CITY OF SURREY

CITY OF SURREY
Finance Department
Purchasing Section

Tender Documents for:

Elgin Hall Parking Upgrade

Reference No.: 1220-020-2018-001

March 29, 2018

INVITATION TO TENDERERS

Contract: **Elgin Hall Parking Upgrade**

The Owner invites tenders for: The upgrade and expansion of the Elgin Hall parking lot which work includes the installation of drainage system including detention system and new concrete outlet, asphalt paving, parking lot lighting and installation of hard and soft landscaping.

Contract Documents **are available at:** This tender is being issued electronically through the BC Bid website www.bcbid.gov.bc.ca (the BC Bid Website) and the *Owner's* website at www.surrey.ca (the "*Owner's* Website") where any interested party may download the tender documents.

All addenda, or further information, that will form part of this tender will also be issued electronically. It is the responsibility of the Tenderer to check the BC Bid Website and the *Owner's* Website for any addenda.

The *Contract* is based on the MMCD Platinum Edition and the City's Supplementary MMCD (updated July 11, 2016)

Tenders are scheduled to close:

Tender Closing Time: 11:00 AM local time

Tender Closing Date: April 12, 2018

Tenders should be submitted in a sealed package, marked on the outside with "Tenders for Elgin Hall Parking Upgrade" and must be delivered to the *Owner* at the office of:

Richard D. Oppelt, Purchasing Manager, at the following location:
Surrey City Hall
Finance Department – Purchasing Section
Reception/Information Desk, 5th Floor West
13450-104 Avenue, Surrey, B.C. Canada V3T 1V8.

NAME OF *OWNER'S* REPRESENTATIVE: Richard D. Oppelt, Purchasing Manager – purchasing@surrey.ca

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SECTION A

Instructions to Tenderers - Part I

(TO BE READ WITH "INSTRUCTIONS TO TENDERERS - PART II" CONTAINED IN THE EDITION OF THE PUBLICATION "MASTER MUNICIPAL CONSTRUCTION DOCUMENTS" SPECIFIED IN ARTICLE 2.2 BELOW)

Owner: City of Surrey

Contract: Elgin Hall Parking Upgrade

Reference No.: 1220-020-2018-001

1.0 Introduction

1.1 These Instructions apply to and govern the preparation of tenders for this *Contract*. The *Contract* is generally for the following work:

- Installation of storm drainage system including installation of storm detention system.
- Installation of 290m of concrete barrier curb and 2,055m^2 of asphalt pavement.
- Installation of parking lot lighting.
- Onsite hard and soft landscaping.
- Offsite boulevard landscaping along the 142A Street and Crescent Road.

1.2 Direct all inquiries regarding the *Contract*, to:

Richard D. Oppelt, Purchasing Manager

Email Address: purchasing@surrey.ca

2.0 Tender Documents

2.1 The tender documents which a tenderer should review to prepare a tender consist of all of the *Contract Documents* listed in Schedule 1 entitled "Schedule of Contract Documents". Schedule 1 is attached to the Agreement which is included as part of the tender package. The *Contract Documents* include the drawings listed in Schedule 2 to the Agreement, entitled "List of *Contract Drawings*".

2.2 A portion of the *Contract Documents* are included by reference. Copies of these documents have not been included with the tender package. These documents are the Instructions to Tenderers - Part II, General Conditions, Specifications and Standard Detail Drawings. They are those contained in the publication entitled "Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings" and the latest edition (updated July 11, 2016) of "City of Surrey Supplementary Master Municipal Construction Documents- Supplementary General Conditions, Supplementary Specifications, and Supplementary Standard Drawings". Refer to Schedule 1 to the Agreement or, if not specified in Schedule 1, then the applicable edition shall be the most recent edition as of the date of the *Tender Closing Date.* All sections of this publication are by reference included in the *Contract Documents*.

2.3 Any additional information made available to tenderers prior to the *Tender Closing Time* by the *Owner* or representative of the *Owner,* such as geotechnical reports or as-built plans, which is not expressly included in Schedule 1 or Schedule 2 to the Agreement, is not included in the *Contract Documents*. Such additional information is made available only for the assistance of tenderers who must make their own judgment about its reliability, accuracy, completeness and relevance to the *Contract*, and neither the *Owner* nor any representative of the *Owner* gives any guarantee or representation that the additional information is reliable, accurate, complete or relevant.

3.0 Submission of Tenders

3.1 Tenders should be submitted in a sealed envelope, marked on the outside with the above *Contract* Title and Reference No., and must be received at the Surrey City Hall, Finance Department, Purchasing Section, 5th Floor West, Main Reception Desk, 13450-104 Avenue, Surrey, B.C. Canada V3T 1V8:

on or before:

Tender Closing Time: 11:00 a.m. local time
Tender Closing Date: April 12, 2018

3.2 Late tenders will not be accepted or considered, and will be returned unopened.

4.0 Additional Instructions to Tenderers

4.1 In submitting a tender, the tenderer represents and warrants that:

a) prior to submitting the tender, the tenderer has disclosed to the Owner in writing any actual or potential conflict of interest;

b) the tenderer has not and will not offer or provide any gifts or personal benefit to any elected or appointed representative or employee of the Owner;

c) except as disclosed in writing by the tenderer, no elected or appointed representative or employee of the Owner:

i) has any interest in the tenderer by way of ownership or management, or

ii) has or is entitled to have any interest in the Contract or any benefit arising therefrom; and

d) the tenderer has not and will not solicit or lobby any individual elected or appointed representative or employee of the Owner in regard to the award of the Contract.

As a condition precedent to award of Contract, the successful tenderer must have or obtain a business license from the Owner.

4.2 Amendment to 5.1 of the Instructions to Tenderers-Part II, by deleting the first sentence and replacing with:

"A tender should be on the Form of Tender as provided and be signed by the authorized signatory(s) as follows:"

4.3 Amendment to 5.3 of the Instructions to Tenderers - Part II , by deleting the first sentence and replacing with:

A tender should include the following Appendices:

4.4 Amendment to 5.3 of the Instructions to Tenderers - Part II, by adding the following:

5.3.6 Tenderers that do not have an operational base in Lower Mainland, British Columbia, should submit in their tender a memorandum outlining the operational strategy of operating in Lower Mainland.

4.5 Amendment to 15.1 of the Instructions to Tenderers – Part II, by deleting the paragraph after 15.1.3, and replacing with:

In exercising its discretion, the Owner will have regard to the information provided by the tenderer in the Appendices to the Form of Tender as described under IT5.3, and may also have regard to any information obtained by the Owner in evaluating such tender information, any information obtained by the Owner from any other person, firm or corporation relating to their previous experience with the tenderer, as well as the Owner's previous relevant experience, if any, with the tenderer. In exercising this discretion the Owner may consider, but is not limited to, the following criteria in addition to the Tender Price:

a) the proven experience of the tenderer, and any listed subcontractors to do the Work;

b) the tenderer's ability to complete the Work within the Preliminary Construction Schedule including timeliness in completing deficient works;

c) the tenderer's ability to work effectively with the Owner, its consultants and representatives, and the public;

d) the tenderer's ability to manage and do the work effectively using the named superintendent and submitted subcontractors;

e) the tenderer's history on other projects including with respect to quality of work, changes in the work, force account work, and the contract administration costs of the Owner;

f) the nature of any legal proceedings undertaken by the tenderer, or any officer or director of the tenderer directly (or indirectly through another corporation) against the Owner within the last five years of the Invitation to Tender.

In no event shall the Owner be liable for the tenderer's costs of preparing a tender.

4.6 Amendment to 15.0 of the Instructions to Tenderers - Part II, add the following:

15.5 The Owner need not necessarily accept the Tender with the lowest Tender Price, or any Tender, and the Owner reserves the right to reject any and all Tenders at any time, or cancel the ITT process, without further explanation and to accept any Tender the Owner considers to be in any way advantageous to it. The Owner's acceptance of any Tender is contingent on having sufficient funding for the Work and a Contract with the Tenderer.

15.6 The Owner and its representatives, agents, Contract Administrators and advisors will not be liable to any Tenderer for any claims, whether for costs, expenses, losses, damages, or loss of anticipated profits, or for any other matter whatsoever, incurred by a Tenderer in preparing and submitting a Tender, or participating in negotiations for a final Contract, or other activity related to or arising out of this ITT, including in the event the Owner accepts a non-compliant Tender or otherwise breaches the terms of this ITT.

SECTION B

FORM OF TENDER

FOR USE WHEN UNIT PRICES FORM THE BASIS OF PAYMENT - TO BE USED ONLY WITH THE GENERAL CONDITIONS AND OTHER STANDARD DOCUMENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.

