

Staff Report to Council

Community Development

FILE: 4520-08/19300 Airport Way – Onni – GE4

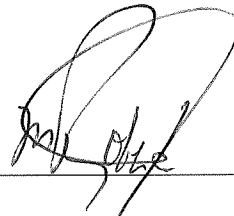
REPORT DATE: November 21, 2019 MEETING DATE: December 10, 2019

TO: Mayor and Council

FROM: Alex Wallace, Manager of Planning & Development

SUBJECT: Soil Removal and Fill Deposit Permit Application – 11208 Harris Road – Onni – GE4

CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:



RECOMMENDATION(S): THAT Council:

- A. Issue a Soil Removal and Fill Deposit Permit to Onni Contracting Ltd. for 11208 Harris Road with the following conditions:
 - A.1 A Highway Use Permit & Traffic Management Plan be approved by the Director of Engineering or their designate to prevent the obstruction of traffic or staging of trucks on any road; AND
 - A.2 No dirt, debris or mud shall be permitted on any road. Roads must be kept clean and swept daily as outlined in the Highway Use Permit, or more if required by the City. Harris Road, Airport Way and access to site must be monitored at all times during fill activities, and any debris removed right away; AND
 - A.3 Filling activities are prohibited on Sundays and statutory holidays and restricted to the hours between 7:00 a.m. to 5:00 p.m. any other day of the week. A portion of the site is adjacent to a residential area, and it is recommended that fill and removal activity in this part of the site be restricted to the hours between 9:00 a.m. to 5:00 p.m; AND
 - A.4 Truck logs must be provided to the City on a monthly basis and levies paid each month; AND

- A.5 Independent Environmental Monitoring as determined by staff; AND
- B. Approve Onni's request to access the site from Harris Road; OR
- C. Other.
-

PURPOSE

The purpose of this application is to permit the deposit of 500,000 cubic metres of fill to raise current site grades for construction purposes above the floodplain. No soil is required to be removed from the properties.

☐ Information Report ☐ Direction Report ☒ Decision Report

DISCUSSION

Background:

The Soil Removal and Fill Deposit Regulation Bylaw restricts the removal of soil or the depositing of fill on lands within the City. When the deposit of fill or removal of soil is 500 cubic metres or greater the proposed activities require Council authorization before issuance of a permit. The application is for the placement of approximately 500,000 cubic meters of structural fill on the 19.26 hectares (47.50 acres) site (See Attachment "A" Subject Property Map). The bylaw requires the following information from applicants:

- Topographic information about the placement or removal of soil signed and sealed by a Qualified Professional;
- A description of the composition and volume of the soil to be deposited or removed;
- Method of soil removal or fill deposits;
- Proposed accesses to the site during the operations including the proposed routes and schedules of trucks;
- Proposed measures to prevent tracking of soil or other material onto highways and measures for cleaning the highways abutting the parcel where fill is to be placed;
- Proposed measures to control erosion, drainage and soil stability during and after removal or deposit signed and sealed by a Qualified Professional;
- Certification that the soil to be removed or fill to be deposited meets the applicable provincial ministry's criteria.

Analysis:

The development proposed at 11208 Harris Road is a light industrial/business park. The subject properties are zoned I-3 (Light Industrial Business Park), Official Community Plan (OCP), land use designation, is Business Park and is located in the Development Permit Area #4 – Business Park. The subject properties are located south of Airport Way, east of Harris Road, and north of Fraser Way (Attachment A).

The applicant has applied for a Soil Deposit and Fill Removal Permit to raise current site grades for construction purposes above the floodplain at 11208 Harris Road as per Schedule B (Attachment B) in the Floodplain Designation and Construction Control Bylaw No. 2384. The flood construction level is 5.75 meters Geodetic Survey of Canada datum (GSC). Properties zoned light, or heavy industrial development are only required to meet the designated flood level of 5.15 meters GSC as per the City of Pitt Meadows Floodplain Designation Bylaw No. 2384, 2008. The plans submitted by Onni show a top of fill elevation of 5.33 meters GSC, which exceeds the required 5.15 meters and is consistent with Phases 1, 2 and 3 of Golden Ears Business Park (GEBP) and other developments in the surrounding neighbourhood. (Attachment C, Fill Plan)

Policy No. C030 "Geotechnical Report Guidelines" (Attachment D) applies to projects requiring fill and soil consolidation to support a foundation. The policy sets the standards and requirements to be addressed. GeoPacific Consultants Ltd. has prepared a geotechnical report dated June 17, 2015, which meets the standards set out in Policy No. C030. The report states that the organic silts and surficial peats and topsoil can be left in place and fill to design grade with compacted structural fill. GeoPacific Consultants Ltd. provided a letter to the City confirming that the soil conditions outlined in the report have not changed since the investigation was completed. (Attachment E)

Requested Exemption

In 2005, the City's Soil Deposit Bylaw was amended to prohibit trucking from filling lands in the south Harris Road area (Attachment F, Boundary of dredged fill area). At that time, the preferred method for filling to flood construction levels for this area was dredged sand similar to the Bonson's Landing and Sawyers Landing developments. The amendment reflected City concerns that the only haul route to this area was Harris Road. Since then Airport Way has been constructed and the sites can be accessed via Airport Way.

After discussions with engineering and planning staff, it is recommended that Onni truck the fill to the site rather than using dredged sand from the Fraser River. Dredging would presumably require installation of a pipe to the site which would only be feasible over or under Fraser Way which is part of the diking infrastructure. Dredging of sand also introduces additional water to the site and would impact the City's drainage network. Moreover, the nature of dredging could result in a 24 hours/day, seven days/week activity, which is likely to have a negative effect on the surrounding

residential neighborhoods due to noise levels. Federal and/or provincial approvals would be required for dredging. Dredging is not a preferable option due to impacts on the City's infrastructure and residents living in the area.

In past applications, Onni was approved to truck fill for Phases 1, 2 and 3 of the Golden Ears Business Park with access initially along Harris Road from Lougheed Highway and later from Golden Ears Way along Airport Way. The City will receive a levy of \$250,000 for 500,000 cubic metres of structural fill trucked to the site compared to dredging for which no levies are collected. Soil activity is still ongoing on Phase 3 located north of Airport Way and East of Harris Road. The City received three complaints related to the activities on Phase 3 and has mitigated the concerns with the complainants.

The applicant is proposing to access the site off of Harris Road to bring fill to the property. Harris Road is not an identified truck route. As per the Highway and Traffic Bylaw, "the Director may, under circumstances which she considers warrants a permit, issue a permit authorizing the movement or parking of a truck on certain Highways other than a Truck Route." Staff supports the proposed access off Harris Road as it will not impact the Katzie Slough on Airport Way and will have minimum impact on the surrounding residential areas.

The applicant is voluntarily offering to provide additional compensation in the amount of \$1.5 Million Dollars in support of their application to utilize structural fill rather than dredging sand. The \$1.5 Million amenity contribution is substantially more than contributions received by previous phases that also used structural fill.

- Phase 1 \$200,000
- Phase 2+3 Zero

If the Soil Permit is approved by Council, staff will issue a Highway Use Permit identifying Airport Way and Harris Road as the preferred haul route to the site. (Attachment G, Truck Route Network)

Independent Environmental Monitoring

A third party Qualified Professional hired by the City and paid for by Onni will monitor environmental aspects and ensure that erosion and sediment control measures are implemented as prescribed in the erosion and sediment control plan provided by Geopacific.

