

TAG	DESCRIPTION
CPY	CANOPY
CTUP1	CONCRETE TILT-UP; PAINT FINISH, P1-LIGHT GREY
CTUP3	CONCRETE TILT-UP; PAINT FINISH, P3-CHARCOAL
CTUP4	CONCRETE - TILT UP - PAINTED P4 - ORANGE
CTUP6	CONCRETE - TILT UP - PAINTED P6 - BLUE
FNC1	FENCE TYPE 1: CHAIN LINK FENCING; C/W GATES AND HARDWARE, SEE SECTIONS & ELEVATIONS TO IDENTIFY HEIGHT, GALVANIZED.
GL1	VISION GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
GL2	SPANDREL GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
MC1	METAL CLADDING - CHARCOAL

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated	DATE:	DRAWN:	Author
PROJECT NUMBER			18038
FILE PATH:		PLOT DATE:	2021-03-05 9:41:41 AM

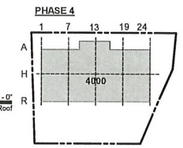
TKA+D ARCHITECTURE + DESIGN INC
MAIN : 1320 PANDORA STREET | VANCOUVER | V5L 0C7 | P: 604 569 3499

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

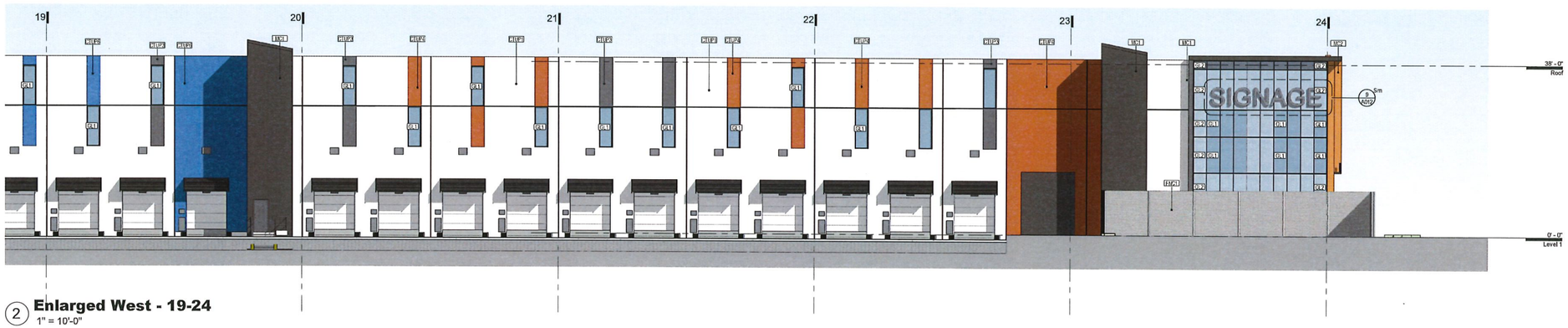
Enlarged West Elevation

PLOT DATE 2021-03-05 9:41:41 AM

A305



1 **Enlarged West -16-19**
1" = 10'-0"



2 **Enlarged West - 19-24**
1" = 10'-0"

KEYNOTE LEGEND

TAG	DESCRIPTION
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CTUP3	CONCRETE TILT-UP; PAINT FINISH, P3-CHARCOAL
CTUP4	CONCRETE - TILT UP - PAINTED P4 - ORANGE
CTUP6	CONCRETE - TILT UP - PAINTED P6 - BLUE
FNC1	FENCE TYPE 1; CHAIN LINK FENCING; C/W GATES AND HARDWARE, SEE SECTIONS & ELEVATIONS TO IDENTIFY HEIGHT, GALVANIZED.
GL1	VISION GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
GL2	SPANDREL GLAZING; SEE GLAZING TYPES & FINISHES SCHEDULE
MC1	METAL CLADDING - CHARCOAL
MC2	METAL CLADDING - FAUX WOOD - TYP. LONGBOARD

REV	DATE	DESCRIPTION
3	2020-03-05	Re-Issued for Development Permit
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author
PROJECT NUMBER: 18038
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GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

Enlarged West Elevation

PLOT DATE: 2021-03-05 9:41:47 AM

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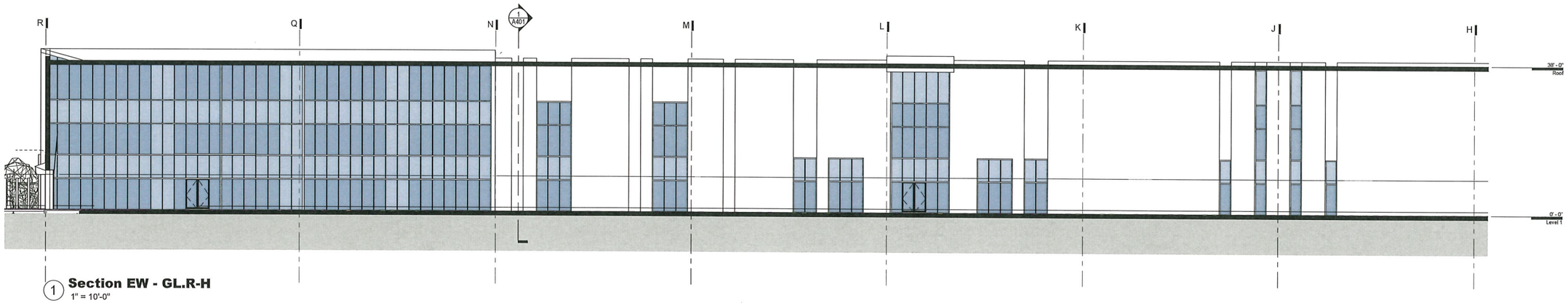
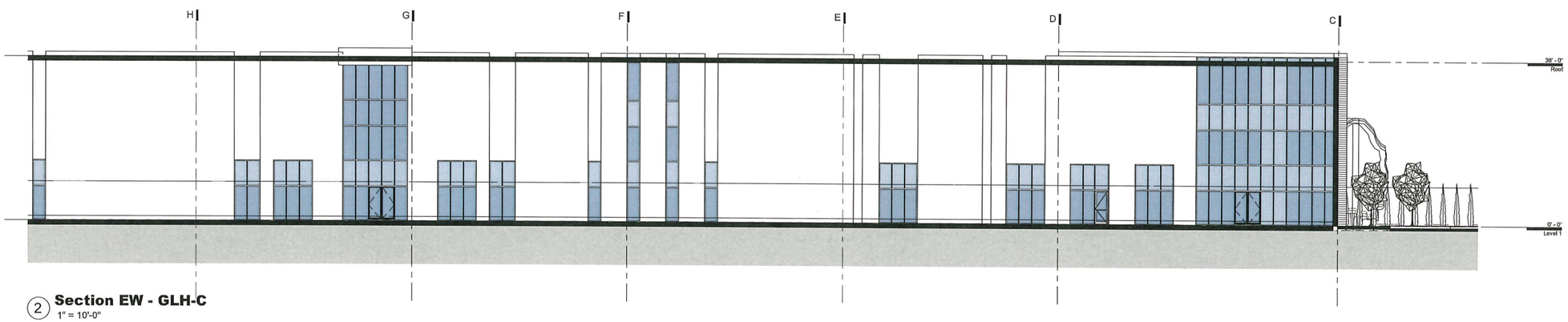


1 **Section EW - GL.R-H**
1" = 10'-0"



2 **Section EW - GLH-C**
1" = 10'-0"

REV	DATE	DESCRIPTION
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2	2020-03-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: 1" = 10'-0" | DATE: | DRAWN: Author

PROJECT NUMBER: 18038

FILE PATH: | PLOT DATE: 2019-04-09 9:11:53 AM

TKA+D ARCHITECTURE + DESIGN INC
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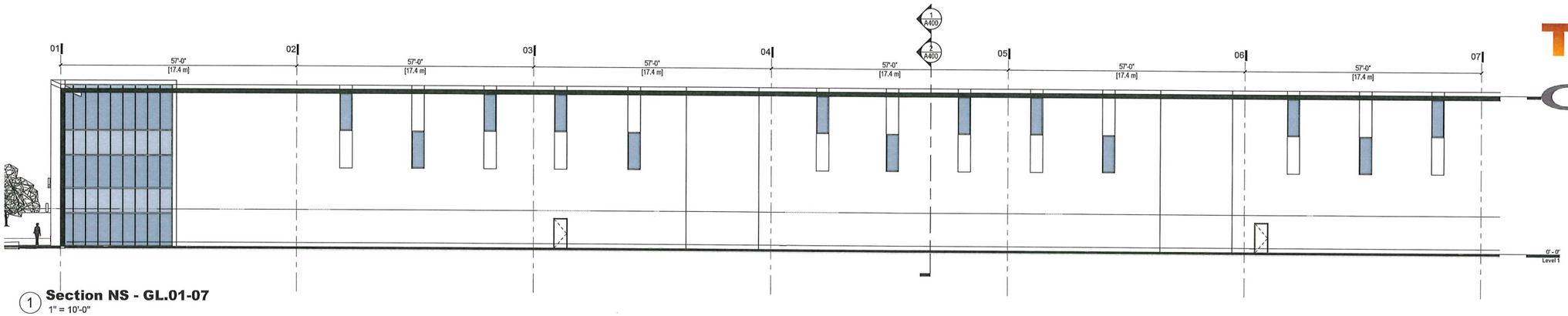
GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Building Section

PLOT DATE: 2021-03-05 9:41:53 AM

A400



1 **Section NS - GL.01-07**
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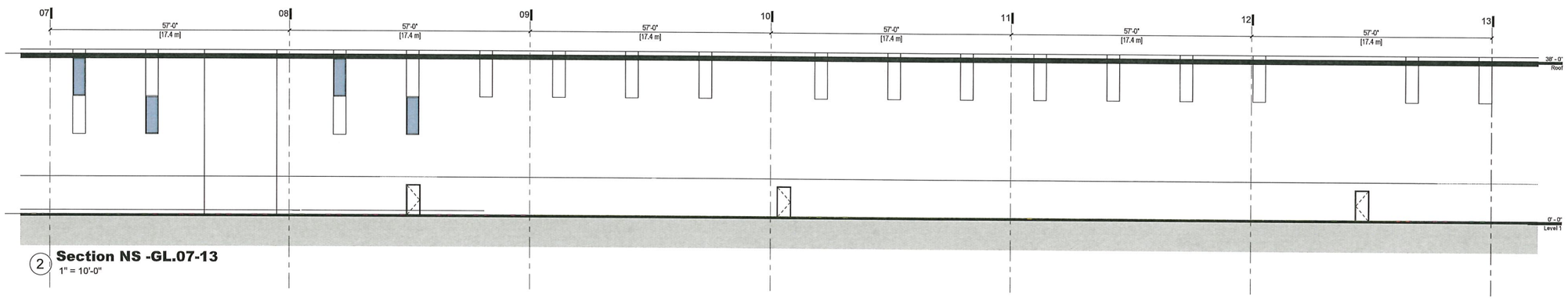
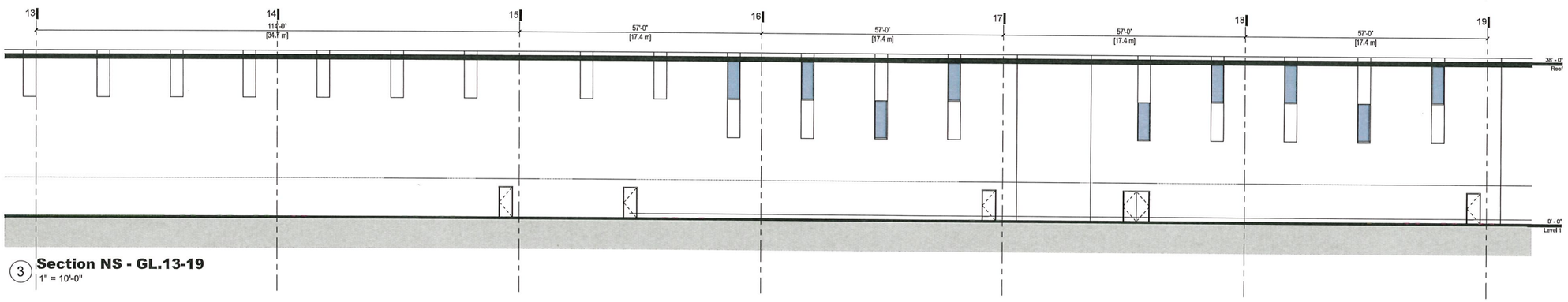
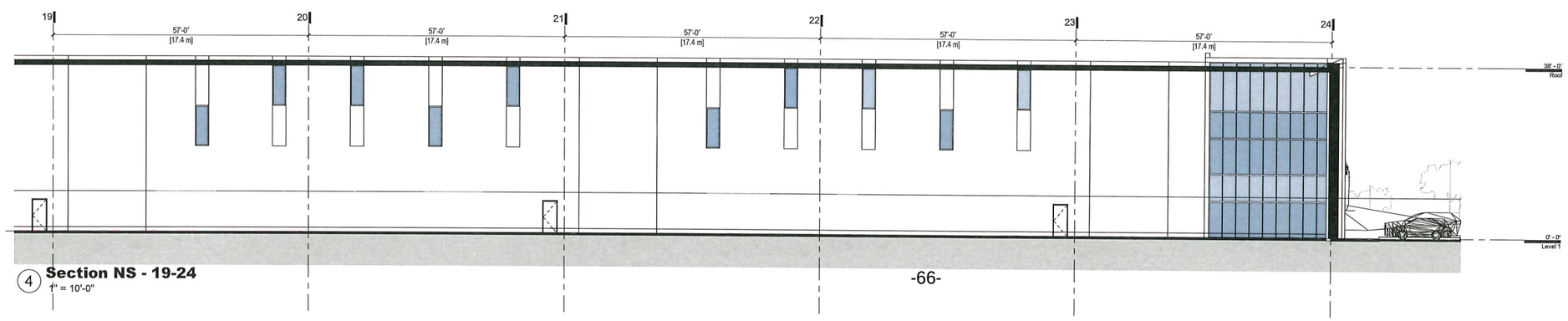


2 **Section NS -GL.07-13**
1" = 10'-0"



3 **Section NS - GL.13-19**
1" = 10'-0"



4 **Section NS - 19-24**
1" = 10'-0"

REV	DATE	DESCRIPTION
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2	2020-02-06	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE 1" = 10'-0"	DATE	DRAWN	Author
PROJECT NUMBER			180338
FILE PATH		PLOT DATE	2021-03-05 9:12:00 AM

TKA+D
ARCHITECTURE + DESIGN INC
#201 - 2550 FAIRCLOUGH STREET VANCOUVER V5L 1C7 P 604 569 3456

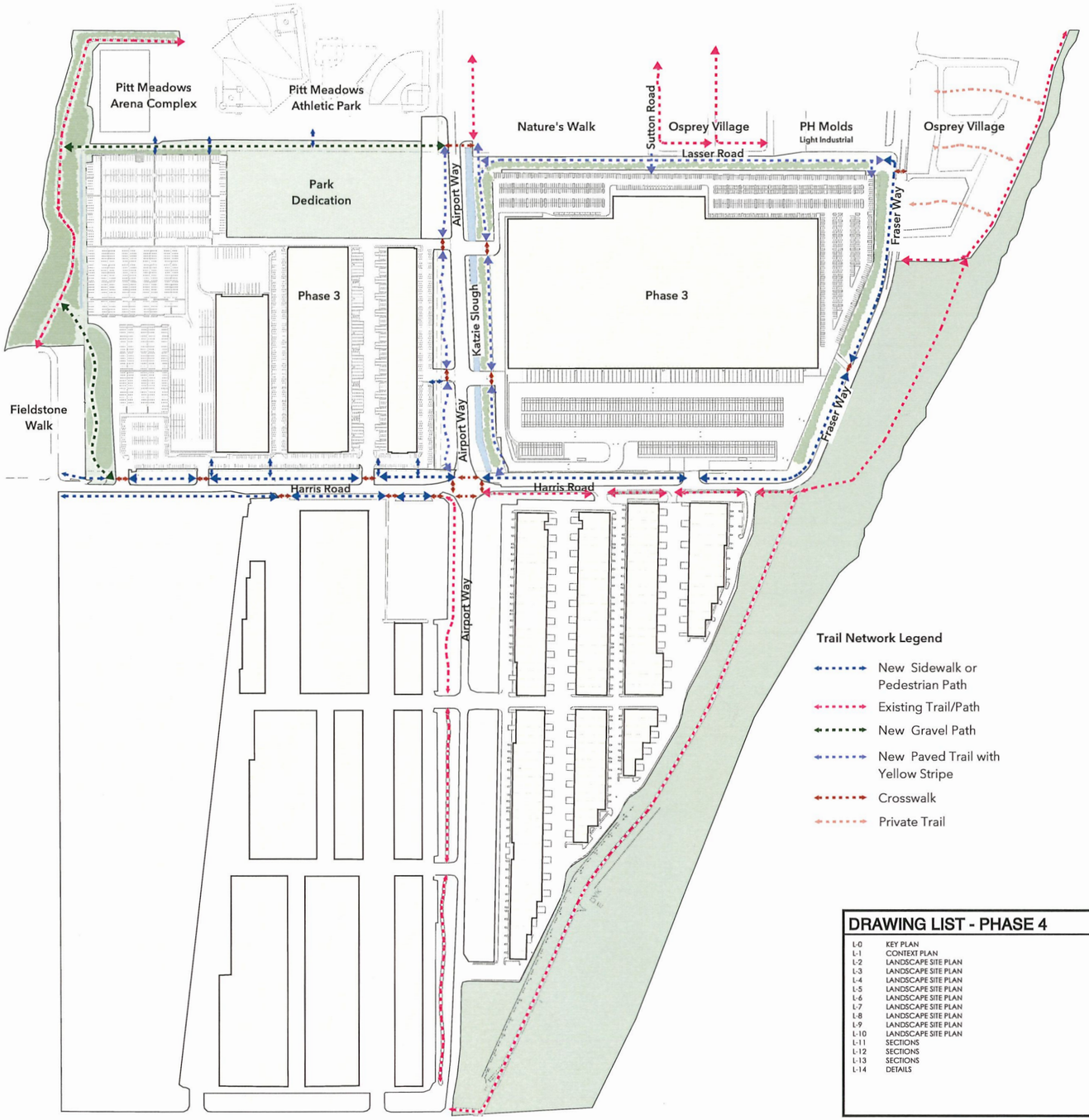
GEBP - PH4 - Build to Suit

11208 Harris Road,
Pitt Meadows

Building Section

PLOT DATE: 2021-03-05 9:42:00 AM

A401



Trail Network Legend

- New Sidewalk or Pedestrian Path
- Existing Trail/Path
- New Gravel Path
- New Paved Trail with Yellow Stripe
- Crosswalk
- Private Trail

DRAWING LIST - PHASE 4

L-0	KEY PLAN
L-1	CONTEXT PLAN
L-2	LANDSCAPE SITE PLAN
L-3	LANDSCAPE SITE PLAN
L-4	LANDSCAPE SITE PLAN
L-5	LANDSCAPE SITE PLAN
L-6	LANDSCAPE SITE PLAN
L-7	LANDSCAPE SITE PLAN
L-8	LANDSCAPE SITE PLAN
L-9	LANDSCAPE SITE PLAN
L-10	LANDSCAPE SITE PLAN
L-11	SECTIONS
L-12	SECTIONS
L-13	SECTIONS
L-14	DETAILS

Material Legend

Detail	Key	Material	Description
A00 L-18		Hydroseed	Wildflower & Hard Fescue Mix by Premier Pacific Seed or approved equivalent
A00 L-18		Hydroseed	Shade Tolerant Wildflower & Grass Mix by Premier Pacific or approved equivalent
A00 L-18		Sod Lawn (Offsite)	
A00 L-18		Shrubs / Planting beds	Native Grass Seed Mix by Premier Pacific Seed or approved equivalent
A00 L-18		Structural Soil	To provide minimum 10 cubic meters per tree of growing medium
A00 L-18		Asphalt Path (with or Without Yellow Stripe)	
A10 L-18		Bird Houses	Make and Model TBD
A00 L-18		Landscape Boulders	Varies
A00 L-18, A10 L-18		Picnic Table	Make and Model TBD
A00 L-18, A10 L-18		Bench - with back	Make and Model TBD
A00 L-18		Bollard - Maglin 500 Series	Black Powder Coat
		Pole Lighting	To be coordinated with Electrical
		Street Lighting Signalized Traffic Lights	Detail by DMD & Associates

Sym	Qty	Botanical Name	Common Name	Size/Space
		Trees		
	151	Acer rubrum 'Bowhall'	Bowhall red maple	7cm cal. (col)
	18	Acer rubrum 'Sun Valley'	Sun Valley red maple	7cm cal. B+B
	31	Acer macrophyllum	Big Leaf maple	8cm cal. WB
	167	Quercus palustris 'Green Pillar'	Green Pillar pin oak	7cm cal. B+B
	40	Populus trembling 'Prarie Gold'	Prarie Gold trembling aspen	5cm cal. WB
	115	Pseddotsuga menzeisii	Douglas fir	3m ht WB
	32	Picea sitchensis	Sitka spruce	2m ht B+B
	40	Tsuga heterophyla	Western hemlock	2.5m ht WB

Sym /Qty	Botanical Name	Common Name	Size/Space/Comments
	Shrubs		
6780	*Arctostaphylos-uva-ursi	Kinnikinnick, bearberry	4" pot/1'-0" o.c.
2562	*Cornus sericea 'Kelseyi'	Dward red-osier dogwood	#2 pot/30" o.c.
1420	*Rosa nutkana	Nootka rose	#2 pot/3'-0" o.c.
1420	*Vaccinium ovatum	Evergreen huckleberry	#2 pot/3'-0" o.c.
1054	Calluna vulgaris	scotch heather	#2 pot/3'-0" o.c
623	Euonymus fortunei 'Emerald'	Fortune's spindle	#2 pot/36" o.c.
59	Hebe pinguifolia	Sutherland Hebe	#2 pot/30" o.c.
159	Lavandula angustifolia	Lavender	#2 pot/30" o.c.
704	Lonicera pileata	Box-leaved honeysuckle	#2 pot/2'-0" o.c.
466	Mahonia repens	Creeping Oregon grape	#2 pot/36" o.c.
345	Potentilla fruticosa	Shrubby Cinquifoil	#2 pot/36" o.c.
48	Rosa rugosa	Beach Rose	#3 pot/4'-0" o.c.
59	Stipa tenuissima	Mexican Feather Grass	#2 pot/3'-0" o.c
88	Spirea betula	Birch Leaf Spirea	#2 pot/30" o.c.
707	Viburnum davidii	David's viburnum	#2pot/2'-0" o.c.
313	Taxus x media 'Hicksii'	Hicks yew (male only)	1.5m ht/B+B/RB-RB

*Asterix (*) Plant in groupings of 35 - 50 (Plant arctostaphylus only at edge - consultant to determine on site)

General Notes

Planting Notes

1. All plants / planting to be per BCNTA and BCSLA standards.
2. Plant selection subject to availability at the time of planting.
3. Contractor shall source specified plant material and only after area of search has been exhausted will substitutions be considered.
4. All trees to be staked in accordance with BCNTA Standards.
5. All plants to be sourced from nurseries certified free of P. ramorum.
6. Plant sizes and related container classes are specified according to the B.C. Landscape Standards current edition. For container classes #3 and smaller, plant sizes shall be as shown in the plant list and the standard; for all other plants, both plant size and container cails shall be as shown in the plant list. Specifically, when the plant list calls for #5 class containers, these shall be as defined in the BCNTA (ANSI) Standard.
7. All offsite trees to have minimum 15 cubic meters of growing medium unless otherwise specified.

Soil Preparation and Placement Notes

1. All growing medium placed on project to meet or exceed BCNTA and B.C Landscape Standards latest edition.
2. Submit sieve analysis by an approved independent soil testing laboratory for each type of growing medium being used on the project PRIOR to placement for review and approval. Clearly identify source and type for each. Resubmit as required until growing medium is approved. Provide one composite sample of each type of proposed growing medium for each different application within the project. Minimum 1 litre physical sample.
3. Submittals shall be made at least seven (7) days prior placement.
4. Contractor shall not move or work growing medium or additives when they are excessively wet, extremely dry, or frozen or in any manner which will adversely affect growing medium structure. Growing medium whose structure has been destroyed by handling under these conditions will be rejected. Growing medium shall not be handled in wet or frozen conditions.

Irrigation Notes (Design-Build System)

1. Irrigation to be provided for all 'Soft Landscape Areas' (unless otherwise specified) shown on the drawing.
2. All 'Soft Landscape Areas' are to be irrigated with high efficiency design build irrigation system to IIABC Standards. c/w rain sensor unless otherwise specified.
3. All irrigation valve boxes equipped with quick-couplers.
4. Layout of the system and installation shall be to trade standards for projects of this scale and type. to provide for uniform complete "head to head" coverage of all lawn and planted areas within the area as designated on the drawings.
5. Record Drawings: Submit with the operating and maintenance manuals, a reproducible copy of the as-built condition of the system.
6. Instruct a designated representative of the Owner in the complete operating and maintenance procedures for that system, including winterizing the system for the first time with the designated representative observing.

NOTE: Sleeving @ roadways to use schedule 40 cast iron sleeving.

Quality Assurance

1. The irrigation system design and installation shall be in accordance with the irrigation industry of BC Standards and Guidelines.
2. All irrigation work shall be done by an experienced and competent irrigation contractor having the facilities and personnel adequate for the work specified. Minimum standard to IIABC.

no.:	date:	item:
04	Feb 23, 2021	Re-Issue for DP
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02	May 08, 2020	Re-Issue for DP
01	Feb 18, 2020	Issue for DP

Revisions:

Durante Kreuk Ltd.
102 - 1637 West 5th Avenue
Vancouver BC V6J 1N5
t: 604 684 4611
f: 604 684 0577
www.dkl.bc.ca

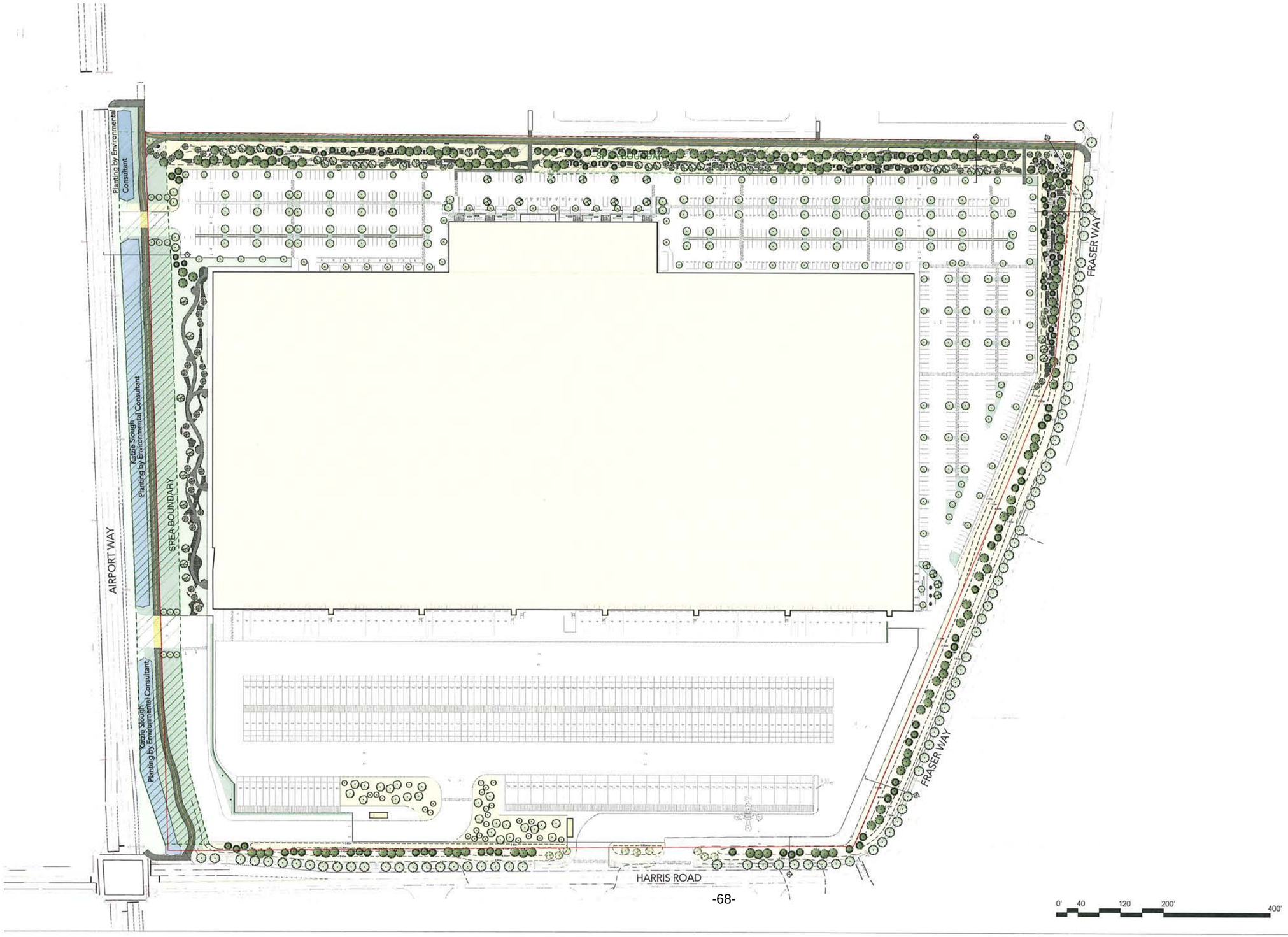
Project:
Golden Ears Industrial Park
Phase 4
Pitt Meadows, BC

Drawn by:	AB
Checked by:	PK
Date:	Apr 30, 2019
Scale:	NTS

Drawing Title:
CONTEXT PLAN

Project No.:
18088

Sheet No.:
L-0



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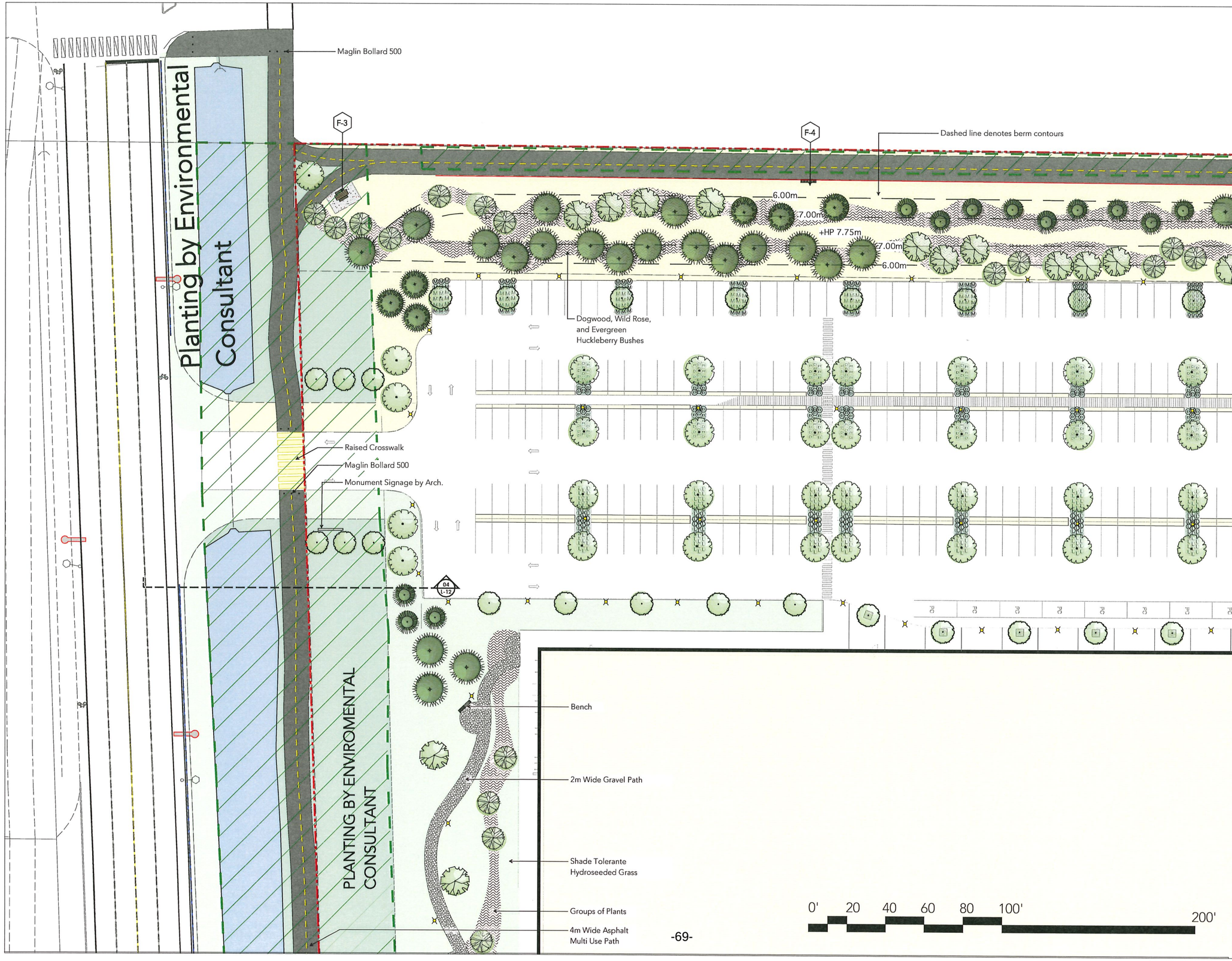
L-1



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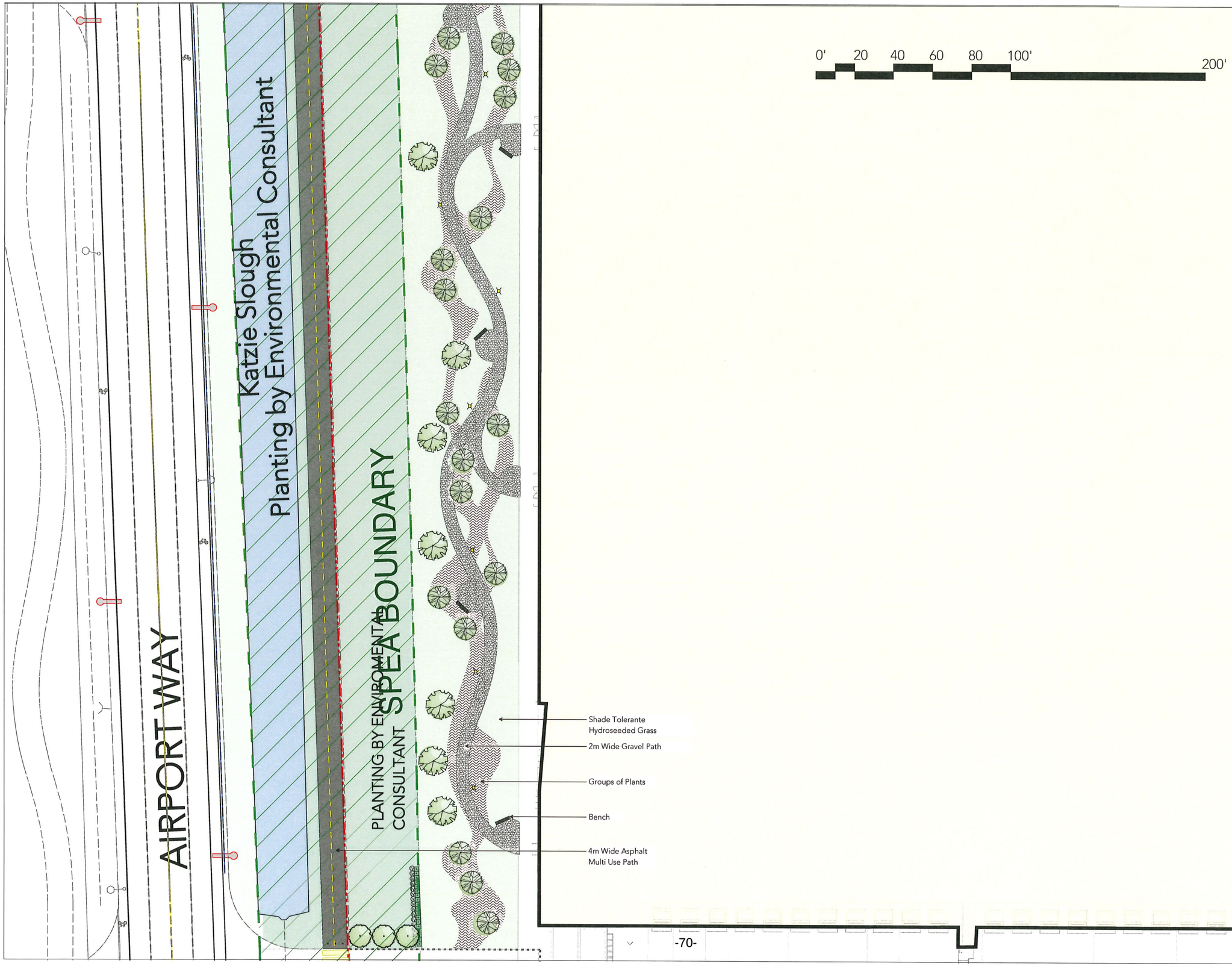
Project:
Golden Ears Industrial Park
Phase 4
Pitt Meadows, BC