Owner: City of Surrey

Contract: Elgin Hall Parking Upgrade

Reference No. 1220-020-2018-001

To *Owner*:

WE, THE UNDERSIGNED:

1.1 have received and carefully reviewed all of the *Contract Documents*, including the Instructions to Tenderers, the specified edition of the "Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings" and the following Addenda:

_____

_____

_____ ;

1.2 have full knowledge of the *Place of the Work*, and the *Work* required; and

1.3 have complied with the Instructions to Tenderers; and

ACCORDINGLY WE HEREBY OFFER

2.1 to perform and complete all of the *Work* and to provide all the labour, equipment and material all as set out in the *Contract Documents*, in strict compliance with the *Contract Documents*; and

2.2 to achieve Substantial Performance of the Work on or before **50 Days**;

2.3 to do the *Work* for the price, which is the sum of the products of the actual quantities incorporated into the *Work* and the appropriate unit prices set out in Appendix 1, the "*Schedule of Quantities and Prices*", plus any lump sums or specific prices and adjustment amounts as provided by the *Contract Documents*. For the purposes of tender comparison, our offer is to complete the *Work* for the "*Tender Price*" as set out on Appendix 1 of this Form of Tender. Our *Tender Price* is based on the estimated quantities listed in the *Schedule of Quantities and Prices*, and excludes *GST*.

WE CONFIRM:

3.1 that we understand and agree that the quantities as listed in the *Schedule of Quantities and Prices* are estimated, and that the actual quantities will vary.

WE CONFIRM:

4.1 that the following appendices are attached to and form a part of this tender:

4.1.1 the appendices as required by paragraph 5.3 of the Instructions to Tenderers – Part II;

4.1.2 the *Bid Security* as required by paragraph 5.2 of the Instructions to Tenderers – Part II; and

4.1.3 the Agreement to Bond – Performance, and Labour and Materials Payment filled and signed.

WE AGREE:

5.1 that this tender will be irrevocable and open for acceptance by the *Owner* for a period of 60 calendar days from the day following the *Tender Closing Date and Time*, even if the tender of another tenderer is accepted by the *Owner*. If within this period the *Owner* delivers a written notice ("*Notice of Award*") by which the *Owner* accepts our tender we will:

5.1.1 within 10 *Days* of receipt of the written *Notice of Award* deliver to the *Owner*:

a) a Performance Bond and a Labour and Material Payment Bond, each in the amount of 50% of the *Contract Price*, covering the performance of the Work including the Contractor's obligations during the Maintenance Period, issued by a surety licensed to carry on the business of suretyship in the province of British Columbia, and in a form acceptable to the Owner;

b) a Baseline Construction Schedule, as provided by GC 4.6.1;

c) a "clearance letter" indicating that the tenderer is in Worksafe BC compliance; and

d) a copy of the insurance policies as specified in SGC 24 indicating that all such insurance coverage is in place and;

5.1.2 within 5 *Days* of receipt of written "*Notice to Proceed*", or such longer time as may be otherwise specified in the *Notice to Proceed*, commence the *Work*; and

5.1.3 sign the *Contract Documents* as required by GC 2.1.2.

WE AGREE:

6.1 that, if we receive written *Notice of Award* of this *Contract* and, contrary to paragraph 5 of this Form of Tender, we:

6.1.1 fail or refuse to deliver the documents as specified by paragraph 5.1.1 of this Form of Tender; or

6.1.2 fail or refuse to commence the *Work* as required by the *Notice to Proceed*,

then such failure or refusal will be deemed to be a refusal by us to enter into the *Contract* and the *Owner* may, on written notice to us, award the *Contract* to another party. We further agree that, as full compensation on account of damages suffered by the *Owner* because of such failure or refusal, the *Bid Security* shall be forfeited to the *Owner*, in an amount equal to the lesser of:

6.1.3 the face value of the *Bid Security*; and

6.1.4 the amount by which our *Tender Price* is less than the amount for which the *Owner* contracts with another party to perform the *Work*.

OUR ADDRESS IS AS FOLLOWS:

_____

_____

_____

Phone: _____

Fax: _____

Attention: _____

This Tender is executed this
_____ day of _____, 20 _____.

Contractor:

_____
(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

_____
(AUTHORIZED SIGNATORY)

_____
(AUTHORIZED SIGNATORY)

See paragraph 5.3.1 of the Instructions to Tenderers – Part II.

All prices and *Quotations* including the *Contract Price* shall include all *Taxes*, but shall not include *GST*. *GST* shall be shown separately.

Reference No.: 1220-020-2018-001

Contract – Elgin Hall Parking Upgrade

Schedule of Quantities and Prices – Summary Sheet

Division	*Title*	*Amount*
Div 01	General Requirements	$
Div 03	Concrete	$
Div 04	Unit Paving	$
Div 26	Electrical	$
Div 31	Earthwork	$
Div 32	Roads and Site Improvements	$
Div 33	Utilities	$
	Tender Price	$
	GST	$
	Tender Price including GST	$

DIV 01		GENERAL REQUIREMENTS				
Item No.	*Section*	*Specification Title*	*Unit*	*Quantity*	*Unit Price*	*Amount*
	01 33 01	**Project Record Documents**				
1.01		Project Record Documents	Incidental	-	-	-
	01 55 00	**Traffic Control, Vehicle Access and Parking**				
1.02	SS 1.5.1	Traffic Control, Vehicle Access and Parking	Lump Sum	1		
	01 57 01	**Environmental Protection / ESC**				
1.03	SS 1.6.1	Environmental Protection	Lump Sum	1		
			Sub-Total		$	

DIV 03		CONCRETE				
Item No.	*Section*	*Specification Title*	*Unit*	*Quantity*	*Unit Price*	*Amount*
	03 30 20	**Concrete Walks, Curb And Gutter**				
3.01	1.4.4	**Concrete Barrier Curb without Gutter** As per MMCD C4	Lineal Metre	290		
3.02	1.4.5	**Concrete Single Ramp Let Down – Integrally 'Charcoal' Coloured. Let-downs to be in Integrally Coloured Concrete to Match 'Charcoal' colour used in plaza concrete.** As per Surrey Standard Drawings SSD-R.26.2	Lump Sum	1		
3.03	1.4.5	**Concrete Single Ramp Let Down at the End of Wheelchair Ramp: Let-downs to be in Integrally Coloured Concrete to Match 'Charcoal' colour used in plaza concrete.** As per Surrey Standard Drawings SSD-R.26.2	Lump Sum	1		
3.04	1.4.5	**Vehicle Rated Decorative Concrete Bands: Integrally coloured 'Charcoal by Solomon Colours' or approved alternate' in 150mm thickness**	Square Metre	18		
3.05	1.4.5	**Concrete Plaza (Pedestrian Rated): Integrally coloured concrete in 'slate grey' by LaFarge Artevia or approved alternate. 100mm thickness required.**	Square Metre	50		
3.06	1.4.5	**Concrete sidewalk restoration, to COS and MMCD Standards**	Lump Sum	1		
			Sub-Total		$	

DIV 04		UNIT PAVING				
Item No.	***Section***	***Specification Title***	***Unit***	***Quantity***	***Unit Price***	***Amount***
	04 00 00	**Unit Paving**				
4.01		**Vehicle Rated Unit Paving (Pacific Slate Series 'Sandalwood') In Herringbone Pattern** Installed as per manufacturer's specifications, in 80mm depth version of product.	Square Metre	114		
4.02		**Pedestrian Rated Unit Paving (Pacific Slate Series 'Sandalwood') In Herringbone Pattern** Installed as per manufacturer's specifications, in 80mm depth version of product.	Square Metre	45		
4.03		**Pedestrian Rated Unit Paving (Pacific Slate Series 'Sandalwood') In Off-set Running Bond Pattern** Installed as per manufacturer's specifications, in 80mm depth version of product.	Square Metre	25		
			Sub-Total		$	

DIV 26		ELECTRICAL				
Item No	***Section***	***Specification Title***	***Unit***	***Quantity***	***Unit Price***	***Amount***
	26 56 01	**Roadway Lighting**				
26.01	1.9.1, 1.9.2	**Parking Lot Lighting**	Lump Sum	1		
			Sub-Total		$	

DIV 31		EARTHWORK				
Item No	*Section*	*Specification Title*	*Unit*	*Quantity*	*Unit Price*	*Amount*
	31 11 01	**Clearing and Grubbing**				
31.01	1.4.1	**Clearing and Grubbing**	Lump Sum	1		
	31 11 41	**Shrub and Tree Preservation**				
31.02	1.3.1	**Preservation of Existing Trees & Shrubs**	Lump Sum	1		
	31 22 01	**Site Grading**				
31.03	1.4.2	**Grading of Landscape Area**	Lump Sum	1		
	31 23 01	**Excavating, Trenching and Backfilling (Underground Utility)**				
31.04	1.10.3	**Over-excavating** Including backfilling	Cubic Metre	50		
	31 24 13	**Roadway Excavation, Embankment and Compaction**				
31.05	1.8.4	**Remove Existing Asphalt**	Lump Sum	1		
31.06	1.8.5	**Common Excavation** Off-Site Disposal or Reuse	Lump Sum	1		
31.07	1.8.9	**Subgrade Preparation**	Lump Sum	1		
31.08	1.8.10	**Replace Unsuitable Subgrade (Optional)** Including imported material	Cubic Metre	100		
			Sub-Total		$	