Road Cleaning

According to the provisions of the Soil Deposit & Removal Bylaw, "dirt, mud, and debris resulting from a removal or deposit operation which is tracked onto public roads must be removed daily or as directed by the Director." According to the plan submitted, all vehicles traveling onsite must be restricted to paved or gravel stabilized areas. Vehicles and equipment traveling on exposed soil must have their wheels or

tracks washed before exiting from the site. A gravel haul road runs east to west leading to a wheel wash and a paved driveway for access to Harris Road. (Attachement H, Errosion & Sediment Control Plan) These site improvements should reduce or eliminate debris tracking onto Harris Road and Airport Way. Staff will work with Onni to resolve any concerns raised throughout the length of the permit. Staff will add the following conditions to the Highway Use Permit:

- *No obstruction to traffic or staging on the road permitted at any time (even with traffic control in place). This would require a Traffic Management Plan and/or further approval from the City.*
- *No dirt, debris or mud on the road. Roads to be kept clean and swept daily or more if required by the City. Harris Road, Airport Way and access to site must be monitored at all times during fill activities and any debris removed right away.*

Operation Hours

The filling would be prohibited on Sundays and statutory holidays and restricted to the hours between 7:00 a.m. to 5:00 p.m. any other day of the week. A portion of the site is adjacent to a residential area, and it is recommended that fill and removal activity in this part of the site within 200 metres of the residential development be restricted to the hours between 9:00 a.m. to 5:00 p.m. The duration for fill activity stated on the application is for one year after which Onni can apply for a renewal of the permit 30 days before the expiry date of the existing permit.

Archaeological Sites

According to mapping prepared by the Ministry of Forests, Lands, and Natural Resource Operations, there are no identified archaeological sites located on the fill site. Further, in March 2008 an Archaeological Impact Assessment for the Airport Way corridor from Harris Road to Bonson Road concluded that "the probability of discovering archaeological sites in the surveyed locations is considered to be low." It is expected that, if archaeological artifact finds are discovered during the excavation of the peat, Onni would report these finds directly to appropriate provincial authorities.

Conclusion:

Staff supports the issuance of the Soil Removal and Fill Deposit permit for Golden Ears Business Park Phase 4 at 11208 Harris Road subject to the conditions outlined in the staff report dated November 21, 2019.

Staff recommends approval to truck the fill to the site rather than using dredged sand from the Fraser River due to impacts on the infrastructure and residents living in the area. Further, staff supports the proposed access of Harris Road, it avoids access over the Katzie Slough on Airport Way and will have minimum impact on the surrounding residential areas.

Relevant Policy, Bylaw or Legislation:

The Soil Removal and Fill Deposit Regulation Bylaw No. 2593, 2013 regulates the placement of fill or the removal of soil or other material on land in the City.

The Floodplain Designation and Construction Control Bylaw No. 2381, 2008 regulates construction in the floodplain in the City.

The Highway and Traffic Bylaw No. 2260, 2006 regulates traffic and the use of highways and other areas in the City.

The Drainage System Protection Bylaw No. 2266, 2007.

Council Policy C030, Geotechnical Report Guidelines provides information to prospective applicants and their engineering professionals on when geotechnical reports are required and set out the standards and requirements to be addressed in those reports.

Riparian Areas Protection Act.

COUNCIL STRATEGIC PLAN ALIGNMENT

- ☐ Corporate Excellence ☒ Economic Prosperity ☒ Community Livability
☐ Transportation & Infrastructure ☐ Not Applicable

FINANCIAL IMPLICATIONS

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

The City will receive a levy of \$0.50/cubic meters for the material being placed on site. The estimated amount of structural fill to be deposited is 500,000 cubic metres. The \$250,000 levy collected would be placed in transportation reserves.

The City will receive a \$1.5 Million amenity contribution to be used at Council's discretion for municipal service(s) that benefits the Pitt Meadows Community.

PUBLIC PARTICIPATION

- ☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

KATZIE FIRST NATION CONSIDERATIONS

- Referral ☐ Yes ☒ No

KATZIE FIRST NATION CONSIDERATIONS

Referral ☐ Yes ☒ No

SIGN-OFFS

Written by:

Reviewed by:

Chantal Gemperle, Supervisor of Building
& Bylaws/Licensing Inspector

Alex Wallace, Manager of Community
Development

ATTACHMENT(S):

- A. Subject Property Map
 - B. Floodplain Designation and Consturction Control Bylaw No. 2384, 2008, Schedule B
 - C. Fill Plan (Dwg. No. G-F1, G-F2 and G-F3) prepared by GeoPacific Consultants dated January 16, 2018
 - D. Council Policy C030, Geotechncial Report Guidelines
 - E. Letter from GeoPacific Consultants
 - F. Soil Removal and Fill Deposit Bylaw, Schedule E
 - G. Truck Route Network
 - H. Erosion & Sediment Control Plan
-