Drawn by: AB
Checked by: PK
Date: Apr 30, 2019
Scale: NTS

Drawing Title:
LANDSCAPE SITE PLAN

Project No.: 18088

Sheet No.: L-2



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Golden Ears Industrial Park
Phase 4
Pitt Meadows, BC

Drawn by: AB
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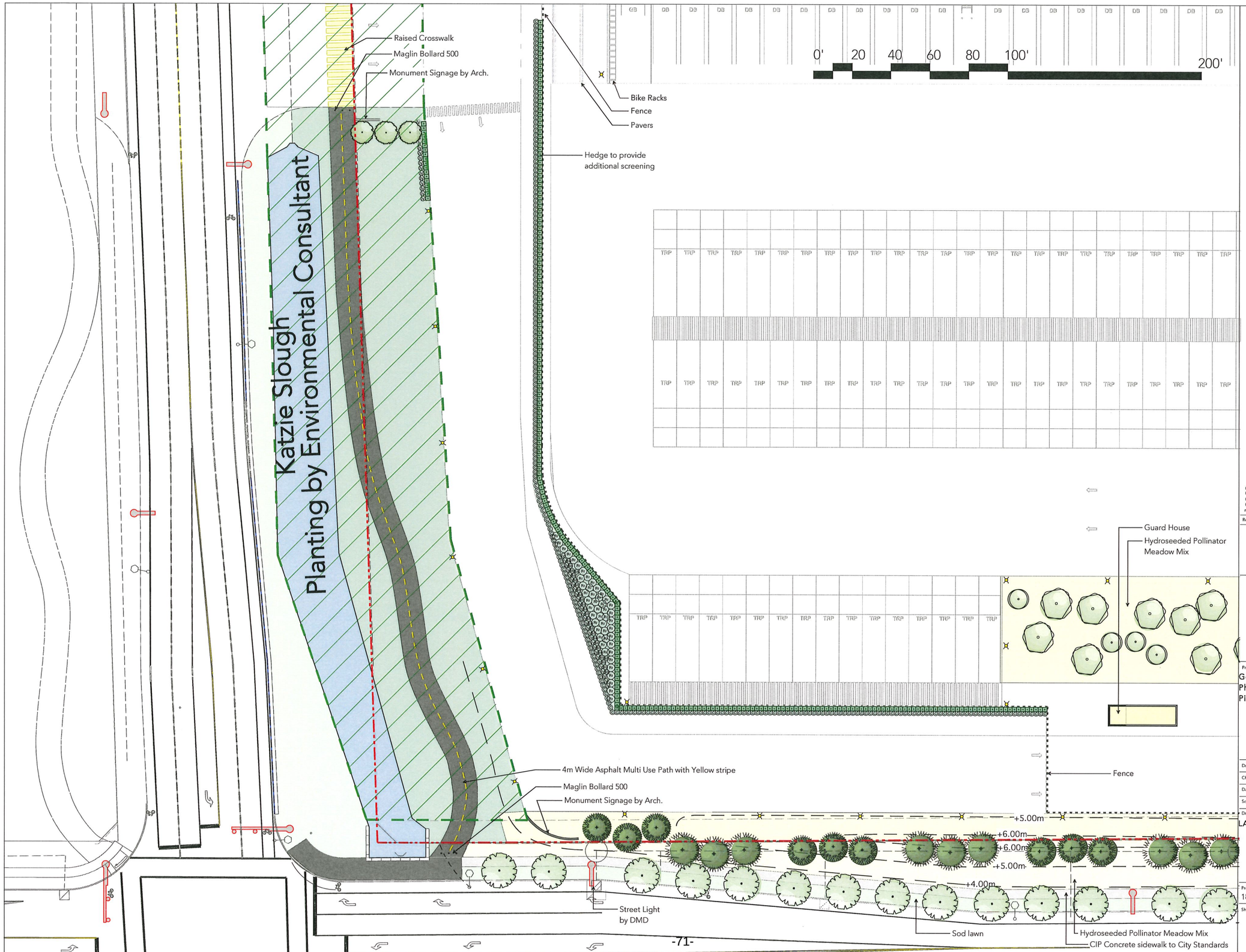
Date: Apr 30, 2019
Scale: NTS

Drawing Title:
LANDSCAPE SITE PLAN

Project No.:
18088

Sheet No.:
L-3



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Phase 4
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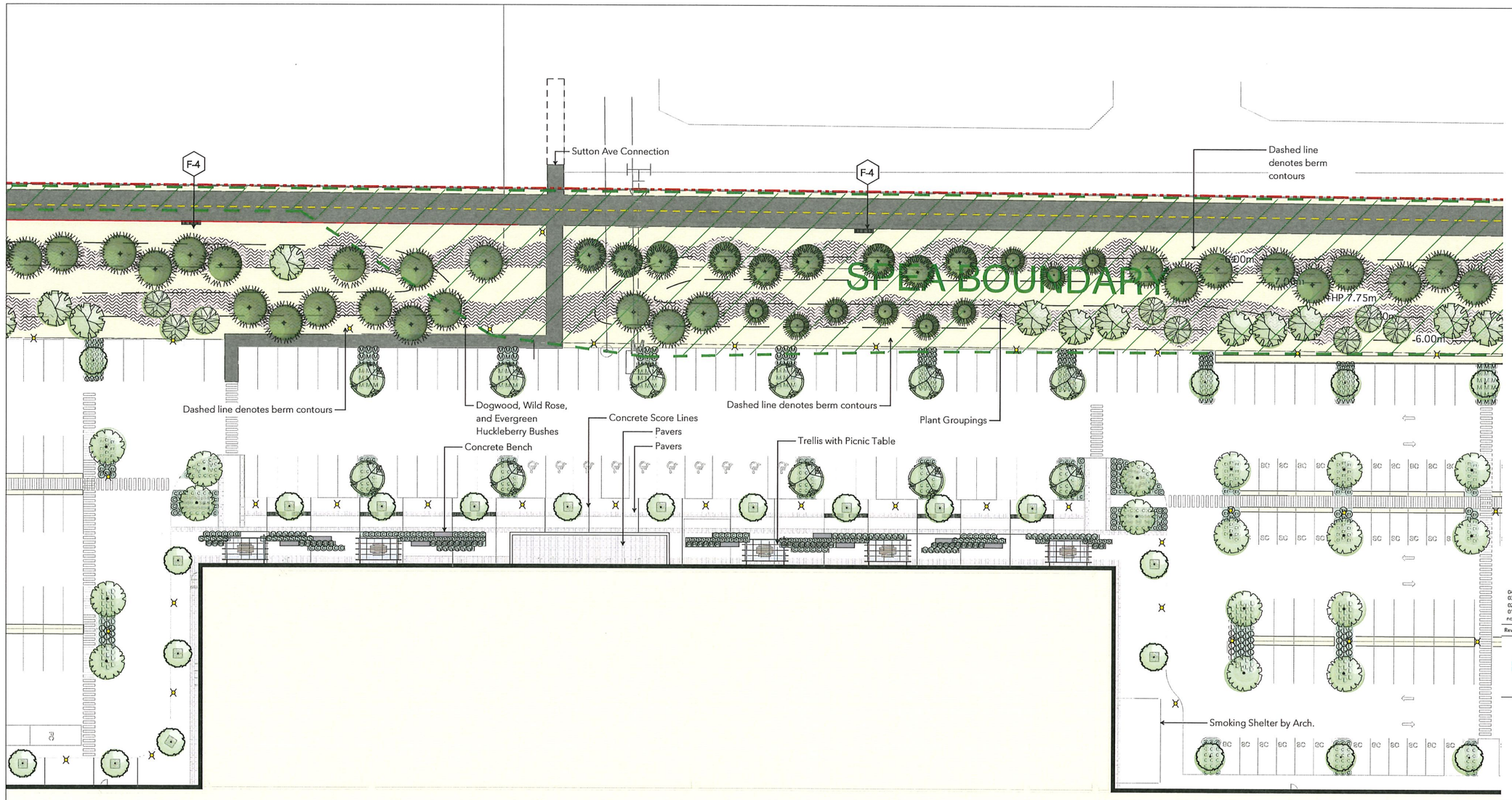
Scale:	NTS

Drawing Title:
LANDSCAPE SITE PLAN

Project No.: 18088

Sheet No.: L-4



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01	Feb 18, 2020	Issue for DP

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Project:
Golden Ears Industrial Park
Phase 4
Pitt Meadows, BC

Drawn by:	AB
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Date:	Apr 30, 2019
Scale:	NTS

Drawing Title:
LANDSCAPE SITE PLAN

Project No.:
18088

Sheet No.:
L-5

0' 20 40 60 80 100' 200'

0' 20 40 60 80 100' 200'

NO LANDSCAPE

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Golden Ears Industrial Park
Phase 4
Pitt Meadows, BC

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Checked by:	PK
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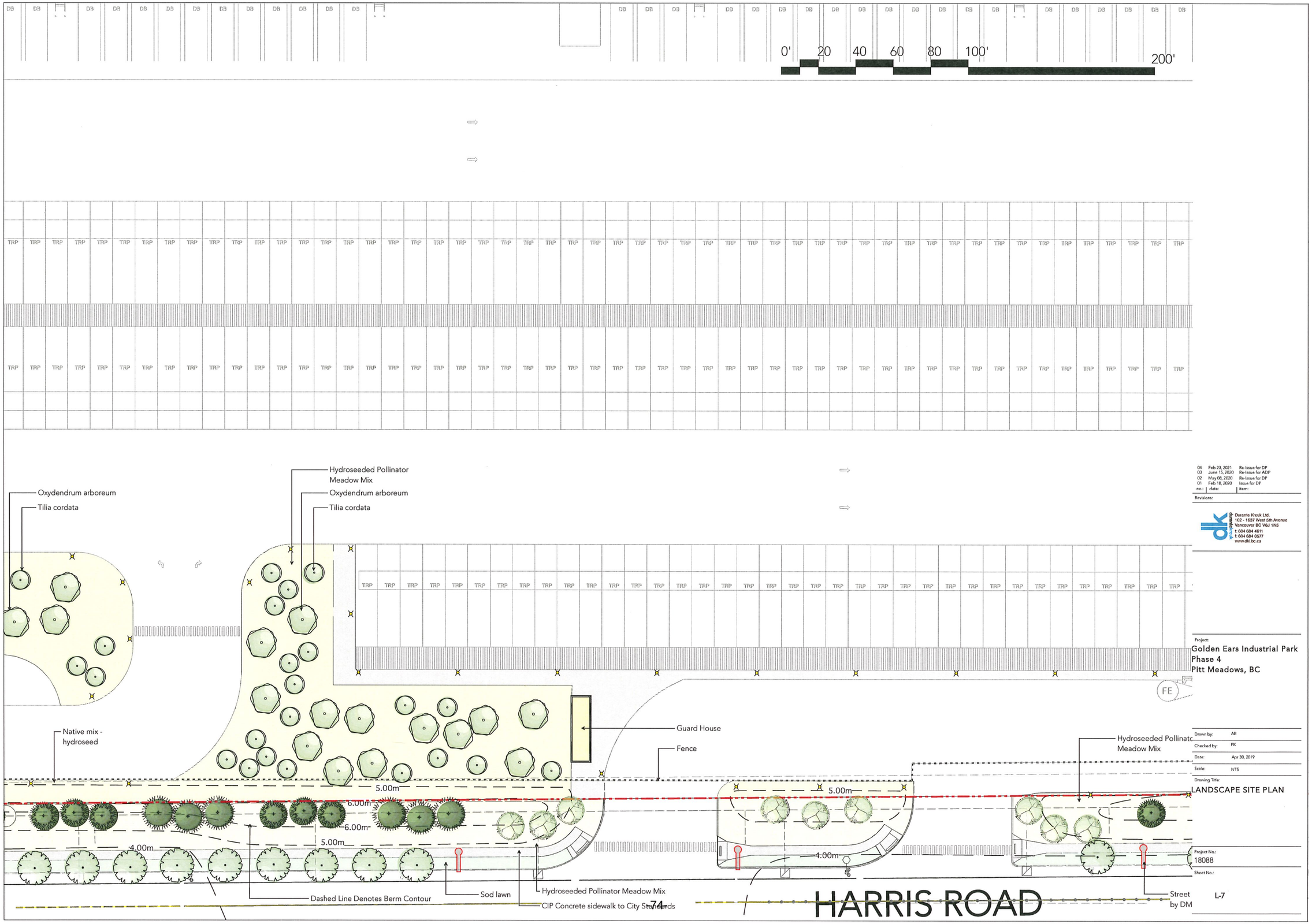
Scale:	NTS

Drawing Title:
LANDSCAPE SITE PLAN

Project No.:
18088

Sheet No.:
L-6



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Project:
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Phase 4
Pitt Meadows, BC

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Drawing Title:
LANDSCAPE SITE PLAN

Project No.: 18088

Sheet No.: L-7

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01	Feb 18, 2020	Issue for DP

Revisions:

Durante Kreuk Ltd.
102 - 1637 West 5th Avenue
Vancouver BC V6J 1N5
t: 604 684 4611
f: 604 684 0577
www.dkl.bc.ca

Project:
Golden Ears Industrial Park
Phase 4
Pitt Meadows, BC

Drawn by:	AB
Checked by:	FK
Date:	Apr 30, 2019
Scale:	NTS

Drawing Title:
LANDSCAPE SITE PLAN

Project No.: 18088

Sheet No.: L-8

no.:	date:	item:
04	Feb 23, 2021	Re-Issue for DP
03	June 15, 2020	Re-Issue for ADP
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LANDSCAPE SITE PLAN

Project No.:
18088

Sheet No.:
L-9

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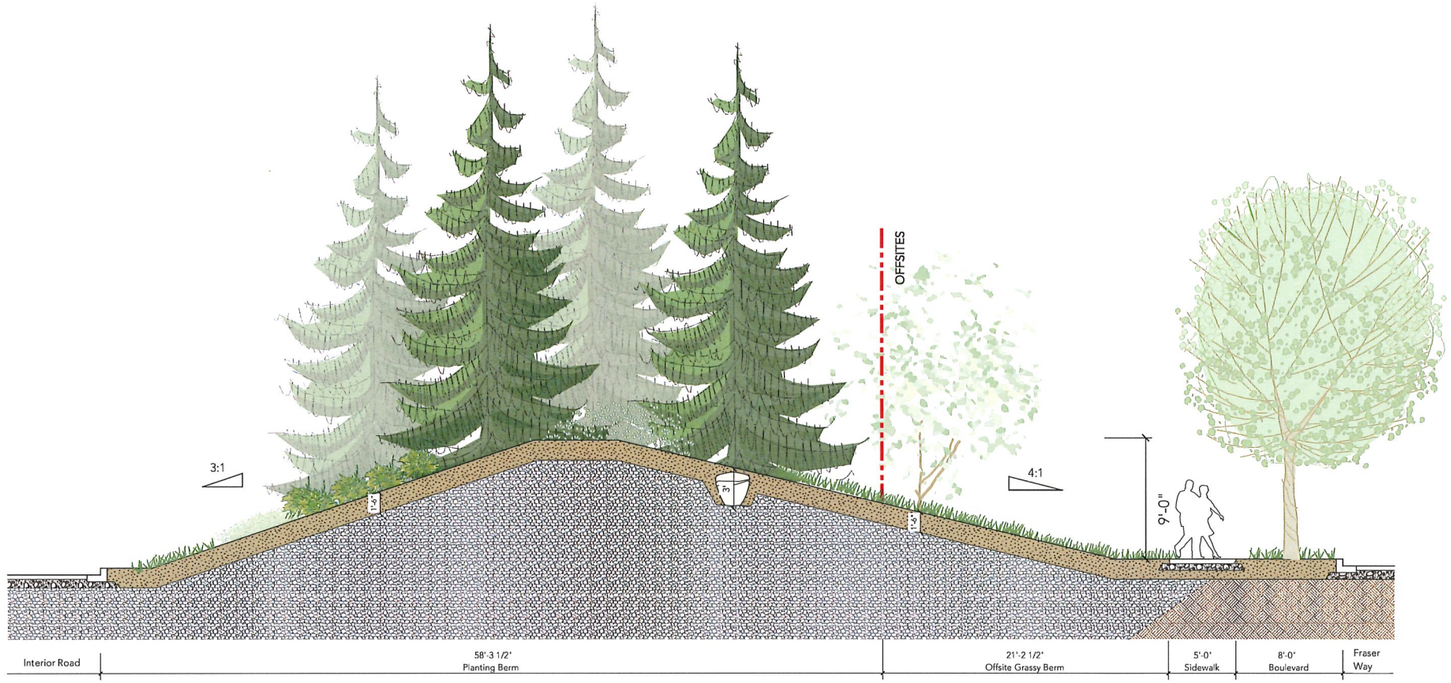
Drawing Title:
LANDSCAPE SITE PLAN

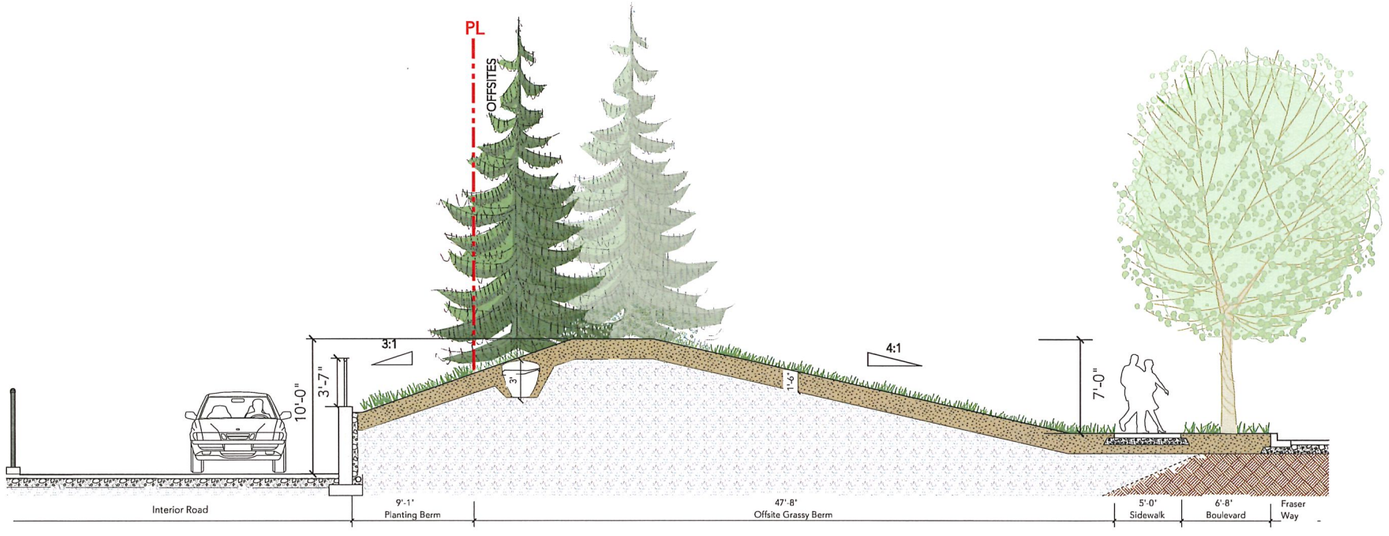
0' 20 40 60 80 100' 200'

Project No.:
18088

Sheet No.:
L-10

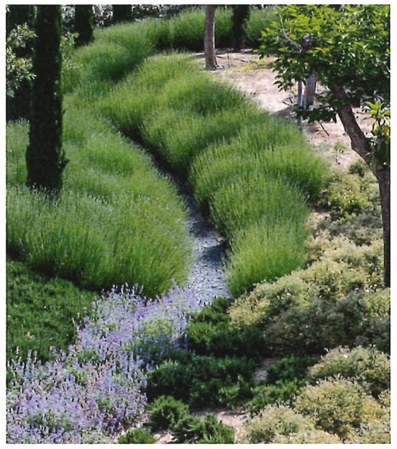


01 L-01 Section through South East Corner Berm and Fraser Way
1/4"=1'-0"

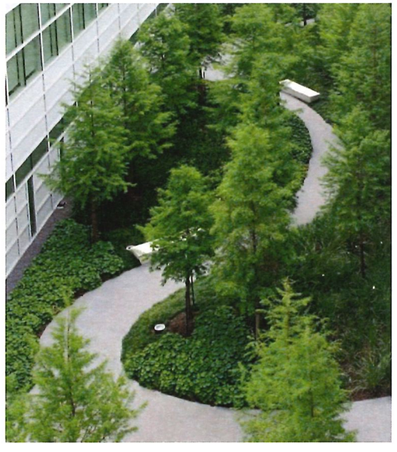


02 L-01 Section through West Fraser Way
1/4"=1'-0"

P1 Precedent Image: Picnic Areas with Custom Heavy Timbre Picnic Tables



P2 Precedent Image: Picnic Areas with Custom Heavy Timbre Picnic Tables



P3 Precedent Image: Meandering Path amongst planting and trees

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Golden Ears Industrial Park
Phase 4, Pitt Meadows, BC

Drawn by:	RO'C/TB
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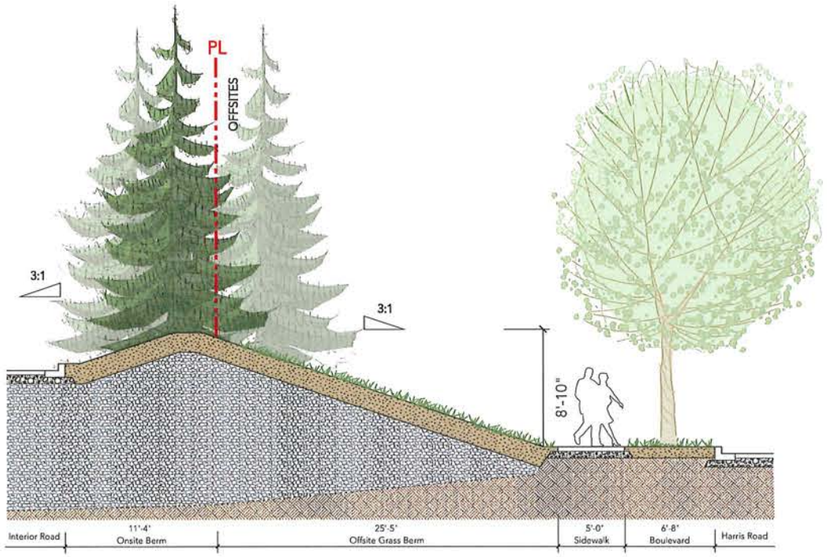
Drawing Title:

Landscape Sections

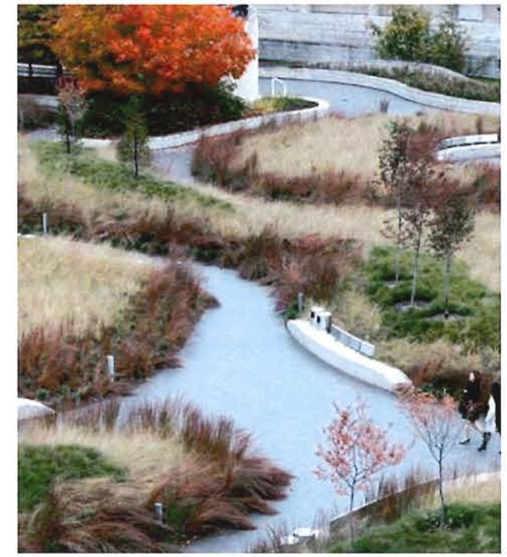
Project No.:
18088

Sheet No.:

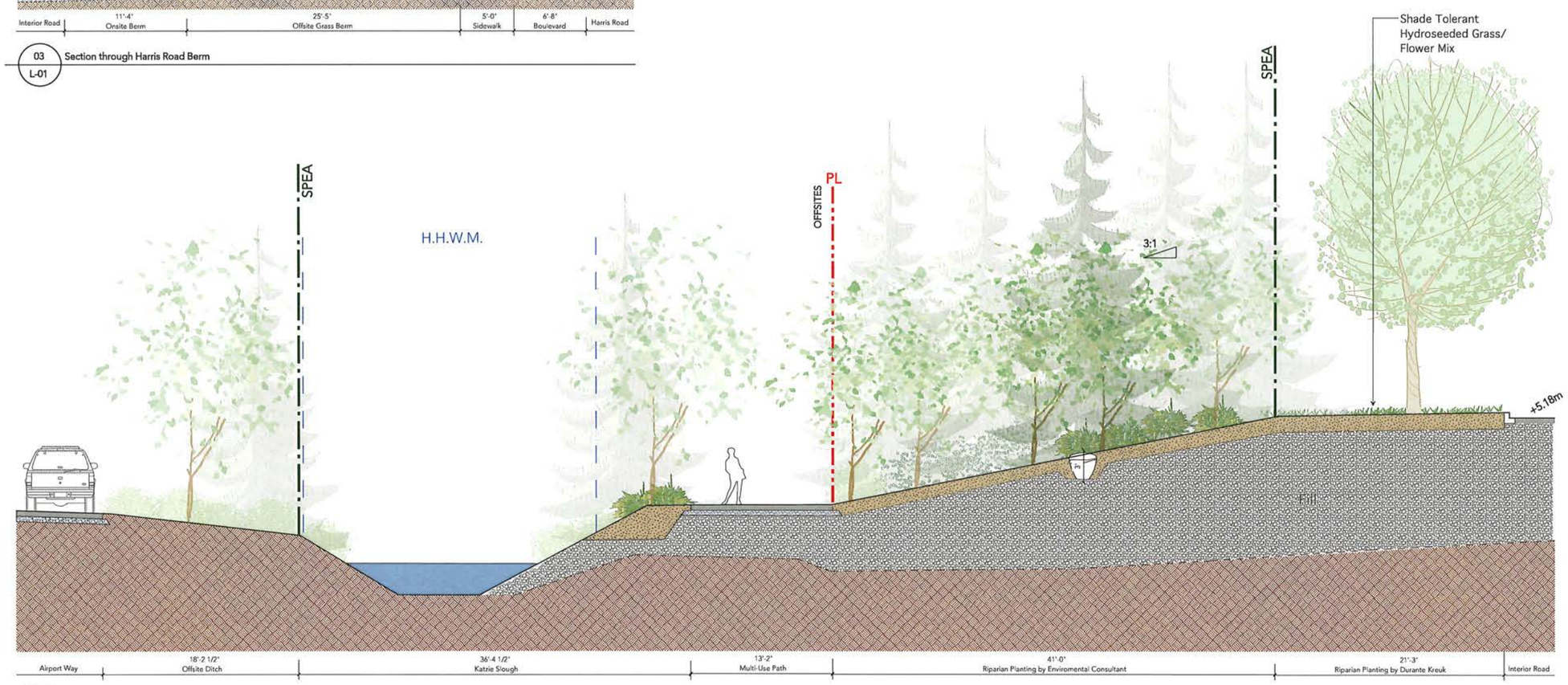
L-11



03 L-01 Section through Harris Road Berm



P4 Precedent Image: Meandering Path amongst native grasslands



04 L-01 Section through Katzie Slough
1/4" = 1'-0"

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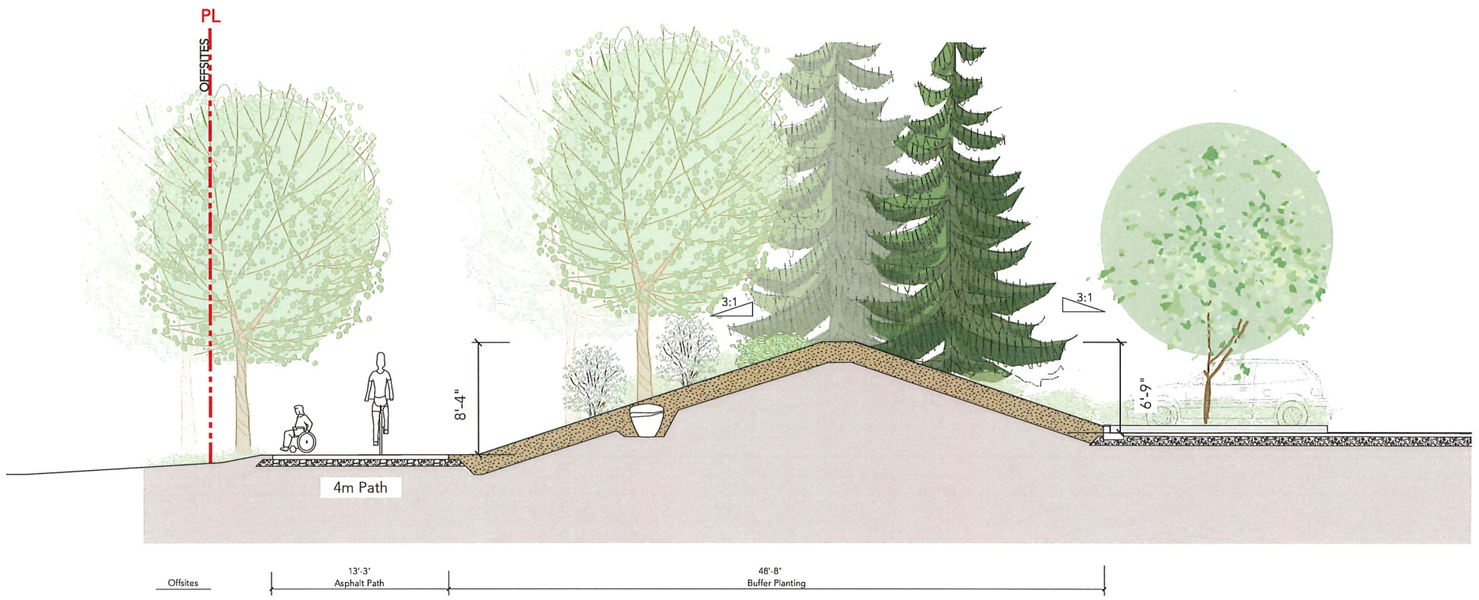
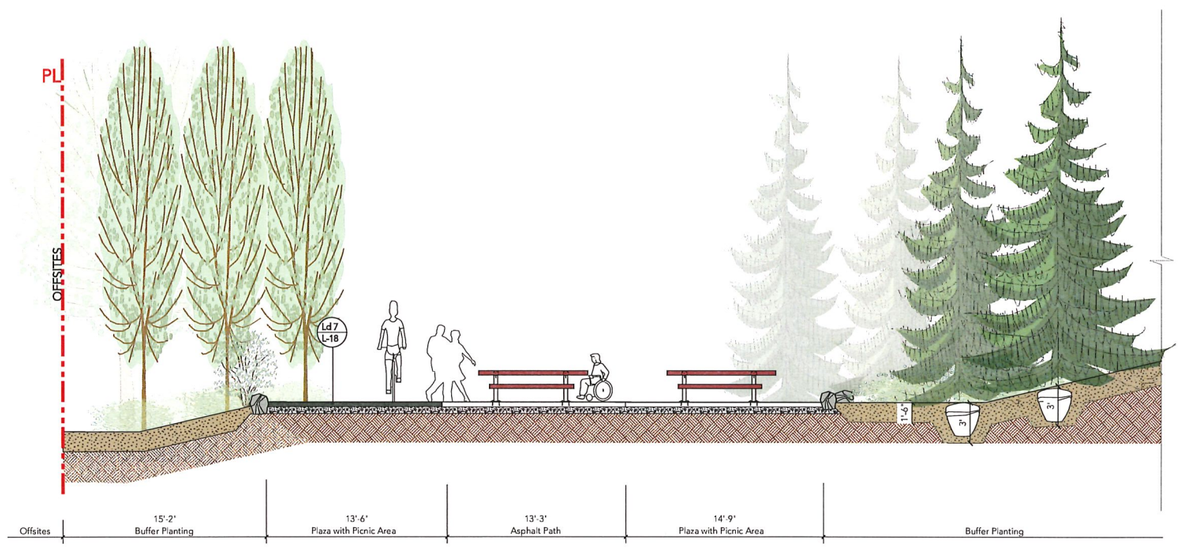
Sheet No.: L-12

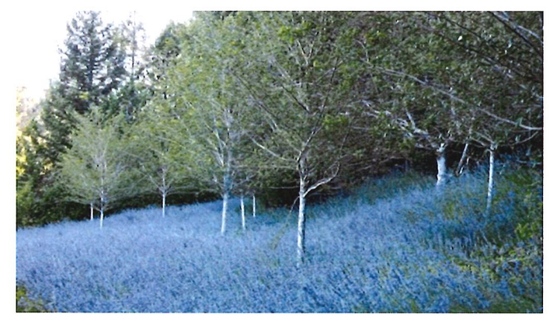


05 L-01 Section through East Berm
1/4"=1'-0"



06 L-01 Section through South East Amenity Area and Berm
1/4"=1'-0"

P5 Precedent Image: Grove of Trembling Aspen



P6 Precedent Image: Planted Berm with Native Flowers and Tree Groupings

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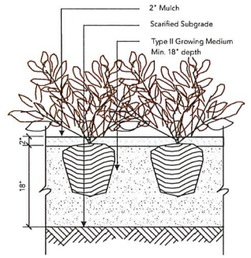
Drawing Title:
Landscape Sections

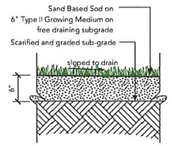
Project No.:
18088

Sheet No.:
L-13

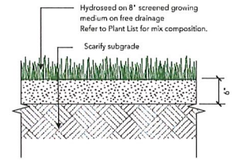


Ld-1 Typical Shrub Planting on Grade
Scale: 1" = 1'-0"

Sod other than that with a sand base and/or with mesh will be rejected, and the Specified sod re-installed at contractor's expense.



Ld-2 Typical Sodded Lawn on Grade
Scale: 1" = 1'-0"



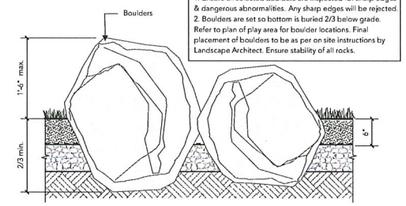
Note: Seed mix from premier pacific seeds or approved equivalent.

Ld-3 Hydroseeded on grade
Scale: 1" = 1'-0"

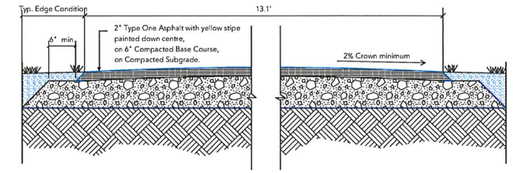
Notes:
Black Powder Coated Finish
Follow manufacturer specifications for install

Ld-4 Maglin 500 Bollard
NTS

Notes:
1. Ensure all selected boulders are inspected for sharp edges & dangerous abnormalities. Any sharp edges will be rejected.
2. Boulders are set so bottom is buried 2/3 below grade. Refer to plan of play area for boulder locations. Final placement of boulders to be as per on site instructions by Landscape Architect. Ensure stability of all rocks.

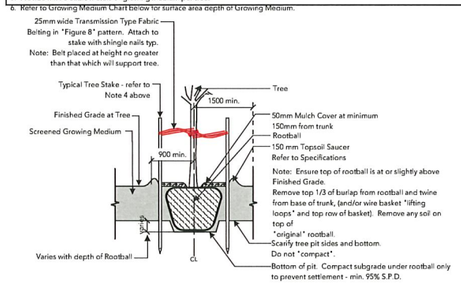


Ld-5 Landscape Boulders
Scale: 1" = 1'-0"



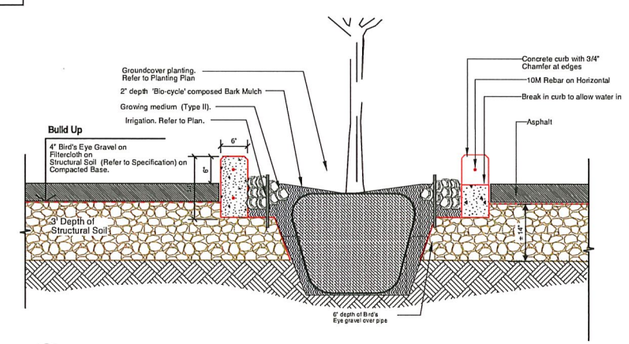
Ld-6 Asphalt Pathway Detail
Scale: 1" = 1'-0"

General Notes:
1. Do not cut Tree Leader.
2. Protect tree from damage during planting. Ensure rootball protected from Sun, Frost or Dessication.
3. Ensure tree location does not conflict with Underground Services. "Call before digging".
4. All street trees to be staked with 2 - 100mmØ x 2.5m long. Minimum depth of stake embedment is 1m. Ensure stakes do not penetrate or damage rootball. Ensure all stakes are aligned parallel to sidewalk/road on tree pit centreline.
5. Provide min. 5 cubic meters of growing medium per tree.
6. Refer to Growing Medium Chart below for surface area depth of Growing Medium.