DIV 32		ROADS AND SITE IMPROVEMENTS				
Item No	*Section*	*Specification Title*	*Unit*	*Quantity*	*Unit Price*	*Amount*
	32 11 16.1	**Granular Sub-Base**				
32.01	1.4.1	**Granular Sub-Base** 75mm minus Crushed, 200mm Thickness Structure within Existing Grass Covered/Vegetated Areas as per Geotechnical Report	Square Metres	765		
	32 11 23	**Granular Base**				
32.02	1.4.1	**Granular Base** 19mm minus Crushed, 150mm Thickness Structure within Existing Aggregate Surfaced Areas as per Geotechnical Report	Square Metres	1710		
32.03	1.4.1	**Granular Base** 19mm minus Crushed, 100mm Thickness Structure within Existing Grass Covered Vegetated Areas as per Geotechnical Report	Square Metres	765		
	32 12 13.1	**Asphalt Tack Coat**				
32.04	1.5.1	**Asphalt Tack Coat**	Square Metres	2055		
	32 12 16	**Hot-Mix Asphalt Concrete Paving**				
32.05	1.5.1, 1.5.2	**Machine Placed Asphalt Pavement** UC #2 – 65mm Thickness within East Parking Area and North Entrance Drive Way	Square Metres	1800		
32.06	1.5.1, 1.5.2	**Machine Placed Asphalt Pavement** UC #2 –75mm Thickness within West Loading Yard and West Entrance Driveway	Square Metres	185		
32.07	1.5.3	**Asphalt Pavement for Sidewalk** Hand-Placed UC #2 - 65 mm Thickness	Square Metres	70		
	32 17 23	**Painted Pavement Markings**				
32.08	1.5.2	**Permanent Painted Pavement Markings**	Lump Sum	1		
	32 91 21	**Topsoil and Finish Grading**				
32.09	1.4.1	Growing Medium: Provide price to supply and install growing medium compliant with a 'Level 2P' mix for planting beds and 'Level 2L' mix for lawn spaces, in compliance with Canadian Landscape Standards and MMCD Speciation's. Depths to be: Trees – per Standards and Specifications Shrub Planting – 450mm depth Lawns – 150mm depth	Cubic Metres	310		
	32 93 01	**Planting of Trees, Shrubs & Ground Cover**				
32.10	1.9.1	**Trees** Trees to be installed as per drawings, to Canadian Landscape Standards and MMCD Specifications. Unit rate includes costs of supply and installation, including straps, stakes, watering bags, and mulch rings (complete).	Each	17		

32.11	1.9.1	**Shrubs** Shrubs are to be installed as per drawings, to Canadian Landscape Standards and MMCD Specifications. Unit rate includes a 50mm thick application of composted bark mulch, to provide complete bed coverage, shrub to shrub (complete).	Lump Sum	1		
32.12	1.9.2	**Structural Soil** Provide price for 10 m3 of structural soil per parking lot island tree, installed to manufacturer's specifications. Supplier to be Premium Soils or approved alternate.	Cubic Metres	40		
	32 92 19	**Hydraulic Seeding**				
32.13	1.8.1	**Hydraulic Seeding** **Price for restoration seed (hydraulic or overseeding in accordance with MMCD Specifications) to 'make good' and transitions at edges where sod terminates at native vegetation to provide continuity of grass lawn spaces.**	Lump Sum	1		
	32 92 23	**Sodding**				
32.14	1.8.2	**Nursery Sod – To be 'All Purpose Sun/Shade Blend' installed to Canadian Landscape Standards and MMCD Specifications.**	Square Metres	310		
		Miscellaneous				
32.15		**Planter: Provide complete price including supply and installation to manufacturer's specifications (complete).**	Each	3		
32.16		**Bike Rack: Provide complete price including supply and installation to manufacturer's specifications (complete).**	Each	1		
32.17		**Bench: Provide complete price including supply and installation to manufacturer's specifications (complete).**	Each	2		
32.18		**Arbor: Provide complete price including supply and installation to manufacturer's specifications (complete). This includes pedestals for structural connections and support. Shop drawing costs are considered incidental to the work.**	Each	1		
32.19		**Steel Inset Letters: Provide complete price including supply and installation to manufacturer's specifications (complete). Price to include 150mm thick nelson studs for epoxied installation within pre-drill sets within concrete (complete). Shop drawing costs are considered incidental to the work.**	Each	17		
32.20		**Parking Lot Fencing – Including Footings: Provide complete price including supply and installation to (complete).**	Lineal Metre	140		
			Sub-Total		$	

DIV 33		UTILITIES				
Item No	*Section*	*Specification Title*	*Unit*	*Quantity*	*Unit Price*	*Amount*
	33 01 30.1	**CCTV Inspection Of Pipelines**				
33.01	1.6.2	**CCTV Pipeline Inspection**	Lineal Metres	125		
	33 01 30.2	**Cleaning of Sewers**				
33.02	1.5.2	**Sewer Cleaning**	Lineal Metres	125		
	33 11 01	**Waterworks**				
33.03		**Hosebib Connections:** Provide price for design-build hose-bib connections to locations identified on landscape plans. Field locations of waterline will be required with new 2" service stub-out, backflow-preventer and pressure reducing valve at each hose-bib (complete).	Lump Sum	1		
	33 40 01	**Storm Sewers**				
33.04	1.6.1, 1.6.2	**Drainage Pipe PVC SDR** 35 250 mm diameter, for depth of main up to 1.95m Native & Imported Backfill	Lineal Metres	70		
33.05	1.6.5	**Catchbasin Lead** 200 mm diameter DR35 PVC – Native & Imported Backfill	Lineal Metres	50		
33.06	1.6.5	**Catchbasin Lead** 150 mm diameter DR35 PVC – Native & Imported Backfill	Lineal Metres	5		
33.07	1.6.9	**Drainage Tie-In** 150mm diameter CB lead into existing 375mm diameter storm sewer	Each	1		
33.08		**Precast Concrete Outlet** 250mm diameter	Each	1		
33.09		**Open Bottom Storm Detention with 8 Infiltration System** As per Civil Details Plan C05	Lump Sum	1		
	33 44 01	**Manholes and Catchbasins**				
33.10	1.5.1.1	**1050mm Manhole** Complete	Each	4		
33.11	1.5.1.1	**1200mm Flow Control Manhole** Complete	Each	1		
33.12	1.5.1.1	**Oil & Sediment Control Device**	Each	1		
33.13	1.5.2	**Catchbasin**	Each	6		
33.14	1.5.3	**Adjust Elevation of Existing Sanitary Manhole Lid at the North Entrance of Parking Lot**	Each	1		
			Sub-Total		$	

Contract - Elgin Hall Parking Upgrade

Indicate Schedule with bar chart with major item descriptions and time.

ACTIVITY	**Time from *Notice to Proceed* in *Days***									
(Insert the following milestone dates)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**
Notice to Proceed										
Substantial Completion										

Tenderer's Initials _____

Contract - Elgin Hall Parking Upgrade

Name: _____

Experience:

Dates: _____

Project Name: _____

Responsibility: _____

References: _____

Dates: _____

Project Name: _____

Responsibility: _____

References: _____

Dates: _____

Project Name: _____

Responsibility: _____

References: _____

Dates: _____

Project Name: _____

Responsibility: _____

References: _____

Dates: _____

Project Name: _____

Responsibility: _____

References: _____

Contract - Elgin Hall Parking Upgrade

PROJECT	OWNER / CONTACT NAME PHONE	WORK DESCRIPTION & YEAR COMPLETED	VALUE ($)
	Owner / Contract _____ Phone ( ) _____		
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	
	Owner / Contract _____ Phone ( ) _____	( ) _____	

Contract - Elgin Hall Parking Upgrade

TENDER DIVISION	TRADE	SUBCONTRACTOR NAME	PHONE NUMBER
03	Concrete		
04	Unit Paving		
26	Electrical		
31	Earth Work (Landscaping)		
32	Roads and Site Improvements		
33	Utilities		

SECTION C

Form of Agreement

BETWEEN *OWNER* AND *CONTRACTOR*

This form of agreement (the "Agreement") is made in duplicate this

_____ day of _____, 20_____.

Contract: **Elgin Hall Parking Upgrade**

Reference No. **1220-020-2018-001**

BETWEEN:

The City of Surrey

(NAME OF OWNER)

(the "*Owner*")

AND:

_____

_____

_____

(NAME AND OFFICE ADDRESS OF CONTRACTOR)

(the "*Contractor*")

The *Owner* and the *Contractor* agree as follows:

Article 1 The Work Start / Completion Dates

1.1 The *Contractor* will perform all *Work* and provide all labour, equipment and material and do all things strictly as required by the *Contract Documents*.