City of
Pitt Meadows



11208 Harris Rd

0 25 50 100 150 200
Meters

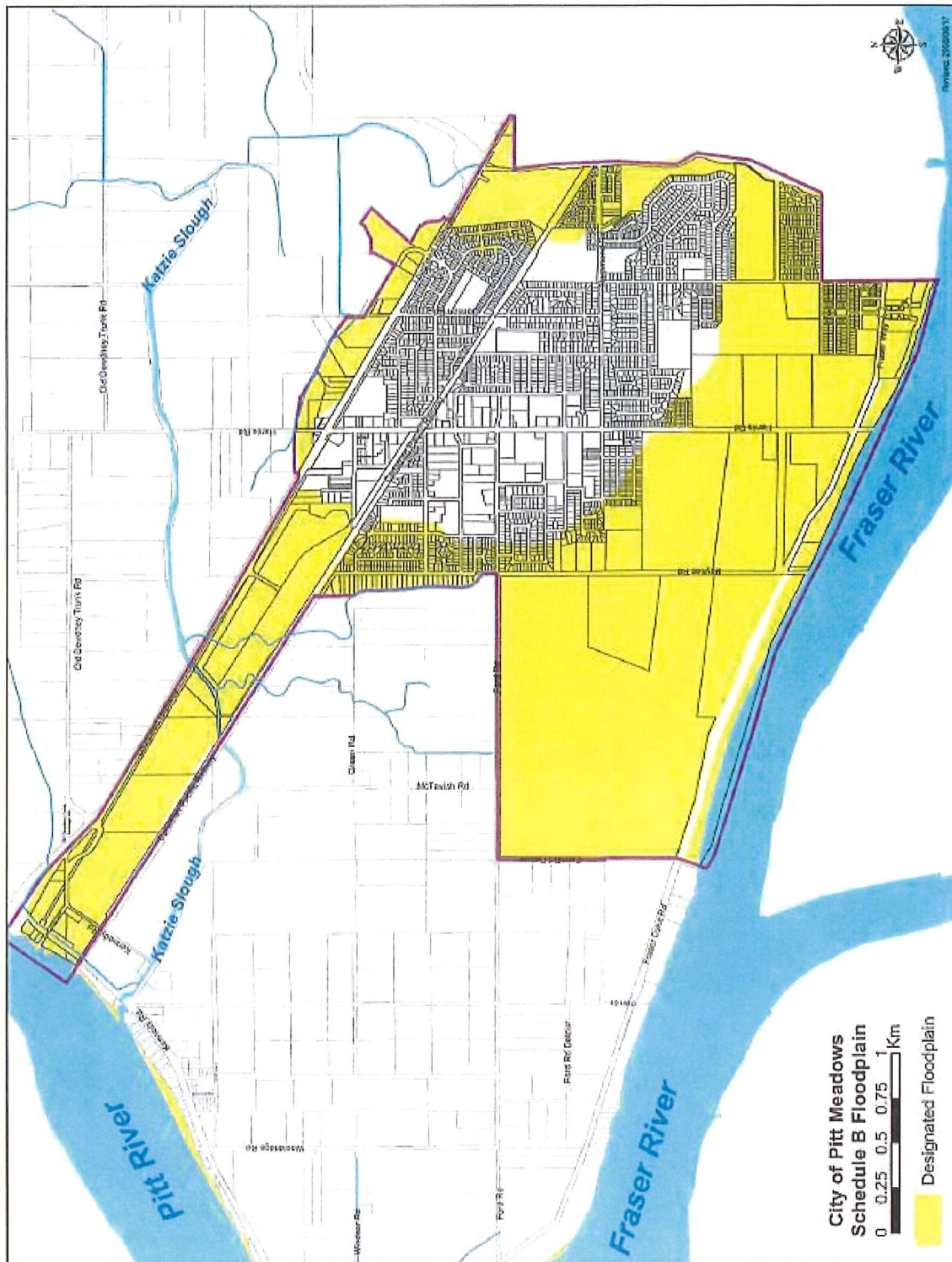
Map Created: 2019/12/03

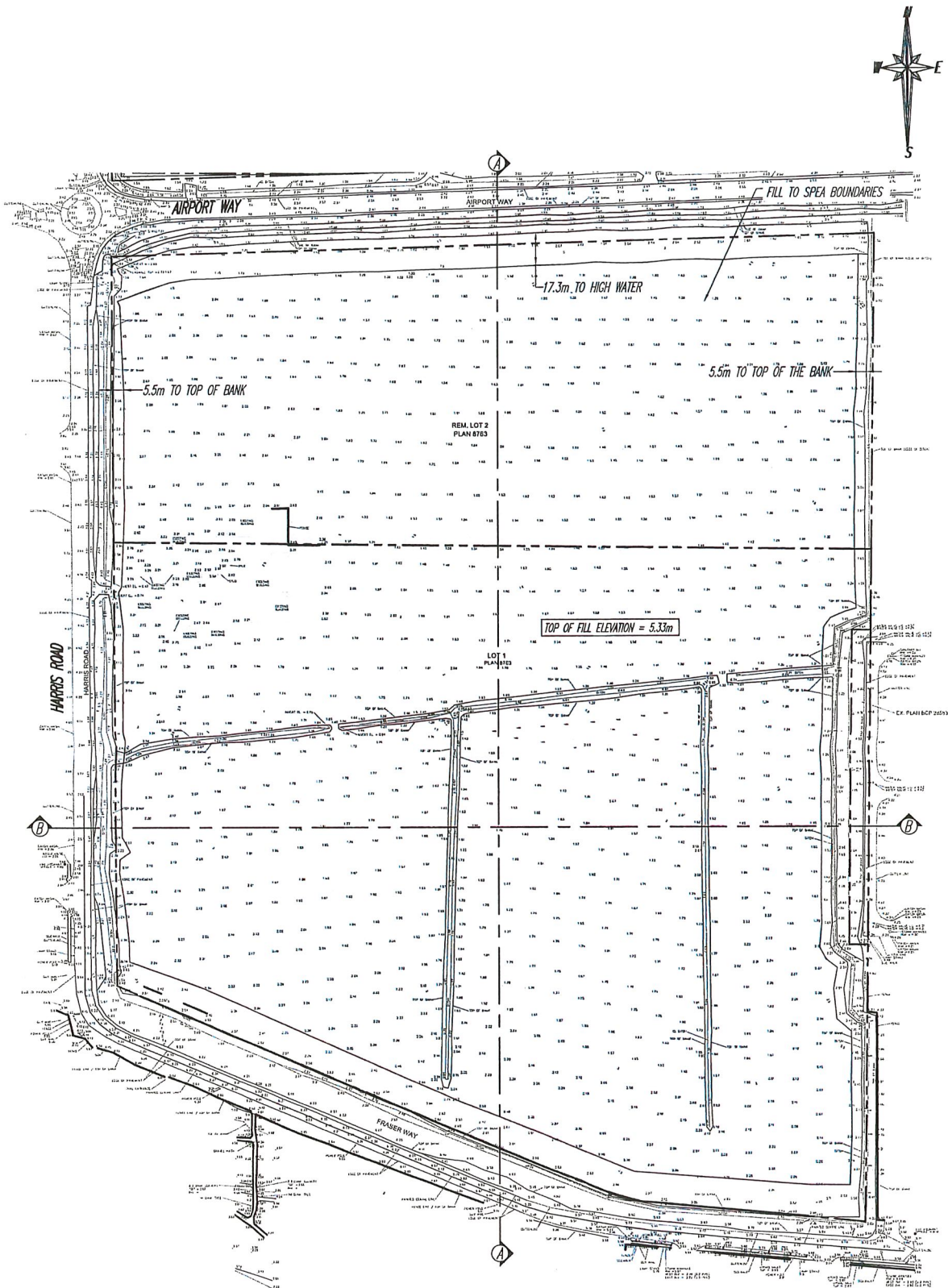


**CITY OF PITT MEADOWS
FLOODPLAIN DESIGNATION AND CONSTRUCTION CONTROL
BYLAW NO. 2384, 2008.**

ATTACHMENT **B**
Page 8

SCHEDULE B:

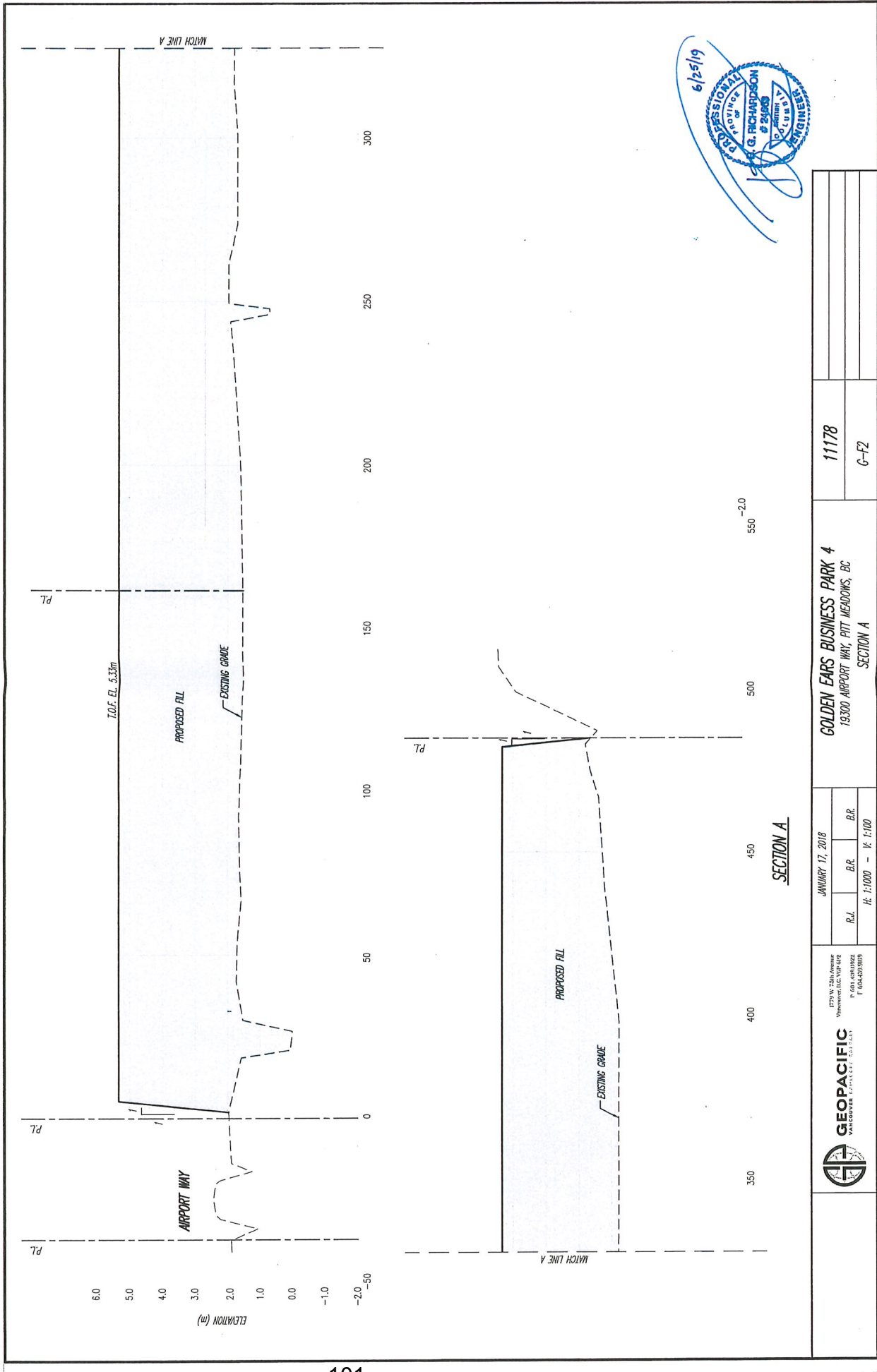





SITE PLAN
SCALE = 1:2000



MAY 23, 2018 - updated survey plan
JUNE 12, 2018 - updated survey plan



 GEOPACIFIC VANCOUVER SPECIALTY CONSULTANTS 1775 W. 2280 Avenue Vancouver, B.C. V6P 4P2 P 604.430.0922 F 604.430.0909	JANUARY 17, 2018			GOLDEN EARS BUSINESS PARK 4 19300 AIRPORT WAY, PITT MEADOWS, BC SECTION A	11178
	R.L.	B.R.	B.R.		
	ht: 1:1000 - 1/4: 1:100				G-F2