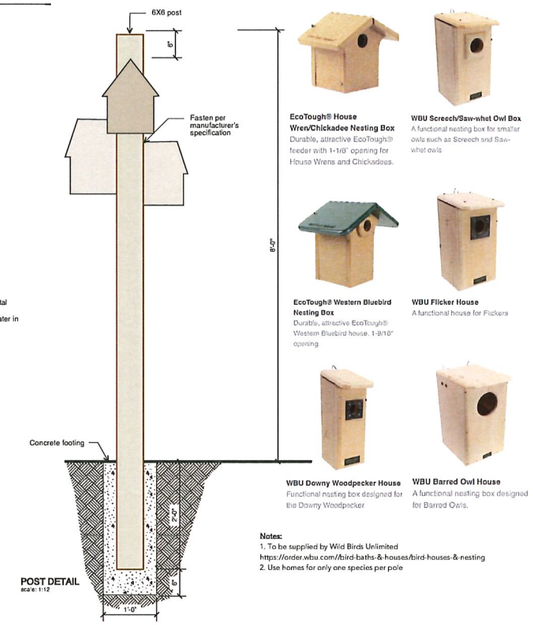


Depth of Growing Medium Tree (mm)	Area (M2)	Variation 1 Size of Surface Square	Variation 2 Size of Surface Circle
450	11.11	3.3 M x 3.3 M	3.80 M Ø
600	8.33	2.9 M x 2.9 M	3.25 M Ø
750	6.67	2.6 M x 2.6 M	2.90 M Ø

Ld-8 Typical Tree Planting
Scale: NTS



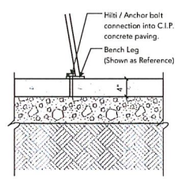
Ld-9 Tree Pit with Structural Soil
Scale: 1" = 1'-0"



Notes:
1. To be supplied by Wild Birds Unlimited
https://order.wbu.com/bird-baths-&-houses/bird-houses-&-nesting
2. Use homes for only one species per pole

Ld-10 BirdHouse
NTS

Note:
Refer to Materials Legend for
Specified Site Furnishings



Ld-7 Site Furniture Anchoring Detail - On Grade
Scale: 1" = 1'-0"

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870 SERIES

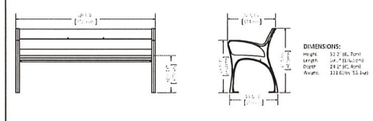
MLB870-W

MATERIALS: Bench ends are made from solid cast aluminum. The seat employs pre-weathered slats.

FINISH: All steel components are protected with E-Coat rust proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces.

INSTALLATION: The bench is delivered pre-assembled. Holes (0.5") are provided in each foot for securing to base.

TO SPECIFY: Select MLB870-W
Choose
- Powdercoat Color

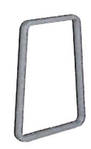


MAGLIN

Ld-11 Bench
NTS

ICONIC

MBR-2300-00001



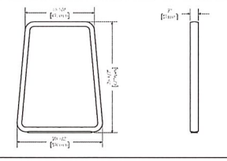
MATERIALS: The bike rack frame is made from solid cast aluminum. All brackets are made of steel. Tamper resistant fasteners are stainless steel.

FINISH: The Maglin Powdercoat System provides a durable finish on all aluminum coatings.

INSTALLATION: The bike rack is delivered in parts. Reference INSTALL_MBR-2300-00001.PDF for more information.

TO SPECIFY: Select MBR-2300-00001
Choose
- Powdercoat Color

HEIGHT: 26.1/2" (67.3cm) LENGTH: 30.1/2" (76.5cm) WIDTH: 2" (5.1cm) WEIGHT: 18 lbs (8kg)



MAGLIN

Ld-12 Bike Rack
NTS

200 SERIES

MTB-0210-00023
Legacy # MLPT210-S-PCS-UM-WCA

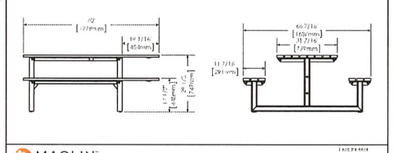
MATERIALS: Table frame is made from 3" x 2-3/8" structural I-Beam with mitered corners. Horizontal support beams are used for superior stability and structural integrity. Surface material is High Density Fiber Composite (HDFC) - Sandstone color.

FINISH: All steel components are protected with E-Coat rust proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces.

INSTALLATION: The Courier Seating surface mount tables are delivered pre-assembled.

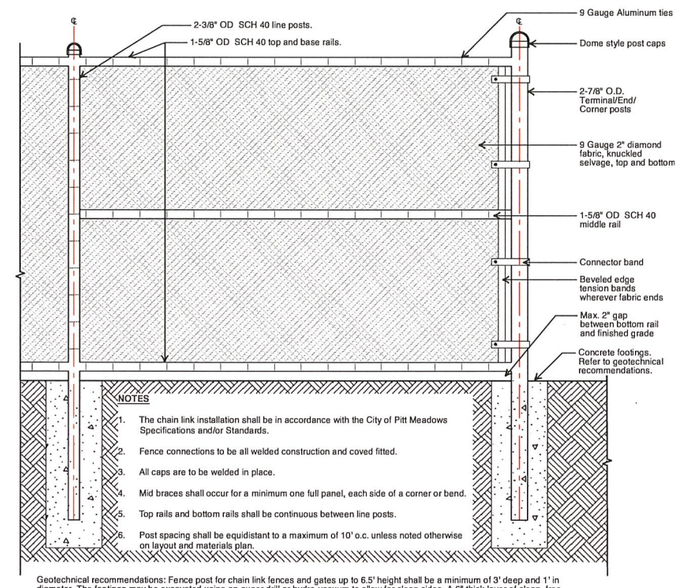
TO SPECIFY: Select MTB-0210-00023
Choose
- Powdercoat Color

HEIGHT: 29.5" (74.9cm) LENGTH: 70" (177.8cm) WIDTH: 66.44" (168.8cm) WEIGHT: 432.6 lbs (196.3kg)



MAGLIN

Ld-13 Table
NTS



NOTES
1. The chain link installation shall be in accordance with the City of Pitt Meadows Specifications and/or Standards.
2. Fence connections to be all welded construction and coved fitted.
3. All caps are to be welded in place.
4. Mid braces shall occur for a minimum one full panel, each side of a corner or bend.
5. Top rails and bottom rails shall be continuous between line posts.
6. Post spacing shall be equidistant to a maximum of 10' o.c. unless noted otherwise on layout and materials plan.

Geotechnical recommendations: Fence post for chain link fences and gates up to 6.5' height shall be a minimum of 3' deep and 1' in diameter. The footings may be excavated using an auger drill or hydro-vacuum to allow for clean sides. A 6" thick layer of clean, free draining material shall be placed at the base of each footing.

Ld-14 6' HT. Chain Link Fence
Scale: 1" = 1'-0"

Project:
Golden Ears Business Park
Phase 4, Pitt Meadows

Drawn by:	RO'C/TB
Checked by:	AB
Date:	Apr 29, 2019
Scale:	As Shown

Drawing Title:
Landscape Sections

Project No.:
18088

Sheet No.:
L-14

Golden Ears – Phase 4 :
Change summary :

Site Organization:

- **Change of facility + Relocation of the loading area:** Originally the warehouse design was a cross-dock design with loading on both the east and west sides of the proposed building. Through the ADP process the design team heard the concerns of having loading on the east side of the building adjacent to residential uses. As a result, the applicant revised the building to limit loading to the west side of the building. Now the design includes 71 dock + grade loading. (previously 141) and a trailer parking on the West side only of the site further from the residents.
- **Employee parking:** the employee parking has been relocated solely on the East of the business park, permitting the access on the East of the site (closer to the resident) to be exclusively car traffic.
- **Access on site:** Site access has been clearly defined and separated in between trucks access and employee vehicles. Additionally, all exit on Harris road has been studied and collaboratively worked on with the design team/ engineer department of Port Moody and the City's third-party traffic and civil engineering consultant. Early iterations of the design included an exit onto Fraser Way. This exit was removed due to concerns from the Panel.
- **Additional Office space:** This new office space located on the East of the building, lower than the warehouse (23'), permits a better transition from the residential area to the warehouse. It's corners were design to include a lot of glazing and faux wood element, to be in a cohesive design with the rest of the building

Landscape Design:

- **Addition of Berms on East, South, and West perimeters:** As our plans have evolved from 2019, berms have been added to all edges of the site where they are possible, including the West edge where they were not originally required. The South and East edges which border residential areas have also seen significant increases in berm height. Further, conifer trees are being planted in groups of 3 across the top of all berms to create a visual screen as well as contribute to additional sound buffering. Berm heights and plantings have been designed in response to comments from the panel to reduce the visibility of the industrial uses from the adjacent residential neighbourhoods to the east and the south.
- **Addition of grassy filter strips throughout parking area:** Through the ADP process we decided to convert 2' strips at the head of each parking stall into unpaved grass to help with filtering sediments from runoff, lower thermal radiation absorbed by parking stalls, and also to partially help with infiltration. As asphalt surfacing is not essential here, we are happy this compromise can be made.
- **Amenity areas onsite improved and expanded:** The new layout proposed allows for a significant increase in outdoor amenity space at the office entry. We are now providing 5 covered outdoor lunch areas that utilize planting to create 'rooms' and separate these areas from circulation routes. We are also providing an additional uncovered amenity area with 3 tables at the South West emergency exit corner of the building, as well as a private, natural, meandering walk at the North edge of the building. The walk is screened from Airport Way by extensive naturalized planting within the SPEA and contains benches at nodes throughout.
- **Amenity areas offsite improved and made safer:** There have been improvements made to the public amenity areas at the Southern and Northern nodes of the Eastern Multi Use Path. The berms in these areas have been reoriented so that visibility from the residential areas into the

nodes is open (eyes on the street), while visibility into the business park is screened. As well, lighting has been added along the entire path as per the recommendations of the ADP panel.

- **Additional Screening of loading areas:** An acoustic wall was additionally added to the Southern side of the loading bay area, which will be aesthetically screened with landscape hedging, and potentially vines if it exceeds a certain height.
- **Multi Use Path and bike lane addition/improvements:** A multi-use path has been added to the northern edge of the site that connects Nature's Walk with circulation along Airport Way on both sides. Bollards in sets of 3 have been added where-ever the M.U.P. meets another path, as well as where it meets a street or driveway for safety of pedestrians, cyclists, and vehicles. Further the MUP connects to a new bike lane at the Airport and Harris intersection, allowing commuter cyclists to separate from recreational cyclists.

Architectural Design:

- **Building Corners:** All corners are punctuated with significant areas of glazing, to bring more natural light to the building, as well as facilitating a high degree of flexibility of the building to accommodate a variety of tenants' sizes.
- **Materiality:** a significant amount of high-quality glazing was added to the north and south elevation (facing streets) to meet the city requirements, The design team also heard the ADP panel and incorporated additional faux wood elements into the soffits, vertical fins and canopies at each corner of the building.
- **Color Palette:** The design team revised their color palette to more toned done natural color: the main palette is composed of different shades of grey (light/ medium and dark) enhance by 2 accents colors: an earthy orange to go with the faux wood element, and a dark blue complimentary color of those brown tones.

Disclaimer: These minutes were prepared as a reasonable summary of the essential content of this meeting, not as a transcription.

MINUTES of the Advisory Design Panel Meeting held on Wednesday, March 3, 2021 at 11:00 a.m. via video conference.

PRESENT:

Voting Members:	R. Dafoe A. Hayes L. Kan
Non-Voting Members:	B. Berkner, RCMP
Council Liaisons:	Councillor MacDonald Councillor Meachen
Other Council Members:	Councillor Hayes
Staff:	A. Berry, Director of Planning & Development (Chair) A. Dominelli, Development Services Technician S. Maki, Director of Engineering and Operations M. Roberts, CAO A. Wallace, Manager of Community Development
Guests:	Applicant 1 + Representatives Sgt. M. Luca, RCMP
Regrets:	J. Brady E. Hirota S. Kim S. Raht E. Rojo
Recording Clerk:	T. McCaw, Committee Clerk II

1. CALL TO ORDER

The meeting was called to order at 11:05 a.m.

2. LATE ITEMS

None.

3. APPROVAL OF AGENDA

There was general consent amongst the Committee to proceed with the Agenda for information purposes only as quorum was not achieved.

4. ADOPTION OF MINUTES

Due to lack of quorum, the Minutes from the January 13, 2021 Advisory Design Panel Meeting will be carried forward to the next meeting for adoption.

5. NEW BUSINESS

(1) Development Permit Application for Golden Ears Business Park Phase 4

The Applicant presented recent revisions made to the Development Permit Application for Golden Ears Business Park Phase 4. Some of the points of the presentation included:

- Revisions to site access points;
- Vehicle entrance/exit on Airport Way moved further east to align with parking location;
- Exit on Fraser Way removed;
- Median added on Harris Road to promote a right turn only;
- Traffic updates regarding onsite circulation for vehicles and trucks;
- Addition of a pedestrian crossing on Fraser Way and Harris Road currently under review;
- Acoustical Study conducted indicates amendments made to the site have resulted in improved decibel levels for closest residents;
- Site is within the City's Noise Control Bylaw requirements;
- Tenant has supported the revised development proposal with the addition of an acoustical wall on the of the site resulting in improved the noise levels; and
- Acoustical Study found that the addition of an acoustical wall on the south side of the site would not provide acoustic improvements.

S. Maki, Director of Engineering and Operations provided some input around the traffic report discussions presented by the applicant. Some of the points included:

- Newly revised access points improves level of services at these access points;
- The addition of a north bound left turn lane on Harris Road and Airport Way will improve the level of service at this intersection;

- The traffic study anticipates 40% of vehicles leaving the site using the Harris Road exit and 60% using the Airport Way exit in morning hours; and
- There are no concerns with spacing of the intersections and site access points.

Following the presentation, Council Liaisons and the CAO discussed the application and the following were some of the key themes of the discussion:

- Support for improvements made on the application;
- Concerns around the new median on Harris Road as it may increase traffic leaving from Phase 1 to travel east onto Fraser Way and into Osprey Village *(Staff noted engineering will monitor*);
- Concerns around the traffic movement on Fraser Way as a result of residents and visitors utilizing the City's dike and trail networks;
- Request for solutions for no traffic movement from Phase 1 and 4 into Osprey Village;
- Importance of signage for newly proposed crosswalk on Fraser Way;
- Importance of an acoustical wall on Lasser Road and on Fraser Way;
- Concerns around site operations being 24/7 and sound travelling further in the evening;
- Support for the removal of the Fraser Way exit;
- Support for the new median on Harris Road;
- Concerns raised around the location of the proposed crosswalk on Fraser Way and Harris road *(Staff noted safety and location of the crosswalk was reviewed and from a safety standpoint meets requirements);*
- Question was raised around how exit/entrance on Phase 4 on Airport Way lines up with the exit/entrance on Phase 3;
- Support for revisions presented today;
- Question was raised if the decibel readings in the sound study included potential noise from the employee parking lot;
- Clarification around site security and whether fencing was still proposed for the perimeter of the property; and
- The question was raised whether fencing was planned on the top of the berm to secure the site.

Some of the comments made by the Applicant in response to the comments made by the Council Liaisons and CAO included:

- Acoustical study considered the loudest noise generating items on the site with the loudest noted as loading;

- The acoustical study took into consideration the rooftop mechanical equipment which was identified as being louder than employee vehicles on the site;
- The acoustical study found that a sound attenuation wall provided zero reduction in decibel readings on site; therefore there was no justification;
- Sound generating sources are several hundred feet away from residents; and
- In this version of development permit design, fencing is only proposed around the loading court on the west side of the building with no plans for fencing around the employee parking.

The voting members of the ADP participated in a guided discussion on the Applicant's presentation. Some of the comments included:

- Support for revisions made to site circulation;
- Proposal of a raised crosswalk with special paving to assist with pedestrian safety;
- Question raised around the acoustical study stating no need for a sound attenuating wall and who would be responsible for the cost of installation of one once the site is fully operational and it is deemed necessary;
- Recommendation for a Memorandum of Understanding with the applicant should a sound attenuating wall be deemed necessary post construction;
- Should quorum have been achieved today, support for the application would have been given;
- Recommendation for City Staff and/or the RCMP to assist in coordinating an education piece to increase awareness in the area regarding the newly revised traffic changes;
- Recommendation was made to review opportunity on how to restrict access to these parking lots, possibly gating off entrances and exits to parking lot;
- City is faced with speeding, vehicles congregating and burnout concerns in the parking lots of Phase 1 and Phase 2;

Some of the comments made by the Applicant in response to the Committee's comments included:

- Based on current acoustical reports there is no justification for a noise wall;

- Agreement to signing a Memorandum of Understanding to outline responsibilities should an acoustical wall be required post construction;
- Site is intended to be in operation 24 hours a day;
- Gates are planned for site entrances; and
- The Applicants leasing teams are currently reviewing traffic mitigation and noise concerns in Phase 1 and Phase 2.

The Council Liaisons, CAO and members of the ADP were given a final opportunity to engage in a discussion and the following were some of the key themes:

- No concerns moving the application forward as presented today;
- Consensus of the meeting is to move forward the application to Council;
- Many concerns will be unknown until site is active and fully operational;
- Recommendation was made for site security;
- Traffic calming around Fraser Way crosswalk serves dually as it promotes calming measures on Fraser Way;
- Recommendation was made that the Memorandum of Understanding held with the Applicant should outline that the City will not be held accountable for the cost of an acoustical wall after the site is fully operational should decibel readings be unacceptable;
- Support for Memorandum of Understanding and the that Applicant is in agreement; and
- Thanks was given to the Applicant for their review of traffic calming measures for Phase 1 and their other sites in Pitt Meadows.

6. ROUND TABLE

The Committee engaged in a round table discussion. There were no motions or recommendations put forward.

7. ADJOURNMENT

The meeting was adjourned at 12: 06 p.m.

*The next meeting for the Advisory Design Panel is tentatively set for Wednesday, **April 14, 2021** at 2:00 p.m.*

167959v1

BKL

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November 10, 2020

File: 2699-20A-R3

ONNI Group
200-1010 Seymour Street
Vancouver, BC
V6B 3M6

Attention: Eric Hughes

Dear Eric:

Re: Golden Ears Business Park Phase 4 - 11208 Harris Road, Pitt Meadows

As requested, we have completed a noise bylaw assessment for the proposed Golden Ears Business Park Phase 4 site to be located at 11208 Harris Road, Pitt Meadows. In addition to the bylaw assessment, we have investigated the noise reduction at neighbouring residences of potential noise barriers at the edge of the site. Our findings and recommendations are summarised below.

Background

A new business park is proposed for a parcel of existing agricultural land at 11208 Harris Road. The land is bound by Airport Way to the north, Lasser Road to the east, Fraser Way to the south, and Harris Road to the west. There are a number of residential dwellings located to the east on Lasser Road, Sutton Avenue, Thorburn Way and Hoffmann Way (henceforth collectively referred to as the Lasser Road residences) and to the south on Fraser Way (Fraser Way residences). An indicative overview of the site is provided in Figure 1, attached.

The business park will consist of a warehouse and attached employee space/office. The warehouse will be 12 m high and just over 76,000 m^2. BKL has assumed the employee space/office will be half the height of the warehouse, 6 m. The employee space/office will be to the east of the warehouse, between the warehouse and Lasser Road residences.

Employee car parking will be on the east of the building, adjacent to the offices. The parking will be accessed either through the north east Airport Way access road or to the south on Fraser Way.

We have been advised that trucks will enter and exit the site exclusively through the north west Airport Way access point. Trucks will move anti clockwise around the car park to access the warehouse building

truck loading/unloading bays to the west facade. The east and south of the site will include a landscaped area with berms to allow for screening of the business park to the Lasser Road Residences and Fraser Way. An indicative site plan is shown in Figure 1.

Concern has been raised regarding the noise impact from activities associated with the business park on existing noise sensitive receptors, including the Lasser Road residences and Fraser Way residences.

Sources of noise will include truck movements around the business park, reversing alarms from the trucks, idling from the trucks as they engage and depart the loading bays, and noise from rooftop mechanical equipment servicing the warehouse and employee space/office.

The Lasser Road residences are located approximately 60 m to the east of the warehouse, the Fraser Way residences are located approximately 115 m to the south of the warehouse, as shown on Figure 1.

Noise Criteria

As per the City of Pitt Meadows zoning map, the Golden Ears Business Park Phase 4 development location is within an I-3 zone. The noise sensitive receptors of the Lasser Road residences and Fraser Way residences are located in R-1/R-2 zones. As per the Bylaw Schedule B, zoning types R-1 and R-2 are Residential zones and designated as 'Quiet Zones'. As per the bylaw Schedule C, zoning type I-3 is Light Industrial Business Park and designated as 'Activity zone'.

The City of Pitt Meadows Noise Control Bylaw No. 2138 (the Bylaw) provides noise limits regarding the impact associated with continuous and non-continuous noise sources in 'Quiet Zones'. Specifically, the Bylaw states that:

Except as provided herein, sound levels emanating from or impinging upon real property shall not exceed values prescribed by the following table:

Table 1 – City of Pitt Meadows Noise Criteria

Criteria	Continual Sound	Non-Continual Sound
Daytime	55 dBA	80 dBA
Nighttime	45 dBA	75 dBA

Continual sound means any uninterrupted or frequent sound occurring for a period or periods totaling in excess of three (3) minutes in any fifteen (15) minute period of time. 'Non-continual sound' refers to any sound that does not meet these criteria.

Point of Reception means any place or parcel where sound originating from any source, other than source on such parcel, is received.

Daytime hours are typically described as occurring between the hours of 7:00 am and 10:00 pm, nighttime between the hours of 10:00 pm and 7:00 am.

Operations

Based on our communications with you regarding potential operations at the site, we assume that the main sources of noise likely to impact on the nearby receptors will be from:

- Roof top mechanical units to control the heating/cooling of the warehouse and office.
- Truck movements on/off the business park.
- Idling trucks as they engage and depart the loading bays.
- Reversing alarms of trucks moving in and out of the loading bays.

Roof top mechanical units are likely to operate 24/7 and will therefore be a continual noise source. We have assumed mechanical units to be placed on the roof of the warehouse and employee space/office in a similar configuration to the placement of mechanical units at Golden Ears Business Park Phase 1 and 2.

We have assumed that none of the trucks will be equipped with “reefers”.

The trucks are expected to enter the site from Airport Way and move anti-clockwise around the car park to the bays on the west facade of the warehouse building; therefore, trucks are not expected to pass residences on Fraser Way or Lasser Road. When the trucks have reached the loading/unloading area, they are expected stop and reverse into the bays on the west side of the building. Once in the loading bay, we understand that delivery trucks will turn off their engines during the loading/unloading process.

The loading/unloading process will likely be continuous but will not generate significant noise as the activities will be undertaken within the building envelope and within the truck container. These elements are anticipated to provide a significant transmission loss to the noise associated with the movement of the cargo/loads, worker communications, and noise from within the building itself.

Although the loading of the trucks may be a continuous activity, the significant noise source of the process outside of the building will likely be engine noise from the truck. Engine idling would likely be limited to only a few minutes or less as they arrive and depart the loading bays. Idling would therefore be considered to be non-continuous noise as it only occurs briefly during periods when the truck is cycling in and out of the bay.

Delivery trucks entering and exiting the development would also be considered as non-continuous noise, as would the reversing alarms which would only be used for a short period when entering and exiting the loading bays.

As there is a potential for trucks to be operating outside of typical daytime hours, we recommend that the nighttime bylaw limit of 75 dBA be used as the noise criterion for the non-continuous noise associated with the Golden Ears Business Park Phase 4 activities.

Noise Sources

The sound levels of delivery trucks idling in the loading bay were estimated based on measurements taken from the loading bays of a Home Depot store in Surrey.

The sound levels of delivery trucks entering and exiting the loading area were estimated based on a heavy-duty truck moving at 15 km/hr.

The sound levels of truck back up alarms were taken from measured noise levels presented in the Alarm Back Up Electric Laboratory Performance Testing document SAE J994 OCT03 Type C.

The sound levels (estimated at a distance of 15 m) of the noise sources are summarised in Table 2:

Table 2 – Noise Sources – Trucks Idling and Entering/Exiting Loading Area, Back Up Alarms

Noise Source	Sound Level at 15 metres (dBA)
Delivery truck idling	79
Delivery trucks entering and exiting the loading area	75
Truck reversing alarms	77

The mechanical unit selections are assumed to be similar to roof top units installed on buildings within the Golden Ears Business Park Phase 1 and 2. The Daikin DSG036 unit has been used as a basis for the calculations. The noise levels per octave have been obtained from a cut sheet for a similar Daikin unit and adjusted to match the manufacturer provided overall level of 78 dBA for the unit type. For the purpose of this assessment, 33 units were assumed to be located near the eastern edge of the warehouse building rooftop and 10 units were assumed to be located near the eastern edge of the employee space/office building rooftop to account for a worst-case scenario.

Noise Bylaw Assessment

Noise propagation from the business park to the Lasser Road residences and Fraser Way residences was modelled using the software Cadna/A according to the ISO 9613 standard. The ground contours, site plans and cross sections were provided to us by ONNI Group. The model accounts for terrain, attenuation and reflections from buildings, ground effect, and other factors.

Noise levels were predicted at the facades of the Lasser Road residences and Fraser Way residences. The noise levels where determined for the impact of continuous and non-continuous noise sources.

The noise levels from the assumed rooftop mechanical units was predicted to be 42 dBA at the Lasser Road residences and 33 dBA at the Fraser Way residences, which is below the recommended noise criterion of 45 dBA for continuous night-time noise sources. The predicted noise levels at the residents are shown in Table 3 and in Figure 2.

The highest noise level from trucks entering/exiting and moving around the business park was predicted to be 49 dBA at the Fraser Way residences. The noise level from these activities at the Lasser Road residences was predicted to be 47 dBA. Noise emissions associated with truck movements are predicted to be below the 75 dBA noise criterion for non-continuous noise sources during nighttime hours at the receptor locations. The predicted noise levels at the residents are shown in Table 3.

The highest predicted noise level from truck reversing alarms, assumed to be operating concurrently at up to six locations nearest to Fraser Way, are predicted to be 50 dBA at the Fraser Way residences, whereas the highest predicted noise level at the Lasser Road residences is 44 dBA. The predicted noise level is below the 75 dBA noise criterion for non-continuous noise sources during nighttime hours. The predicted noise levels at the residents are shown in Table 3 and in Figure 3.

The predicted noise levels from five trucks idling simultaneously, assumed to be occurring nearest to Fraser Way, are predicted to be 51 dBA at the Fraser Way residences, the highest predicted noise level at the Lasser Road residences is 44 dBA. The predicted noise level is below the 75 dBA noise criterion for non-continuous noise sources during nighttime hours. The predicted noise levels at the residents are shown in Table 3 and in Figure 4.

In addition to the above, in order to account for the worst-case scenario, we have extended our assessment of truck idling noise to include the assessment of the impact of trucks idling in 15 bays simultaneously, which would represent more than half of the bays closest to the Fraser Way residential receptors. The highest predicted noise level at the Fraser Way residences is 52 dBA, and the highest predicted noise level at the Lasser Road residences is 45 dBA. The predicted noise levels are below the 75 dBA noise criterion for non-continuous noise sources during nighttime hours. The results of this assessment are shown in Table 3 and Figure 5. It should be noted that the chances of trucks idling in 15 truck bays at the same time would be exceptionally rare.

Table 3 summarises the predicted highest noise level from each noise source at the Fraser Way and Lasser Road residences, against the respective noise criterion:

Table 3 – Predicted Highest Noise Level from Each Noise Source

Noise Source	Fraser Way Receptors Highest Predicted Noise Level	Lasser Road Receptors Highest Predicted Noise Level	Noise Criterion
Rooftop mechanical units	33	42	45
Delivery trucks entering/exiting the loading area	49	47	75
Truck reversing alarms (in six locations simultaneously)	50	44	75
Delivery truck idling (in five bays)	51	44	75
Delivery truck idling (in 15 bays)	52	45	75

The predic ted noise levels meet the recommended noise criterion at the nearest residential receptors, and therefore, no further noise mitigation is required.

The proposed landscaping berm to the east and south of the site should provide suitable mitigation to noise associated with the operations of the business park to the Fraser Way and Lasser Road residences.

Noise Mitigation Investigation

In addition to the noise bylaw assessment, Onni Group has requested for BKL to conduct a noise mitigation investigation. The intent of the investigation is to assess the benefit to the residential receptors of Lasser Road and Fraser Way of noise walls installed atop the east and south berms.

BKL investigated the benefit of noise walls at a height of 2.5 m, 3 m and 4 m. The noise walls would be installed at the apex of the berms. The noise walls are shown as red lines in Figure 6 which provides an indication as to the assessed extent of the noise walls at the east and south berms.

Lasser Road Residences - Noise Wall Height Calculation

Table 4 summarises the predicted highest noise level from each assumed noise source at the Lasser Road residences with a 2.5 m, 3 m and 4 m noise wall mounted at the east and south berm locations:

Table 4 – Predicted Highest Noise Level from Each Noise Source at Lasser Road Residences with Noise Walls

Noise Source	Berm Only (No Wall)	2.5 m Noise Wall	3 m Noise Wall	4 m Noise Wall
Rooftop mechanical units	42	42	41	40
Delivery trucks entering/exiting the loading area	47	47	47	47
Truck reversing alarms (in six locations simultaneously)	44	43	42	42
Delivery truck idling (in five bays)	44	44	43	42
Delivery truck idling (in 15 bays)	45	45	44	44

Some of the Lasser Road residences may experience a greater attenuation with the installation of the noise wall. The attenuation will depend on their location and the type of noise source. For the purpose of this investigation, we have focused on the overall benefit at the worst affected receptor.

As shown in Table 4, there would be no predicted attenuation to the continuous noise emissions from HVAC units with a 2.5 m noise wall. A 3 m noise wall is predicted to attenuate noise emissions by 1 dB and a 4 m noise wall by 2 dB at the worst affected receptor.

For non-continuous noise:

- Up to 1 dB attenuation is predicted with the installation of a 2.5 m noise wall, and
- a 1-2 dB attenuation is predicted with a 3 m or 4 m noise wall at the worst affected receptor(s).

For context, if a continuous sound has an abrupt change in level of 3 dB it will generally be noticed while the same change in level over an extended period of time will probably go unnoticed. A change of 6 dB is clearly noticeable subjectively and a decrease of 10 dB is generally perceived as being half as loud. For non-continuous sound, subtle changes of less than 3 dB may not necessarily be noticed.

Fraser Way Residences - Noise Wall Height Calculation

Table 5 summarises the predicted highest noise level from each assumed noise source at the Fraser Way residences with a 2.5 m, 3 m and 4 m noise wall mounted at the east and south berm locations:

Table 5 – Predicted Highest Noise Level from Each Noise Source at Fraser Way Residences with Noise Walls

Noise Source	Berm Only (No Wall)	2.5 m Noise Wall	3 m Noise Wall	4 m Noise Wall
Rooftop mechanical units	33	33	33	33
Delivery trucks entering/exiting the loading area	49	49	49	49
Truck reversing alarms (in six locations simultaneously)	50	50	50	50
Delivery truck idling (in five bays)	51	51	51	51
Delivery truck idling (in 15 bays)	52	52	52	52

Some of the Fraser Way residences may experience a greater attenuation with the installation of the noise wall. The attenuation will depend on their location and the type of noise source. For the purpose of this investigation, we have focused on the overall benefit at the worst affected receptor.

As shown in Table 5, there is no predicted benefit from a noise wall at the worst affected receptor(s).

Conclusion

Based on the current information, our noise bylaw assessment indicates that the predicted noise levels from activities associated with the Golden Ears Business Park Phase 4 will meet the recommended noise criterion and therefore no further noise mitigation is required.

At the request of the client, a noise mitigation investigation has been undertaken of the inclusion of a noise wall of either 2.5m, 3m or 4m height installed to the east and south berm areas.

Results of the investigation at the Lasser Road residences indicate that there may be up to 2 dB attenuation of continuous noise sources and attenuation ranging from 1-2 dB of non-continuous noise sources depending on the height of noise wall.

For the Fraser Way residences, no attenuation of continuous or non-continuous noise sources was predicted irrespective of wall height at the worst affected receptor.

This report completes our noise impact assessment for the Golden Ears Business Park Phase 4 in the City of Pitt Meadows.

Should you have any questions or require further assistance, please feel free to contact us.

Sincerely,
BKL Consultants Ltd.
per:

Nick Dobbs, MIOA
Assistant Project Consultant
dobbs@bkl.ca
Enclosures
Figures 1-6

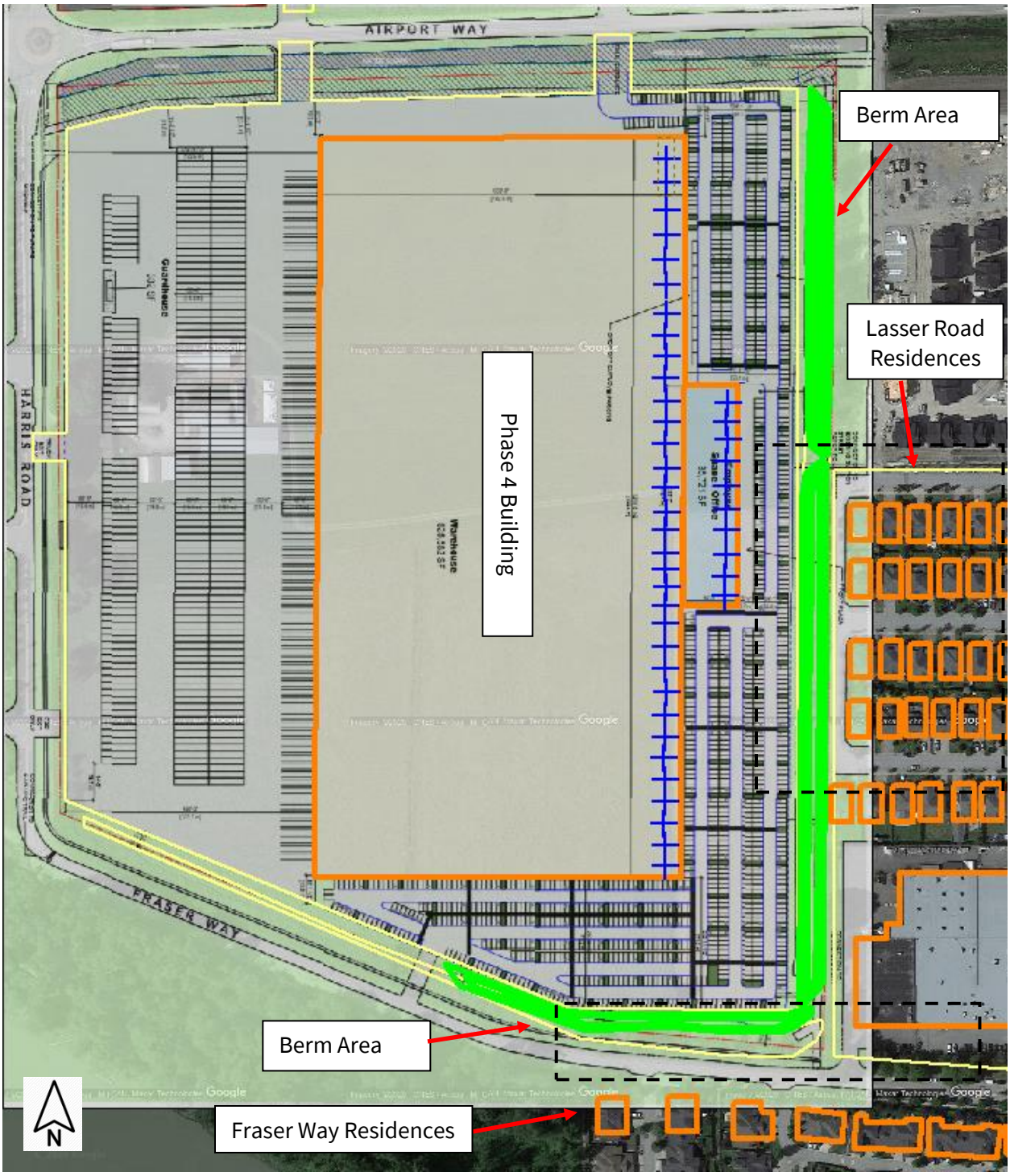

Figure 1 – Site Plan

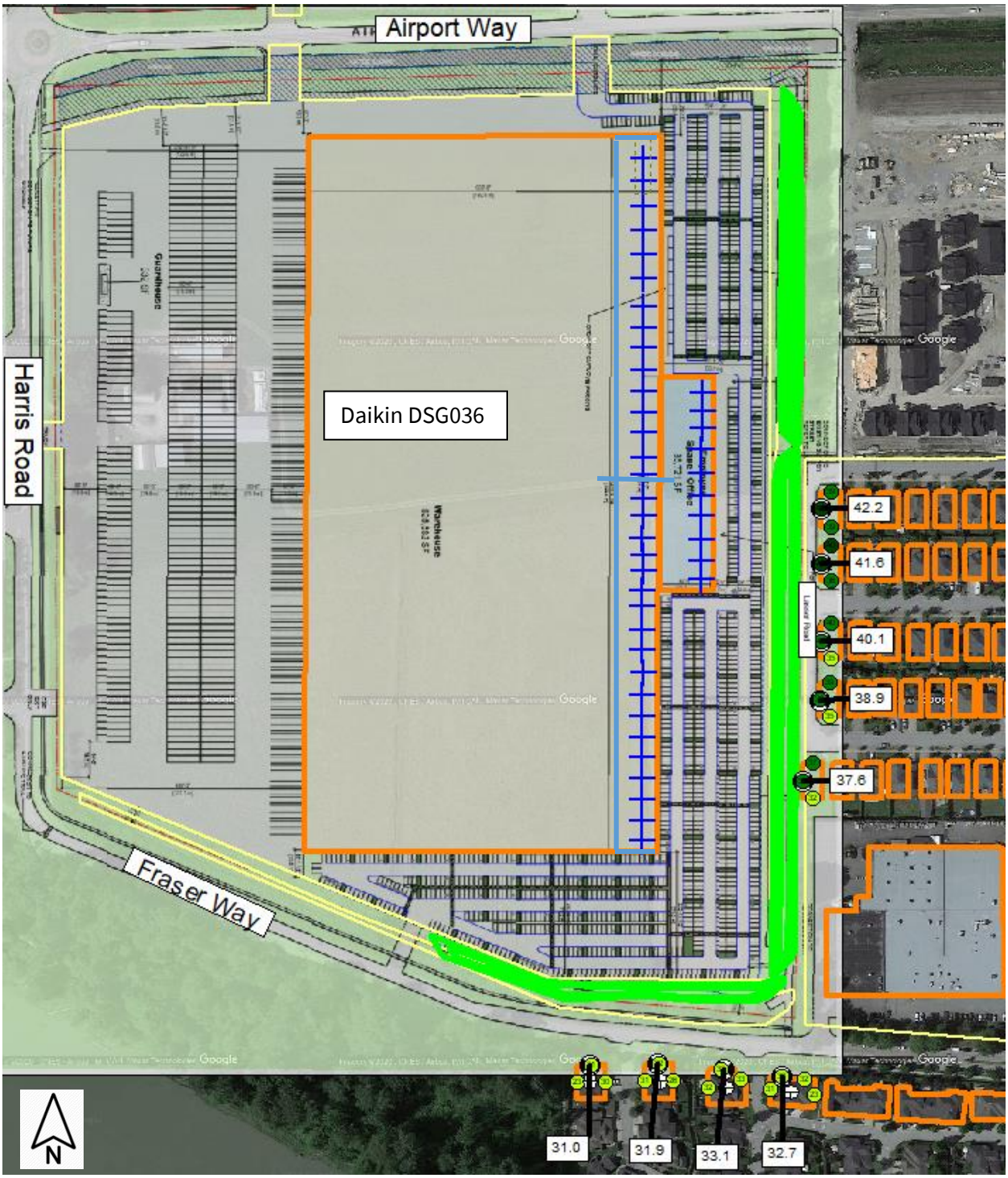

Figure 2 - Predicted noise levels (dBA) at the residents from the assumed rooftop mechanical units