1.2 The *Contractor* will commence the *Work* in accordance with the *Notice to Proceed*. The *Contractor* will proceed with the *Work* diligently, will perform the *Work* generally in accordance with the construction schedules as required by the *Contract Documents* and will achieve *Substantial Performance* of the *Work* on or before **50 *Days*** from the

Notice to Proceed date subject to the provisions of the *Contract Documents* for adjustments to the *Contract Time*.

1.3 Time shall be of the essence of the *Contract.*

Article 2 Contract Documents

2.1 The "*Contract Documents*" consist of the documents listed or referred to in Schedule 1, entitled "Schedule of Contract Documents", which is attached and forms a part of this Agreement, and includes any and all additional and amending documents issued in accordance with the provisions of the *Contract Documents*. All of the *Contract Documents* shall constitute the entire *Contract* between the *Owner* and the *Contractor*.

2.2 The *Contract* supersedes all prior negotiations, representations or agreements, whether written or oral, and the *Contract* may be amended only in strict accordance with the provisions of the *Contract Documents.*

Article 3 Contract Price

3.1 The price for the *Work* ("*Contract Price*") shall be the sum in Canadian dollars of the following

1.1.1 the product of the actual quantities of the items of *Work* listed in the *Schedule of Quantities and Prices* which are incorporated into or made necessary by the *Work* and the unit prices listed in the *Schedule of Quantities and Prices*; plus

1.1.2 all lump sums, if any, as listed in the *Schedule of Quantities and Prices*, for items relating to or incorporated into the *Work*; plus

1.1.3 any adjustments, including any payments owing on account of *Changes* and agreed to *Extra Work*, approved in accordance with the provisions of the *Contract Documents*.

3.2 The *Contract Price* shall be the entire compensation owing to the *Contractor* for the *Work* and this compensation shall cover and include all profit and all costs of supervision, labour, material, equipment, overhead, financing, and all other costs and expenses whatsoever incurred in performing the *Work*.

Article 4 Payment

4.1 Subject to applicable legislation and the provisions of the *Contract Documents*, the *Owner* shall make payments to the *Contractor*.

4.2 At the substantial performance, a holdback will be made from the monthly progress payment to the *Contractor*. The holdback shall be the lesser of $30,000 or 5% of the total *Contract* value including any change orders.

This holdback shall be released upon the submission, by the *Contractor*, of sufficient field data, to the *Contract Administrator*, for the creation of as-constructed drawings. The sufficiency of data will solely be determined by the *Contract Administrator* before instructing the *Owner*, in writing, for the release of this holdback.

Article 5 Rights and Remedies

5.1 The duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

5.2 Except as specifically set out in the *Contract Documents*, no action or failure to act by the *Owner*, *Contract Administrator* or *Contractor* shall constitute a waiver of any of the parties' rights or duties afforded under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach under the *Contract*.

Article 6 Notices

6.1 Communications among the *Owner*, the *Contract Administrator* and the *Contractor*, including all written notices required by the *Contract Documents*, may be delivered by hand, or by fax, or by pre-paid registered mail to the addresses as set out below:

The *Owner*:

City of Surrey- Engineering Department
13450-104 Avenue
Surrey, B.C.
V3T 1V8
Attention: Richard D. Oppelt, Purchasing Manager

The *Contractor*:

Attention:

The *Contract Administrator*:

ISL Engineering & Land Services Ltd.
#201 – 8506 200 Street
Langley, BC
Attention: Steve Verkaik, P.Eng

6.2 A communication or notice that is addressed as above shall be considered to have been received

1.1.4 immediately upon delivery, if delivered by hand; or

1.1.5 after 5 *Days* from date of posting if sent by registered mail.

6.3 The *Owner* or the *Contractor* may, at any time, change its address for notice by giving written notice to the other at the address then applicable. Similarly if the *Contract Administrator* changes its address for notice then the *Owner* will give or cause to be given written notice to the *Contractor.*

Article 7 General

7.1 This *Contract* shall be construed according to the laws of British Columbia.

7.2 The *Contractor* shall not, without the express written consent of the *Owner*, assign this *Contract*, or any portion of this *Contract*.

7.3 The headings included in the *Contract Documents* are for convenience only and do not form part of this *Contract* and will not be used to interpret, define or limit the scope or intent of this *Contract* or any of the provisions of the *Contract Documents*.

7.4 A word in the *Contract Documents* in the singular includes the plural and, in each case, vice versa.

7.5 This agreement shall ensure to the benefit of and be binding upon the parties and their successors, executors, administrators and assigns.

IN WITNESS WHEREOF the parties hereto have executed this Agreement the day and year first written above.

Contractor:

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY) (SIGN & PRINT NAME)

(AUTHORIZED SIGNATORY) (SIGN & PRINT NAME)

Owner:

City of Surrey

(AUTHORIZED SIGNATORY) (SIGN, PRINT NAME & POSITION)

(AUTHORIZED SIGNATORY) (SIGN, PRINT NAME & POSITION)

Schedule 1 Schedule of Contract Documents

The following is an exact and complete list of the *Contract Documents*, as referred to in Article 2.1 of the Agreement.

***NOTE*:** The documents noted with "*" are contained in the "Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings", Platinum edition dated 2009, and the documents noted with "**" are contained in the City of Surrey Supplementary Master Municipal Construction Documents, edition dated January, 2016 (Updated July 11, 2016). All sections of this publication are included in the *Contract Documents*.

8.1 Agreement, including Schedules

8.2 Addenda, if any:

8.3 Supplementary General Conditions, Project;

8.4 Supplementary General Conditions **;

8.5 General Conditions*;

8.6 Supplementary Specifications, Project;

8.7 Supplementary Specifications **;

8.8 Specifications*;

8.9 Supplementary Standard Detail Drawings **;

8.10 Standard Detail Drawings*;

8.11 Executed Form of Tender, including all Appendices, and Form of Agreement;

8.12 Schedule 2 to the Agreement –"List of *Contract Drawings*";

8.13 Instructions To Tenderers - Part I; and

8.14 Instructions to Tenderers - Part II*.

(COMPLETE LISTING OF ALL DRAWINGS, PLANS AND SKETCHES WHICH ARE TO FORM A PART OF THE CONTRACT, OTHER THAN STANDARD DETAIL DRAWINGS AND SUPPLEMENTARY STANDARD DETAIL DRAWINGS.)