COUNCIL POLICY C030

13 - Planning & Development

Geotechnical Report Guidelines

Effective Date: October 2, 2007

Revised Date: July 3, 2012

Reaffirmed Date: July 21, 2015

1. Purpose

The City is relying on the geotechnical engineer's report to avoid, or at least mitigate as specified, any damage to property and/or injury to persons from occurring as a result of geotechnical concerns relating to proposed development.

This policy provides information to prospective applicants and their engineering professionals on when geotechnical reports are required and sets out the standards and requirements to be addressed in those reports.

2. Policy

Application

A geological and geotechnical review, report, study or site specific study is required by the City to support Development Permit, Building Permit, and Rezoning or Subdivision applications in areas as determined by the City from time to time.

A geological and geotechnical review may be required when any of the following conditions apply:

- The project is located on or within 15 metres of a natural, existing or proposed slope greater than 20%
- The project proposes to direct storm water to an existing or proposed slope greater than 20%
- The project will require site grading involving more than 500 m³ or cuts/fills in excess of 1.2 metres in depth or height
- The project will require pre-load or soil consolidation to support a foundation.



Level of Safety

The professional engineer shall consider the following requirements when determining whether a property is “safe” or can be “safely used”:

- The extent of property damage and damage/harm to life and limb which occurs is not likely to be in any way greater than the damage or harm which would occur prior to the development taking place.

A detailed geotechnical review and onsite investigation shall be undertaken by qualified professional geological or geotechnical engineers in order to determine whether the proposed development can occur in a safe manner and to describe mitigation requirements to be employed, where appropriate. The professional shall be guided by the City’s requirement that development shall have a level of safety for any and all geotechnical failures with a 0.5% probability of failure occurring in a 50 year period (a return period of 1:10,000) for applications requiring rezoning, subdivision or development permit approval and a 2% probability of failure occurring in a 50 year period (a return period of 1:2475) for building permit applications.

The City reserves the right to modify this standard to suit the proposed development.

Report Requirements

A geotechnical report shall address the following minimum requirements pertaining to slope and soil stability:

- The professional geotechnical engineer has reviewed all information available to the consultant, including previous geotechnical reports and relevant materials located within the City’s Geotechnical Library. Each report shall describe the specific information reviewed and onsite tests conducted to arrive at the conclusions and recommendations within the report
- Each report shall contain all logs of geotechnical explorations (boring, test pits, trench logs, etc.) conducted on the property, plus a statement explaining the sufficiency in number and depth in order to evaluate site conditions and acquire data to justify all conclusions and recommendations
- The scope and intent of the proposed development
- Statement that there is no net decrease in overall slope and soil stability resulting from the proposed development or works
- Identification, probability and consequences of risks and a statement that slope/soil instabilities will be mitigated by the owner/developer to provide for the safe occupation and use of the development lands and adjacent nearby lands
- Other factors which the professional geotechnical engineer considers relevant to the review, including an assessment of risk, potential consequences, and mechanisms to guarantee ongoing maintenance of slope/soil stabilities over time



- A construction management plan, monitoring and reporting requirements by the professional geotechnical engineer
- Sign and seal each report/letter submitted to the City.

Professional Assurances

The professional geotechnical engineer **MUST** provide in writing the following specific geotechnical assurances **to the City** with each report/letter:

- The professional geotechnical engineer has carried out all necessary surface and subsurface investigations that the Engineer considers necessary to provide the review, design and supervision undertaking being given and adherence to these guidelines
- The professional geotechnical engineer will provide the review, design and supervision such that, in the Engineer's opinion, the site is suitable for the proposed development and the proposed development does not and will not compromise in any way the stability of the soil on-site or soil on lands which are adjacent or nearby, and will not cause or contribute to such soils becoming susceptible to land slip, land slide, rock fall, mud/land flow, debris flow, torrent, erosion, slumping, creeping, settling, avalanches or other such occurrence
- In the professional geotechnical engineer's opinion, in the event of any land slip, land slide, rock fall, mud flow, debris flow, debris torrent, erosion, slumping, settling or other such occurrence, which occurs after the proposed development is completed, the extent of the property damage and damage to life and limb which occurs is not likely to be in any way greater than the damage or harm which would occur prior to the development taking place
- The professional geotechnical engineer's undertaking that he/she is retained by the owner/developer to review, consult, design and fully supervise the construction of the proposed development, and that on completion of the work, he/she will confirm in writing that he/she has fulfilled the review, design and supervision undertakings and the proposed development can be safely used for its intended purpose, taking into consideration future changes which could reasonably occur to the proposed development over time. In the event the retainer is terminated for any reason by the owner/developer, the Engineer shall be obligated to immediately notify the City in writing of that fact
- The professional geotechnical engineer's undertaking that he/she shall notify the City if he/she becomes aware of changes or new information which could affect the outcome of their geotechnical review and/or recommendations.



Professional Liability Insurance

The professional geotechnical engineer shall provide the City with evidence of occurrence based professional liability insurance coverage which does not lapse in the amount of at least \$2,000,000 as provided to their client.

Covenants

The owner/developer may be required by the City to register a covenant against the property title at the Land Titles Office as a notification to future land owners. The covenant will incorporate provisions included in the geotechnical report(s) and indemnify the City against all claims. During the construction phase enforcement of the covenant provisions are the joint responsibility of the owner/developer and the professional geotechnical engineer.

Security

The owner/developer may be required by the City to provide bonding as security for performance of the on-site and off-site construction works and secure the provisions outlined in the geotechnical report(s) pertaining to that construction.

Peer Review

The City may require a professional geotechnical engineer peer review for conformance to good engineering practice and adherence to these guidelines on a case by case basis. The peer review shall be completed by a qualified professional geotechnical engineer engaged directly by the City. Any costs incurred by the City to conduct a peer review shall be borne by the owner/developer. The Engineer engaged by the City shall notify the professional geotechnical engineer and owner/developer in writing of the peer review.



GEOPACIFIC
VANCOUVER KAMLOOPS CALGARY

P (604) 439 0922
F (604) 439 9189
geopacific.ca
1779 West 75th Ave
Vancouver, BC V6P 6P2

Onni Contracting Ltd.
200 – 1010 Seymour Street,
Vancouver, BC, V6B 0G1

September 20, 2019
File: 11178

Attn: Darragh Ryan

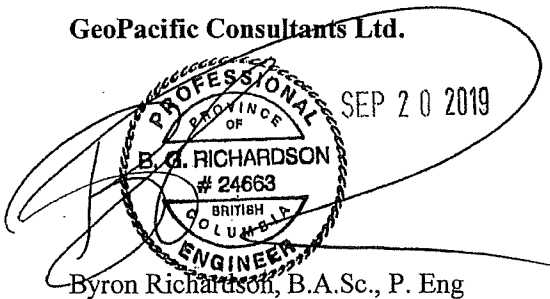
**RE: Geotechnical Report for the Proposed Golden Ears Business Park 4
11208 Harris Road, Pitt Meadows B.C.**

We understand that the City of Pitt Meadows would like confirmation that the soil conditions outlined in GeoPacific's Geotechnical report dated June 17, 2015 have not changed since the investigation was completed. The only earthworks that have been carried out on the site since the investigation has been the relocation of the Katzie Slough along Airport Way at the north end. We can confirm that the Geotechnical investigation and report prepared for the proposed development at the address above is still valid.