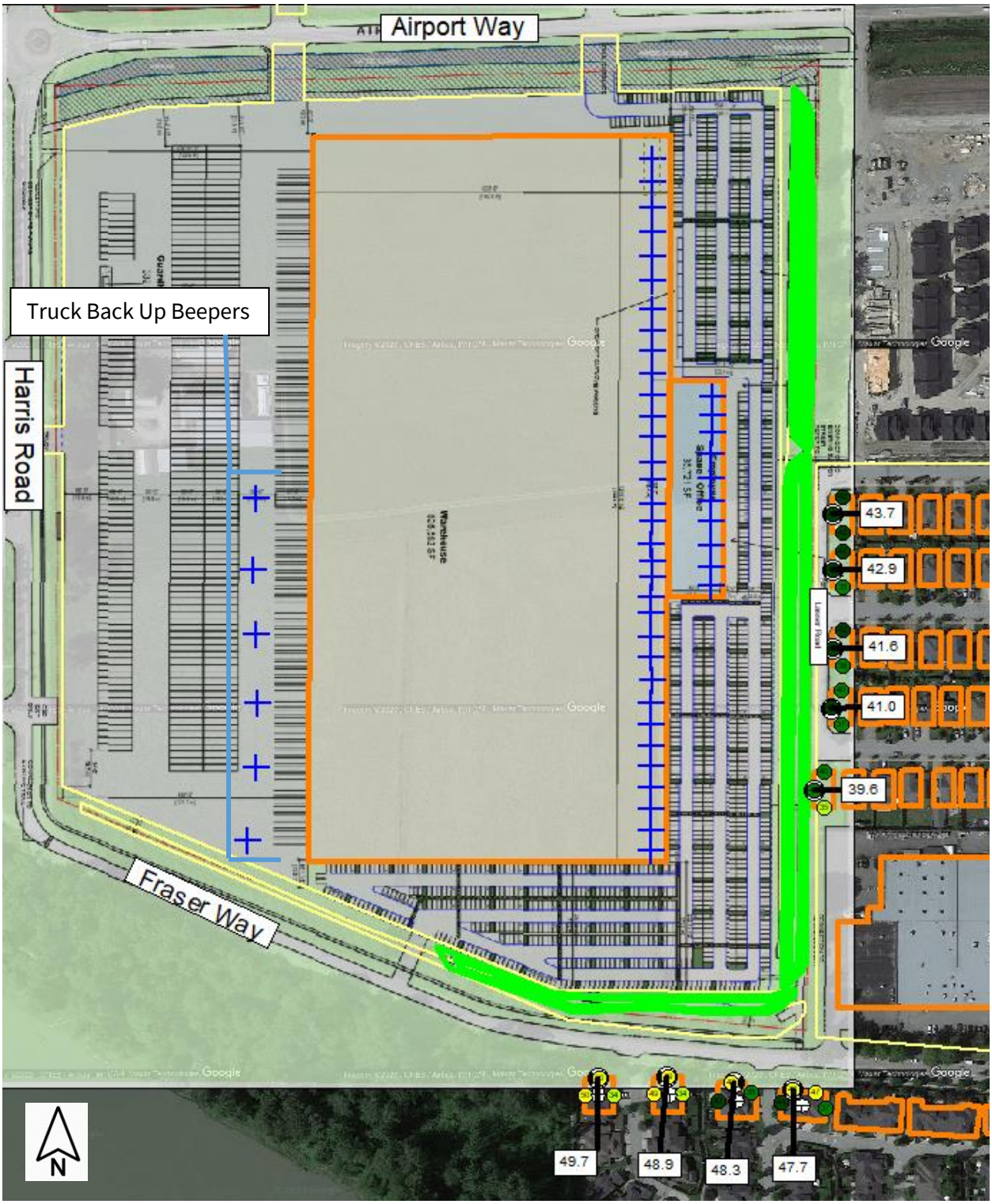

Figure 3 - Predicted noise levels (dBA) at the residents from truck reversing alarms

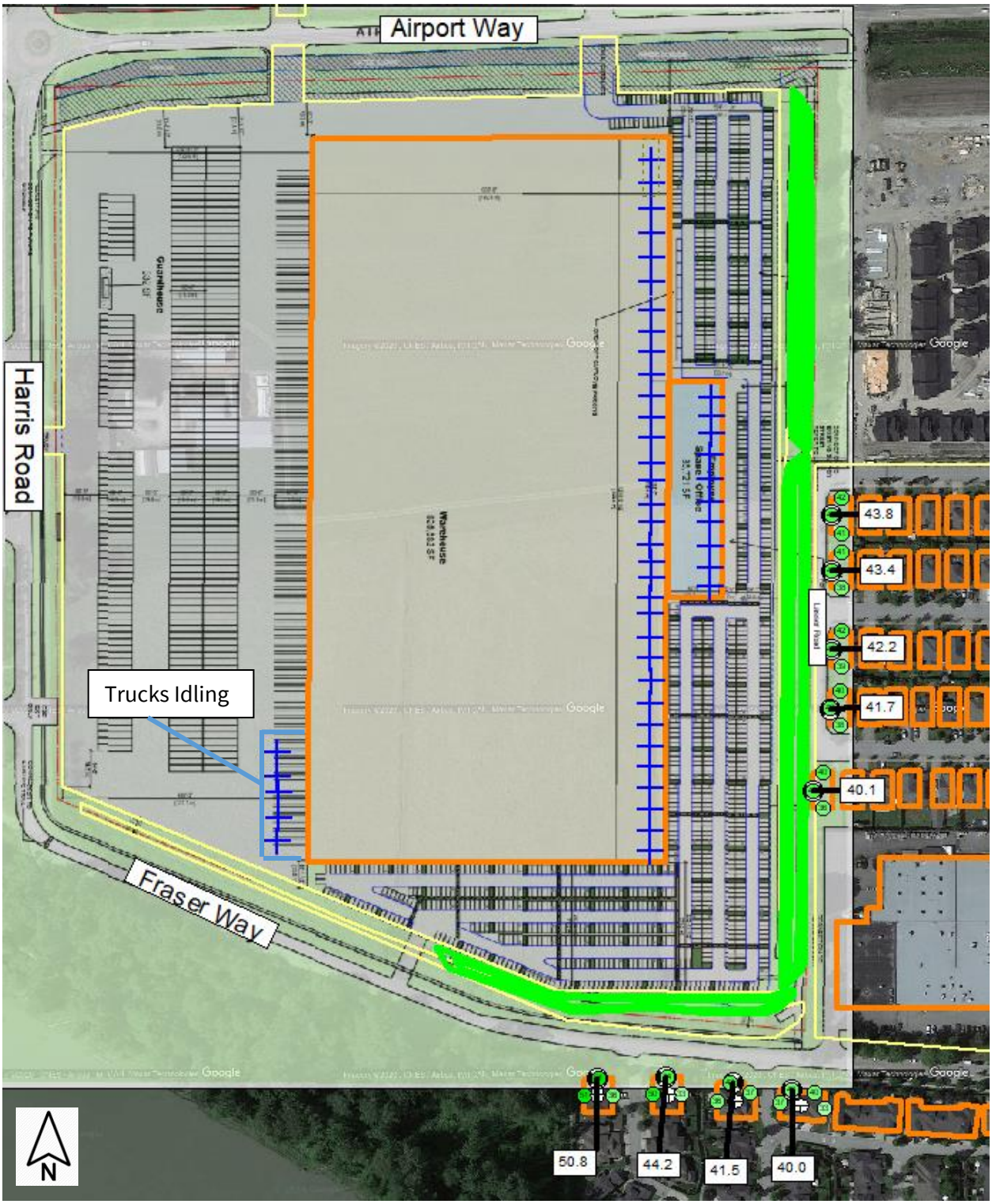

Figure 4 - Predicted noise levels (dBA) at the residents from five trucks idling

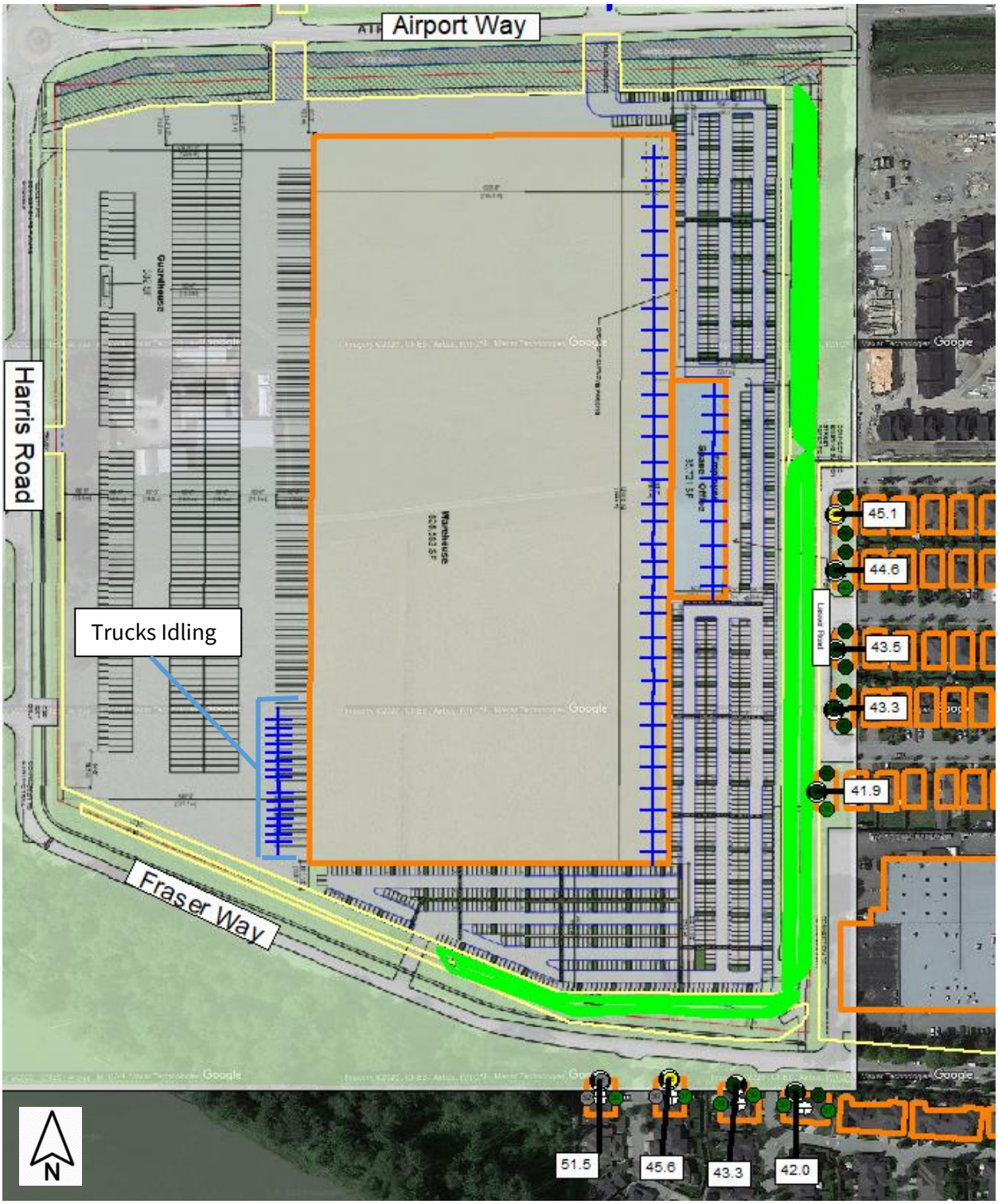

Figure 5 - Predicted noise levels (dbA) at the residents from 15 trucks idling

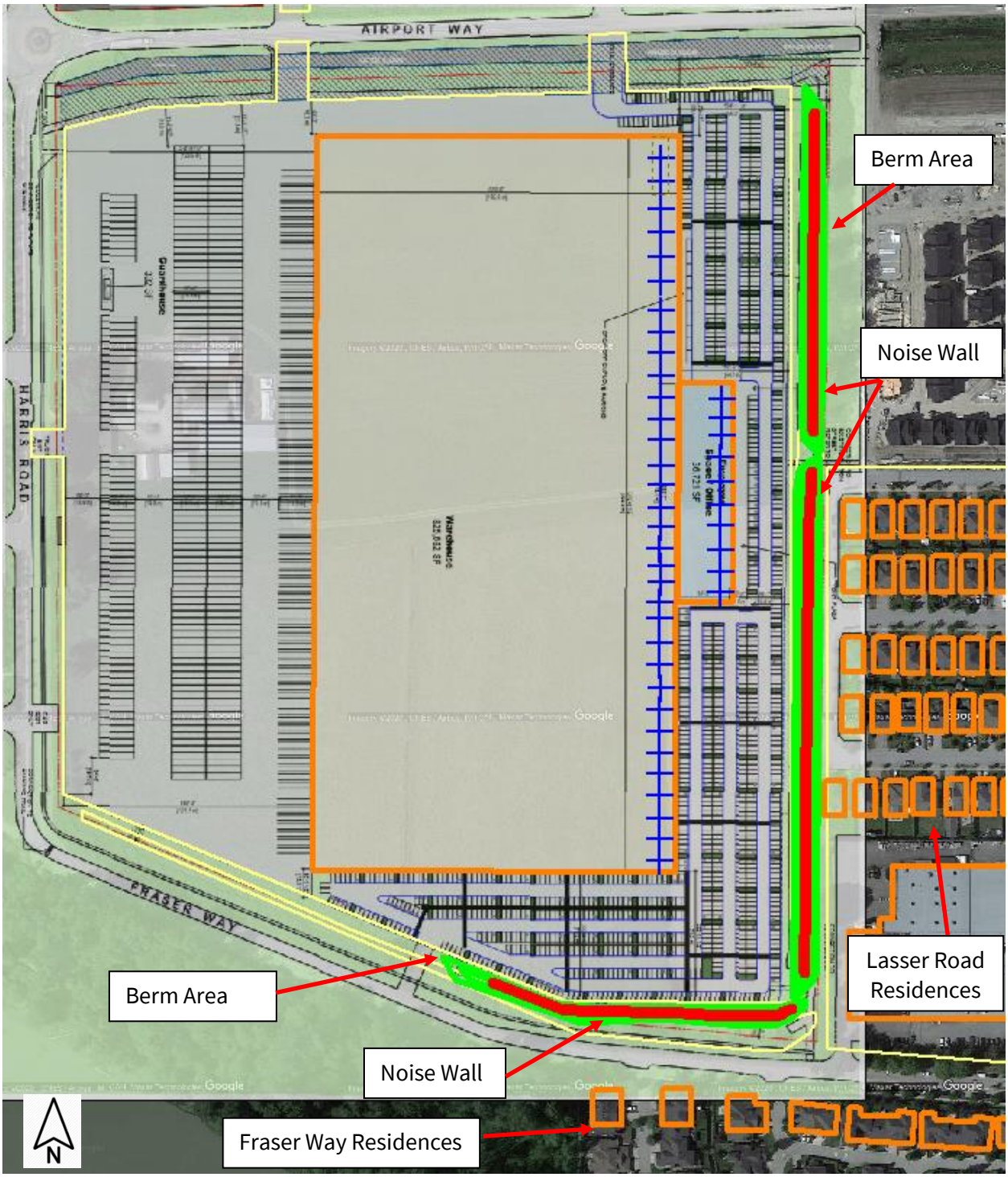

Figure 6 – Noise Wall Locations and Extent

Traffic Engineering Specialists

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Date: March 1, 2021
Our File No: 7255-01

BY EMAIL

Eric Hughes
VP of Development
ONNI Group
Suite 200, 1010 Seymour Street
Vancouver, BC
V6B 3M6

Dear Mr. Hughes,

Re: Golden Ears Business Park, Pitt Meadows – REVISED FINAL Access Assessment

1.0 BACKGROUND

ONNI is currently seeking development permits for the last two phases i.e. Phase 3 and Phase 4, of its Golden Ears Business Park (GEBP) development in Pitt Meadows. The Phase 3 property is 1,761,795 ft^2 in area and the Phase 4 property is 1,927,003 ft^2 in area.

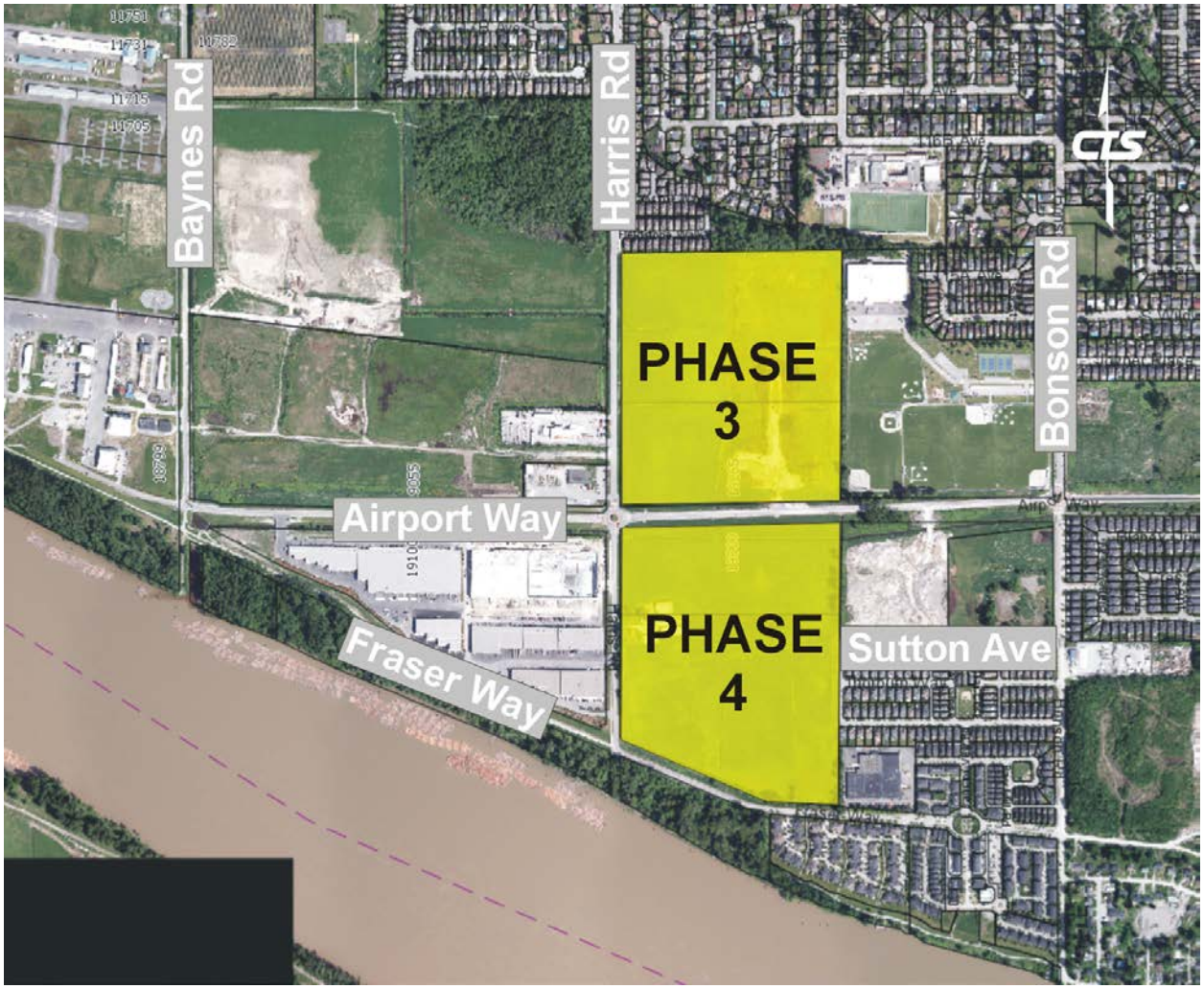
The current development permit application proposes the following:

- Phase 3 – 19265 Airport Way
  - Building 3100 – 145,518 ft^2
  - Building 3200 – 236,272 ft^2
  - Building 3300 – 111,581 ft^2

- Phase 4 – 11208 Harris Road
  - Building 4000 - 863,536 ft^2

Both GEBP - Phase 3 and Phase 4 front Airport Way (approximate 425 meters of frontage) and Harris Road (approximately 475 meters and 425 meters of frontage respectively. **FIGURE 1** illustrates the location of Phase 3 and Phase 4 within the context of the local road network. A site/access plan for GEBP - Phase 3 and Phase 4 is included as **APPENDIX A**.

FIGURE 1
GEBP - PHASE 3 AND PHASE 4



2.0 SCOPE

CTS was tasked with undertaking an access assessment which rationalizes the proposed site/access plan for GEBP - Phase 3 and Phase 4 by ONNI with consideration for:

- Adjacent road network including City of Pitt Meadows truck routes
- On-site building, drive aisle and parking layout;
- Location of parking and loading areas;
- Operational requirements by the tenant of each building/space;
- Type of motorist i.e. visitor, staff/personnel, delivery person, equipment/vehicle operator;
- Type of vehicle i.e. passenger car, pick-up truck, delivery van, light/medium/heavy single unit truck, tractor with semi-trailer;
- Driveway access type;
- Driveway access spacing;
- Driveway access offset from intersections;
- Driveway access location relative to the adjacent property;
- Sight lines;
- Site safety;
- Proposed road geometry;
- Capacity analysis;
- Traffic signal warrant analysis;
- Gap analysis; and
- On-site parking provision.

The site/access plan for GEBP - Phase 3 and Phase 4 is included as **APPENDIX A**.

3.0 ROAD NETWORK

3.1 Existing Road Network

The following can be stated about Airport Way and Harris Road adjacent to GEBP - Phase 3 and Phase 4:

Airport Way

- Is an arterial road connecting Golden Ears Way Roundabout in the east with Baynes Road (Pitt Meadows Regional Airport) in the west. Airport Way is also a City of Pitt Meadows Truck Route.
- Two lanes with paved shoulder.
- Bicycle route i.e. bicycle lanes.
- Illuminated at Bonson Road, Harris Road and Baynes Road.
- The posted speed on Airport Way is 60 km/h.

Bonson Road

- A collector road connecting Hammond Road in the north with Fraser Way in the south.
- Two lanes with paved shoulder.
- Bicycle route i.e. shared bikeway.
- Illuminated.
- The posted speed on Bonson Road is 50 km/h.

Harris Road

- An arterial road connecting Lougheed Highway in the north with Fraser Way in the south.
- Two lanes with paved shoulder from Fraser Way to Hammond Road.
- Bicycle route i.e. bicycle lanes.
- Illuminated at Airport Way and south of Airport Way.
- The posted speed on Harris Road is 50 km/h.

Baynes Road

- An arterial road connecting Ford Road in the north with Airport Way in the south. Baynes Road is also a City of Pitt Meadows Truck Route.
- Two lanes with paved shoulder.
- Bicycle route i.e. shared bikeway.
- Illuminated at Airport Way.
- The posted speed on Baynes Road is 50 km/h.

Fraser Way

- A collector road connecting Bonson Road in the east with Harris Road in the west.
- Two lanes with open shoulder.
- Bicycle route i.e. shared bikeway.
- Illuminated.
- The posted speed on Fraser Way is 50 km/h.

Airport Way at Golden Ears Way Roundabout

- Intersection is controlled by a roundabout.
- There are signed and marked pedestrian crossings on all four approaches to the intersection.
- The intersection is illuminated.

Airport Way at Bonson Road Intersection

- Intersection is controlled by a roundabout.
- There are signed and marked pedestrian crossings on all four approaches to the intersection.
- The intersection is illuminated.

Airport Way at Harris Road Intersection

- Intersection is controlled by a roundabout.
- There are signed and marked pedestrian crossings on all four approaches to the intersection.
- The intersection is illuminated.

Airport Way at Baynes Road Intersection

- Intersection is STOP controlled on Baynes Road.
- The intersection is illuminated.

3.1 Proposed Road Network

The following improvements are proposed for Airport Way between Bonson Road and Baynes Road adjacent to GEBP - Phase 3 and Phase 4:

Airport Way

- Four lanes with paved shoulder.
- Multi-user pathway along the north boulevard connecting the proposed park amenity with a midpoint between Harris Road and Baynes Road.

- Multi-user pathway along the south boulevard connecting Bonson Road with Harris Road
- Street lighting.

Airport Way at Bonson Road Intersection

- Traffic signal control.
- Pedestrian controlled crossings on all four approaches to the intersection.
- Street lighting.

Airport Way at Sutton Development/Park Amenity Access

- New full movement access to the proposed park amenity.
- Sutton Development access restricted to right-in/right-out only.
- Pedestrian controlled crossing on the west approach to the intersection.
- Street lighting.

Airport Way at Harris Road Intersection

- Traffic signal control.
- Pedestrian controlled crossings on all four approaches to the intersection.
- Street lighting.

4.0 ACCESS ASSESSMENT

CTS undertook the following access assessment with reference to ONNI's site/access plan for GEBP - Phase 3 and Phase 4 included as **APPENDIX A**.

Adjacent Road Network

Vehicle routing to/from GEBP - Phase 3 and Phase 4 is intended to be along the adjacent arterial and collector roads i.e. Airport Way, Harris Road and Baynes Road and City of Pitt Meadows Truck Routes i.e. Airport Way and Baynes Road. The City of Pitt Meadows Truck Route Network is included as **APPENDIX B**.

Given vehicles routing to GEBP - Phase 3 and Phase 4 from the north and west along Harris Road and Baynes Road, and from the east along Airport Way, it is reasonable to expect that the majority those vehicles route from GEBP - Phase 3 and Phase 4 in the direction from which they originated.

Also, it is reasonable to expect that vehicles routing to/from GEBP - Phase 3 and Phase 4 require a pre-requisite number of direct and functional points of access and turns to accommodate ingress to/egress from GEBP - Phase 3 and Phase 4 from/to the adjacent arterial roads and truck routes.

Note - GEBP – Phase 1 and Phase 2 have a total of ten all movement points of access along Baynes Road, Airport Way and Harris Road. The much smaller City of Pitt Meadows Works Yard has two points of access on Harris Road, presumably to accommodate their operational requirements i.e. one point of access for visitors, staff/personnel and deliveries and the other for work related vehicles and equipment.

GEBP – Phase 3 and Phase 4 Site Layout

The on-site building, drive aisle parking and loading layout have been designed to not only meet the City's land use, parking and loading requirements but also to align the on-site operation of GEBP – Phase 3 and Phase 4 with a pre-requisite number of direct and functional points of access along the adjacent arterial roads, collector roads and truck routes by directly connecting the motorist/vehicle with the associated land use, parking or loading area.

- Visitors and delivery persons require access to the main public entrance for each building. The main public entrance is typically at the front of the building facing the adjacent road and is where the business/company name and unit number/address are displayed.

  Operationally, there is typically a public parking area at the front of the building as well as access to that parking to accommodate visitors and delivery persons who might be unfamiliar with the GEBP.

The driveway, drive aisle and parking area are typically designed to accommodate a passenger car, pick-up truck or delivery van.

- Parking for staff/personnel is typically removed from the main public entrance and delivery and loading areas so not to “take away” from parking and/or conflict with their operation.

  Staff/personnel parking is proposed for the north half of GEBP – Phase 3 and for the eastern half of GEBP – Phase 4.

  The driveway, drive aisle and parking area are typically designed to accommodate a passenger car, pick-up truck or delivery van.

- Delivery persons and operators require access to delivery and loading bays typically at the back of the building facing away from the adjacent street. The vehicle type could be a delivery van, light/medium/heavy single unit truck, tractor with semi-trailer or a piece of equipment such as a fork lift, and the delivery person or operator is typically familiar with their location being a frequent user.

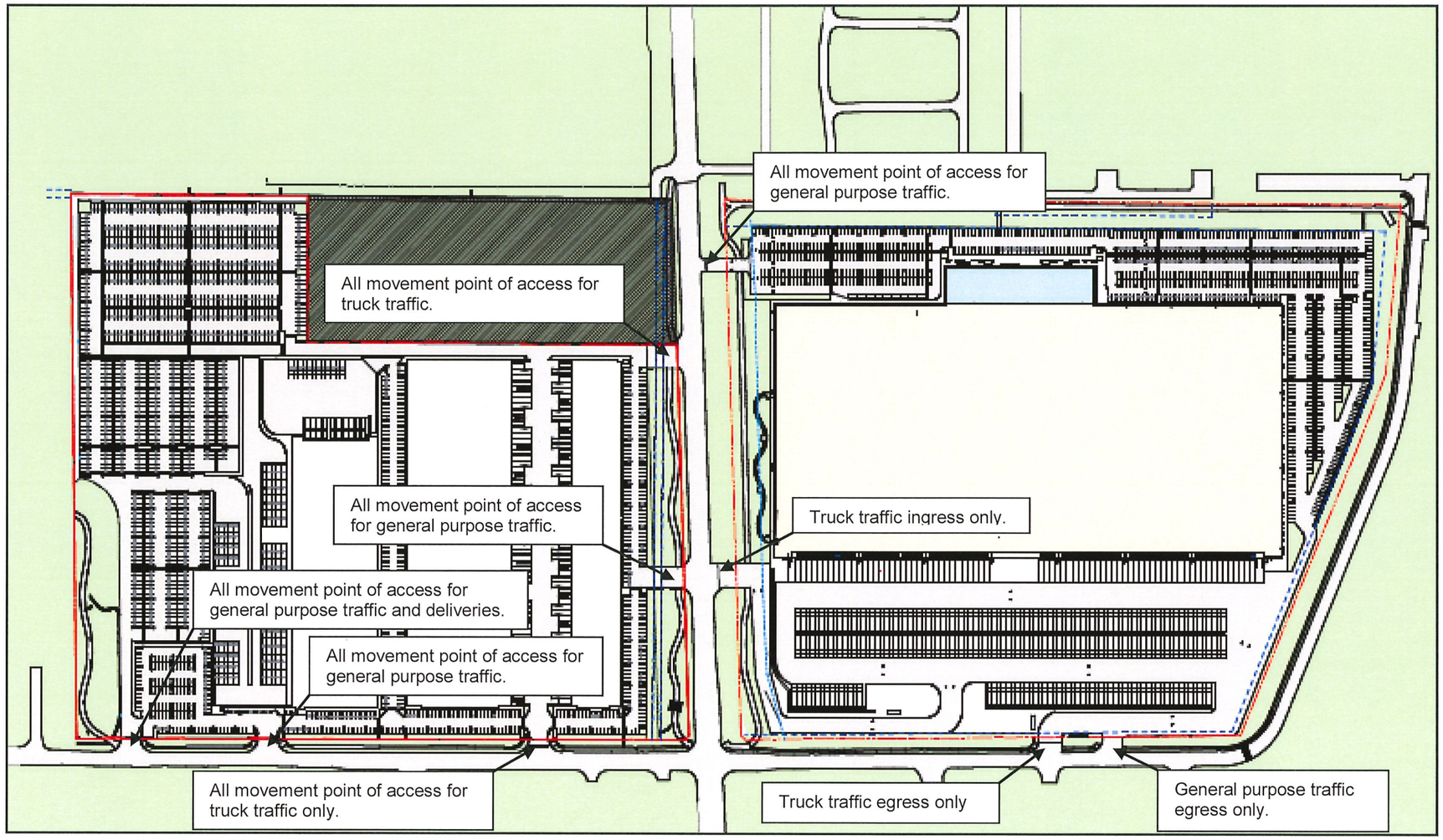
  The area associated with delivery/loading bays is typically designated as a work area which might require the use of personal protective equipment (PPE) such as hard hats, visi-vests, protective footwear, etc.

  Delivery and loading areas are not intended to be associated with public and/or staff/personnel access given they are typically active works areas, there is a disparity in vehicle size and operation, larger vehicles have a larger blind spot, etc.

  The driveway, drive aisle and parking area is typically designed to accommodate a tractor with semi-trailer.

FIGURE 2 illustrates the GEBP – Phase 3 and Phase 4 points of access and their intended function.

FIGURE 2
GEBP – PHASE 3 AND PHASE 4 POINTS OF ACCESS



Driveway Design

The Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017* provides typical driveway dimensions based on operation i.e. one-way or two-way, and land use i.e. residential, commercial or industrial. Their dimensions can vary dramatically if accommodating a passenger car or a tractor with semi-trailer. Per *Table 8.9.1: Typical Driveway Dimensions*, the recommended width of a two-way industrial driveway is 9.0 to 15.0 meters.

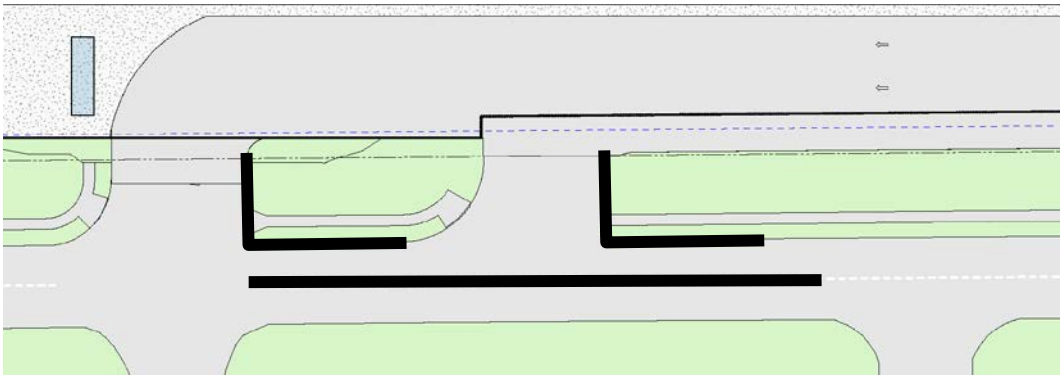
The two driveways on Airport Way and two driveways on Harris Road intended for the movement of delivery vans, light/medium/heavy single unit trucks, tractors with semi-trailer or pieces of equipment, will be designed to accommodate the manoeuvring of a WB20.

Note – In the rare event where two WB20 vehicles wish to egress/ingress the same driveway at the exact same time, one or the other WB20 operators would typically hold their position while the other WB20 operator clears the driveway. To design a driveway crossing where both WB20 vehicles could clear simultaneously would result in an unacceptably wide crossing from an operational and safety perspective. For example, a pedestrian crossing the driveway would be exposed to vehicular traffic for a longer distance and time period than is reasonably expected or designed for.

The two driveways on Airport Way, and three driveways on Harris Road intended for the movement of a passenger car, pick-up truck and delivery van will be designed to accommodate those vehicle types.

In addition to accommodating the intended design vehicle, the driveways on Harris Road south of Airport Way will be intentionally designed to direct egressing vehicles from GEBP – Phase 4, to the north towards Airport Way. This design requirement will be achieved by the installation of regulatory signage i.e. NO LEFT TURN, squaring off of the southerly curb return and installation of a raised median on centerline of Harris Road. See **FIGURE 3**.

FIGURE 3
GEBP – PHASE 4 HARRIS ROAD EGRESS



Driveway Frequency

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017* the maximum number of driveways based on frontage is four or more for properties having a frontage greater than 150 meters. As mentioned, the frontage for GEBP – Phase 3 and Phase 4 along both Airport Way and Harris Road exceeds 400 meters. The maximum number of driveways on the GEBP - Phase 3 frontages is two on Airport Way and three on Harris Road. The maximum number of driveways on the GEBP - Phase 4 frontages is two on Airport Way and two on Harris Road.