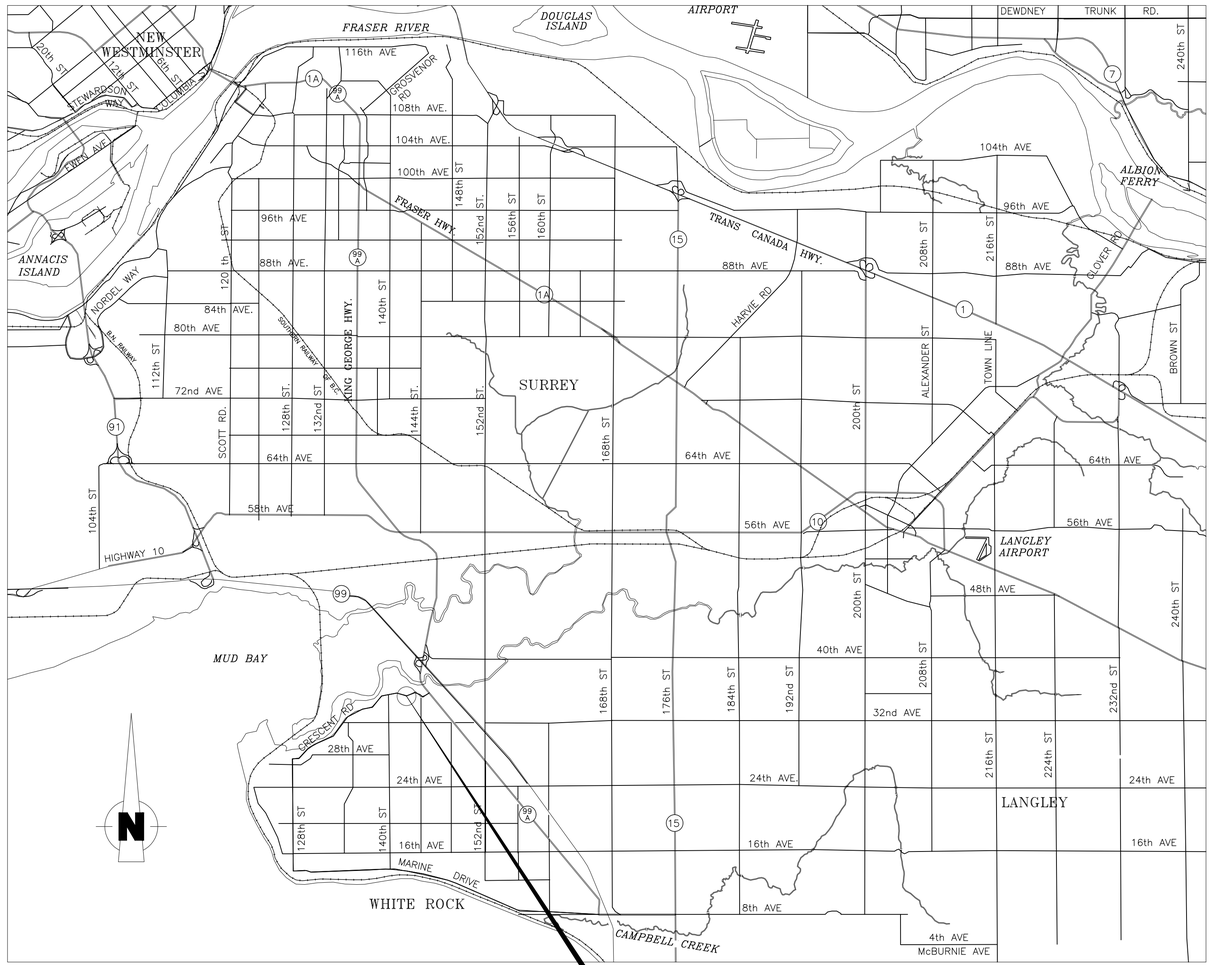
Schedule 2: List of *Contract Drawings*

TITLE	DRAWING NO.	DATE	REVISION NO.	REVISION DATE
CIVIL				
ELGIN HALL PARKING UPGRADE COVER SHEET AND GENERAL NOTES	01 (C01)	--	--	--
ELGIN HALL PARKING UPGRADE GRADING PLAN	02 (C02)	2016.08.24	4	2018.03.26
ELGIN HALL PARKING UPGRADE SERVICING PLAN	03 (C03)	2016.08.24	4	2018.03.26
ELGIN HALL PARKING UPGRADE PARKING LAYOUT	04 (C04)	2016.08.24	4	2018.03.26
ELGIN HALL PARKING UPGRADE DETAIL	05 (C05)	2016.08.24	4	2018.03.26
LIGHTING				
ELGIN HALL PARKING UPGRADE LIGHTING	06 (1)	2016.07.26	2	2018.01.12
LANDSCAPING				
ELGIN HALL PARKING UPGRADE COVER SHEET	07 (L0)	2018.02.14	6	2018.02.14
ELGIN HALL PARKING UPGRADE LANDSCAPE NOTES	08 (L1)	2018.02.14	6	2018.02.14
ELGIN HALL PARKING UPGRADE LANDSCAPE PLAN	09 (L2)	2018.02.14	6	2018.02.14
ELGIN HALL PARKING UPGRADE LANDSCAPE PLAN – WEST	10 (L3)	2018.02.14	6	2018.02.14
ELGIN HALL PARKING UPGRADE LANDSCAPE PLAN – EAST	11 (L4)	2018.02.14	6	2018.02.14
ELGIN HALL PARKING UPGRADE LANDSCAPE PLAN DETAILS	12 (L5)	2018.02.14	6	2018.02.14
ELGIN HALL PARKING UPGRADE LANDSCAPE PLAN DETAILS	13 (L6)	2018.02.14	6	2018.02.14
ELGIN HALL PARKING UPGRADE LANDSCAPE PLAN DETAILS	14 (L7)	2018.02.14	6	2018.02.14

EROSION AND SEDIMENT CONTROL PLAN				
ELGIN HALL PARKING UPGRADE GENERAL NOTES	15 (ESC 01)	2016.07.26	2	2018.03.26
ELGIN HALL PARKING UPGRADE PHASE 1 – SITE PREPARATION, STRIPPING AND GRUBBING	16 (ESC 02)	2016.07.26	2	2018.03.26
ELGIN HALL PARKING UPGRADE PHASE 2 – CIVIL SITE SERVICING AND PARKING LOT CONSTRUCTION	17 (ESC 03)	2016.07.26	2	2018.03.26
ELGIN HALL PARKING UPGRADE PHASE 3 – PAVING AND LANDSCAPING	18 (ESC 04)	2016.07.26	2	2018.03.26
ELGIN HALL PARKING UPGRADE DETAILS	19 (ESC 05)	2016.07.26	2	2018.03.26

ELGIN HALL PARKING UPGRADE

14250 CRESCENT ROAD, SURREY, BC



SITE LOCATION PLAN

SCALE: NTS

DRAWING SCHEDULE

DRAWING	SHEET NUMBER	DRAWING TITLE
CIVIL		
31566_C01	1 OF 19	COVER SHEET AND GENERAL NOTES
31566_C02	2 OF 19	GRADING PLAN
31566_C03	3 OF 19	SITE SERVICING PLAN
31566_C04	4 OF 19	LINE MARKING AND PARKING LAYOUT
31566_C05	5 OF 19	DETAILS
LIGHTING		
31566_06	6 OF 19	LIGHTING
LANDSCAPING		
31566_L00	7 OF 19	LANDSCAPE COVER SHEET
31566_L01	8 OF 19	LANDSCAPE NOTES
31566_L02	9 OF 19	LANDSCAPE PLAN
31566_L03	10 OF 19	LANDSCAPE PLAN - WEST
31566_L04	11 OF 19	LANDSCAPE PLAN - EAST
31566_L05	12 OF 19	LANDSCAPE PLANTING DETAILS
31566_L06	13 OF 19	LANDSCAPE PLANTING DETAILS
31566_L07	14 OF 19	LANDSCAPE PLANTING DETAILS
EROSION AND SEDIMENT CONTROL		
31566_ESC01	15 OF 19	GENERAL NOTES
31566_ESC02	16 OF 19	PHASE 1 - SITE PREPARATION, STRIPPING AND GRUBBING
31566_ESC03	17 OF 19	PHASE 2 - SITE SERVICING AND PARKING LOT CONSTRUCTION
31566_ESC04	18 OF 19	PHASE 3 - PAVING AND LANDSCAPING
31566_ESC05	19 OF 19	DETAILS

GENERAL NOTES APPLICABLE TO ALL CIVIL WORK

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH:

   A. THE LATEST EDITION OF THE BRITISH COLUMBIA BUILDING CODE AND THE BC PLUMBING CODE.
   B. THE MASTER MUNICIPAL CONSTRUCTION DOCUMENT AND STANDARD DETAIL DRAWINGS,LATEST EDITION (PLATINUM EDITION) AND CITY OF SURREY 2016 SUPPLEMENTARY SPECIFICATIONS AND DETAILED DRAWINGS UNLESS OTHERWISE NOTED;
   C. CONSTRUCTION PLANS, ACCEPTED AND SIGNED BY THE CITY OF SURREY;
   D. APPLICABLE CONTRACT DOCUMENTS AND ALL SPECIFICATIONS REFERENCED THEREIN;
   E. MINISTRY OF ENVIRONMENT AND/OR FEDERAL DEPARTMENT OF FISHERIES AND OCEANS;
   F. MINISTRY OF TRANSPORTATION "BC TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS", LATEST EDITION; AND
   G. WORKSAFEBC, LATEST EDITION.

   THE CONTRACTOR SHALL MAINTAIN ON SITE COPIES OF THE ABOVE DOCUMENTS AND SHALL ENSURE THAT ALL SUB CONTRACTORS ARE THOROUGHLY FAMILIAR WITH THE APPLICABLE SECTIONS OF THE DOCUMENTS. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. ALL EXCEPTIONS TO THE ABOVE STANDARDS SHALL BE APROVED IN WRITING BY THE ENGINEER.

2. ALL ELEVATIONS SHOWN ARE GEODETIC.

3. ALL EXISTING UTILITIES ARE SHOWN ACCORDING TO AVAILABLE RECORD DRAWINGS. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE CITY OF SURREY OR ISL ENGINEERING AND LAND SERVICES LTD. AS TO AS FOUND LOCATION, ACCURACY OR OMISSIONS. THE CONTRACTOR SHALL CONTACT THE VARIOUS COMPANIES DIRECTLY FOR INFORMATION AS TO ACTUAL LINE AND SERVICE CONNECTION LOCATIONS. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION, INCLUDING UNDERGROUND POWER AND TELEPHONE SERVICE DUCTS AND SHALL NOTIFY THE ENGINEER OF RECORD A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION OF ANY CONFLICTS. ANY ADDITIONAL WORK REQUIRED AS A RESULT OF FAILING TO PRE-LOCATE KNOWN OR POTENTIAL CONFLICTS WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE.

4. RESTORATION OF EXISTING DRIVEWAYS, CURBS AND WALKWAYS TO CONFORM TO CITY SPECIFICATIONS.

5. EVERY EFFORT IS TO BE MADE TO SAVE EXISTING LANDSCAPING WITHIN THE ROAD R.O.W. LANDSCAPING IS TO BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION.

6. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING STRUCTURES OR SURFACE FEATURES TO ORIGINAL CONDITION OR BETTER FOLLOWING CONSTRUCTION.