If you would like further details or would like clarification of any of the above, please do not hesitate to call or contact.

For:

GeoPacific Consultants Ltd.

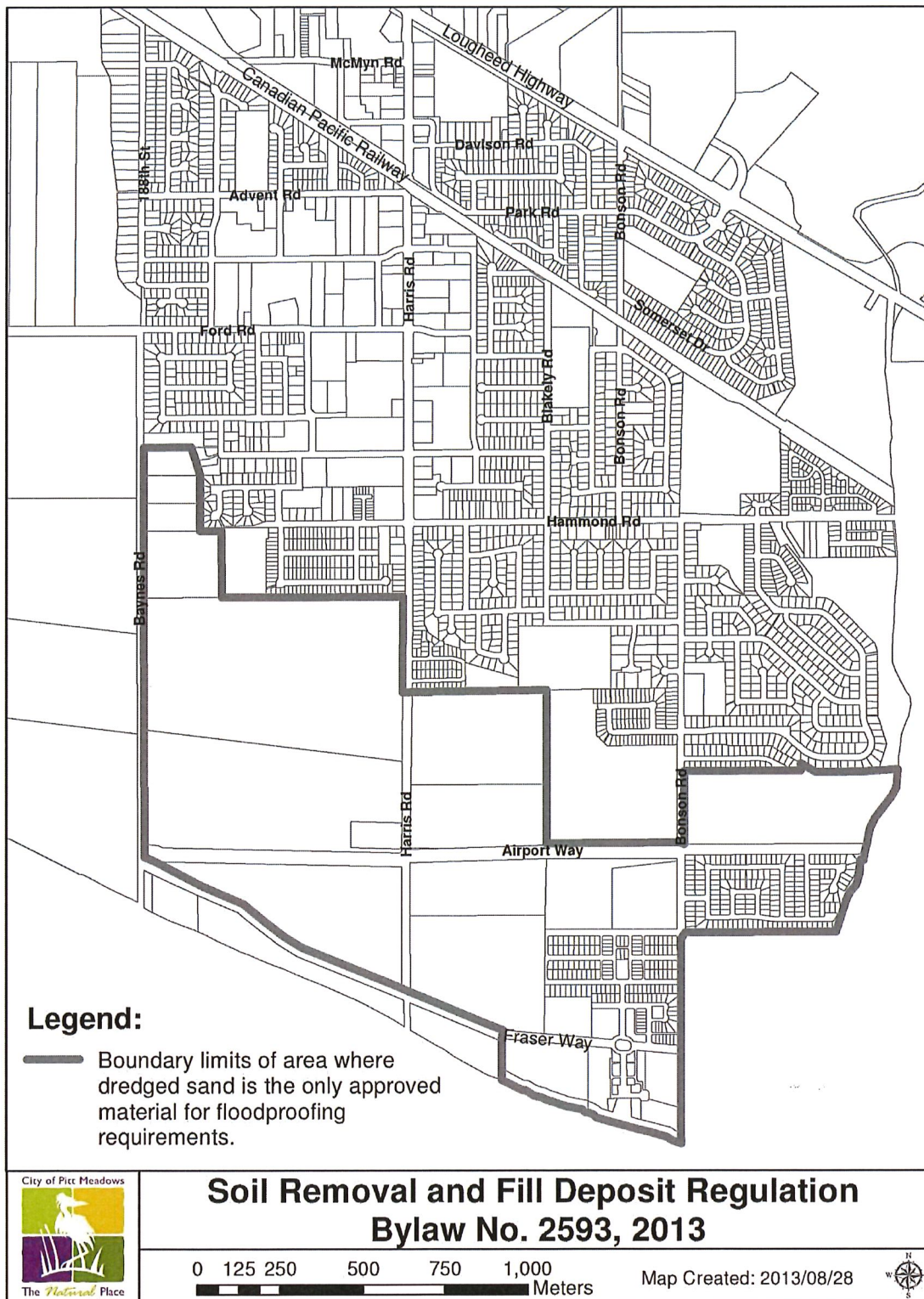


Byron Richardson, B.A.Sc., P. Eng
Senior Project Engineer



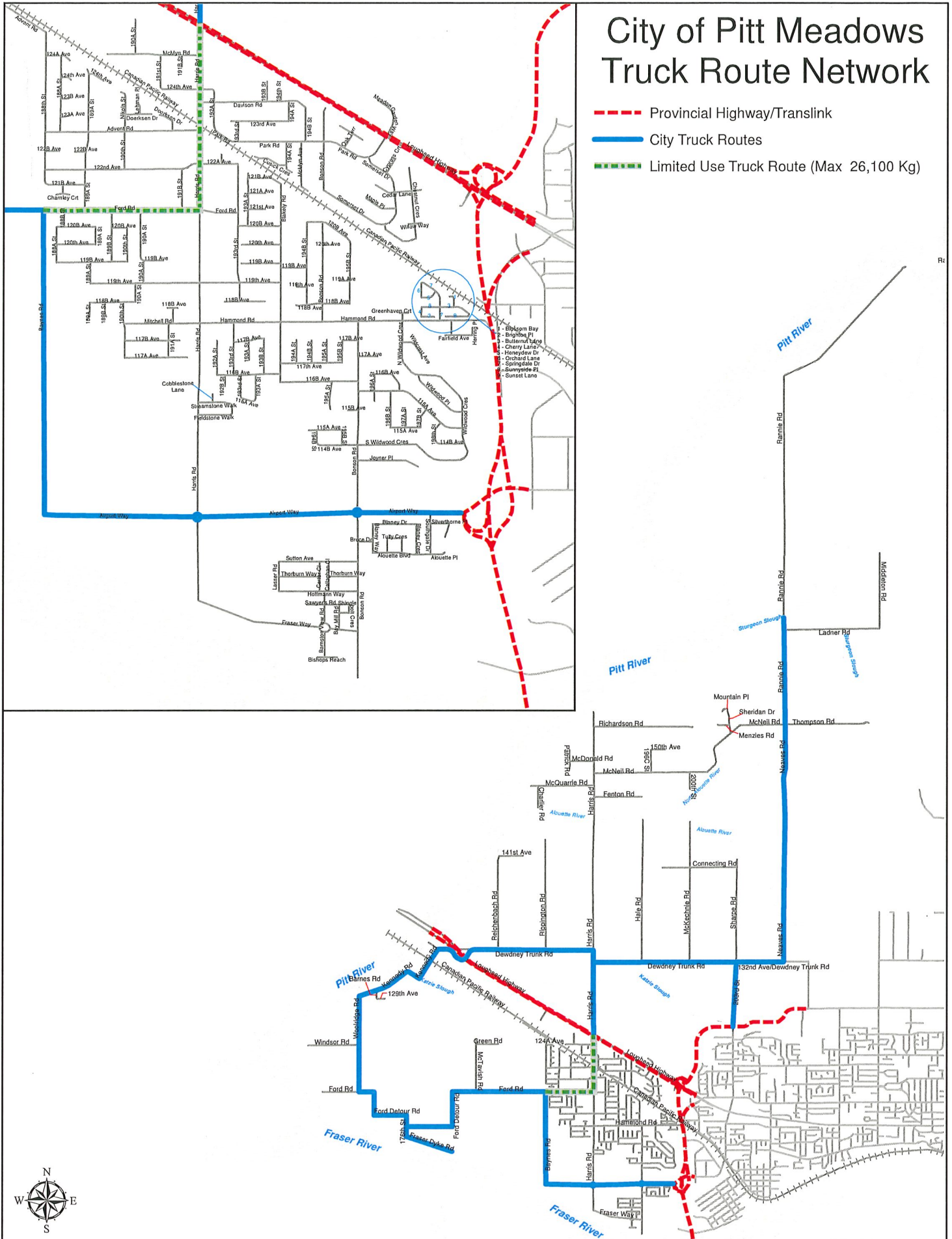
CITY OF PITT MEADOWS
SOIL REMOVAL AND FILL DEPOSIT REGULATION
Bylaw No. 2593, 2013