Adjacent Driveway Spacing

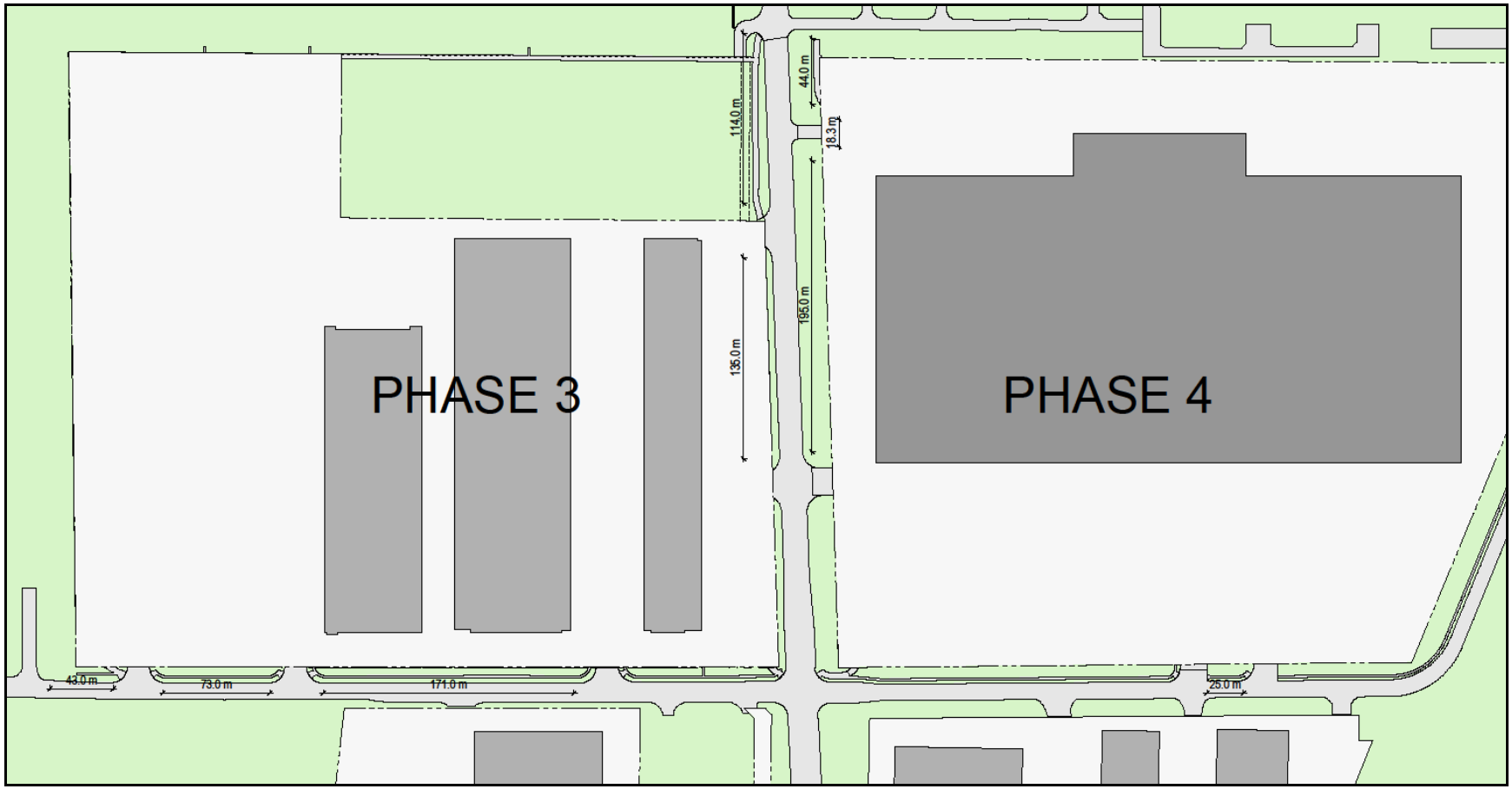
Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017* the minimum driveway spacing along an arterial road or a collector road in an industrial area is 25 meters.

The minimum driveway spacing on the north side of Airport Way exceeds 114 meters for the GEBP – Phase 3 east point of access and Sutton Development/Park Amenity access. The minimum driveway spacing on the south side of Airport Way exceeds 44 meters for the GEBP – Phase 4 east point of access and the Sutton Development/Park Amenity Access.

The minimum driveway spacing on the east side of Harris Road exceeds 43 meters for the GEBP – Phase 3 north point of access and Fieldstone Walk. The minimum driveway spacing on the east side of Harris Road exceeds 25 meters for GEBP – Phase 4 north and south points of access.

FIGURE 4 illustrates the adjacent driveway spacing offsets for GEBP – Phase 3 and Phase 4.

FIGURE 4
ADJACENT DRIVEWAY SPACING OFFSETS



Opposite Driveway Spacing

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads* 2017 driveways should be offset such that left turns in and the left turns out do not overlap.

Of the GEBP – Phase 3 and Phase 4 driveways on Airport Way, two are aligned directly opposite one another and two are offset. The two driveways that are offset, are offset such that the left turns in and the left turns out do not overlap.

Of the GEBP – Phase 2 and GEBP – Phase 3 driveways on Harris Road, three are offset. All of the driveways that are offset, are offset such that the left turns in and the left turns out do not overlap.

The GEBP Phase 4 driveways on Harris Road are right-out only, therefore there is no left turn overlap with GEBP – Phase 1 driveways.

Note - The driveways on the west side of Harris Road just north of Airport Way, belong to the City of Pitt Meadows Works Yard.

Corner Clearance

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017* the minimum clearance from a driveway to the intersection of an arterial road and a collector road i.e. Airport Way and Harris Road, is 70 meters.

The driveways proposed for GEBP – Phase 3 and Phase 4 along Airport Way and Harris Road exceed 70 meters on all approaches to the intersection of Airport Way and Harris Road.

Sight Lines

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017*, the Stopping Sight Distance (SSD) for a road posted a 60 km/h is 85 meters whereas the SSD for a road posted at 50 km/h is 65 meters.

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Road*s 2017, the Intersection Sight Distance (ISD) for a truck for a road posted a 60 km/h is 195 meters whereas the ISD for a road posted at 50 km/h is 160 meters.

The sight distance to/from the proposed driveway crossings along Airport Way and Harris Road exceed the SSD and ISD.

Proposed Road Geometry

Airport Way is proposed to be widened from two lanes to four lanes by 2024. The benefits to traffic operations along Airport Way include:

- Additional lane capacity and improved levels of service.
- Turns from Airport Way to GEBP – Phase 3 and Phase 4 can be made without impeding through traffic.
- Turn gap availability from GEBP – Phase 3 and Phase 4 to Airport Way is approximately doubled.

The intersection of Airport Way and Harris Road is proposed to be signalized by 2024. The benefits to traffic operations and safety include:

- Additional lane capacity and improved levels of service.
- Improved left turn radius through the intersection on all approaches.
- Signalized pedestrian and bicycle movements on all approaches.

5.0 PARK AMENITY ACCESS ASSESSMENT

A park dedication is proposed for the northeast quadrant of GEBP – Phase 3. The park dedication also abuts the Pitt Meadows Arena Complex and Athletic Park. The Pitt Meadows Arena Complex and Athletic Park are accessed from Bonson Road.

Access to the park is proposed on Airport Way opposite the Sutton Development. A preliminary design of the proposed point of access is included as **APPENDIX C**. It is expected that the proposed driveway and parking area would operate at their peak, evenings and weekends i.e. outside of the peak operational periods for GEBP – Phase 3 and Phase 4. No operational conflict is expected.

Adjacent Driveway Spacing

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017* the minimum driveway spacing along an arterial road in an industrial area is 25 meters.

The driveway spacing on the north side of Airport Way exceeds 114 meters for the GEBP – Phase 3 east point of access and Sutton Development/Park Amenity Access.

Opposite Driveway Spacing

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads* 2017 driveways should be offset such that left turns in and left turns out do not overlap.

The GEBP – Phase 4 east driveway and Park Amenity Access are offset. The two driveways are spaced such that left turns in and left turns out do not overlap. The driveway spacing on Airport Way between the GEBP – Phase 4 east driveway and the proposed Park Amenity Access, exceeds 50 meters.

Sight Lines

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017*, the Stopping Sight Distance (SSD) for a road posted a 60 km/h is 85 meters whereas the SSD for a road posted at 50 km/h is 65 meters.

Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Road*s 2017, the Intersection Sight Distance (ISD) for a truck for a road posted a 60 km/h is 195 meters whereas the ISD for a road posted at 50 km/h is 160 meters.

The sight distance to/from the proposed park amenity access along Airport Way exceeds the SSD and ISD.

6.0 CITY OF PITT MEADOWS WORKS YARD ACCESS ASSESSMENT

At the request of the City of Pitt Meadows, CTS assessed the driveway points of access to/from the City of Pitt Meadows works yard, with reference to **FIGURE 5**.

FIGURE 5
CITY OF PITT MEADOWS WORKS YARD

Currently there are driveway two points of access along Harris Road, servicing the works yard. The north driveway point of access is full movement whereas the south driveway point of access is right-in/right-out/left-in. Left turns out are prohibited at the south point of access by signage. Also, the north driveway point of access is primarily for staff, deliveries and visitors whereas the south driveway point of access is primarily for the movement of work related vehicles and equipment and larger deliveries.

In assessing the design and operation of both driveway points of access, CTS applied the corner clearance criterion. Per the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017* the minimum clearance from a

driveway to the intersection of two arterial roads i.e. Airport Way and Harris Road, is 70 meters.

The north driveway point of access is offset approximately 79 meters from Airport Way and the south driveway point of access is offset approximately 21 meters from Airport Way. The south driveway point of access does not meet the TAC corner clearance criterion. Left-in turns and left-out turns would conflict with the operation of the intersection of Airport Way and Harris Road e.g. left-in turns and left-out turns would track through the southbound left turn storage lane. The south driveway point of access would operate best as right-in/right-out.

7.0 TRIP GENERATION

The number of vehicle trips expected to be generated by GEBP – Phase 3 and Phase 4 for 2024 is summarized by **TABLE 1**. The ITE *Trip Generation Manual 10th Edition* trip generation rates for an Industrial Park, were referenced.

TABLE 1
GEBP – PHASE 3 and PHASE 4
YEAR 2024

Land Use		Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Peak Hour Volumes (vph)		
							% in	% out	in	out	total
Industrial Park Phase 3	Building 3100	Weekday Morning	1,000 Sq. Ft. GFA	145.5	0.40	ITE 10th Edition Code 130	81%	19%	48	11	59
		Weekday Afternoon		145.5	0.40		21%	79%	12	47	59
Industrial Park Phase 3	Other Buildings	Weekday Morning	1,000 Sq. Ft. GFA	347.9	0.40	ITE 10th Edition Code 130	81%	19%	113	27	140
		Weekday Afternoon		347.9	0.40		21%	79%	29	111	140
Industrial Park Phase 4	Phase 4 Buildings	Weekday Morning	1,000 Sq. Ft. GFA	863.5	0.40	ITE 10th Edition Code 130	81%	19%	280	66	346
		Weekday Afternoon		863.5	0.40		21%	79%	73	273	346
TOTAL WEEKDAY MORNING PEAK HOUR									**441**	**104**	**545**
TOTAL WEEKDAY AFTERNOON PEAK HOUR									**114**	**431**	**545**

For the year 2024, GEBP – Phase 3 and Phase 4 are expected to generate 545 (441 inbound and 104 outbound) vehicle trips in the morning peak hour and 545 (114 inbound and 431 outbound) vehicle trips in the afternoon peak hour.

FIGURE 6 and **FIGURE 7** illustrate the site generated traffic for the year 2024 during the weekday morning and afternoon peak hours.

Note - The site generated traffic volume does not change from the 2024 analysis to the 2035 analysis for the weekday morning and afternoon peak hours i.e. remains at 545 vehicles per hour for both analyses.

FIGURE 6
2024 WEEKDAY MORNING PEAK HOUR SITE GENERATED TRAFFIC VOLUMES

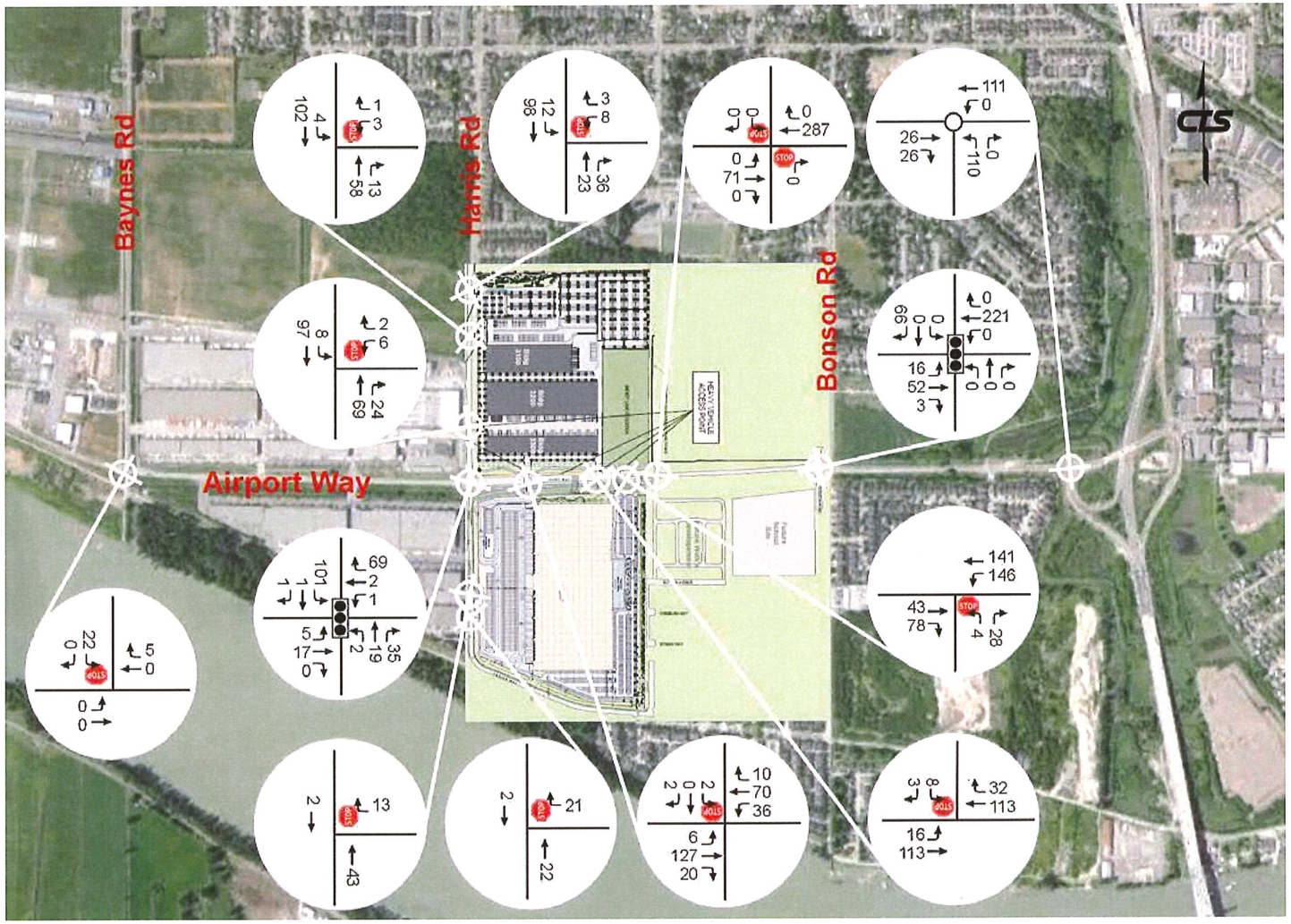
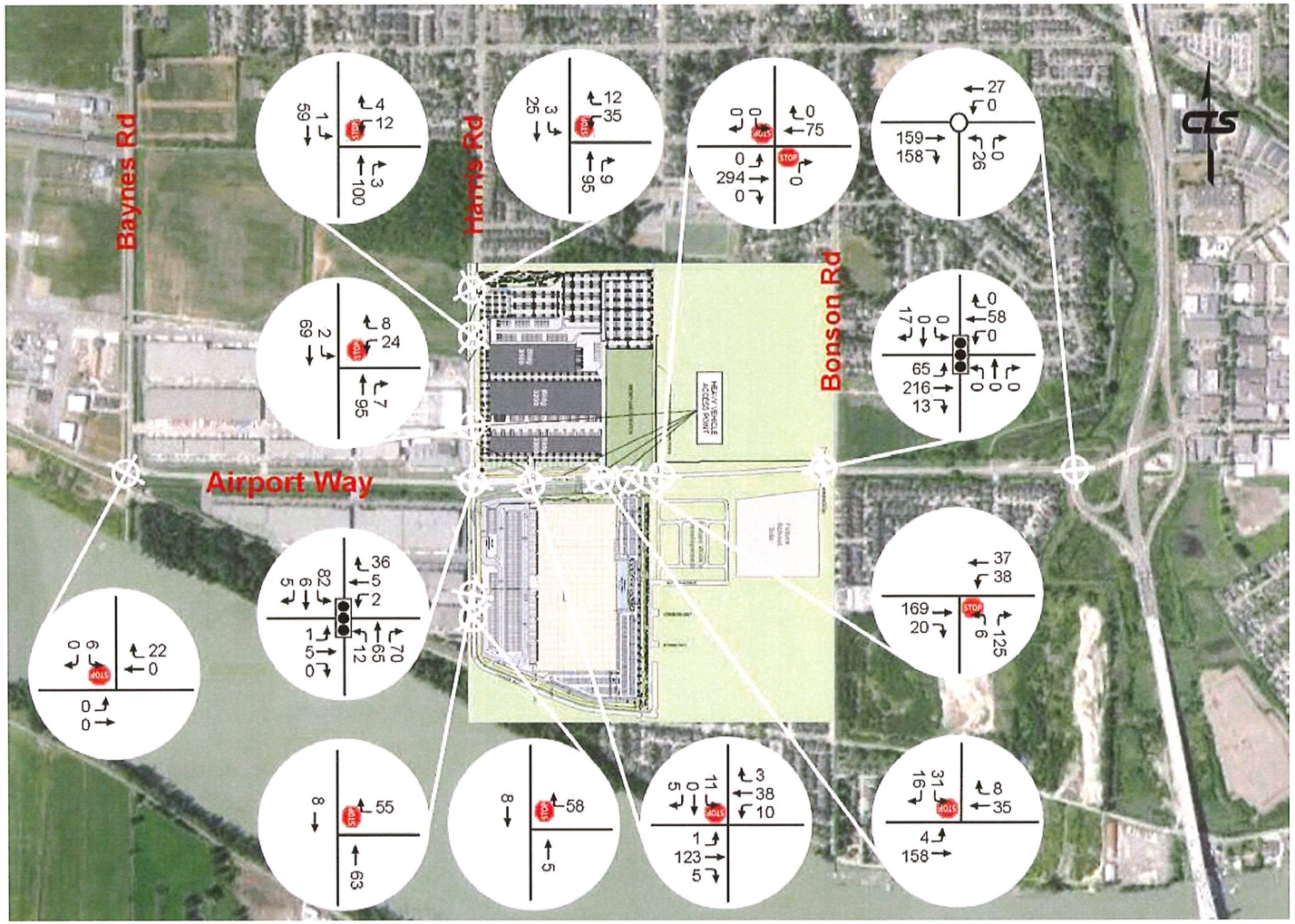


FIGURE 7
2024 WEEKDAY AFTERNOON PEAK HOUR SITE GENERATED TRAFFIC VOLUMES



8.0 CAPACITY ANALYSIS

8.1 Assumptions

In addition to the Access Assessment undertaken in Section 4.0, capacity analysis was performed for each of the GEBP – Phase 3 and Phase 4 points of access on Airport Way and Harris Road as well as for the intersection of Airport Way and Harris Road, to determine the overall intersection and individual movement Level of Service (LOS) that is provided to motorists. The LOS for intersections and movements is defined in terms of delay (seconds per vehicle) which is a measure of driver discomfort and frustration, fuel consumption and lost travel time.

An intersection or movement LOS can range from "A" (Excellent) to "E" (Capacity). A LOS of "F" indicates that an intersection or movement is failing because the intersection or movement is over capacity and delays are excessive. A LOS of “D” or better is considered acceptable by many public agencies for overall intersection, through and right turn movements and a LOS of “E” or better is considered acceptable for left turn movements, at signalized intersections.

Synchro (Version 10.0) was used to analyze the intersection and movement level of service for signalized intersections. Highway Capacity Software (HCS) was used to analyze the intersection and movement Level of Service for unsignalized intersections. SIDRA INTERSECTION 6.1 was used for the roundabout intersection analysis.

With respect to the point of access and intersection analyses, the following assumptions were made:

- Saturation flow rate → 1,900 passenger cars/hour of green/lane (pcphgpl).
- Heavy truck i.e. 3+ axles, percentage → 15% for all truck point of access movements and on Airport Way and Harris Road. All other points of access were assumed to be zero heavy trucks.
- Peak Hour Factor (PHF) → 0.93 for the weekday morning peak hour and 0.86 for the weekday PM peak hour which were the average PHF’s from the traffic turning movement counts.
- All points of access were assumed to be all movement i.e. right-in, right-out, left-in and left-out except:
    - GEBP Phase 4 Airport Way West Ingress – right-in and left-in only.
    - GEBP Phase 4 Harris Road Truck Egress – right-out only.
    - GEBP Phase 4 Harris Road Passenger Car Egress – right-out only.
- All egresses were assumed to be shared left turn/right turn movements except:
    - GEBP Phase 4 Harris Road Truck Egress – right-out only.
    - GEBP Phase 4 Harris Road Passenger Car Egress – right-out only.

- CTS based the capacity analysis on background traffic data collected by CTS on February 28, 2017. Copies of the turning movement summary count data are included as **APPENDIX D**. The weekday morning peak hour was 0745 to 0845. The weekday afternoon peak hour was 1615 to 1715.
- Per direction received from the City of Pitt Meadows, CTS studied the 2024 and 2035 horizon years with GEBP – Phase 3 and Phase 4.
- The 2017 background data was grown to the 2024 and 2035 study years at 2% per annum simple straight line, consistent with McElhanney's *South Bonson Traffic Study – Final Report, April 2016*.
- Vehicle trips generated by the Sutton Development residential community were included as background traffic in the years 2024 and 2035. The Sutton Development generated vehicle trips are summarized by **TABLE 2.**

TABLE 2
SUTTON DEVELOPMENT VEHICLE TRIP GENERATION

Land Use		Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Peak Hour Volumes (vph)		
							% in	% out	in	out	total
Residential	Townhouse	Weekday Morning	Dwelling Units	220	0.36	ITE 10th Edition Code 221	26%	74%	21	59	80
		Weekday Afternoon	Dwelling Units	220	0.44	ITE 10th Edition Code 221	61%	39%	59	38	97
TOTAL WEEKDAY MORNING PEAK HOUR									21	59	80
TOTAL WEEKDAY AFTERNOON PEAK HOUR									59	38	97

The vehicle trip generation data is based on that assumed by the City of Pitt Meadows in their *Staff Report to Council – Temporary Commercial Use Permit Application for 19451 Sutton Avenue, April 2019.*

- Vehicle trips generated by the proposed park amenity were assumed to be 20 vehicle trips inbound and 20 vehicle trips outbound for both the morning and afternoon peak hours.

- Vehicle trips generated by the proposed elementary school on the southwest corner of Airport Way and Bonson Road were included as background traffic in the year 2035. The school generated vehicle trips are summarized by **TABLE 3.**

TABLE 3
SCHOOL VEHICLE TRIP GENERATION

Land Use		Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Peak Hour Volumes (vph)		
							% in	% out	in	out	total
School	Elementary	Weekday Morning	1,000 Square Feet GFA	15	6.97	ITE 10th Edition Code 520	55%	45%	58	47	105
		Weekday Afternoon	1,000 Square Feet GFA	15	1.37		45%	55%	9	12	21
TOTAL WEEKDAY MORNING PEAK HOUR									58	47	105
TOTAL WEEKDAY AFTERNOON PEAK HOUR									9	12	21

The vehicle trip generation data is based on that assumed by McElhanney in their *South Bonson Traffic Study – Final Report, April 2016.*

- Vehicle trips generated by the GEBP Phase 1 and Phase 2 were included as background traffic. The vehicle trip generation data is based on that assumed by MMM in their *Golden Ears Business Park – Phase 3 Transportation Impact Study, April 2015.*
- Trip distribution parameters for distributing GEBP – Phase 3 and Phase 4 generated vehicle trips to/from the site are summarized by **TABLE 4**. The traffic distribution is based on that assumed by McElhanney in their *South Bonson Traffic Study, April 2016*.

Note - The distribution percentage for North - Harris Road was changed from 30% to 25% and the distribution percentage for West – Airport Way was changed from 0% to 5%.

TABLE 4
TRIP DISTRBUTION PERCENTAGES

FROM / TO	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	INBOUND	OUTBOUND	INBOUND	OUTBOUND
North - Bonson Rd	15.0%	15.0%	15.0%	15.0%
North - Harris Rd	25.0%	25.0%	25.0%	25.0%
East Airport Way	50.0%	50.0%	50.0%	50.0%
South - Harris Rd	5.0%	5.0%	5.0%	5.0%
West - Airport Way	5.0%	5.0%	5.0%	5.0%
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**

- CTS analyzed Airport Way as a four-lane cross-section for both the 2024 and 2035 scenarios.
- CTS analyzed the intersections of Airport Way and Bonson Road and Airport Way and Harris Road as traffic signal controlled for both the 2024 and 2035 scenarios. For the traffic signal controlled intersection, CTS assumed protected/permissive phasing on all approaches and optimized the signal timing.
- CTS analyzed the intersection of Airport Way and the Sutton Development/Park Amenity access and Airport Way and Baynes Road as STOP controlled for both the 2024 and 2035 scenarios.
- CTS analyzed the intersection of Airport Way and Golden Ears Way Roundabout as roundabout control with no geometric or laning improvements. The link volumes established for the east approach to the intersection of Airport Way and Bonson Road for 2024 were used as basis for the west approach to the intersection of Airport Way and Golden Ears Way Roundabout. The link volumes were distributed to the east and south approaches to the intersection of Airport Way and Golden Ears Way Roundabout 50%/50%.
- The preliminary geometry and laning assumed for Airport Way are illustrated by the preliminary design included as **APPENDIX C**.

8.2 Capacity Analysis

With consideration for the preceding assumptions, capacity analysis was performed for each of the GEBP – Phase 3 and Phase 4 points of access on Airport Way and Harris Road as well as for the intersections of:

- Airport Way and Bonson Road;
- Airport Way and Harris Road;
- Airport Way and Baynes Road;
- Airport Way and Sutton Development/Park Amenity access; and
- Airport Way and Golden Ears Way Roundabout.

TABLE 5 summarizes and compares the delay in seconds and the 95th percentile queue for all GEBP – Phase 3 and Phase 4 unsignalized points of access on Harris Road (two lane cross-section) and Fraser Way (two lane cross-section) for the 2024 and 2035 morning and afternoon peak hours.

TABLE 6 summarizes and compares the delay in seconds and the 95th percentile queue for all GEBP – Phase 3 and Phase 4 unsignalized points of access on Airport Way (four lane cross-section) for the 2024 and 2035 morning and afternoon peak hours.

TABLE 7 summarizes and compares the delay in seconds and the 95th percentile queue for the unsignalized intersection of Airport Way (four lane cross-section) and the Sutton

Development/Park Amenity access for the 2024 and 2035 morning and afternoon peak hours.

TABLE 8 summarizes and compares the delay in seconds and the 95th percentile queue for the unsignalized intersection of Airport Way and Baynes Road for the 2024 and 2035 morning and afternoon peak hours.

TABLE 9 summarizes and compares the main performance parameters of the capacity analysis for the signalized intersection of Airport Way (four lane cross-section) at Bonson Road and Airport Way (four lane cross-section) at Harris Road for the 2024 and 2035 morning and afternoon peak hours.

The capacity analysis summary sheets are included as **APPENDIX E**.

TABLE 5
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY
HARRIS ROAD (TWO LANE CROSS-SECTION) AND PHASE 3 POINTS OF ACCESS

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Harris Road (N/S) & North Access - Phase 3 (E/W)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes				8		3		375	36	12	534		A	OK
			Delay				17.1				0.0		8.2				
			95% Queue (veh)				0.1				0.0		0.0				
		2035 Base + Site (Phase 3 & 4)	Volumes				8		3		452	36	12	632		A	OK
			Delay				20.6				0.0		8.5				
			95% Queue (veh)				0.2				0.0		0.0				
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes				35		12		623	9	3	423		A	WB Movements are approaching capacity
			Delay				25.6				0.0		9.1				
			95% Queue (veh)				0.9				0.0		0.0				
		2035 Base + Site (Phase 3 & 4)	Volumes				35		12		726	9	3	500		A	WB Movements are approaching capacity
			Delay				35.0				0.0		9.6				
			95% Queue (veh)				1.3				0.0		0.0				
Harris Road (N/S) & Middle Access - Phase 3 (E/W)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes				3		1		410	13	4	538		A	OK
			Delay				17.1				0.0		8.2				
			95% Queue (veh)				0.0				0.0		0.0				
		2035 Base + Site (Phase 3 & 4)	Volumes				3		1		487	13	4	636		A	OK
			Delay				20.5				0.0		8.5				
			95% Queue (veh)				0.1				0.0		0.0				
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes				12		4		628	3	1	457		A	OK
			Delay				23.0				0.0		9.1				
			95% Queue (veh)				0.3				0.0		0.0				
		2035 Base + Site (Phase 3 & 4)	Volumes				12		4		731	3	1	534		A	WB Movements are approaching capacity
			Delay				29.4				0.0		9.5				
			95% Queue (veh)				0.4				0.0		0.0				
Harris Road (N/S) & South Access - Phase 3 (E/W)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes				6		2		421	24	8	533		A	OK
			Delay				18.6				0.0		8.6				
			95% Queue (veh)				0.1				0.0		0.0				
		2035 Base + Site (Phase 3 & 4)	Volumes				6		2		498	24	8	631		A	OK
			Delay				22.6				0.0		8.8				
			95% Queue (veh)				0.1				0.0		0.0				
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes				24		8		623	7	2	467		A	WB Movements are approaching capacity
			Delay				27.0				0.0		9.4				
			95% Queue (veh)				0.7				0.0		0.0				
		2035 Base + Site (Phase 3 & 4)	Volumes				24		8		726	7	2	544		A	WB Movements are approaching capacity
			Delay				36.4				0.0		9.8				
			95% Queue (veh)				0.9				0.0		0.0				

Delay = Average Delay (seconds/vehicle)

Intersection approaching capacity (LOS 'D' or 'E'); ; or medium approach delays (25sec to <50sec)

Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (=> 50sec)

95% Queue = UNSIGNALIZED QUEUE IS PER VEHICLE

TABLE 5 CONTINUED
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY
HARRIS ROAD (TWO LANE CROSS-SECTION) AND PHASE 4 POINTS OF ACCESS

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Harris Road (N/S) & Phase 4 Outbound Truck Access (E/W)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes						13		205			146		A	OK
			Delay						10.9		0.0			0.0			
			95% Queue (veh)						0.1		0.0			0.0			
		2035 Base + Site (Phase 3 & 4)	Volumes						13		234			174		A	OK
			Delay						11.2		0.0			0.0			
			95% Queue (veh)						0.1		0.0			0.0			
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes						55		261			136		A	OK
			`						12.3		0.0			0.0			
			95% Queue (veh)						0.4		0.0			0.0			
		2035 Base + Site (Phase 3 & 4)	Volumes						55		293			163		A	OK
			Delay						12.8		0.0			0.0			
			95% Queue (veh)						0.4		0.0			0.0			
Harris Road (N/S) & Phase 4 Outbound Car Access (E/W)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes						21		184			146		A	OK
			Delay						9.5		0.0			0.0			
			95% Queue (veh)						0.1		0.0			0.0			
		2035 Base + Site (Phase 3 & 4)	Volumes						21		213			174		A	OK
			Delay						9.5		0.0			0.0			
			95% Queue (veh)						0.1		0.0			0.0			
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes						87		174			136		A	OK
			Delay						9.8		0.0			0.0			
			95% Queue (veh)						0.4		0.0			0.0			
		2035 Base + Site (Phase 3 & 4)	Volumes						87		206			163		A	OK
			Delay						10.1		0.0			0.0			
			95% Queue (veh)						0.4		0.0			0.0			

Delay = Average Delay (seconds/vehicle)

Intersection approaching capacity (LOS 'D' or 'E'); ; or medium approach delays (25sec to <50sec)

Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (=> 50sec)

95% Queue = UNSIGNALIZED QUEUE IS PER VEHICLE

TABLE 6
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY
AIRPORT WAY (FOUR LANE CROSS-SECTION) AND POINTSOF ACCESS

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Airport Way (E/W) & West Access - Phase 3 & 4 (N/S)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	6	475	20	36	742	10				2		2	A	OK
			Delay	9.4	4.7	0.0	11.7	5.9	0.0				21.1				
			95% Queue (veh)	0.0	0.0	0.0	0.2	0.2	0.0				0.1				
		2035 Base + Site (Phase 3 & 4)	Volumes	6	558	20	36	884	10				2		2	A	SB movements are approaching capacity.
			Delay	10.0	5.0	0.0	12.6	6.3	0.0				27.4				
			95% Queue (veh)	0.0	0.0	0.0	0.2	0.2	0.0				0.1				
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	1	952	5	10	465	3				11		5	A	OK
			Delay	8.5	4.8	0.0	19.0	9.5	0.0				24.2				
			95% Queue (veh)	0.0	0.0	0.0	0.1	0.1	0.0				0.3				
		2035 Base + Site (Phase 3 & 4)	Volumes	1	1107	5	10	551	3				11		5	A	SB movements are approaching capacity.
			Delay	8.8	4.4	0.0	23.0	11.5	0.0				32.4				
			95% Queue (veh)	0.0	0.0	0.0	0.2	0.2	0.0				0.4				
Airport Way (E/W) & East Access - Phase 3 (N/S)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	16	461			78	32				8		3	A	OK
			Delay	10.4	5.2			0.0	0.0				23.4				
			95% Queue (veh)	0.1	0.0			0.0	0.0				0.2				
		2031 Base + Site (Phase 3 & 4)	Volumes	16	544			927	32				8		3	A	SB movements are approaching capacity.
			Delay	11.2	5.6			0.0	0.0				30.3				
			95% Queue (veh)	0.1	0.0			0.0	0.0				0.2				
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	4	959			462	8				31		16	A	OK
			Delay	8.9	4.5			0.0	0.0				24.1				
			95% Queue (veh)	0.0	0.0			0.0	0.0				0.8				
		2031 Base + Site (Phase 3 & 4)	Volumes	4	1114			548	8				31		16	A	SB movements are approaching capacity.
			Delay	9.2	4.6			0.0	0.0				32.6				
			95% Queue (veh)	0.0	0.0			0.0	0.0				1.2				
Airport Way (E/W) & East Access - Phase 4 (N/S)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes		391	78	146	813		4		28				A	OK
			Delay		0.0	0.0	8.9	4.5		13.3							
			95% Queue (veh)		0.0	0.0	0.5	0.0		0.2							
		2035 Base + Site (Phase 3 & 4)	Volumes		474	78	146	955		4		28				A	OK
			Delay		0.0	0.0	9.3	4.7		15.4							
			95% Queue (veh)		0.0	0.0	0.6	0.0		0.3							
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes		970	20	38	464		6		125				A	OK
			Delay		0.0	0.0	11.3	5.7		19.3							
			95% Queue (veh)		0.0	0.0	0.2	0.0		1.7							
		2035 Base + Site (Phase 3 & 4)	Volumes		1125	20	38	550		6		125				A	OK
			Delay		0.0	0.0	12.5	6.3		24.5							
			95% Queue (veh)		0.0	0.0	0.3	0.0		2.3							

Delay = Average Delay (seconds/vehicle)

Intersection approaching capacity (LOS 'D' or 'E'); ; or medium approach delays (25sec to <50sec)

Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (=> 50sec)

95% Queue = UNSIGNALIZED QUEUE IS PER VEHICLE

TABLE 7
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY
AIRPORT WAY (FOUR LANE CROSS-SECTION) AND THE SUTTON DEVELOPMENT/PARK AMENITY ACCESS

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Townhouse Access / Park Access (N/S) & Airport Way (E/W)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	7	405	7		952	13			20	13		7	A	OK. SB is appraoching capacity
			Delay	10.5	5.3	0.0		0.0	0.0			9.7	30.0				
			95% Queue (veh)	0.0	0.0	0.0		0.0	0.0			0.1	0.4				
		2035 Base + Site (Phase 3 & 4)	Volumes	7	488	7		1094	13			20	13		7	A	OK. SB is appraoching capacity
			Delay	11.3	5.7	0.0		0.0	0.0			10.1	41.3				
			95% Queue (veh)	0.0	0.0	0.0		0.0	0.0			0.1	0.6				
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	7	1070	18		495	13			13	13		7	A	OK. SB is appraoching capacity
			Delay	8.7	4.4	0.0		0.0	0.0			13.8	28.0				
			95% Queue (veh)	0.0	0.0	0.0		0.0	0.0			0.1	0.4				
		2035 Base + Site (Phase 3 & 4)	Volumes	7	1225	18		581	13			13	13		7	A	OK. SB is appraoching capacity
			Delay	9.0	4.5	0.0		0.0	0.0			15.2	38.4				
			95% Queue (veh)	0.0	0.0	0.0		0.0	0.0			0.1	0.6				

Delay = Average Delay (seconds/vehicle)

Intersection approaching capacity (LOS 'D' or 'E'); ; or medium approach delays (25sec to <50sec)

Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (=> 50sec)

95% Queue = UNSIGNALIZED QUEUE IS PER VEHICLE

TABLE 8
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY
AIRPORT WAY AND BAYNES ROAD

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Baynes Road (N/S) & Airport Way (E/W)	Weekday Morning Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	8	9			49	115				91		24	A	OK
			Delay	7.6				0.0	0.0				9.6				
			95% Queue (veh)	0.0				0.0	0.0				0.5				
		2035 Base + Site (Phase 3 & 4)	Volumes	9	11			59	138				107		28	A	OK
			Delay	7.7				0.0	0.0				9.8				
			95% Queue (veh)	0.0				0.0	0.0				0.6				
	Weekday Afternoon Peak Hour	2024 Base + Site (Phase 3 & 4)	Volumes	21	48			15	110				132		6	A	OK
			Delay	7.5				0.0	0.0				10.3				
			95% Queue (veh)	0.1				0.0	0.0				0.7				
		2035 Base + Site (Phase 3 & 4)	Volumes	25	58			17	126				157		7	A	OK
			Delay	7.6				0.0	0.0				10.8				
			95% Queue (veh)	0.1				0.0	0.0				0.9				

Delay = Average Delay (seconds/vehicle)

Intersection approaching capacity (LOS 'D' or 'E'); ; or medium approach delays (25sec to <50sec)

Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (=> 50sec)

95% Queue = UNSIGNALIZED QUEUE IS PER VEHICLE

TABLE 9
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY
AIRPORT WAY (FOUR LANE CROSS-SECTION) AND BONSON ROAD

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Bonson Road (N/S) and Airport Way (E/W)	Weekday Morning Peak Hour	2024 Base	Volumes	34	312	21	106	551	139	34	109	191	186	50	93	B	Optimized singal timing with 75s Cycle length
			V/C	0.14	0.41	0.41	0.29	0.67	0.67	0.13	0.65		0.62	0.20			
			95% Queue (m)	7.8	30.2	30.2	18.4	64.6	64.6	10.6	47.1		36.7	14.8			
		2024 Base +Site	Volumes	50	364	24	106	772	139	34	109	191	186	50	159	C	Optimized singal timing with 80s Cycle length
			V/C	0.23	0.40	0.40	0.25	0.79	0.79	0.14	0.70		0.72	0.30			
			95% Queue (m)	10.2	37.1	37.1	18.6	106.6	106.6	11.1	51.2		45.0	17.8			
		2035 Base	Volumes	39	368	43	154	657	166	52	137	249	222	68	110	C	Optimized singal timing with 80s Cycle length
			V/C	0.20	0.51	0.51	0.48	0.80	0.80	0.18	0.80		0.76	0.24			
			95% Queue (m)	9.7	41.9	41.9	29.2	101.3	101.3	15.2	73.7		54.6	17.9			
		2035 Base + Site	Volumes	55	420	46	154	878	166	52	137	249	222	68	176	C	Optimized singal timing with 90s Cycle length. WBTH, WBRT are near capacity.
			V/C	0.33	0.53	0.53	0.41	0.91	0.91	0.20	0.84		0.83	0.34			
			95% Queue (m)	12.5	54.0	54.0	29.7	147.0	147.0	17.7	97.0		66.4	26.2			
	Weekday Afternoon Peak Hour	2024 Base	Volumes	124	635	43	150	370	203	19	63	131	99	66	44	B	Optimized singal timing with 75s Cycle length
			V/C	0.37	0.72	0.72	0.54	0.50	0.50	0.10	0.55		0.43	0.23			
			95% Queue (m)	16.5	56.7	56.7	19.9	37.6	37.6	7.3	23.3		19.4	16.1			
		2024 Base +Site	Volumes	189	851	56	150	428	203	19	63	131	99	66	61	B	Optimized singal timing with 80s Cycle length
			V/C	0.50	0.79	0.79	0.61	0.60	0.60	0.11	0.60		0.52	0.30			
			95% Queue (m)	25.0	88.7	88.7	29.1	53.0	53.0	7.7	26.9		21.4	18.2			
		2035 Base	Volumes	147	756	54	178	440	243	26	77	161	118	78	53	C	Optimized singal timing with 80s Cycle length
			V/C	0.46	0.79	0.79	0.63	0.62	0.62	0.13	0.67		0.63	0.29			
			95% Queue (m)	22.1	88.5	88.5	37.1	57.6	57.6	9.4	35.9		24.2	20.4			
		2035 Base + Site	Volumes	212	972	67	178	498	243	26	77	161	118	78	70	C	Optimized singal timing with 90s Cycle length. EBTH & EBRT are near capacity.
			V/C	0.61	0.88	0.88	0.73	0.65	0.65	0.14	0.73		0.72	0.33			
			95% Queue (m)	33.1	141.7	141.7	53.2	79.3	79.3	10.8	45.8		31.6	27.3			

Intersection approaching capacity (LOS 'D' or 'E'); or approach demand near capacity (v/c 0.85 to 0.99)

Intersection equals or exceeds capacity (LOS 'F'); or high approach demand over capacity (v/c => 1.0)

95% Queue length exceeds the capacity of existing storage bay.