7. MANHOLE, CATCH BASIN AND LAWN BASIN RIM ELEVATIONS SHALL BE SET TO MATCH FINISHED GRADE.

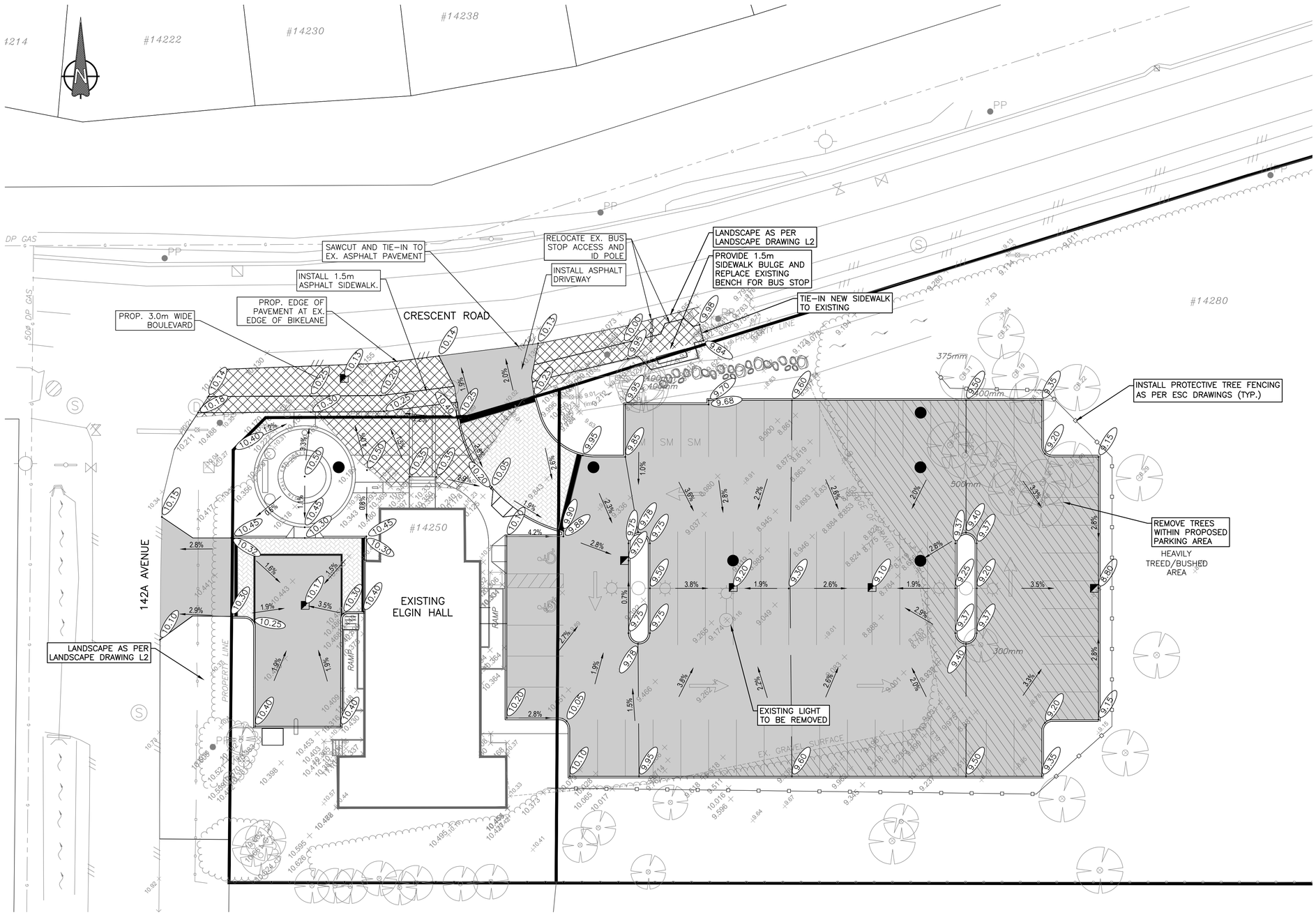
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CITY PERMITS AND TRAFFIC ACCOMODATIONS FOR WORK WITHIN THE CITY ROAD ALLOWANCE.

9. CIVIL WORK TO BE COORDINATED WITH ALL OTHER DISCIPLINES AS REQUIRED. THE CONTRACTOR SHALL COORDINATE WITH GEOTECHNICAL ENGINEER REVIEW AND APPROVE
   A. NATIVE SUBGRADE PRIOR TO FILL PLACEMENT.
   B. FILL MATERIAL PRIOR TO USE.
   C. BACKFILL MATERIAL
   D. PAVEMENT STRUCTURE INCLUDING ROAD BASE AND ASPHALT SURFACE

10. ALL PROPOSED GRADING SHALL MEET EXISTING GROUND ELEVATIONS AT ADJOINING PROPERTY LINES UNLESS OTHERWISE NOTED.

11. CONTRACTOR TO CONTACT ISL ENGINEERING AND LAND SERVICES (604.371.0091) A MINIMUM 24HOURS IN ADVANCE TO ARRANGE FOR INSPECTION PRIOR TO BACKFILLING INSTALLED WORKS.

ISL Engineering and Land Services
#201, 8506 200 STREET, Langley, B.C. V2Y 0M1
T: 604.371-0091 F: 604.371.0098



65mm ASPHALT PAVEMENT
150mm CRUSHED GRANULAR BASE
200mm CRUSHED GRANULAR SUB–BASE

PAVEMENT DETAIL FOR NEW PARKING AREA

NTS

65mm ASPHALT PAVEMENT
150mm CRUSHED GRANULAR BASE
EXISTING GRAVEL

PAVEMENT DETAIL OVER EXISTING GRAVEL

NTS

75mm ASPHALT PAVEMENT
150mm CRUSHED GRANULAR BASE
EXISTING GRAVEL

PAVEMENT DETAIL FOR WEST LOADING YARD

NTS

80mm UNIT PAVING
100mm CRUSHED GRANULAR BASE
200mm CRUSHED GRANULAR SUB–BASE

PAVEMENT DETAIL FOR UNIT PAVING SURFACE

NTS

LEGEND

GRADE	2.0%
EX. ELEVATION	9.596 +
PR. ELEVATION	17.08
CONCRETE BARRIER CURB	
RIDGE LINE	
PR. CATCHBASIN	
PR. MANHOLE LID	
ASPHALT PAVEMENT	
SIDEWALKS	
LANDSCAPING	
NEW PARKING AREA (TREE AND BRUSH REMOVAL REQUIRED)	
EXISTING ASPHALT REMOVAL	
UNIT PAVING	
EDGE OF ASPHALT	
EDGE OF GRAVEL	
EDGE OF VEGETATION	
EX. CATCHBASIN	
EX. VALVE	
EX. SANITARY MANHOLE	S
EX. STORM MANHOLE	D

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LEGAL DESCRIPTION

SURVEY BENCHMARK .
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REV.	DATE	DESCRIPTION	BY
5			
4	MAR 26, 2018	ISSUED FOR TENDER	TJA
3	OCT 13, 2017	ISSUED FOR REVIEW	TJA
2	MAY 02, 2017	ISSUED FOR DRAWING COORDINATION	TJA
1	AUG 24, 2016	ISSUED FOR DEVELOPMENT PERMIT	TJA

"I _____ Professional Engineer, in good standing in and for the Province of British Columbia, hereby certify that the works as herein set out on the attached drawings have been designed to good engineering standards and in accordance with the latest edition of the City Of Surrey Design Criteria Manual, the MMCD, and the City of Surrey Standard Construction Documents (General Conditions, Supplementary Specifications and Supplementary Standard Drawings), adopted by the City of Surrey.

CONSULTANT

ISL Engineering and Land Services
SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT

City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE

ELGIN HALL PARKING UPGRADE
GRADING PLAN

SEAL

SCALE: HOR. 1:200 VERT. 1:200

DESIGNED SJV

DRAWN TJA

REVIEWED SJV

DATE (YYYY.MM.DD) 16-08-24

CONSULTANT PROJ. NO. 31566

DWG. NO. C02

REV. 5

SURREY PROJECT NUMBER .