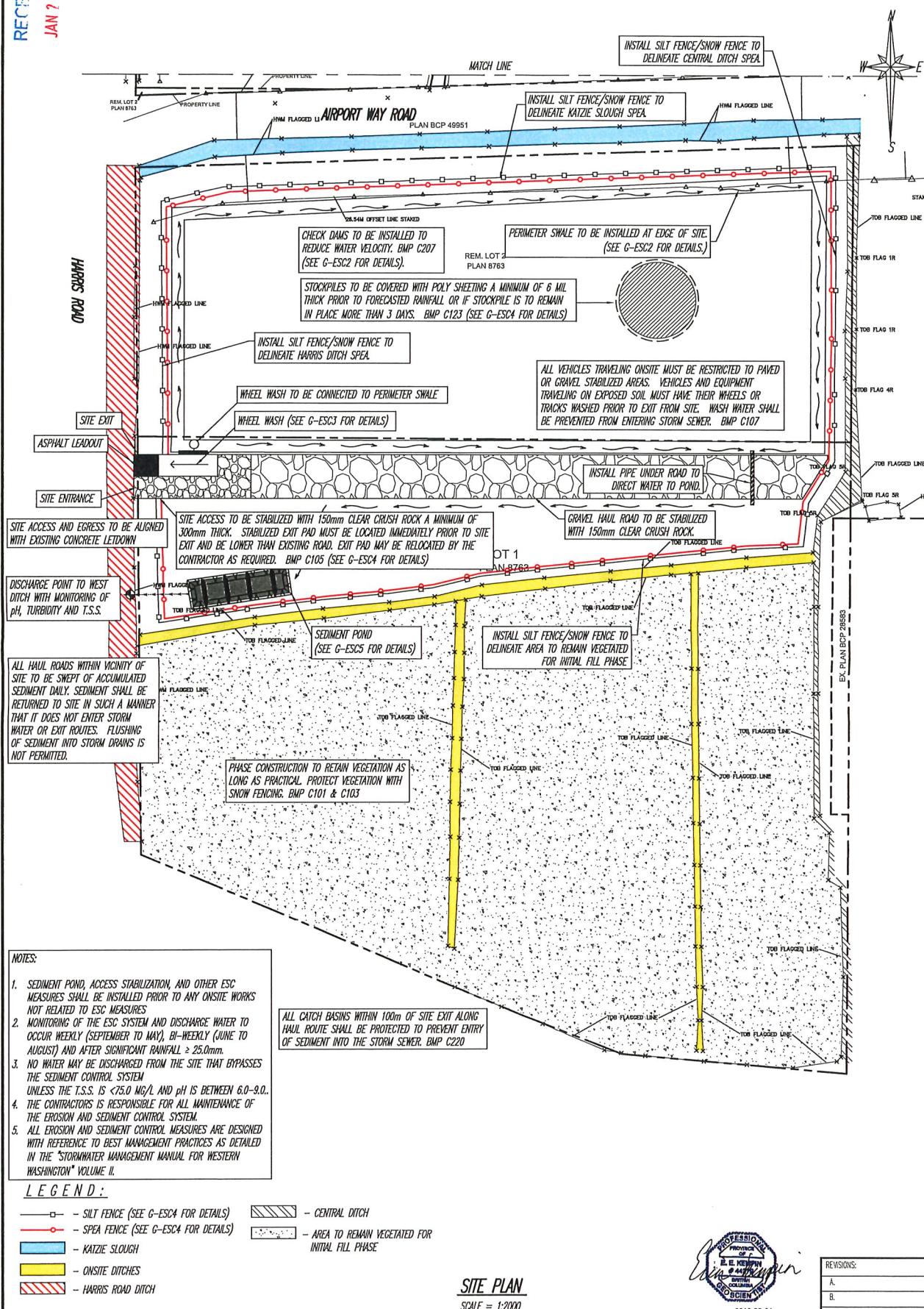
SCHEDULE E



City of Pitt Meadows Truck Route Network

- Provincial Highway/Translink
- City Truck Routes
- Limited Use Truck Route (Max 26,100 Kg)





PEAK SURVEYING
FILE NO.: 1356-01
DATE: AUGUST 27, 2015



GEOPACIFIC
VANCOUVER KAMLOOPS CALGARY

1779 W. 75th Avenue
Vancouver, B.C. V6P 6P2
P 604.439.0922
F 604.439.9189

DATE: <i>FEBRUARY 27, 2018</i>		
DRAWN BY: <i>J.S.</i>	APPROVED BY: <i>E.K.</i>	REVIEWED BY: <i>M.T.L.</i>
SCALE: <i>AS SHOWN</i>		

GOLDEN EARS BUSINESS PARK 4
11208 HARRIS ROAD, PITT MEADOWS, BC

INITIAL PHASE - EROSION & SEDIMENT CONTROL PLAN

REVISIONS:

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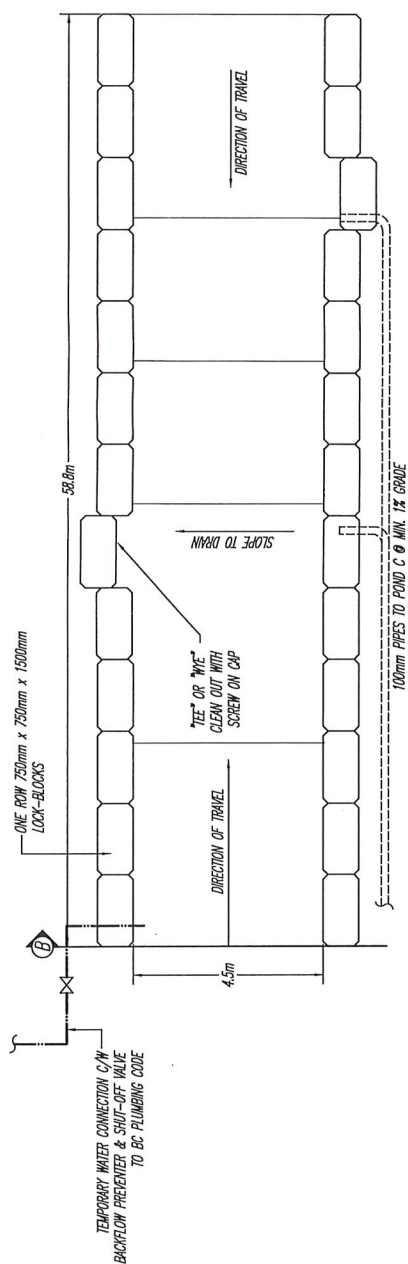
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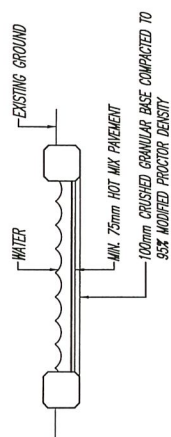
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G-ESC1B