TABLE 9 CONTINUED
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY
AIRPORT WAY (FOUR LANE CROSS-SECTION) AND HARRIS ROAD

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Harris Road (N/S) and Airport Way (E/W)	Weekday Morning Peak Hour	2024 Base	Volumes	38	118	16	36	411	225	28	89	45	185	92	159	B	Optimized singal timing with 70s Cycle length
			V/C	0.14	0.14	0.14	0.09	0.64	0.64	0.08	0.33		0.47	0.44			
			95% Queue (m)	7.6	11.8	11.8	7.3	46.3	46.3	6.8	24.1		31.3	34.9			
		2024 Base +Site	Volumes	43	135	16	37	413	294	30	108	80	286	93	160	B	Optimized singal timing with 70s Cycle length
			V/C	0.17	0.16	0.16	0.09	0.65	0.65	0.09	0.45		0.83	0.44			
			95% Queue (m)	8.2	13.1	13.1	7.4	45.3	45.3	7.2	32.1		79.4	35.4			
		2035 Base	Volumes	46	144	19	43	493	278	33	105	53	234	110	190	B	Optimized singal timing with 70s Cycle length
			V/C	0.19	0.17	0.17	0.10	0.74	0.74	0.11	0.39		0.68	0.54			
			95% Queue (m)	9.5	15.0	15.0	9.0	66.6	66.6	7.5	28.1		47.9	44.6			
		2035 Base + Site	Volumes	51	161	19	44	495	347	35	124	88	335	111	191	C	Optimized singal timing with 75s Cycle length
			V/C	0.25	0.19	0.19	0.11	0.80	0.80	0.12	0.60		0.82	0.47			
			95% Queue (m)	10.8	17.1	17.1	9.5	79.9	79.9	8.0	41.0		79.0	44.8			
	Weekday Afternoon Peak Hour	2024 Base	Volumes	195	477	31	13	169	245	14	88	67	257	84	57	B	Optimized singal timing with 75s Cycle length
			V/C	0.64	0.48	0.48	0.05	0.56	0.56	0.05	0.48		0.76	0.27			
			95% Queue (m)	35.1	44.5	44.5	3.5	18.8	18.8	4.4	29.0		60.5	25.0			
		2024 Base +Site	Volumes	196	482	31	15	174	281	26	153	137	339	90	62	C	Optimized singal with 90s Cycle length.
			V/C	0.79	0.60	0.60	0.08	0.68	0.68	0.09	0.79		0.82	0.22			
			95% Queue (m)	55.2	63.0	63.0	5.7	28.3	28.3	7.3	74.1		87.1	27.7			
		2024 Base +Site (NBRT)	Volumes	196	482	31	15	174	281	26	153	137	339	90	62	B	Optimized singal with 80s Cycle length.
			V/C	0.77	0.54	0.54	0.07	0.64	0.64	0.09	0.53	0.35	0.77	0.26			
			95% Queue (m)	41.0	50.8	50.8	4.5	22.1	22.1	6.7	38.6	6.6	79.9	27.2			
		2035 Base	Volumes	233	570	38	16	203	294	17	104	80	306	101	68	C	Optimized singal timing with 90s Cycle length
			V/C	0.71	0.60	0.60	0.09	0.72	0.72	0.07	0.64		0.77	0.29			
			95% Queue (m)	57.9	69.0	69.0	5.4	31.5	31.5	5.8	45.5		74.3	34.6			
		2035 Base + Site	Volumes	234	575	38	18	208	330	29	169	150	388	107	73	D	Optimized singal with 90s Cycle length. EBLT, NBTH/RT & SBLT are near capacity.
			V/C	0.99	0.72	0.72	0.12	0.75	0.75	0.10	0.85		0.97	0.26			
			95% Queue (m)	77.1	77.1	77.1	6.5	33.4	33.4	7.6	96.3		120.9	33.7			
		2035 Base + Site (NBRT)	Volumes	234	575	38	18	208	330	29	169	150	388	107	73	C	Optimized singal with 100s Cycle length.
			V/C	0.73	0.62	0.62	0.11	0.78	0.78	0.12	0.63	0.39	0.84	0.29			
			95% Queue (m)	68.5	80.6	80.6	6.7	39.4	39.4	8.3	54.6	54.6	90.6	37.6			

Intersection approaching capacity (LOS 'D' or 'E'); or approach demand near capacity (v/c 0.85 to 0.99)

Intersection equals or exceeds capacity (LOS 'F'); or high approach demand over capacity (v/c => 1.0)

95% Queue length exceeds the capacity of existing storage bay.

Based on the capacity analysis summarized by **TABLE 5** to **TABLE 9** the following observations can be made:

Harris Road (N/S) and Phase 3 North Access (E/W)

- Under 2024 base+site and 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours. The east approach experiences some delay under 2024 base+site conditions and 2035 base+site conditions during the afternoon peak hour.
- There are no operational issues expected for Harris Road i.e. delay is acceptable and there is no vehicle queuing.

Harris Road (N/S) and Phase 3 Middle Access (E/W)

- Under 2024 base+site and 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours. The east approach experiences some delay under 2035 base+site conditions during the afternoon peak hour.
- There are no operational issues expected for Harris Road i.e. delay is acceptable and there is no vehicle queuing.

Harris Road (N/S) and Phase 3 South Access (E/W)

- Under 2024 base+site and 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours. The east approach experiences some delay under 2024 base+site conditions and 2035 base+site conditions during the afternoon peak hour.
- There are no operational issues expected for Harris Road i.e. delay is acceptable and there is no vehicle queuing.

Harris Road (N/S) and Phase 4 Truck Egress (E/W)

- Under 2024 base+site and 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours.
- There are no operational issues expected for Harris Road i.e. delay is acceptable and there is no vehicle queuing.

Harris Road (N/S) and Phase 4 Passenger Car Egress (E/W)

- Under 2024 base+site and 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours.
- There are no operational issues expected for Fraser Way i.e. delay is acceptable and there is no vehicle queuing.

Airport Way (E/W) and Phase 3 and 4 West Access (N/S)

- Under 2024 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and the afternoon peak hours.
- Under 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and the afternoon peak hours. The westbound left turn movement is approaching capacity in the weekday afternoon peak hour.
- The north approach is experiencing some delay but minor vehicle queuing.
- There are no operational issues expected for Airport Way i.e. delay is acceptable and there is minor vehicle queuing.

Airport Way (E/W) and Phase 3 East Access (N/S)

- Under 2024 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning peak and the afternoon peak hours.
- Under 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and the afternoon peak hours.
- The north approaches are experiencing some delay but minor vehicle queuing.
- There are no operational issues expected for Airport Way i.e. delay is acceptable and there is minor vehicle queuing which is not expected to have an impact on the pedestrian crossing to the east.

Airport Way (E/W) and Phase 4 East Access (N/S)

- Under 2024 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning peak and the afternoon peak hours.
- Under 2035 base+site conditions, this point of access is expected to operate at an overall LOS A (Excellent) during the weekday morning and the afternoon peak hours.
- There are no operational issues expected for Airport Way i.e. delay is acceptable and there is minor vehicle queuing which is not expected to have an impact on the pedestrian crossing to the east.

Airport Way (E/W) and Sutton Development/Park Amenity Access (N/S)

- Under 2024 base+site conditions, this unsignalized intersection is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours.
- Under 2035 base+site conditions, this unsignalized intersection is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours.
- The south approaches are experiencing some delay but minor vehicle queuing.
- There are no operational issues expected for Airport Way i.e. delay is acceptable and there is no vehicle queuing.

Airport Way (E/W) and Baynes Road (N/S)

- Under 2024 base+site conditions, this unsignalized intersection is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours. All movements are under capacity.
- Under 2035 base+site conditions, this unsignalized intersection is expected to operate at an overall LOS A (Excellent) during the weekday morning and afternoon peak hours. All movements are under capacity.
- There are no operational issues expected for Airport Way i.e. delay is acceptable and there is no vehicle queuing.

Airport Way (E/W) and Bonson Road (N/S) Signalized

- Signalization of the intersection gives LOS B (Very Good) for the 2024 base weekday morning peak hour and the 2024 base and 2024 base+site weekday afternoon peak hours.
- The 2024 base+site, 2035 base and 2035 base+site weekday morning peak hours and the 2035 base and 2035 base+site weekday afternoon peak hours are LOS C (Good). The westbound through & right turn are approaching capacity for the 2035 base+site weekday morning peak hour and the eastbound through & right turn are approaching capacity for the 2035 base+site weekday afternoon peak hour scenarios.

Airport Way (E/W) and Harris Road (N/S) Signalized

- Signalization of the intersection gives LOS B (Very Good) for the 2024 base, 2024 base+site, and 2035 base weekday morning peak hours and the 2024 base in the weekday afternoon peak hour. All movements are under capacity.
- The level of service for the 2035 base+site during the weekday morning peak hour is LOS C (Good). The level of service for the 2024 base+site and 2035 base during the weekday afternoon peak hour are LOS C (Good).
- The level of service of the intersection operates at LOS D (Fair) for the 2035 base+site during the weekday afternoon peak hours. The eastbound left-turn, northbound through/right turn and southbound left-turn movements are approaching capacity in the 2035 base+site scenario. The southbound left turn 95th percentile queue exceeds 100 meters.
- Adding a northbound right-turn lane will improve the overall level of service to LOS B (Very Good) and LOS C (Good) during the weekday afternoon 2024 base+site and 2035 base+site scenarios, respectively. All movements are under capacity.

Airport Way (E/W) and Golden Ears Way Roundabout

- A table for this capacity analysis was not presented given the inputs were largely assumed. Based on the inputs stated in *Section 8.1*, the intersection fails in 2024.

General

The capacity analysis for all intersections along Airport Way and Harris Road gives excellent results in terms of overall delay i.e. LOS A, and queuing i.e. minor queuing.

8.3 Traffic Signal Warrant Analysis

CTS performed a Traffic Signal Warrant Analysis for the intersection of Airport Way and the GEBP – Phase 4 east point of access, for opening day, i.e. 2024. A 24 hour traffic volume count on Airport Way from 2020 was referenced to calculate the average peak six hour two-way traffic volume. The average was then compared with the AM and PM peak hour traffic volume and a peak hour adjustment factor calculated which was then applied to the opening day i.e. 2024, traffic volumes for the intersection of Airport Way and the GEBP – Phase 4 east point of access. Those adjusted traffic volumes were then inserted into the Transportation Association of Canada (TAC) Traffic Signal and Pedestrian Signal Warrant Analysis spreadsheet. **FIGURE 7** and **FIGURE 8** summarize the traffic signal warrant results.

Based on the results, a traffic signal is not warranted for the intersection of Airport Way and the GEBP – Phase 4 east point of access.

FIGURE 7
AM PEAK HOUR TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic Signal and Pedestrian Signal Head Warrant Analysis

Main Street (name)	Airport Way	Direction (EW or NS)	EW	Road Authority:	
Side Street (name)	East Phase 4 Access	Direction (EW or NS)	NS	City:	Pitt Meadows
Quadrant / Int #		Comments	Adjust Factor for AM Peak Hr	Analysis Date:	
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET			Count Date:	2024 Base + Site AM Peak Hour
				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
Airport Way	WB	0	1	1	0	0	0	n	500	2	perm	y	n
Airport Way	EB	0	0	1	0	1	0	n	300	2	perm	y	n
East Phase 4 Access	NB	0	0	0	1	0	0	n	2,000	1	perm	y	n
East Phase 4 Access	SB	0	0	0	0	0	0	n	2,000	0	perm	y	n

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn	1,650	1,650
Through	1,800	1,800
Right Turn	1,500	1,500

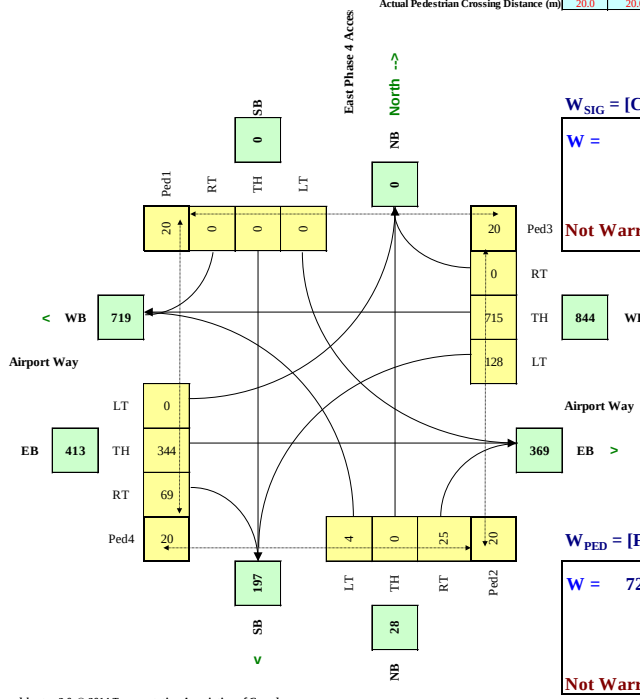
Are the East Phase 4 Access NB right turns significantly impeded by through movements? (y/n)	n
	n
	n
Are the Airport Way EB right turns significantly impeded by through movements? (y/n)	y

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	18,573
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Airport Way	EW	60	15.0%	y	0.0
East Phase 4 Access	NS		2.0%	n	0.0

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
700 - 800	4	0	25	0	0	0	128	715	0	0	344	69	20	20	20	20
800 - 900	4	0	25	0	0	0	128	715	0	0	344	69	20	20	20	20
1100 - 1200	4	0	25	0	0	0	128	715	0	0	344	69	20	20	20	20
1200 - 1300	4	0	25	0	0	0	128	715	0	0	344	69	20	20	20	20
1600 - 1700	4	0	25	0	0	0	128	715	0	0	344	69	20	20	20	20
1700 - 1800	4	0	25	0	0	0	128	715	0	0	344	69	20	20	20	20
Total (6-hour peak)	**21**	**0**	**148**	**0**	**0**	**0**	**771**	**4,293**	**0**	**0**	**2,064**	**412**	**120**	**120**	**120**	**120**
Average (6-hour peak)	**4**	**0**	**25**	**0**	**0**	**0**	**128**	**715**	**0**	**0**	**344**	**69**	**20**	**20**	**20**	**20**
												Actual Pedestrian Crossing Distance (m)	20.0	20.0	20.0	20.0

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v\text{-}v}) / K_1 + (F (X_{v\text{-}p}) L) / K_2] \times$

W =	87	33	54
		Veh	*Ped*

Not Warranted - Vs<75

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 72

Not Warranted

Traffic Signal Warrant Spreadsheet - v2.0 © 2014 Transportation Association of Canada

FIGURE 8
PM PEAK HOUR TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic Signal and Pedestrian Signal Head Warrant Analysis

Main Street (name)	Airport Way	Direction (EW or NS)	EW	Road Authority:	
Side Street (name)	East Phase 4 Access	Direction (EW or NS)	NS	City:	Pitt Meadows
Quadrant / Int #		Comments	Adjusted Factor for PM Peak Hour	Analysis Date:	
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET			Count Date:	2024 Base + Site PM Peak Hour
				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
Airport Way	WB	0	1	1	0	0	0	n	500	2	perm	y	n
Airport Way	EB	0	0	1	0	1	0	n	300	2	perm	y	n
East Phase 4 Access	NB	0	0	0	1	0	0	n	2,000	1	perm	y	n
East Phase 4 Access	SB	0	0	0	0	0	0	n	2,000	0	perm	y	n

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn	1,650	1,650
Through	1,800	1,800
Right Turn	1,500	1,500

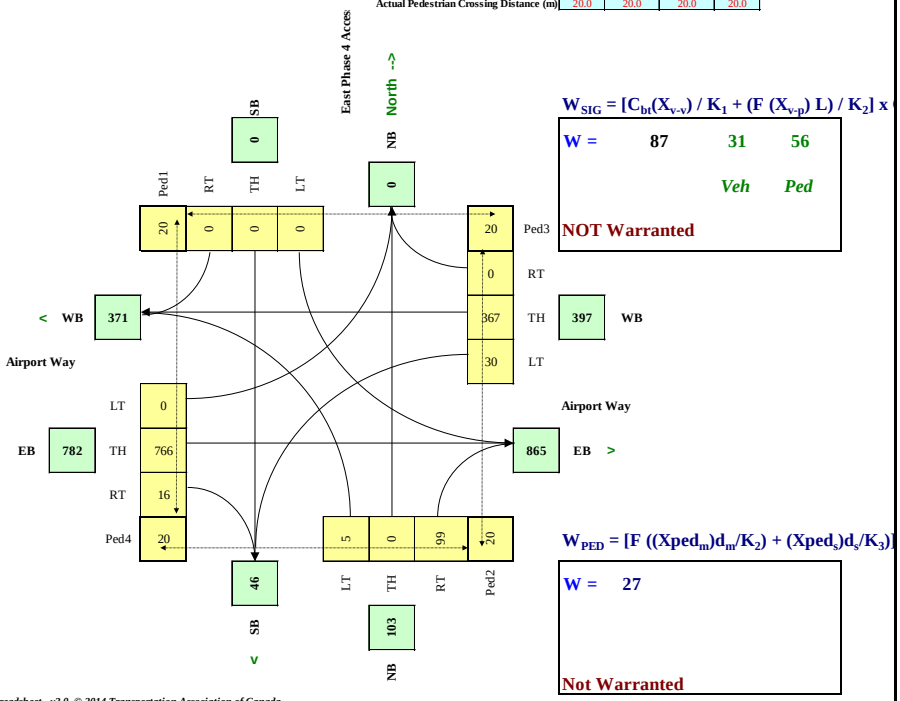
Are the East Phase 4 Access NB right turns significantly impeded by through movements? (y/n)	n
	n
	n
Are the Airport Way EB right turns significantly impeded by through movements? (y/n)	y

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	18,573
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Airport Way	EW	60	15.0%	y	0.0
East Phase 4 Access	NS		2.0%	n	0.0

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
700 - 800	5	0	99	0	0	0	30	367	0	0	766	16	20	20	20	20
800 - 900	5	0	99	0	0	0	30	367	0	0	766	16	20	20	20	20
1100 - 1200	5	0	99	0	0	0	30	367	0	0	766	16	20	20	20	20
1200 - 1300	5	0	99	0	0	0	30	367	0	0	766	16	20	20	20	20
1600 - 1700	5	0	99	0	0	0	30	367	0	0	766	16	20	20	20	20
1700 - 1800	5	0	99	0	0	0	30	367	0	0	766	16	20	20	20	20
Total (6-hour peak)	**28**	**0**	**593**	**0**	**0**	**0**	**180**	**2,199**	**0**	**0**	**4,598**	**95**	**120**	**120**	**120**	**120**
Average (6-hour peak)	**5**	**0**	**99**	**0**	**0**	**0**	**30**	**367**	**0**	**0**	**766**	**16**	**20**	**20**	**20**	**20**
												Actual Pedestrian Crossing Distance (m)	20.0	20.0	20.0	20.0

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v-v}) / K_1 + (F (X_{v-p}) L) / K_2] x$

W =	87	31	56
		Veh	*Ped*

NOT Warranted

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 27

Not Warranted

Traffic Signal Warrant Spreadsheet - v2.0 © 2014 Transportation Association of Canada

8.4 Gap Analysis

CTS assessed left turn gap availability for scenarios where the opposing traffic volume was 500 vehicles per hour and 1,000 vehicles per hour. For the 500 vehicles per hour opposing volume scenario it was determined that there could be up to 200 left turn gaps available within which to turn. For the 1,000 vehicles per hour opposing volume scenario it was determined that there could be up to 120 left turn gaps available within which to turn. For the scenarios analyzed, were there no left turn volumes close to the left turn gap availability thresholds.

9.0 ANALYSIS BY OTHERS

Throughout this report CTS has referenced a study undertaken by McElhanney specifically, their *South Bonson Traffic Study Final Report 2016* which assessed impacts of future developments on road network performance, intersection control and pedestrian safety/accessibility. In particular the future planned development of Golden Ears Business Park (GEBP) and other residential/industrial land uses along Airport Way were considered. McElhanney's report assumed GEBP - Phase 3 and Phase 4 would be improved with approximately 1,867,700 ft^2 of GFA. This assumption is based on a plan previously provided by ONNI which anticipated GEBP - Phase 3 and Phase 4 would be improved with eight industrial buildings.

Also, within the report McElhanney references background traffic data from 2016, vehicle trip generation data from the ITE *Trip Generation Manual 9th Edition* and assumes gross floor areas and horizon years at build-out for GEBP – Phase 3 and Phase 4 based on the best available information at the time.

ONNI's current development application proposes 1,356,907 ft^2 of GFA based on four industrial buildings with build-out in 2024. For the 2035 build-out scenario this report assumes no additional development.

Note - Constructing additional GFA beyond the current application would require a future development permit application and approval by Council.

The report by CTS updates much of the analysis undertaken by McElhanney by referencing more recent background traffic data from 2017 and the *ITE Trip Generation Manual 10th Edition* and applying the most recent site plan gross floor areas and time line for build-out of GEBP – Phase 3 and Phase 4. For example, **TABLE 10** compares the vehicle trip generation for GEBP – Phase 3 and Phase 4 for 2021, 2024 and 2031.

TABLE 10
GEBP – PHASE 3 AND PHASE 4 TRIP GENERATION

FIRM	GEBP	GFA	Year of Build-out		
			Total Vehicle Trips		
			2021	2024	2031
McElhanney	Phase 3 (50%)	443,000 ft2	306		
	Phase 4 (50%)	491,000 ft2	332		
	Phase 3 (100%)	886,000 ft2			529
	Phase 4 (100%)	981,000 ft2			573
CTS	Phase 3 (100%)	493,371 ft2		199	199
	Phase 4 (100%)	863, 536 ft2		346	346

The GEBP – Phase 3 and Phase 4 50% build-out vehicle trip generation in 2021 by McElhanney is 638 vehicles. The GEBP – Phase 3 and Phase 4 100% build-out vehicle trip generation in 2024 by CTS is 545 vehicles. The CTS GEBP – Phase 3 and Phase 4 100% build-out vehicle trip generation number is 14.6% less than the McElhanney GEBP – Phase 3 and Phase 4 50% build-out vehicle trip generation number. The difference between the two vehicle trip generation numbers is primarily the result of application of the new trip generation rate for an industrial park i.e. 0.4 trips per 1,000 ft^2 of GFA.

Note - Given the CTS 100% build-out vehicle trip generation by GEBP – Phase 3 and Phase 4 in 2024 is less than the McElhanney 50% vehicle trip generation by GEBP – Phase 3 and Phase 4 in 2021, presumes that all agreed upon road improvements could be delayed until as late as 2024.

Further, CTS understands ONNI and the City of Pitt Meadows previously agreed to numerous traffic improvements recommended by McElhanney in their 2016 report including:

- Four laning of Airport Way between Baynes Road and Golden Ears Way Roundabout;
- Signalization of Airport Way and Bonson Road;
- Signalization of Airport Way and Harris Road; and
- Numerous improvements for pedestrians and cyclists i.e. sidewalks and multi-user pathways, bike lanes, pedestrian crossings and bus shelters.

Despite the reduction in density between ONNI's current application and what was considered in 2016, CTS understands the traffic improvements previously agreed to between ONNI and the City will be constructed. Per the agreement between ONNI and the City of Pitt Meadows, the traffic improvements will be constructed when the City confirms that 50% of build-out of both phases has been completed as previously agreed to. As a result, the traffic improvements need to be completed prior to the proposed building on Phase 4 being completed. However, the timing of the traffic improvements may be altered based on the findings of this report as agreed to by the City and ONNI.

10.0 PARKING PROVISION

The vehicle parking and loading supply exceeds the vehicle parking and loading requirement for GEBP – Phase 3 and Phase 4 per the City of Pitt Meadows *Zoning Bylaw 2025, Section 7: Parking and Loading Spaces*.

Additional parking spaces have been provided for GEBP – Phase 3 and Phase 4 to account for:

- Vehicle parking accumulation throughout the day;
- Shift change vehicle parking overlap;
- Vehicle staging; and
- Vehicle and tractor trailer storage.

11.0 CONCLUSIONS AND RECOMMENDATIONS

11.1 Conclusions

- CTS assessed the site/access plan for GEBP – Phase 3 and Phase 4 and proposed park amenity with reference to the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads 2017*. Design criteria included:

    - Adjacent road network classification and function;
    - Site layout and function;
    - Driveway design;
    - Driveway frequency;
    - Adjacent driveway spacing;
    - Opposite driveway spacing;
    - Corner clearance; and
    - Sight lines.

    Based on the preceding assessments, all design criteria were exceeded.

- CTS undertook capacity analysis for the purpose of confirming the operation of Airport Way and Harris Road with GEBP – Phase 3 and Phase 4 site traffic for 2024 and 2035. An Airport Way four lane cross-section was assumed. Based on the analysis, there are no operational issues expected for Airport Way and Harris Road i.e. delay is acceptable and there is no vehicle queuing for all laning scenarios.

- CTS also undertook capacity analysis for the intersections of:

    - Airport Way and Bonson Road;
    - Airport Way and Harris Road;
    - Airport Way and Baynes Road;
    - Airport Way and Sutton Development/Park Amenity Access; and
    - Airport Way and Golden Ears Way Roundabout.

    With GEBP – Phase 3 and Phase 4 site traffic for 2024 and 2035. Based on the analysis, there are no operational issues expected for Airport Way or Harris Road and all of the intersections operate at acceptable levels of service other than the intersection of Airport Way and Golden Ears Way Roundabout.

Note - The intersection of Airport Way and Harris Road southbound left turn 95th percentile queue is 90.6 meters for the 2035 base+site scenario. That said, the most southerly driveway point of access on Harris Road north of Airport Way is offset approximately 135 meters north of Airport Way.

- CTS undertook a traffic signal warrant analysis for the intersection of Airport Way and GEBP – Phase 4 east point of access, for both the AM and PM peak hours. Based on the results of the analysis, a traffic signal is not warranted.

- CTS also assessed the two driveway points of access for the City of Pitt Meadows works yard. The south driveway point of access does not meet the minimum corner clearance criterion.

- CTS provided a summary and comparison of the studies undertaken by McElhanney for the City of Pitt Meadows and by CTS for ONNI. The two keys difference between the studies were:

    - The GFA assumed by CTS in their 2020 study was substantially less than that assumed by McElhanney in their 2016 study; and
    - The vehicle trip generation rate per 1,000 ft2 of GFA applied by CTS in their study was approximately half of that applied by McElhanney in their study.

- Lastly, CTS provided a rationale for the vehicle parking and loading provision.

11.2 Recommendations

Based on this Golden Ears Business Park access assessment it is recommended that:

1. The City of Pitt Meadows accept the assessment and conclusions as documented by this report.
2. The City of Pitt Meadows accept the Golden Ears Business Park – Phase 3 and Phase 4 site/access plan. That is two Phase 3 all movement points of access on Airport Way, two Phase 4 points of access on Airport Way, three Phase 3 all movement points of access on Harris Road, and two Phase 4 egress points of access on Harris Road.
3. A proposed park amenity all movement access on Airport Way opposite the Sutton Development access is recommended and that the intersection be pedestrian signal controlled.
4. Airport Way be widened to four lanes i.e. two eastbound lanes and two westbound lanes, between Golden Ears Way Roundabout and Baynes Road.
5. Harris Road be widened to three lanes i.e. one northbound lane, one southbound left turn lane and one southbound through/right-turn lane, between Airport Way and Fieldstone Walk.

6. A 60 meter northbound right turn lane be added to the south approach of the intersection of Airport Way and Harris Road.
7. The intersections of Airport Way and Bonson Road and Airport Way and Harris Road be re-constructed with signalization, before build-out of GEBP Phase 3 and Phase 4 in 2024.
8. The capacity analysis 95th percentile queue be considered for the design of all left turn storage lanes for the signalized intersections of Airport Way and Bonson Road and Airport Way and Harris Road.
9. The City of Pitt Meadows consider restricting the turning movements at the south driveway point of access to their works yard, to right-in/right-out only.

Please call the undersigned should there be questions and/or comments pertaining to this REVISED FINAL Traffic Study.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.