SURREY DRAWING NUMBER

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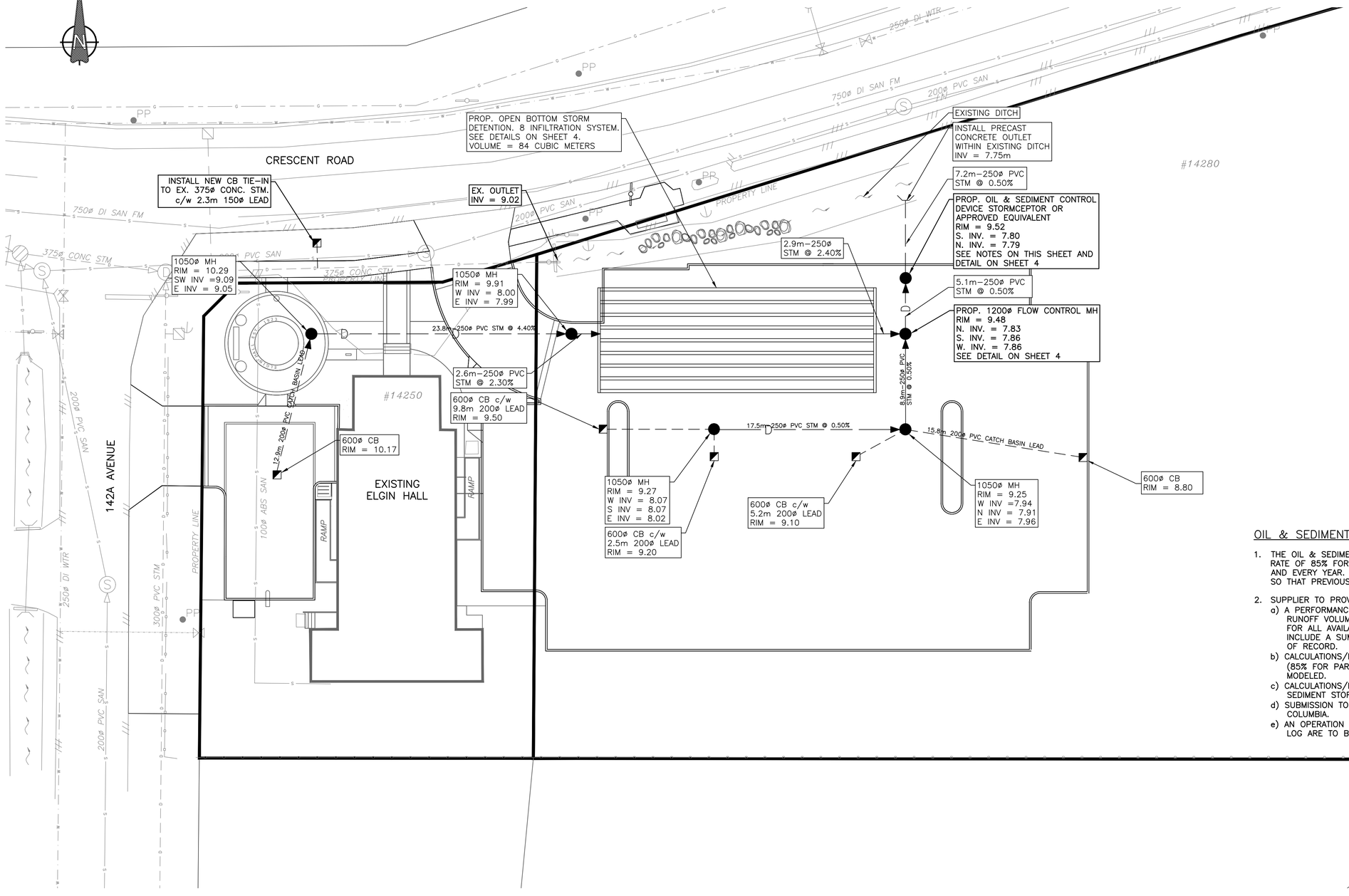

OIL & SEDIMENT CONTROL DEVICE NOTES:

1. THE OIL & SEDIMENT CONTROL DEVICE SHALL HAVE A MIN. ANNUAL TSS REMOVAL RATE OF 85% FOR PARTICLE SIZES 50 MICROMETER AND GREATER FOR EACH AND EVERY YEAR. DURING HIGH FLOWS THE SYSTEM SHALL INTERNALLY BYPASS SO THAT PREVIOUSLY CAPTURED SEDIMENT IS SEPARATED FROM THE HIGH FLOW.

2. SUPPLIER TO PROVIDE:
   a) A PERFORMANCE TABLE SHOWING AVERAGE ANNUAL REMOVAL RATES, TOTAL RUNOFF VOLUMES, TREATED VOLUMES AND SEDIMENT DEPOSITION VOLUMES FOR ALL AVAILABLE YEARS OF LOCAL METEOROLOGICAL RAINFALL DATA. INCLUDE A SUMMARY OF TOTAL RUNOFF VOLUME TREATED OVER THE PERIOD OF RECORD.
   b) CALCULATIONS/INFORMATION SHOWING HOW AVERAGE ANNUAL REMOVAL RATES (85% FOR PARTICLE SIZES 50 MICROMETER OR GREATER) WERE ACHIEVED OR MODELED.
   c) CALCULATIONS/INFORMATION DEMONSTRATING HOW THE ONE YEAR OF SEDIMENT STORAGE CAPACITY WAS DERIVED.
   d) SUBMISSION TO BE SIGNED AND SEALED BY ENGINEER REGISTERED IN BRITISH COLUMBIA.
   e) AN OPERATION AND MAINTENANCE (O&M) MANUAL AND SAMPLE MAINTENANCE LOG ARE TO BE PROVIDED TO THE OWNER.

LEGEND

- CATCHBASIN
- MANHOLE LID
- STORM SEWER — D —
- CATCH BASIN LEAD — — —

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LEGAL DESCRIPTION

SURVEY BENCHMARK . .

REV.	DATE	DESCRIPTION	BY
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2	MAY 02, 2017	ISSUED FOR DRAWING COORDINATION	TJA
1	AUGUST 24, 2016	ISSUED FOR DEVELOPMENT PERMIT	SJV

"I _____ Professional Engineer, in good standing in and for the Province of British Columbia, hereby certify that the works as herein set out on the attached drawings have been designed to good engineering standards and in accordance with the latest edition of the City Of Surrey Design Criteria Manual, the MMCD, and the City of Surrey Standard Construction Documents (General Conditions, Supplementary Specifications and Supplementary Standard Drawings), adopted by the City of Surrey.

CONSULTANT

ISL Engineering and Land Services
SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT

City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE

ELGIN HALL PARKING UPGRADE
SITE SERVICING PLAN

SEAL

SCALE: HOR. 1:200 VERT. 1:200

DESIGNED SJV

DRAWN TA

REVIEWED SJV

DATE (YYYY.MM.DD) 16-08-24

CONSULTANT PROJ. NO. 31566

DWG. NO. C03

REV. 5

SURREY PROJECT NUMBER .

SURREY DRAWING NUMBER

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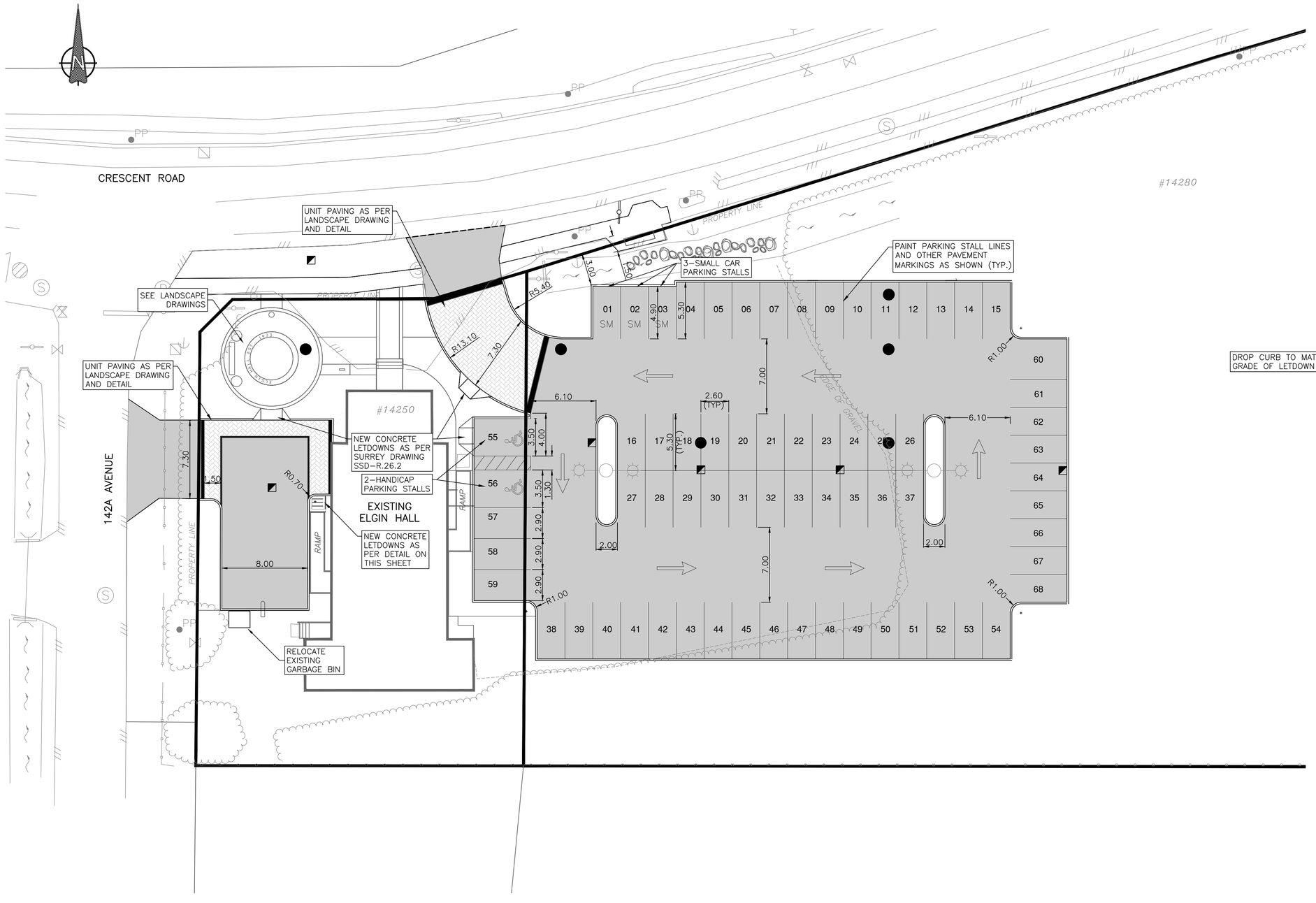