-111-




PLAN
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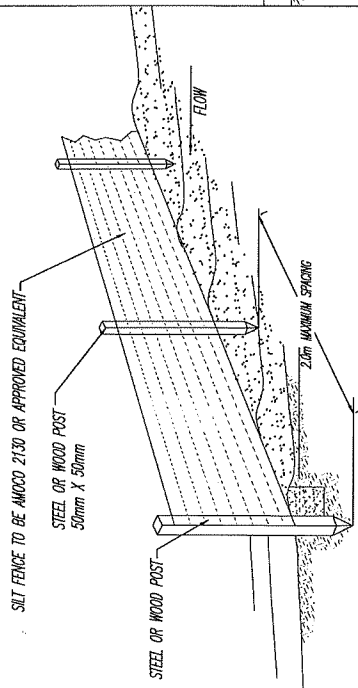


SECTION B
SCALE 1:100

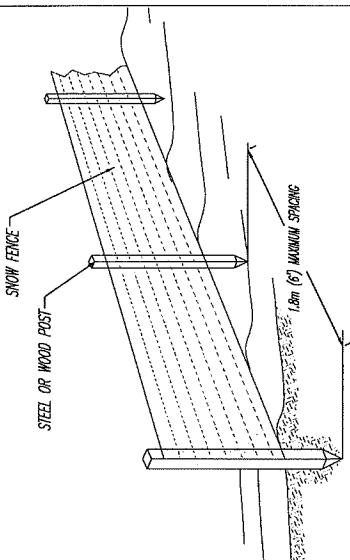
NOTE:

1. ALL LOCK BLOCKS AND JOINTS TO BE GROUTED TO FORM LEAK TIGHT SYSTEM.
2. PROTECT DRAINS BY RECESSING LOCK BLOCKS AT LOW POINTS.
3. CLEAN SEDIMENT AND WATER FROM WHEEL WASH WEEKLY AT MINIMUM SEDIMENT COLLECTING IN WHEEL WASH IS TO BE MONITORED AND CLEANED MORE FREQUENTLY IF REQUIRED.
4. WATER DEPTH TO BE MAINTAINED AT 0.25m DEEP.

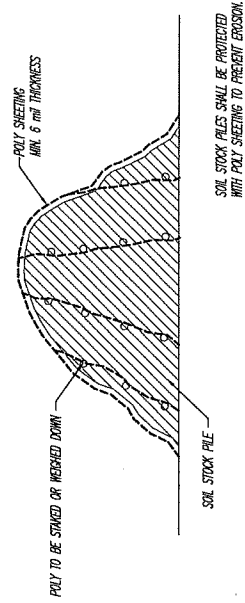
 <p>GEOPACIFIC VANCOUVER LANDSCAPE GALLERY</p> <p>1779 W. 76th Avenue Vancouver, B.C. V6P 4P6 P 604-430-0922 F 604-430-9899</p>	<p>DATE: FEBRUARY 27, 2018</p>		<p>FILE NO.: 11178</p>		<p>REVIEWS:</p> <p>A. _____</p> <p>B. _____</p> <p>C. _____</p>
	<p>DRAWN BY: J.S.</p>	<p>APPROVED BY: E.K.</p>	<p>DWG. NO.: G-ESC3</p>		
	<p>SCALE: AS SHOWN</p>		<p>GOLDEN EARS BUSINESS PARK 4 11208 HARRIS ROAD, PITT MEADOWS, BC EROSION AND SEDIMENT CONTROL DETAILS</p>		



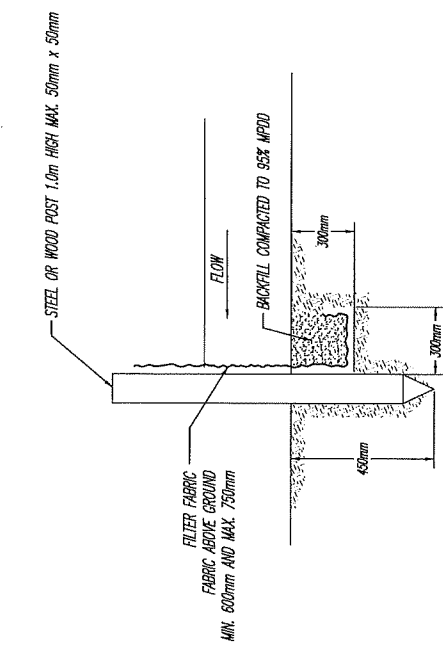
SILT FENCE PROFILE - BMP C233
N.T.S.



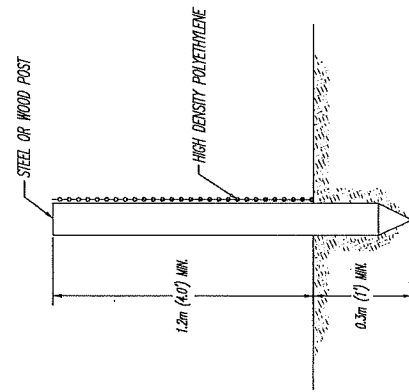
SNOW FENCE PROFILE - BMP C101 & C103
N.T.S.



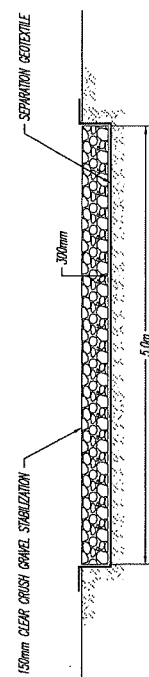
PLASTIC SHEETING - BMP C123
N.T.S.



SILT FENCE DETAIL
N.T.S.



SNOW FENCE DETAIL
N.T.S.



SITE ENTRANCE DETAIL
N.T.S.



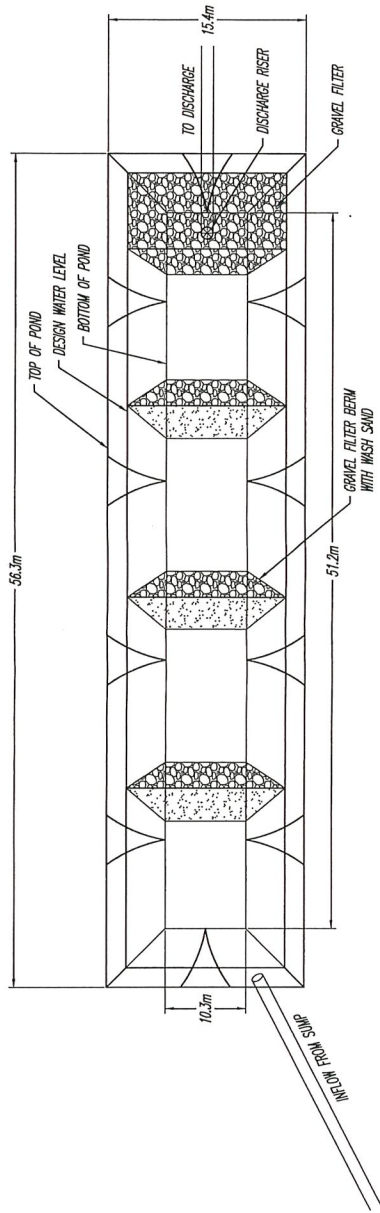
FILE NO.	11178
DWG. NO.	G-ESC4
REVISIONS:	
A.	
B.	
C.	