BADozzi

PROFESSIONAL PROVINCE OF B. A. DOZZI BRITISH COLUMBIA ENGINEER

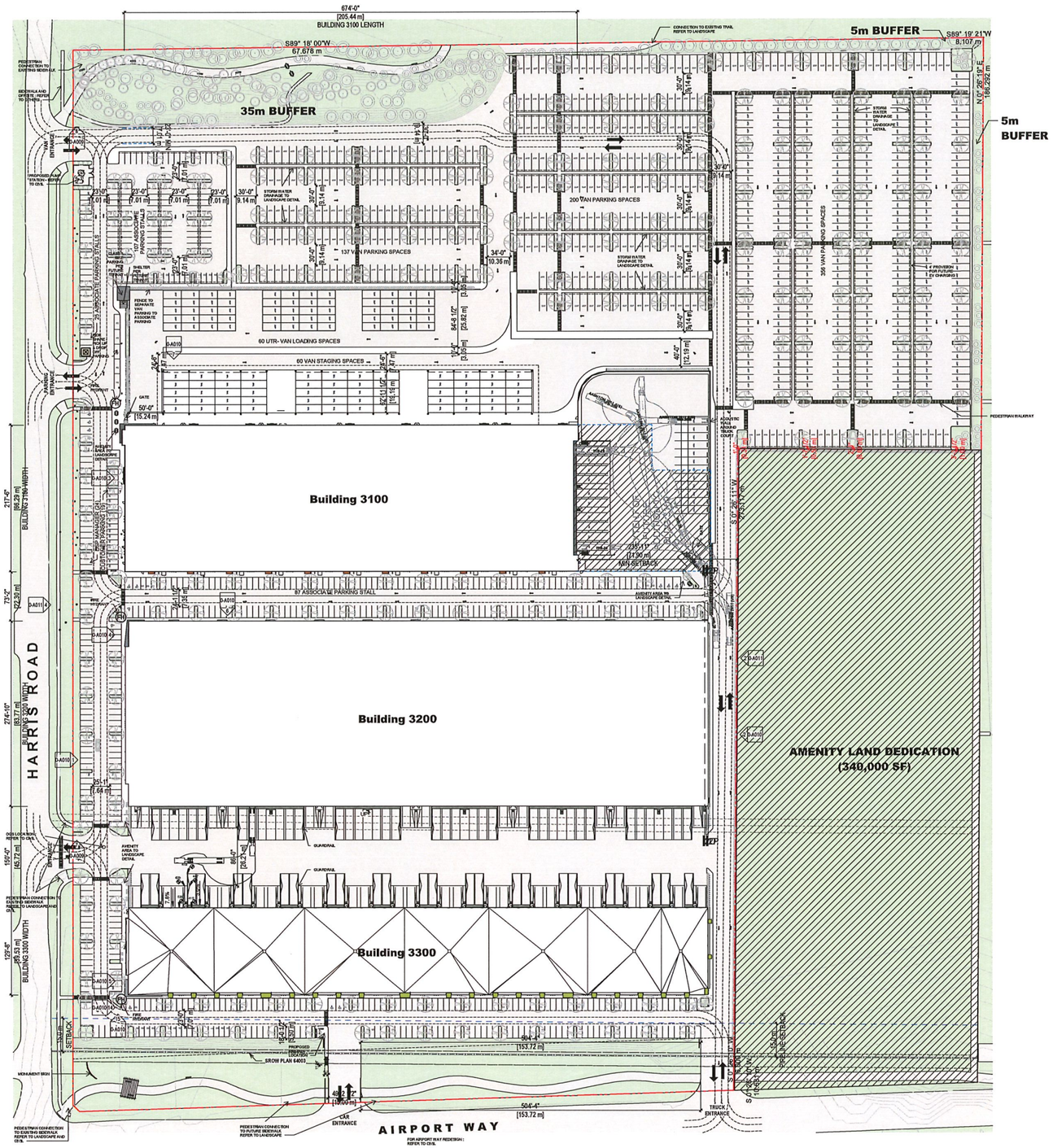
MAR. 1/21

Brent A. Dozzi, P. Eng.
Senior Project Engineer

Phone: (604) 936-6190 x237
Email: bdozzi@cts-bc.com

APPENDICES

APPENDIX A
Phase 3 and Phase 4 Site/Access Plan



1 **Site Plan - PH3**
1 : 720

TKA+D

onni group

AREA SUMMARY

Area Summary - By Building

Building	Area (SF)	Area (SM)
Building 3100	145,518 SF	13,519 m²
Building 3200	236,826 SF	22,002 m²
Building 3300	111,575 SF	10,366 m²
	493,919 SF	45,887 m²

Area Summary - By Occupancy

Occupancy	Area (SF)	Area (SM)
Assembly, Classroom	3,479 SF	323 m²
Assembly, Non-fixed Seats	747 SF	69 m²
Assembly, Non-fixed Seats and Tables	6,128 SF	569 m²
Business & Personal Services	1,719 SF	160 m²
Industrial	476,012 SF	44,223 m²
Industrial, Storage Spaces	127,429 SF	11,838 m²
Industrial, Warehouse	236,470 SF	21,970 m²
Service	236,830 SF	22,000 m²
	638,051 SF	59,277 m²

PARKING REQUIRED

Parking Required - PH 3 - Building 3100

Occupancy	Area (SF)	Parking Req'd Factor (1/Area)	Spaces
Assembly, Classroom	419 SF	395.5	1
Assembly, Non-fixed Seats	127,970 SF	1,076.0	119
Assembly, Non-fixed Seats and Tables	17,128 SF		35
Business & Personal Services	145,518 SF		154

Parking Required - PH 3 - Building 3200

Occupancy	Area (SF)	Parking Req'd Factor (1/Area)	Spaces
Industrial	236,470 SF	1,076.0	220
Service	360 SF	21,994 SF	2,043 m²
Service	236,830 SF	732 SF	68 m²
	638,051 SF		59,277 m²

Parking Required - PH 3 - Building 3300

Occupancy	Area (SF)	Parking Req'd Factor (1/Area)	Spaces
Industrial	111,580 SF		95
	111,580 SF		95

PARKING PROVIDED

Parking Provided - PH 3 - Building 3100

Parking Type	Count
Accessible Stall - 5.5 x 3.6m	11
Regular 2.6x5.5m	199
Small Car - 2.4 x 4.8m	58
Commercial Van Parking	694
Parallel 2.6mx6.7m	5
	967

Parking Provided - PH 3 - Building 3200

Parking Type	Count
Accessible Stall - 5.5 x 3.6m	5
Regular 2.6x5.5m	215
Small Car - 2.4 x 4.8m	41
	261

Parking Provided - PH 3 - Building 3300

Parking Type	Count
Accessible Stall - 5.5 x 3.6m	4
Regular 2.6x5.5m	81
Small Car - 2.4 x 4.8m	20
	105

REV	DATE	DESCRIPTION
3	2020-11-13	Re-Issued for Developement Permit
2	2020-10-02	Re-Issued for Development Permit
1	2020-05-06	Issued for Development Permit

SCALE: 1 : 720	DATE: 2020, Nov 13	DRAWN: Author	
PROJECT NUMBER	18038		
FILE PATH		PLOT DATE:	2020-12-09 5:50:23 PM

TKA+D ARCHITECTURE + DESIGN INC
108 - 1944 MAIDSONA STREET, VANCOUVER, V6L 3C7 P 604 568 6484

GEBP - PH3 - Build to Suit

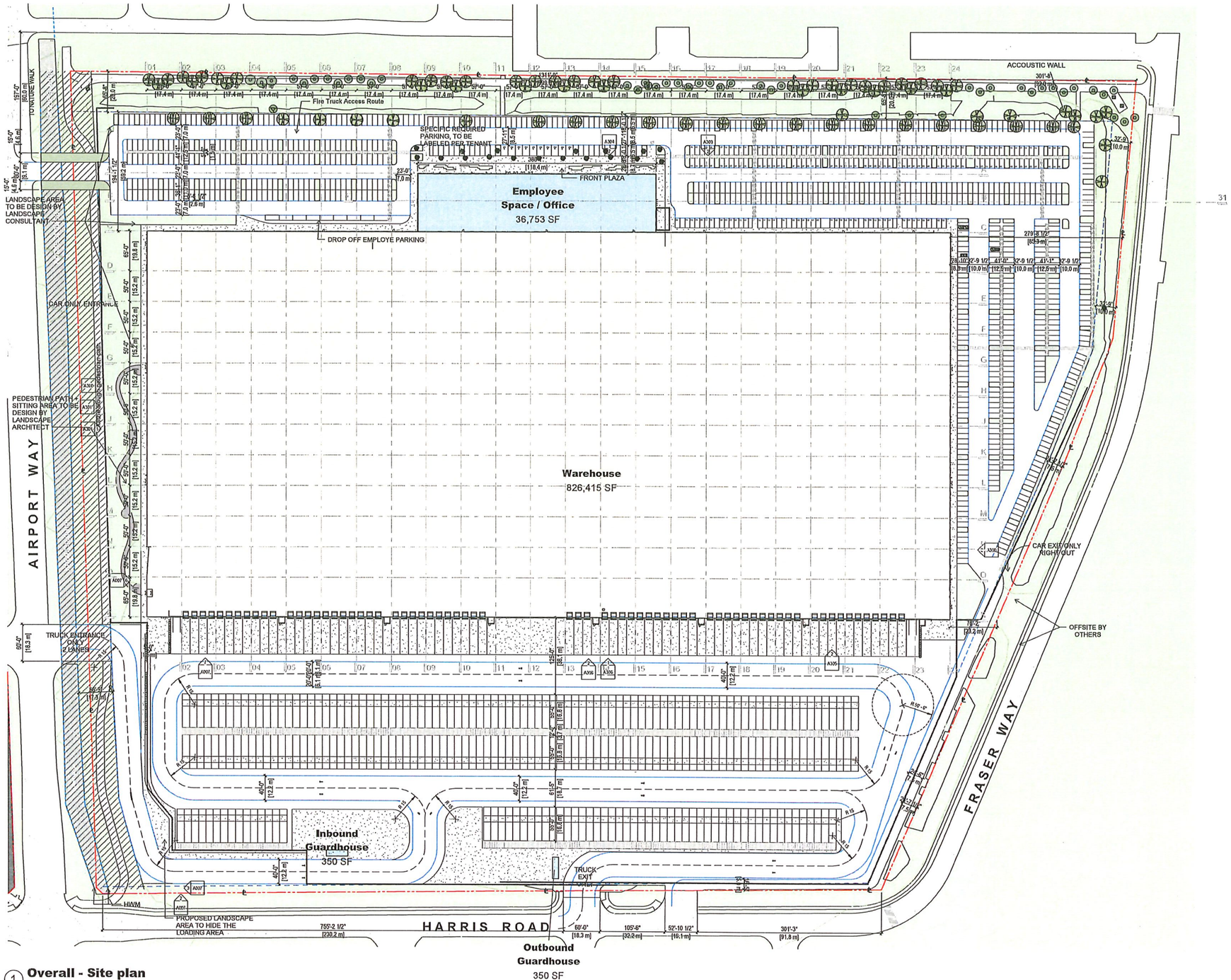
19265 Airport Way, Pitt Meadows

Site Plan

PLOT DATE 2020-12-09 5:50:23 PM

TN

0-A003



1 **Overall - Site plan**
1" = 60'-0"

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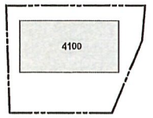
KEYPLAN 2

PHASE 4



Building 4000

Area (SF)	Area (SM)
863,868 SF	80,256 m²

Total Parking Provided

STALL TYPE	COUNT
DISABILITY 3.6m x 5.5m	10
PARALLEL 2.6m x 7m	9
REGULAR 2.6m x 5.5m	728
SMALL CAR 2.4m X 4.8m	168
	915

Loading provided

STALL TYPE	COUNT
DOCK LOADING	69
GRADE LOADING	2
TRAILER PARKING	247
	318

PROGRESS UPDATE

INTERNAL REVIEW ONLY

REV	DATE	DESCRIPTION
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE As indicated | DATE: | DRAWN Author
PROJECT NUMBER 16038
FILE PATH | PLOT DATE 2021-01-26 10:34:21 AM

TKA+D
ARCHITECTURE + DESIGN INC
305 - 1930 PARADISE STREET , VANCOUVER , V5L 1C7 , P 604 913 3470

GEBP - PH4 - Build to Suit
11208 Harris Road,
Pitt Meadows

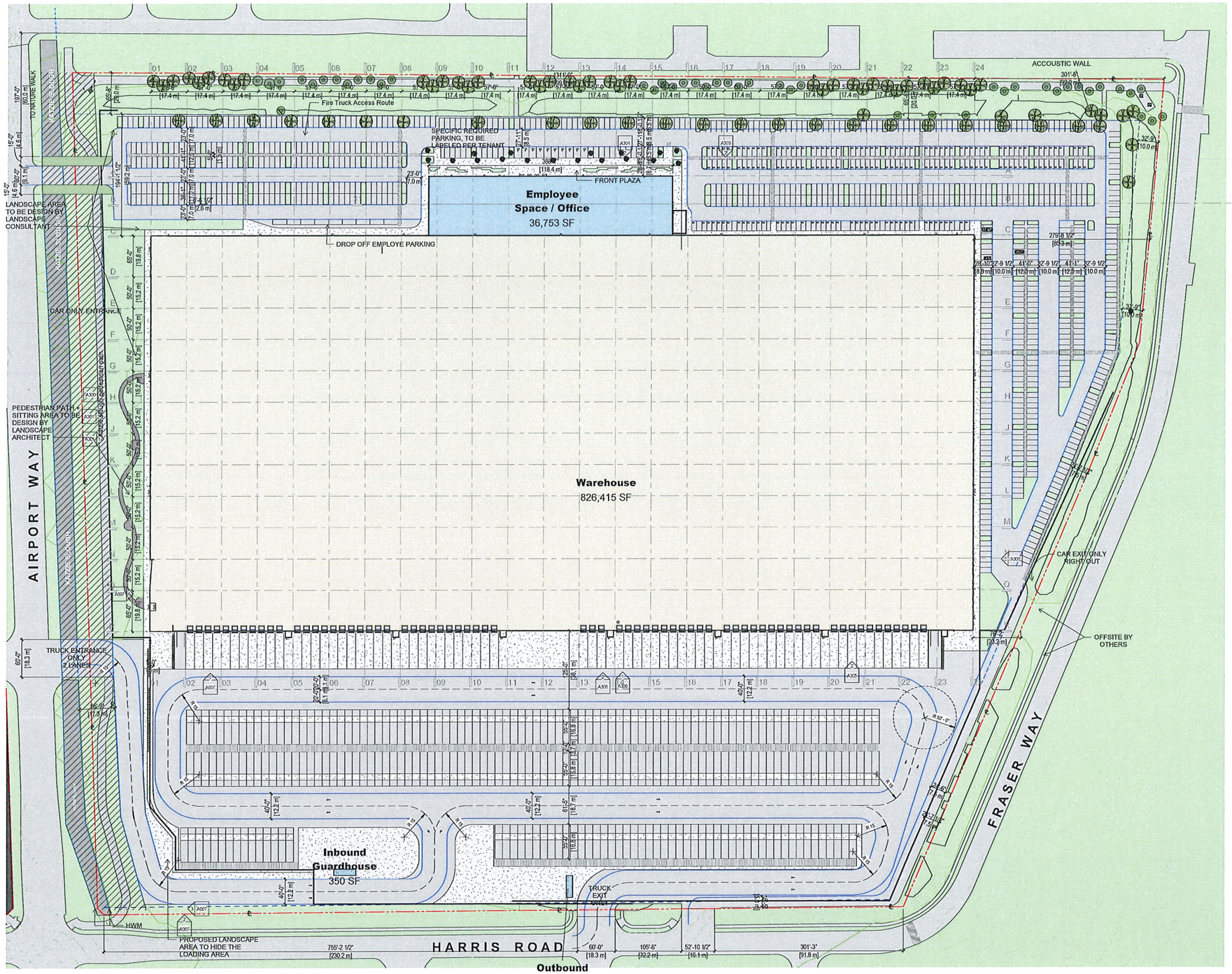
Full Site Plan

PLOT DATE 2021-01-26 10:34:21 AM

A101

TKA+D

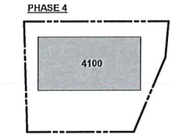
onni group



1 **Overall - Site plan**
1" = 60'-0"

KEYPLAN 2

PHASE 4



Building 4000

Area (SF)	Area (SM)
863,868 SF	80,256 m²

Total Parking Provided

STALL TYPE	COUNT
DISABILITY 3.6m x 5.5m	10
PARALLEL 2.6m x 7m	9
REGULAR 2.6m x 5.5m	728
SMALL CAR 2.4m X 4.8m	168
	915

Loading provided

STALL TYPE	COUNT
DOCK LOADING	69
GRADE LOADING	2
TRAILER PARKING	247
	318

PROGRESS UPDATE

INTERNAL REVIEW ONLY

REV	DATE	DESCRIPTION
2	2020-05-08	Re-Issued for Development Permit
1	2020-03-10	Issued for Development Permit

SCALE: As indicated | DATE: | DRAWN: Author
PROJECT NUMBER: 18038
FILE PATH: | PLOT DATE: 2021-01-26 10:34:21 AM

TKA+D
ARCHITECTURE + DESIGN INC
328 - 1339 PANDORA STREET - VANCOUVER - V5L 0C7 P 604 569 3419

GEBP - PH4 - Build to Suit

11208 Harris Road, Pitt Meadows

Full Site Plan

PLOT DATE: 2021-01-26 10:34:21 AM

A101

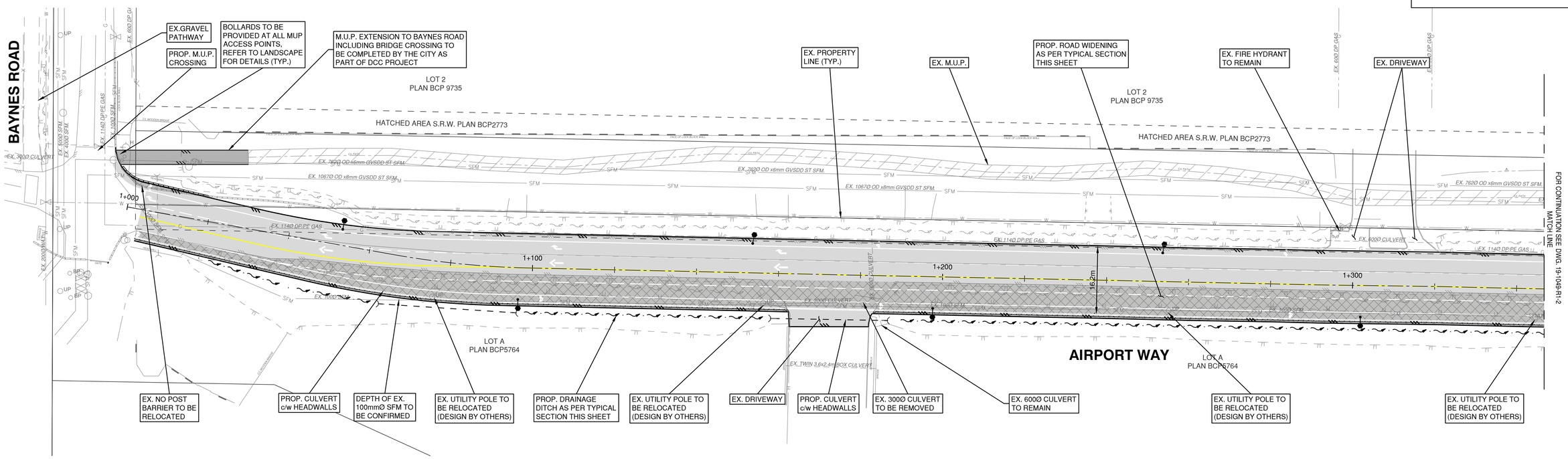
Appendix B
intentionally removed

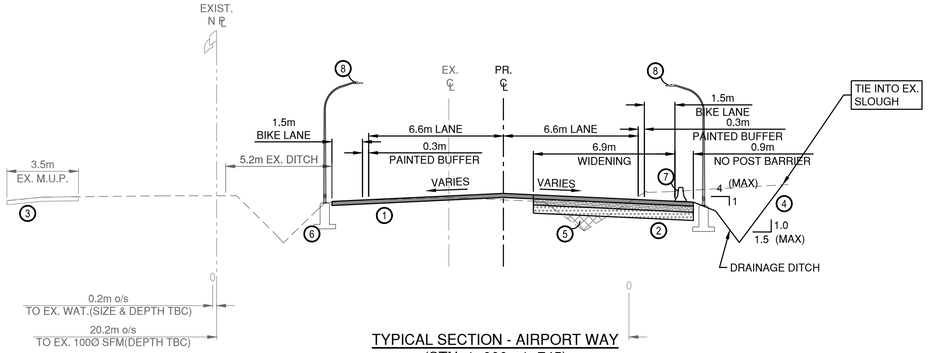
APPENDIX B
City of Pitt Meadows Truck Route Network

APPENDIX C
Airport Way and Harris Road Preliminary Design

BENCHMARK:

82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429





TYPICAL SECTION - AIRPORT WAY (STN. 1+000 - 1+745)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. EX. MULTI-USE PATHWAY
4. DRAINAGE DITCH (DIMENSIONS & SIDE SLOPES TO BE CONFIRMED)
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. EX. DITCH TO BE RETAINED
7. NO POST ROADSIDE BARRIER WHERE CLEAR ZONE TO EXISTING SLOUGH CAN NOT BE ACHIEVED
8. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.

LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE

DRAFT

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No.	DATE	REVISION	BY

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TEL 604 574 3336
BINNIE.com

CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
AIRPORT WAY ROADWORKS

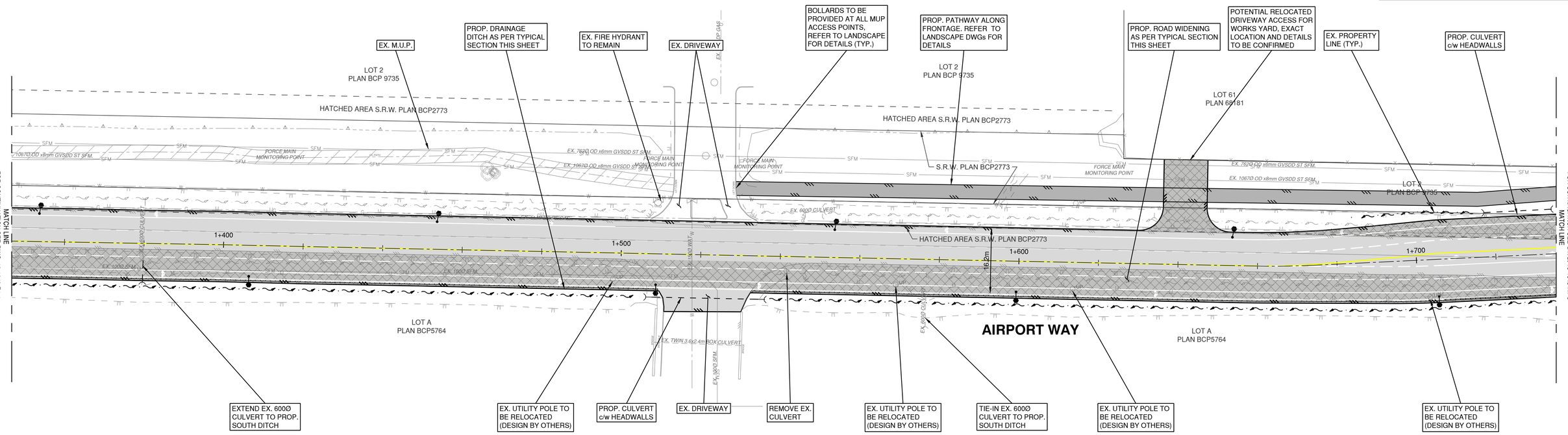
SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

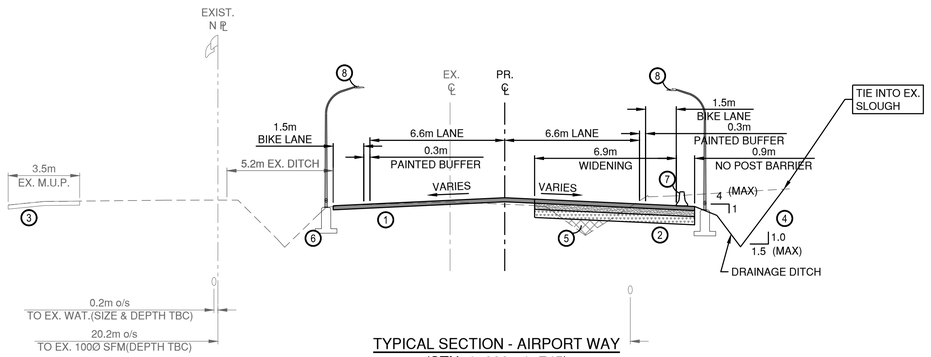
SCALES
0 1:500 20m

DATE	2020-05-07
DRAWING No.	19–1049–R1–1
SHEET 05 OF 16	REV.

DESTROY ALL PRINTS BEARING PREVIOUS No.

BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429





TYPICAL SECTION - AIRPORT WAY
(STN. 1+000 - 1+745)
SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. EX. MULTI-USE PATHWAY
4. DRAINAGE DITCH (DIMENSIONS & SIDE SLOPES TO BE CONFIRMED)
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. EX. DITCH TO BE RETAINED
7. NO POST ROADSIDE BARRIER WHERE CLEAR ZONE TO EXISTING SLOUGH CAN NOT BE ACHIEVED
8. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.

LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE

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Langley, BC V1M 4A6
TEL 604 574 3336
BINNIE.com

CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
AIRPORT WAY ROADWORKS

SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

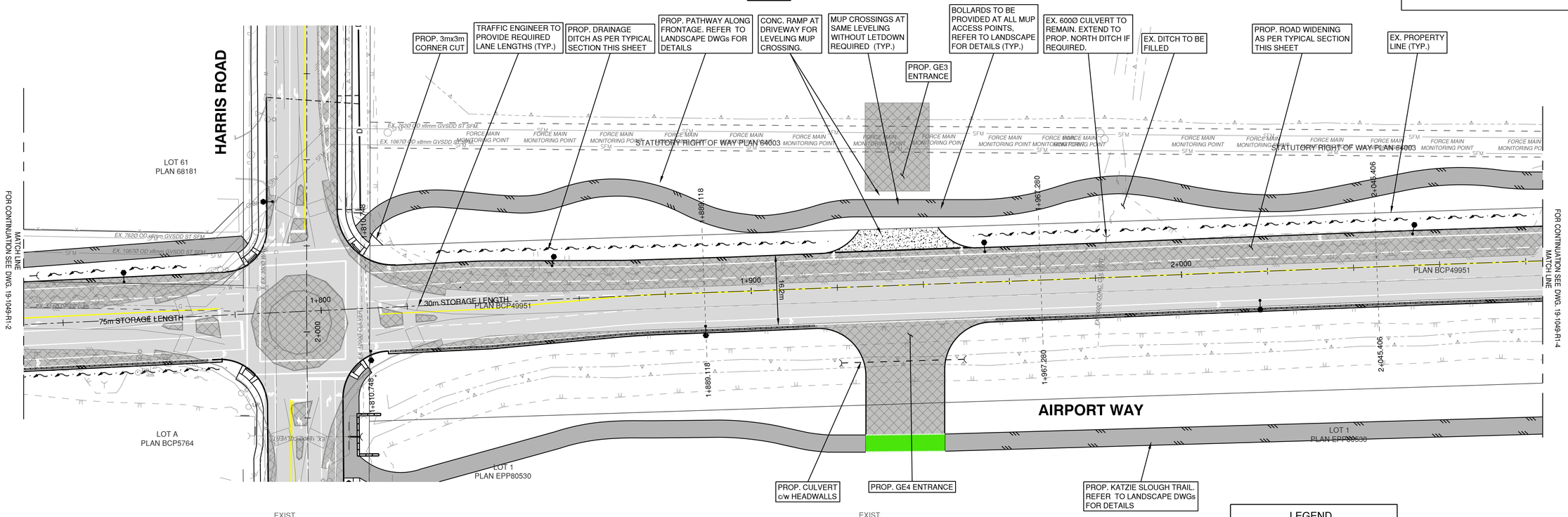
SCALES 0 1:500 20m

DATE	2020-05-07
DRAWING No.	19–1049–R1–2
SHEET 06 OF 16	REV.

DESTROY ALL PRINTS BEARING PREVIOUS No.

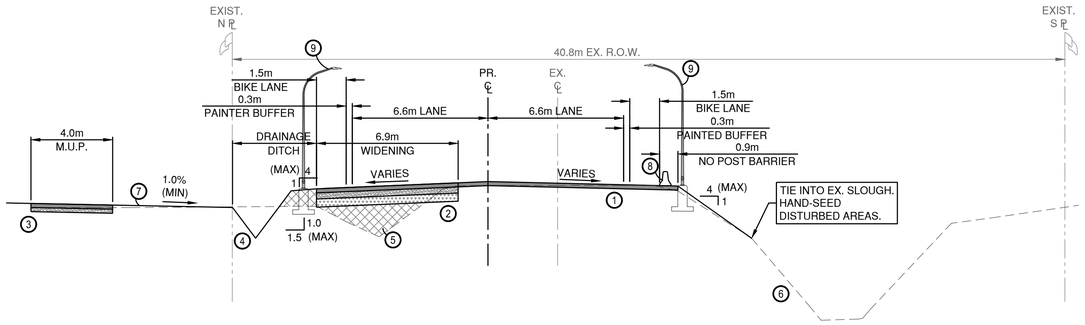
BENCHMARK:

82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429



LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE



TYPICAL SECTION - AIRPORT WAY
(STN. 1+745 - 2+320)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. MULTI-USE PATHWAY (SEE LANDSCAPE DWGs FOR DETAILS)
4. DRAINAGE DITCH (DIMENSIONS & SIDE SLOPES TO BE CONFIRMED)
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. EX. DITCH TO BE RETAINED
7. GRASSED BOULEVARD c/w 450mm TOPSOIL
8. NO POST ROADSIDE BARRIER WHERE CLEAR ZONE TO EXISTING SLOUGH CAN NOT BE ACHIEVED
9. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

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TEL 604 574 3336
BINNIE.com

CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
AIRPORT WAY ROADWORKS

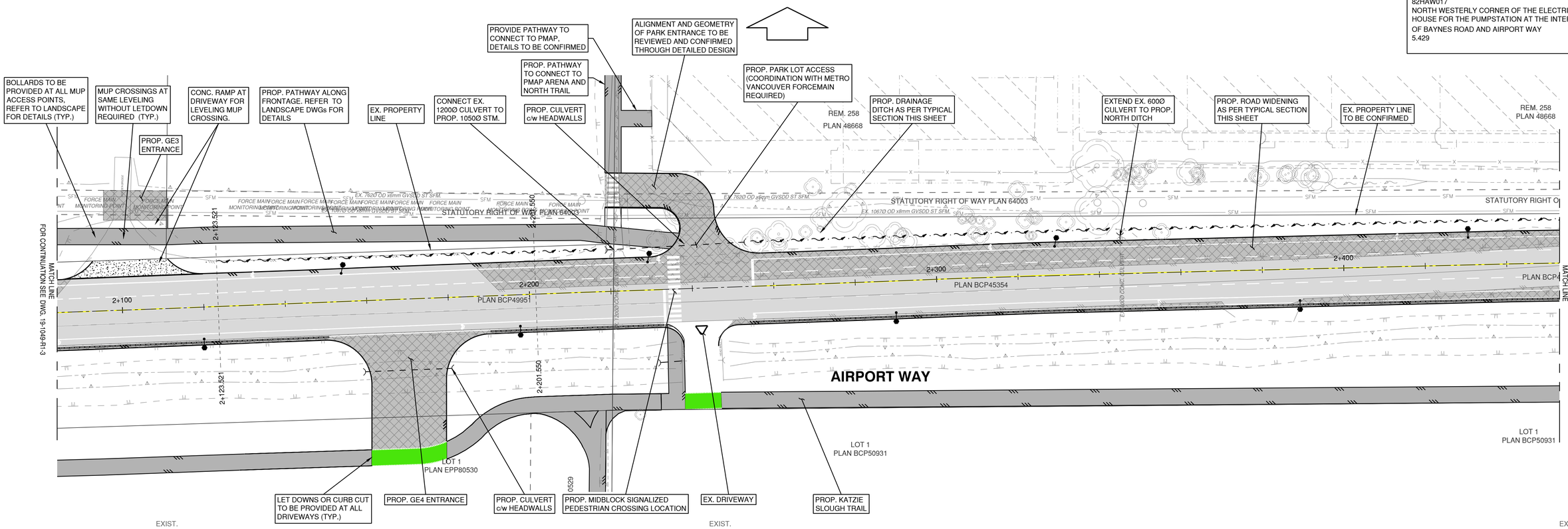
SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

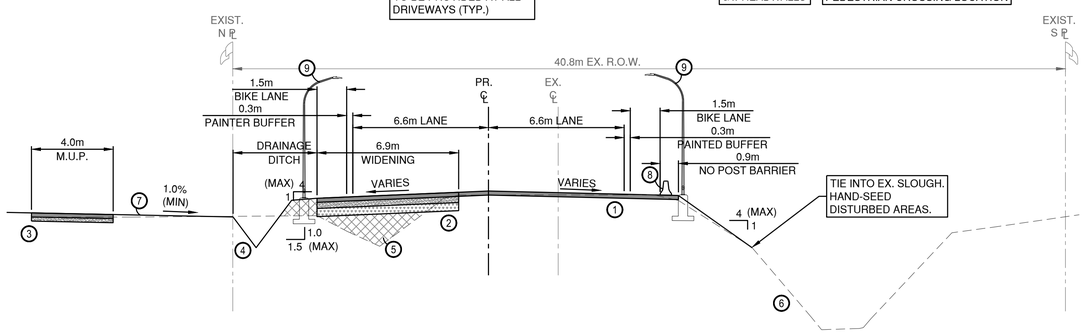
SCALES
0 1:500 20m

DATE	2020-05-07
DRAWING No.	19–1049–R1–3
SHEET 07 OF 16	REV.

DESTROY ALL PRINTS BEARING PREVIOUS No.

BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429





TYPICAL SECTION - AIRPORT WAY
(STN. 1+745 - 2+320)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. MULTI-USE PATHWAY (SEE LANDSCAPE DWGs FOR DETAILS)
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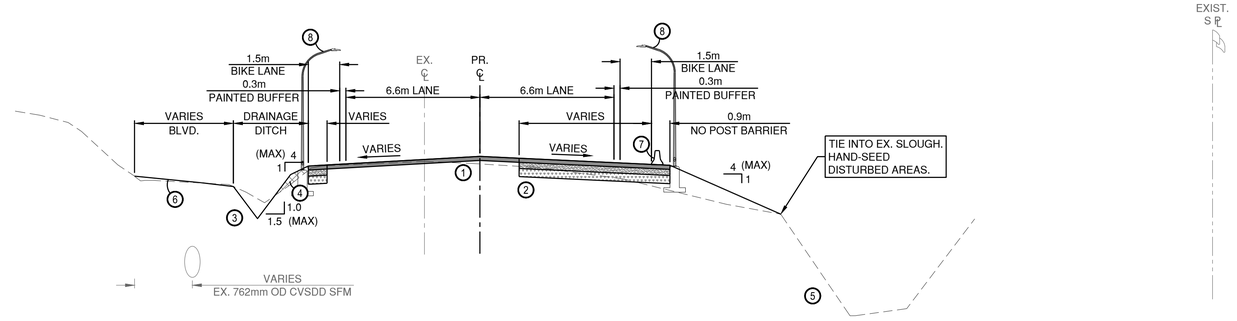
6. EX. DITCH TO BE RETAINED
7. GRASSED BOULEVARD c/w 450mm TOPSOIL
8. NO POST ROADSIDE BARRIER WHERE CLEAR ZONE TO EXISTING SLOUGH CAN NOT BE ACHIEVED
9. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER



TYPICAL SECTION - AIRPORT WAY
(STN. 2+320 - 2+580)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. DRAINAGE DITCH (DIMENSIONS & SIDE SLOPES TO BE CONFIRMED)
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7. NO POST ROADSIDE BARRIER WHERE CLEAR ZONE TO EXISTING SLOUGH CAN NOT BE ACHIEVED
8. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE

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BINNIE.com

CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
AIRPORT WAY ROADWORKS

SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

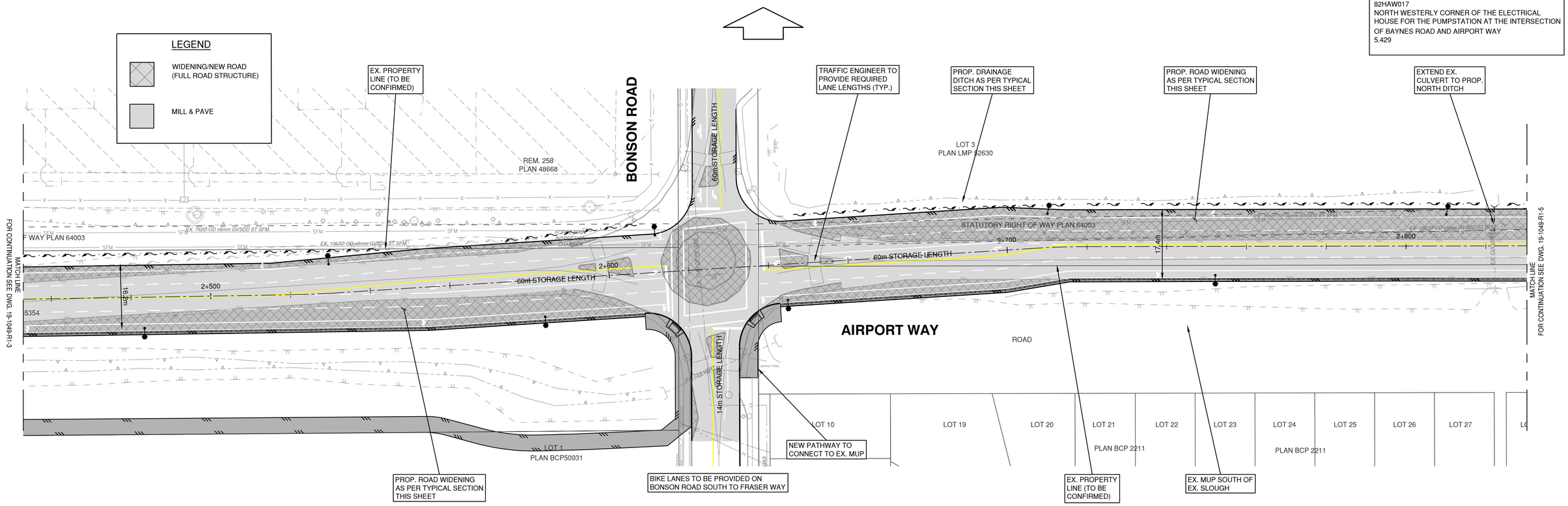
SCALES
0 1:500 20m

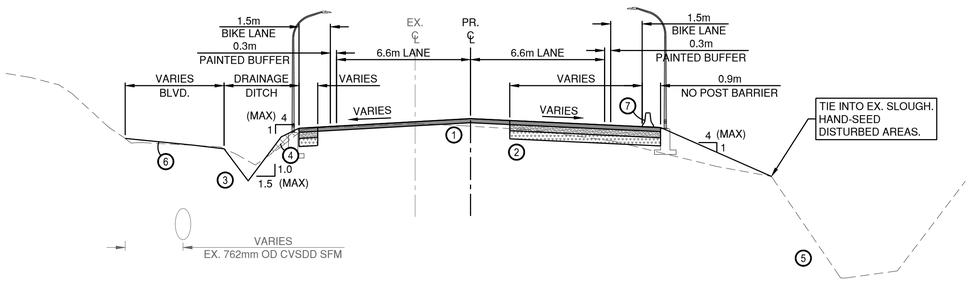
DATE	2020-05-07
DRAWING No.	19–1049–R1–4
SHEET 08 OF 16	REV.

DESTROY ALL PRINTS BEARING PREVIOUS No.

BENCHMARK:

82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429





TYPICAL SECTION - AIRPORT WAY
(STN. 2+320 - 2+580)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
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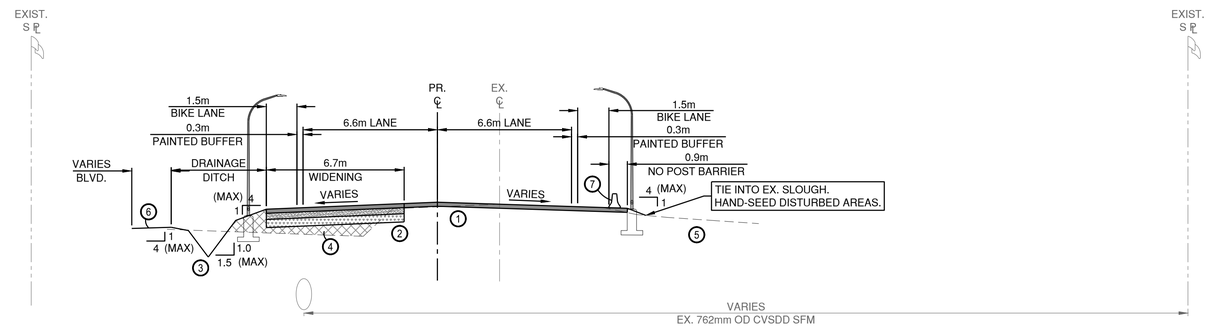
5. EX. DITCH TO BE RETAINED
6. GRASSED BOULEVARD c/w 450mm TOPSOIL
7. NO POST ROADSIDE BARRIER WHERE CLEAR ZONE TO EXISTING SLOUGH CAN NOT BE ACHIEVED

NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER



TYPICAL SECTION - AIRPORT WAY
(STN. 2+675 - 3+140)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. DRAINAGE DITCH (DIMENSIONS & SIDE SLOPES TO BE CONFIRMED)
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NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

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CLIENT
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200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
AIRPORT WAY ROADWORKS

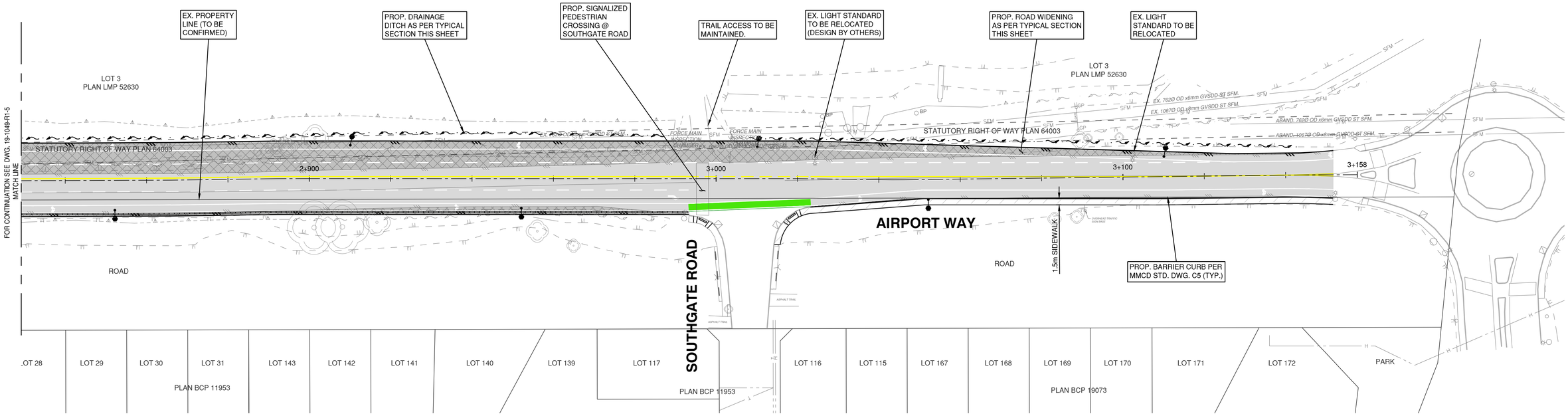
SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

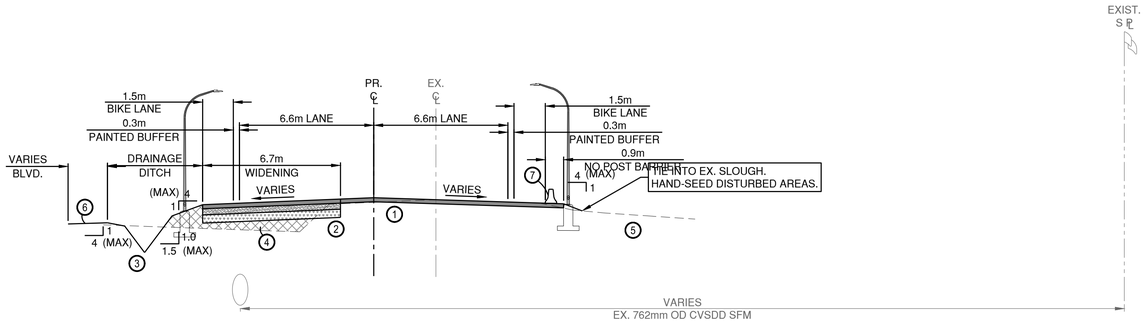
SCALES
0 1:500 20m

DATE	2020-05-07
DRAWING No.	19–1049–R1–5
SHEET 09 OF 16	REV.

DESTROY ALL PRINTS BEARING PREVIOUS No.

BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429





TYPICAL SECTION - AIRPORT WAY
(STN. 2+675 - 3+140)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. DRAINAGE DITCH (DIMENSIONS & SIDE SLOPES TO BE CONFIRMED)
4. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
5. EX. DITCH TO BE RETAINED
6. GRASSED BOULEVARD c/w 450mm TOPSOIL
7. NO POST ROADSIDE BARRIER WHERE CLEAR ZONE TO EXISTING SLOUGH CAN NOT BE ACHIEVED

NOTE: PAVEMENT STRUCTURE BASED ON PITT MEADOWS DESIGN CRITERIA [B.5.4]. ADEQUACY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE

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CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
AIRPORT WAY WIDENING

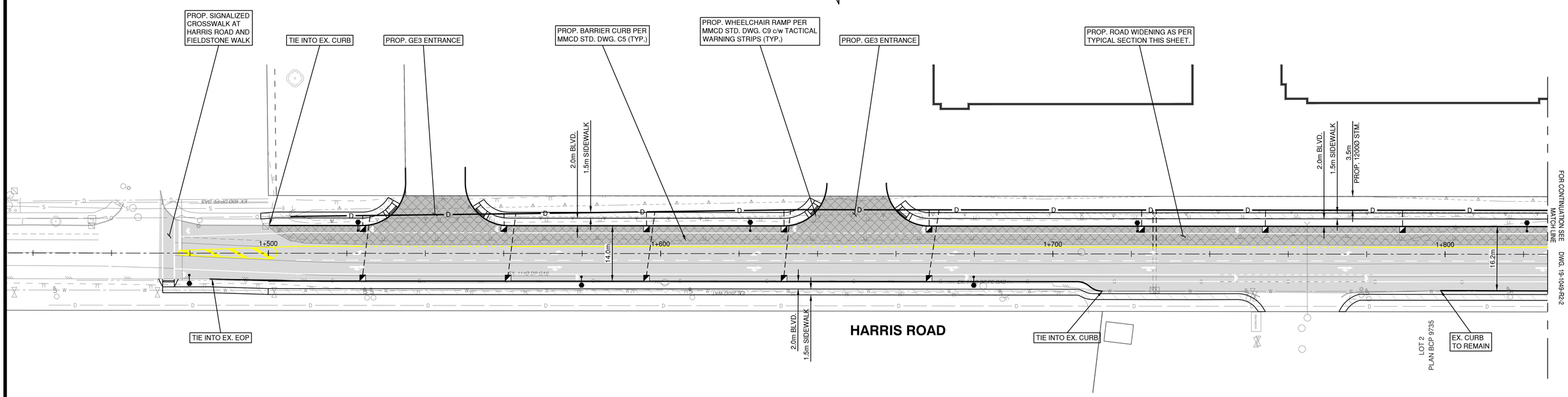
SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

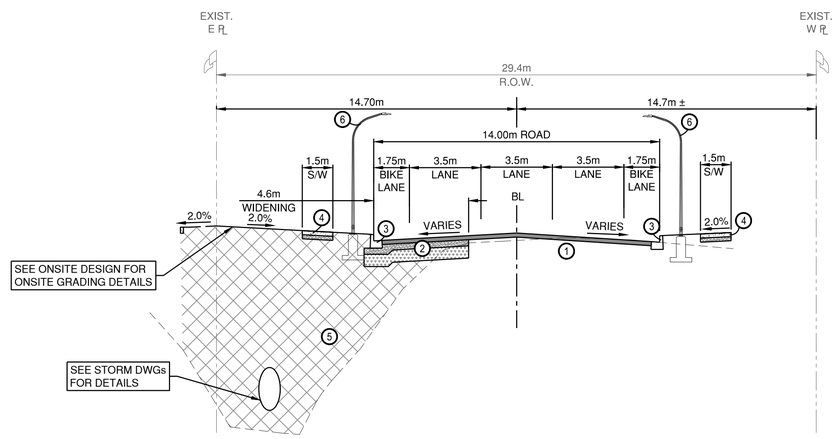
SCALES
0 1:500 20m

DATE 2020-05-07
DRAWING No. 19–1049–R1–6
SHEET 10 OF 16
REV.
DESTROY ALL PRINTS BEARING PREVIOUS No.

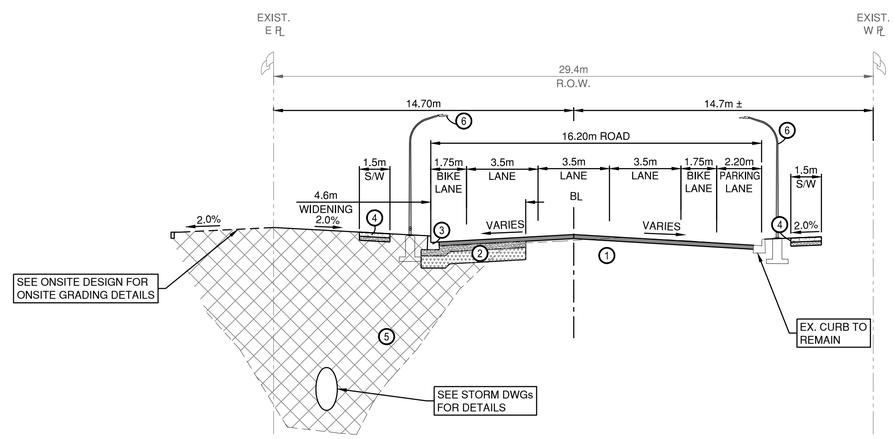
PLOTTED: 2021-02-01 10:32:32 AM USER: CZNAO
FILE: J:\2019\19-1049-R1-6\DWG\CAD\DRAWINGS\19-1049-R1-6.DWG LAYOUT: 19-1049-R1-6

BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429





TYPICAL SECTION - HARRIS ROAD
(STN. 1+500 - 1+720)
SCALE: 150H
75V



TYPICAL SECTION - HARRIS ROAD
(STN. 1+720 - 1+845)
SCALE: 150H
75V

LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. BARRIER CURB PER MMCD STD. DWG. C5
4. 1.50m WIDE CONCRETE SIDEWALK AS PER MMCD STD. DWG. C1
   - 100mm THICK CONCRETE
   - 100mm THICK - BASE GRAVELS
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. PROP. STREET LIGHT

NOTE: CROSS SECTION OF HARRIS ROAD NORTH OF AIRPORT WAY IS UNDER REVIEW AND SUBJECT TO CHANGE

NOTE: PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

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No.	DATE	REVISION	BY

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BINNIE.com

CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
HARRIS ROAD ROADWORKS

SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

SCALES
0 H 1:500 20m
0 V 1:50 2m

DATE 2020-05-07
DRAWING No. 19–1049–R2–1
SHEET 12 OF 16
REV.
DESTROY ALL PRINTS BEARING PREVIOUS No.

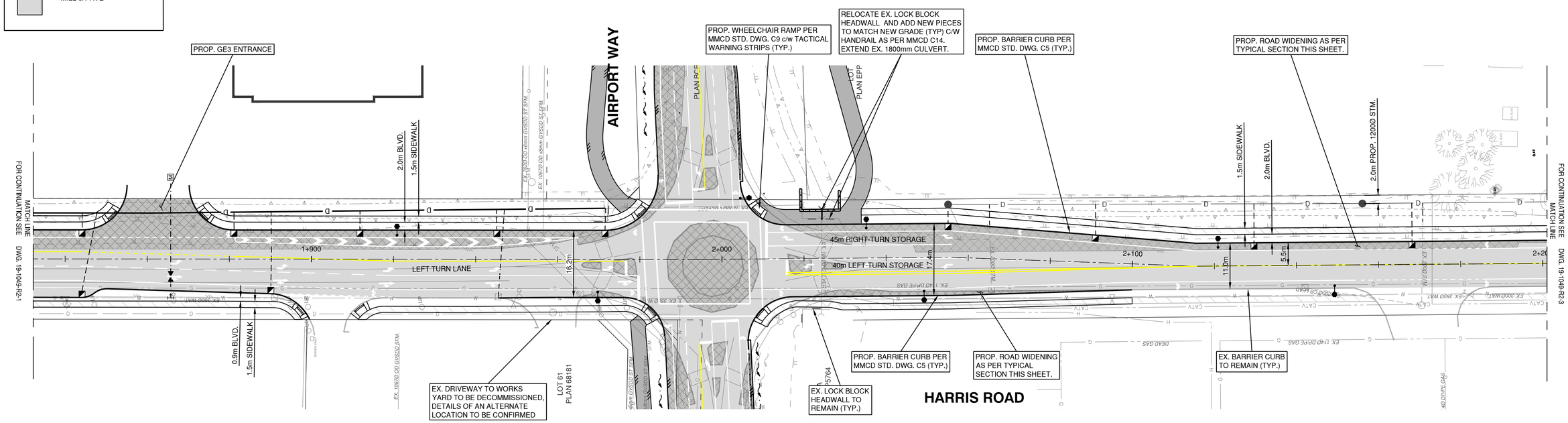
PLOTTED: 2021-02-01 10:33:39 AM USER: CRAIG
FILE: J:\2019\19-1049\02-ARCS\02-CONTRACT DWGS\19-1049-R2(HARRIS ROAD & FRASER WAYDWG LAYOUT 19-1049-R2-1

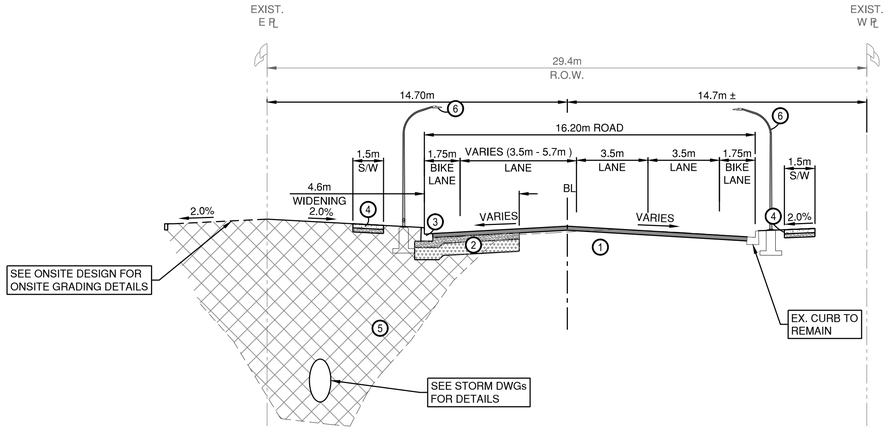
LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE

BENCHMARK:

82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429



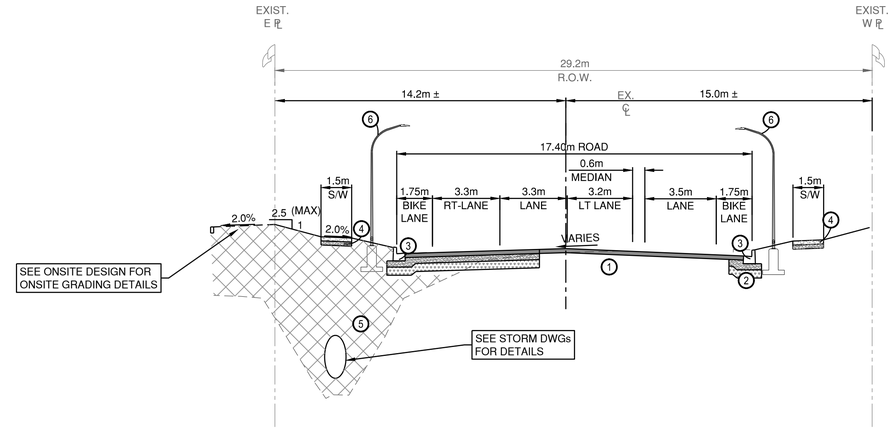


TYPICAL SECTION - HARRIS ROAD (STN. 1+845 - 1+935)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. BARRIER CURB PER MMCD STD. DWG. C5
4. 1.50m WIDE CONCRETE SIDEWALK AS PER MMCD STD. DWG. C1
   - 100mm THICK CONCRETE
   - 100mm THICK - BASE GRAVELS
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER



TYPICAL SECTION - HARRIS ROAD (STN. 2+010 - 2+056)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. BARRIER CURB PER MMCD STD. DWG. C5
4. 1.50m WIDE CONCRETE SIDEWALK AS PER MMCD STD. DWG. C1
   - 100mm THICK CONCRETE
   - 100mm THICK - BASE GRAVELS
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

NOTE: CROSS SECTION OF HARRIS ROAD NORTH OF AIRPORT WAY IS UNDER REVIEW AND SUBJECT TO CHANGE

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CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
HARRIS ROAD ROADWORKS

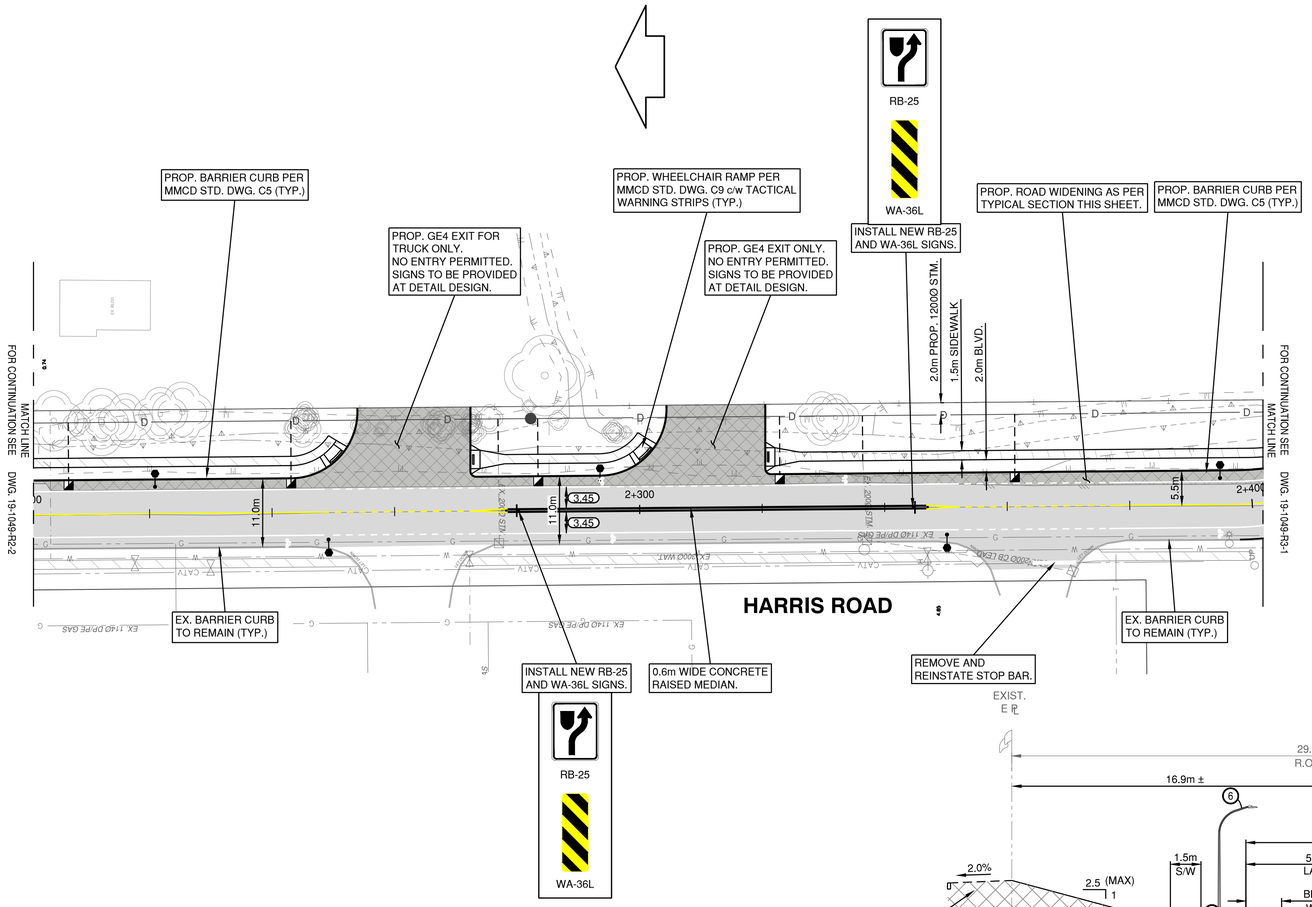
SURVEYED BY
DRAWN BY KF
DESIGNED BY VL
CHECKED BY NP

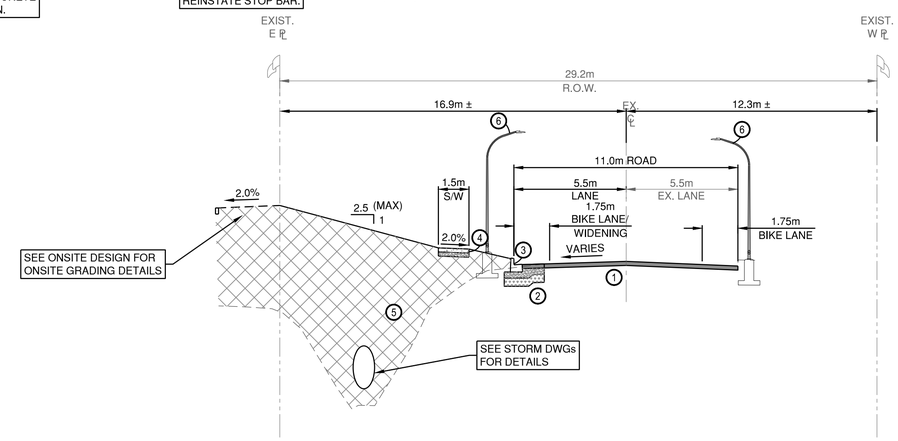
SCALES
0 H 1:500 20m
0 V 1:50 2m

DATE 2020-05-07
DRAWING No. 19–1049–R2–2
SHEET 13 OF 16
REV.
DESTROY ALL PRINTS BEARING PREVIOUS No.

PLOTTED: 2021-02-01 10:33:48 AM, USER: CZAID
FILE: S:\2019\19-1049\02-ACTIVE\DWG\CIVIL\DRAWING\19-1049-R2\HARRIS ROAD & FRASER WAY\DWG LAYOUT 19-1049-R2-2

BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429





LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE

TYPICAL SECTION - HARRIS ROAD
(STN. 2+116 - 2+400)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. BARRIER CURB PER MMCD STD. DWG. C5
4. 1.50m WIDE CONCRETE SIDEWALK AS PER MMCD STD. DWG. C1
   - 100mm THICK CONCRETE
   - 100mm THICK - BASE GRAVELS
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

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No.	DATE	REVISION	BY
0	2021-02-17	PHASE 3 SERVICING AGREEMENT SCOPING	CBC

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ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

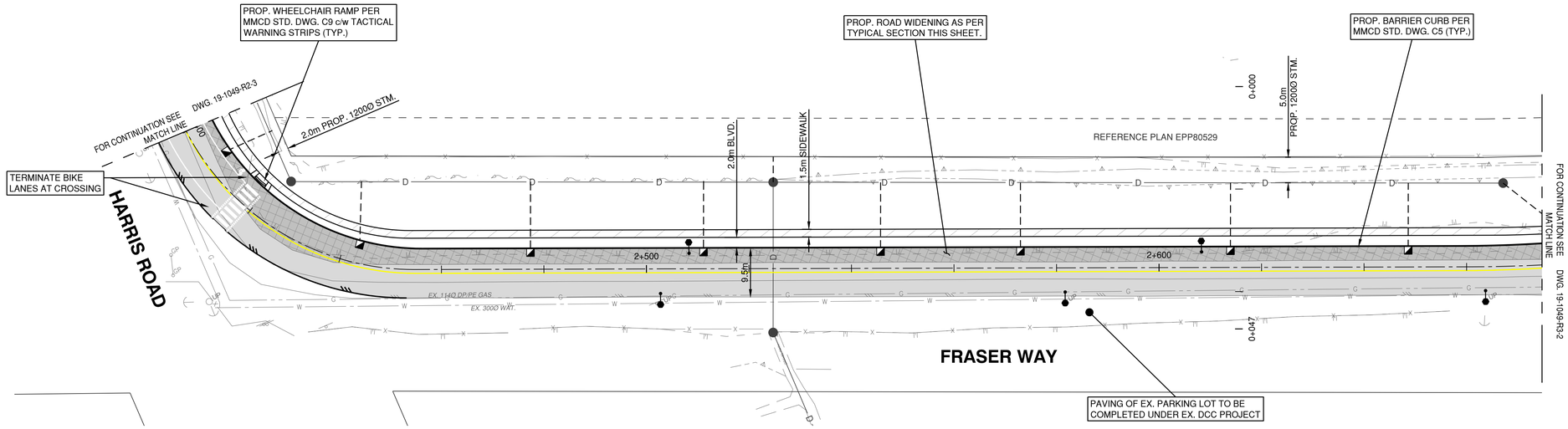
DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
HARRIS ROAD ROADWORKS

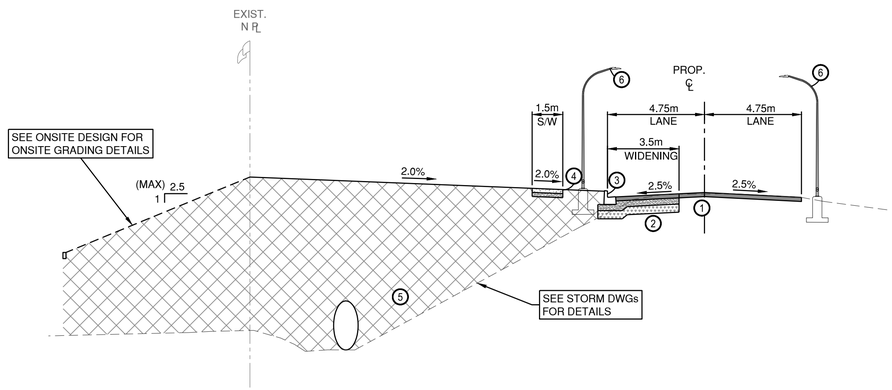
SURVEYED BY
DRAWN BY KF
DESIGNED BY VL
CHECKED BY NP

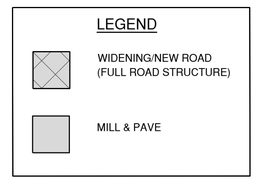
SCALES
0 H 1:500 20m
0 V 1:50 2m

DATE 2020-05-07
DRAWING No. 19-1049-R2-3
SHEET 11 OF 23
REV. 0
DESTROY ALL PRINTS BEARING PREVIOUS No.

BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429







TYPICAL SECTION - FRASER WAY
(STN. 2+040 - 2+722)

SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. BARRIER CURB PER MMCD STD. DWG. C5
4. 1.50m WIDE CONCRETE SIDEWALK AS PER MMCD STD. DWG. C1
   - 100mm THICK CONCRETE
   - 100mm THICK - BASE GRAVELS
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

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No.	DATE	REVISION	BY
0	2021-02-17	PHASE 4 SERVICING AGREEMENT SCOPING	CBC

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BINNIE.com

CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
FRASER WAY ROADWORKS

SURVEYED BY
DRAWN BY KF
DESIGNED BY VL
CHECKED BY NP

SCALES
0 H 1:500 20m
0 V 1:50 2m

DATE 2020-05-07
DRAWING No. 19-1049-R3-1
SHEET 13 OF 23
REV. 0
DESTROY ALL PRINTS BEARING PREVIOUS No.

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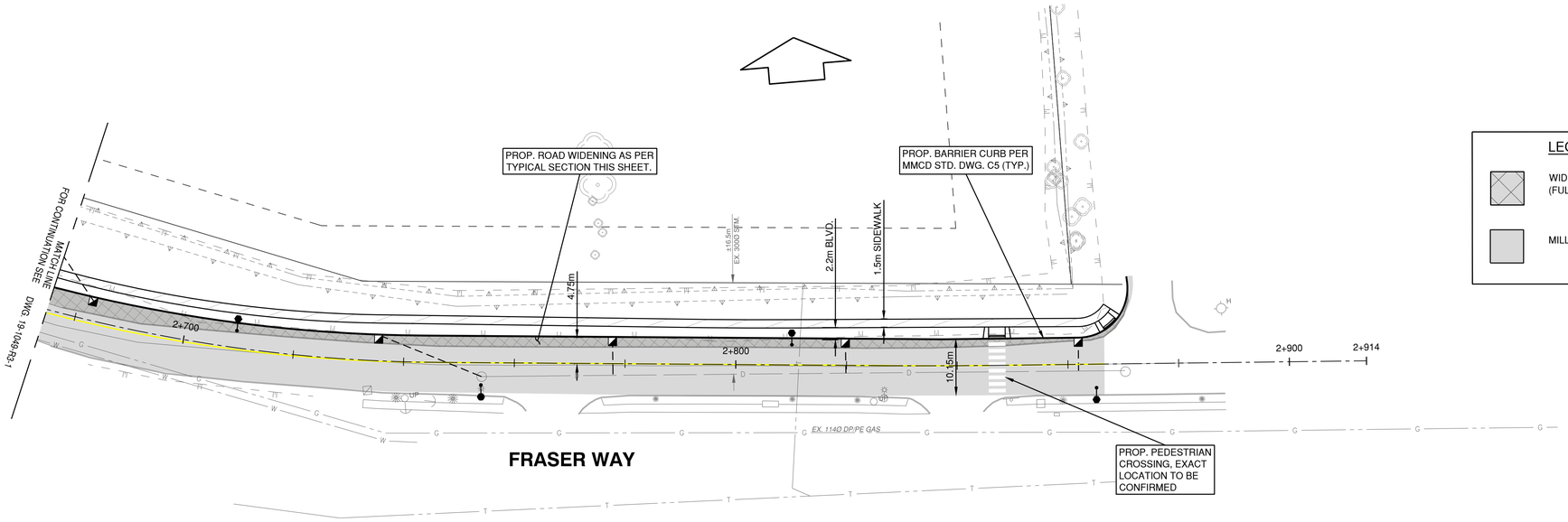
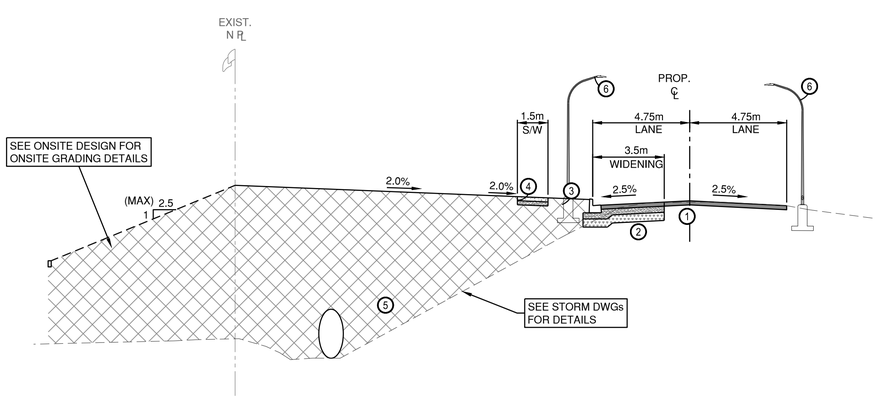
BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429



LEGEND

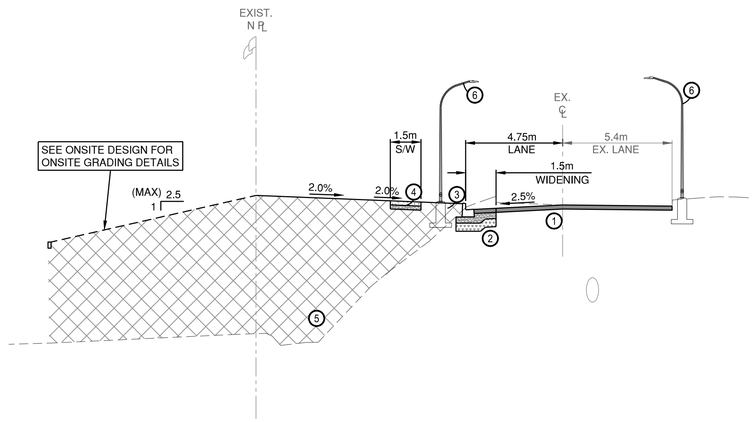
- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE



TYPICAL SECTION - FRASER WAY
(STN. 2+040 - 2+722)
SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. BARRIER CURB PER MMCD STD. DWG. C5
4. 1.50m WIDE CONCRETE SIDEWALK AS PER MMCD STD. DWG. C1
   - 100mm THICK CONCRETE
   - 100mm THICK - BASE GRAVELS
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER



TYPICAL SECTION - FRASER WAY
(STN. 2+722 - 2+770)
SCALE: 150H
75V

1. MIN. 50mm MILL AND PAVE c/w UC#1 (DEPTH TO BE CONFIRMED)
2. WIDENING c/w FULL STRUCTURE:
   - 50mm UC#1
   - 50mm LC#1
   - 150mm BASE GRAVELS
   - 300mm SUB-BASE GRAVELS
3. BARRIER CURB PER MMCD STD. DWG. C5
4. 1.50m WIDE CONCRETE SIDEWALK AS PER MMCD STD. DWG. C1
   - 100mm THICK CONCRETE
   - 100mm THICK - BASE GRAVELS
5. EX. DITCH TO BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL FILL (TO BE CONFIRMED BY GEOTECHNICAL ENGINEER)
6. PROP. STREET LIGHT

NOTE: PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER

DRAFT

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CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
FRASER WAY ROADWORKS

SURVEYED BY	
DRAWN BY	KF
DESIGNED BY	VL
CHECKED BY	NP

SCALES
0 H 1:500 20m
0 V 1:50 2m

DATE	2020-05-07
DRAWING No.	19–1049–R3–2
SHEET 18 OF 16	REV.

DESTROY ALL PRINTS BEARING PREVIOUS No.

PLOTTED: 2021-02-01 10:34:10 AM USER: CZNAD
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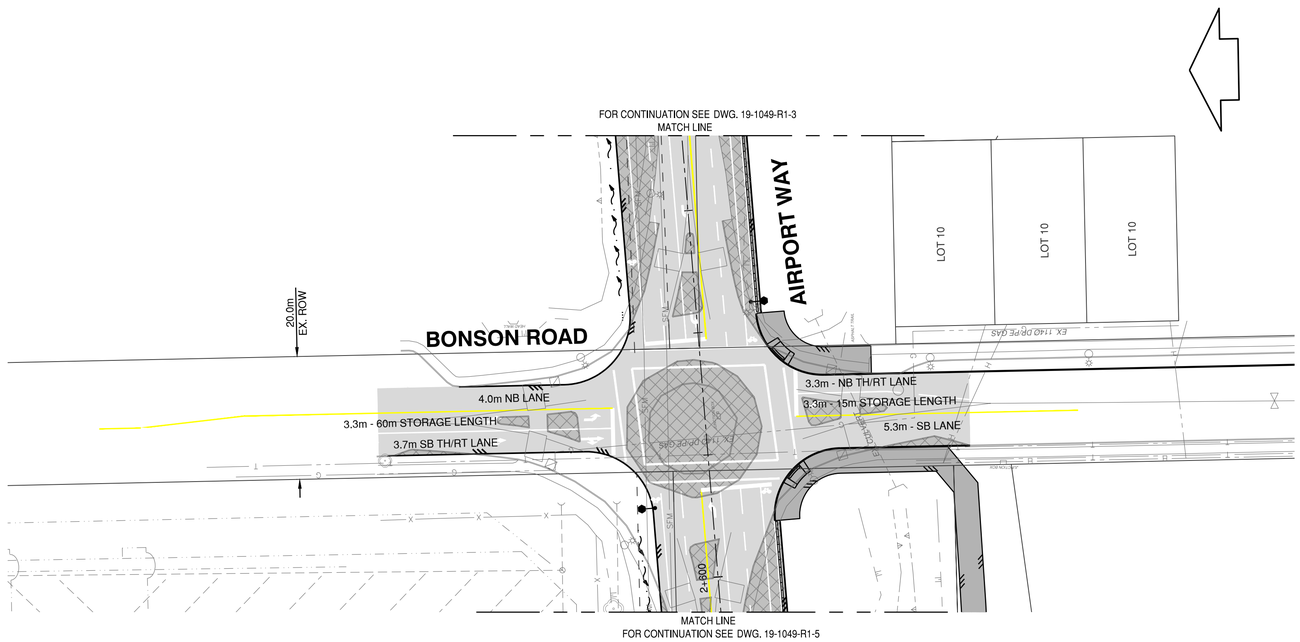
BENCHMARK:
82HAW017
NORTH WESTERLY CORNER OF THE ELECTRICAL HOUSE FOR THE PUMPSTATION AT THE INTERSECTION OF BAYNES ROAD AND AIRPORT WAY
5.429

LEGEND

- WIDENING/NEW ROAD (FULL ROAD STRUCTURE)
- MILL & PAVE



BIKE LANES TO BE PROVIDED ON BONSON ROAD SOUTH TO FRASER WAY

DRAFT

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CLIENT
ONNI GROUP
200-1010 SEYMOUR STREET, VANCOUVER, BC, V6B 3M6

DRAWING DESCRIPTION
GOLDEN EARS BUSINESS PARK
19265 & 19300 AIRPORT WAY
BONSON ROAD ROADWORKS

SURVEYED BY
DRAWN BY KF
DESIGNED BY VL
CHECKED BY NP

SCALES
0 1:500 20m

DATE 2020-05-07
DRAWING No.
19–1049–R4–1
SHEET 19 **OF** 16
REV.
DESTROY ALL PRINTS BEARING PREVIOUS No.

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Appendix D
intentionally removed

APPENDIX D
Turning Movement Count Data Summary Sheets

Appendix E
intentionally removed

APPENDIX E
Intersection Capacity Analysis Summary Sheets