GOLDEN EARS BUSINESS PARK 4
11208 HARRIS ROAD, PITT MEADOWS, BC
EROSION AND SEDIMENT CONTROL DETAILS

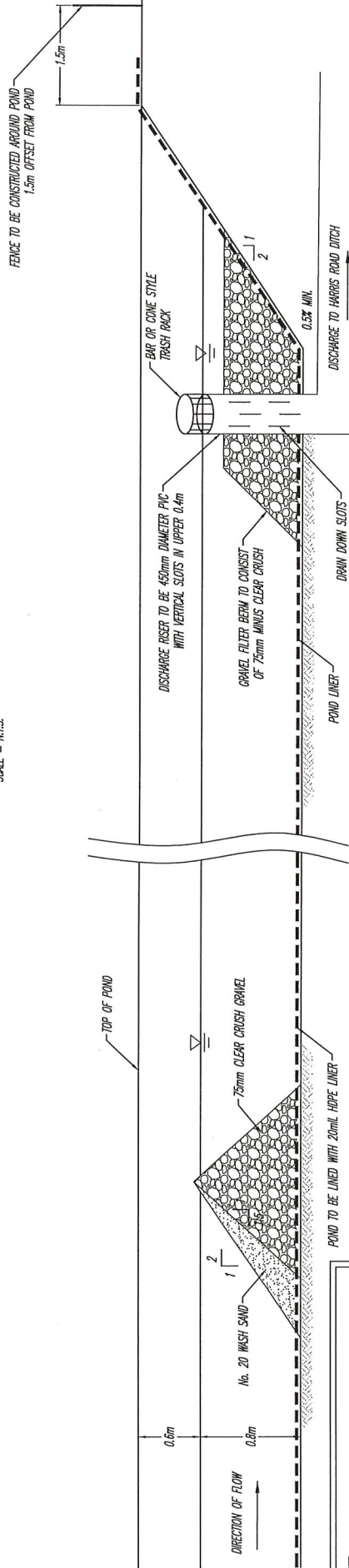
DATE:	FEBRUARY 27, 2018
DRAWN BY:	J.S.
APPROVED BY:	E.K.
REVIEWED BY:	M.T.L.
SCALE:	AS SHOWN

GEOPACIFIC
WATERWAYS & LANDSCAPE CONSULTANTS
1779 W. 25th Avenue
Vancouver, B.C. V6P 1P2
P: 604-453-0928
F: 604-453-0889

REFERENCE:



POND PLAN
SCALE = N.T.S.



SAND CORE FILTER BERM
SCALE = N.T.S.

POND SIZING
FLOW RATE (Q) = $0.21 \text{ m}^3/\text{SEC}$
SETTLING VELOCITY (V_s) = $0.0002 \text{ m}/\text{SEC}$
REQUIRED POND AREA (A_s) = $\frac{Q(1.2)}{V_s}$
= 867 m^2
POND AREA PROVIDED = 867 m^2

FLOW RATE
SYSTEM TO BE SIZED BASED ON THE FOLLOWING FLOW RATE:
RATIONAL METHOD: $Q = CA$
WHERE: Q = PEAK DISCHARGE FLOW RATE
 C = RUNOFF COEFFICIENT
 I = RAINFALL INTENSITY
 A = SITE CATCHMENT AREA
 $Q = 90 \text{ L}/\text{SEC}$ PEAK DISCHARGE FLOW RATE @ $T_c = 2 \text{ hr}$
DF CURVE FOR PITT MEADOWS (ENVIRONMENT CANADA)

GEOPACIFIC VANCOUVER LANDSCAPE ARCHITECTS 1779 W. 25th Avenue Vancouver, B.C. V6P 4P2 P 604.430.0922 F 604.430.9589	DATE: FEBRUARY 27, 2018 DRAWN BY: J.S. APPROVED BY: E.K. SCALE: AS SHOWN	FILE NO.: 11178 DWG. NO.: G-ESC5	REVISIONS: A. B. C.
	GOLDEN EARS BUSINESS PARK 4 11208 HARRIS ROAD, PITT MEADOWS, BC EROSION & SEDIMENT CONTROL DETAILS		

EROSION SEDIMENT CONTROL CRITERIA

1. SEDIMENT CONTROL

1.1 Under this plan, all persons including but not limited to the developer, project owner, the engineer of record, ESC supervisor, civil contractor, civil subcontractor, builder, & building sub trades herein after referred to as the owner/developer/person responsible; engaged on site shall comply with regulatory criteria as specified in the CEM.

1.2 In accordance with City of Pitt Meadows, Drainage protection Bylaw 2266, 2007 and Subdivision and Development Bylaw No. 2389, 2013, the ESC permit of which this plan forms part thereof; deems the permit holder ultimately responsible for all site activities that result in a breach of compliance with the Bylaw, for the duration of the permit.

1.3 No person shall obstruct or impede the flow of the Drainage System, store, transport or dispose of any waste or deleterious substance (including sediment) in such a manner, so as to permit the likely escape of the materials into the drainage system or release directly or indirectly deleterious substance into the drainage system.

1.4 No person shall cause or permit to be released, directly or indirectly into the Drainage system any sediment, earth, construction or excavation wastes, cement, concrete, or other substances, which when mixed with water, will result in a pH value outside of the ranges of 6.0-9.0; or a discharge exceeding a total suspended solids level of 75mg/L.

2. INSPECTION

2.1 Once the erosion and sediment control works have been completed, and before the start of any other on-site construction, the erosion and sediment control works shall be inspected and signed off by GeoPacific Consultants Ltd. to ensure that they are installed and constructed in accordance with the approved drawings. Any deficiencies in the sediment control works shall be corrected, before proceeding with any other on-site constructions.

2.2 Throughout the duration of the project, weekly and significant rainfall inspections shall occur to ensure component parts of the erosion and sediment control works are functioning properly. Reports shall include a review of ESC Facilities implemented and any deficiencies observed, maintenance undertaken or recommendations of adaptive measures to ensure compliance with approved ESC Plan.

3. MONITORING AND SAMPLING

Water samples shall be collected under the direction of a Qualified Environmental Professional (QEP) at the discharge points for the sediment control works as specified on the ESC Plan. Discharge water Total Suspended Solids (TSS) not to exceed 75 mg/L and to have a pH between 6.0 – 9.0 at discharge point to any watercourse.

3.1. Samples for discharge points will be submitted for laboratory analysis if field testing results exceed the trigger value of 65 nephelometric turbidity units (NTU) or at the discretion of the QEP. All samples requiring laboratory analysis shall be collected and sent to a laboratory for TSS analysis.

3.2. If during on construction work, any waste, deleterious substance, or water that exceeds limits of pH 6.0 – 9.0 or TSS above 75 mg/L is being released directly or indirectly into the drainage system the Developer and/or Contractor performing the work must immediately notify the QEP.

3.3. Water samples shall be taken at the discharge point for the sediment control works:

3.3.1. Weekly during the wet season (Sept – May)

3.3.2. Bi-weekly during the dry season (June – August)

3.3.3. During or immediately after a significant rainfall event (SRE) (>25 mm in 24 hours). Additional monitoring is not required if the SREs are within 48 hours of each other.

3.4. Monitoring will continue until the site build out is complete and no longer poses a risk to the drainage system or the QEP no longer deems monitoring necessary. At this stage the ESC facilities may be safely removed.

4. MAINTENANCE

4.1 Should any part of the sediment control works become damaged or blocked or in any other way not functioning properly, then the Contractor shall take all steps necessary to repair and/or remove such damage, or blockage, or other cause of malfunction in accordance with appropriate best management practice guidance documents and legislation and shall immediately inform the QEP for further direction.

4.2 Accumulated sediment removed during the maintenance of the treatment works, shall be disposed of in such a manner as to prevent its re-entry into the site drainage system, and /or into any storm sewer system or watercourse.

4.3 All storm drains within the vicinity of the truck ramp driveway shall be inspected. Any sediment accumulated by the storm drain inlet protection device shall be removed. The permanent storm water system shall be installed with a shut off valve. The drain protection device shall be cleaned and replaced shall be cleaned and replaced when accumulation of sediment is approximately one third of sediment sock capacity.

5. ENFORCEMENT

5.1 All persons must comply with all municipal, provincial, and federal environmental statutes.

DRAWING LIST:


SITE PLAN-----G-ESC1B

EROSION AND SEDIMENT CONTROL DETAILS-----G-ESC2, G-ESC3, G-ESC4, G-ESC5

ESC CRITERIA-----G-ESC6



2018-03-01

REFERENCE:	 GEOPACIFIC LANDSCAPE ARCHITECTS 4775 W. 10th Avenue Vancouver, BC V6P 6E6 P 604.433.0202 F 604.433.0888	DATE: FEBRUARY 27, 2018	FILE NO: 11178	REVISIONS:
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		DWG. NO.: G-ESC06		