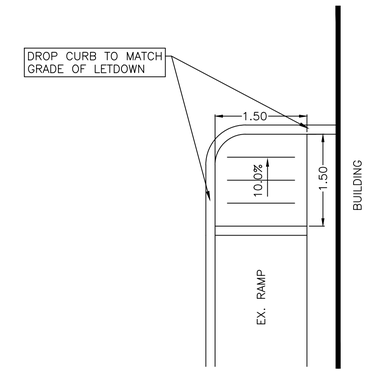

CONCRETE LETDOWN DETAIL
NTS

LEGEND

- CONCRETE BARIER CURB
- CATCHBASIN
- MANHOLE LID
- ASPHALT PAVEMENT
- UNIT PAVING
- EX. GRAVEL
- EX. VEGETATION
- EX. EDGE OF ASPHALT
- TRAFFIC FLOW ARROW

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LEGAL DESCRIPTION

SURVEY BENCHMARK .

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3	OCT 13, 2017	ISSUED FOR REVIEW	TJA
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1	AUGUST 24, 2016	ISSUED FOR DEVELOPMENT PERMIT	SJV

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CONSULTANT

ISL Engineering and Land Services
SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT: City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE: ELGIN HALL PARKING UPGRADE
LINE MARKING AND PARKING LAYOUT

SEAL

SCALE: HOR. 1:200 VERT. 1:200

DESIGNED SJV
DRAWN TA
REVIEWED SJV

DATE (YYYY.MM.DD) 16-08-24
CONSULTANT PROJ. NO. 31566
DWG. NO. C04
REV. 5

SURREY PROJECT NUMBER .
SURREY DRAWING NUMBER

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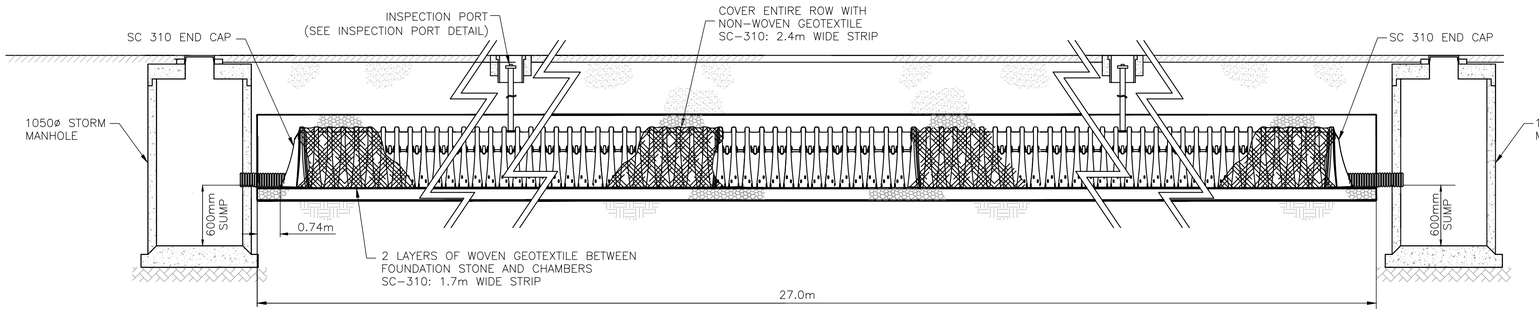
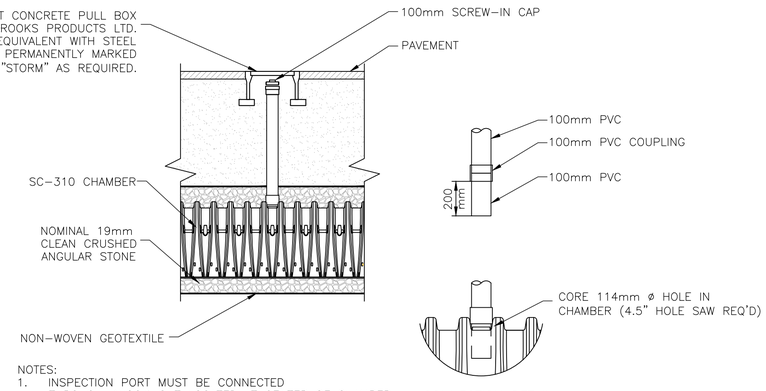


ISOLATOR ROW PROFILE (ON SITE SYSTEM)

SCALE: NTS



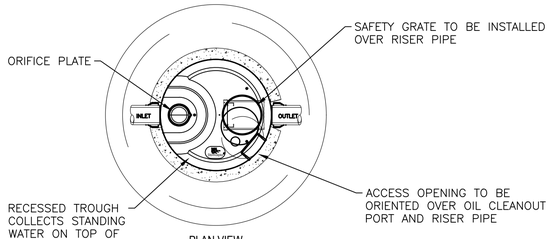
NOTES:
1. INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.

CONNECTION DETAIL

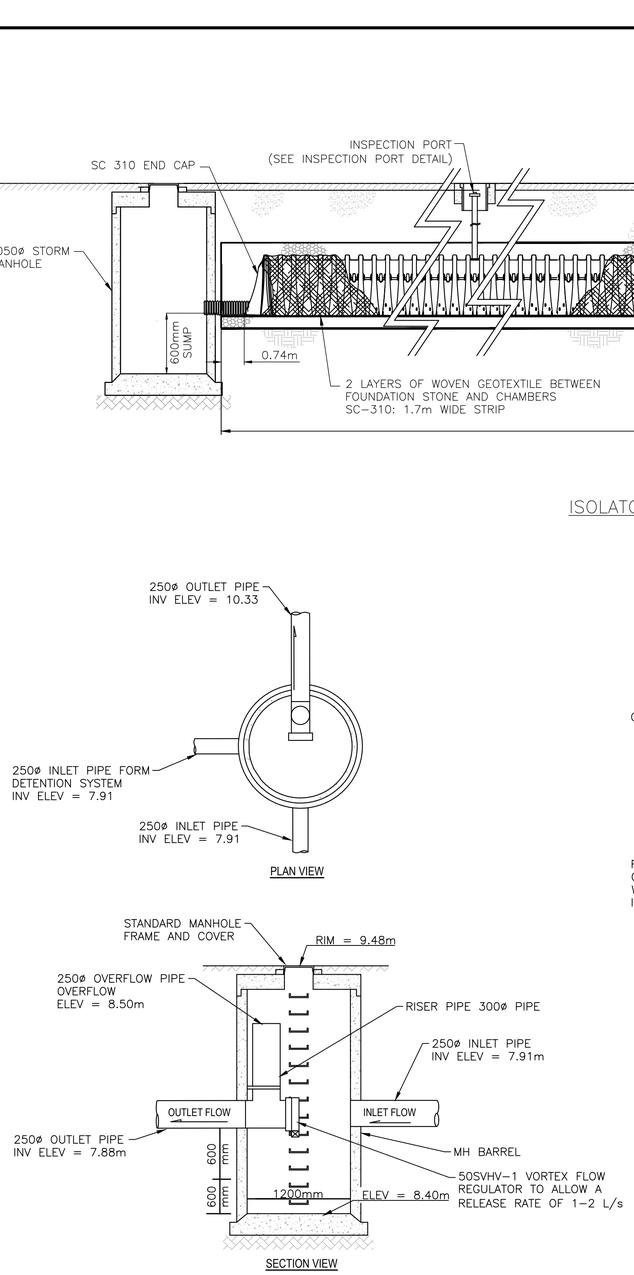
INSPECTION PORT DETAIL

SCALE: NTS

PLAN VIEW



PLAN VIEW



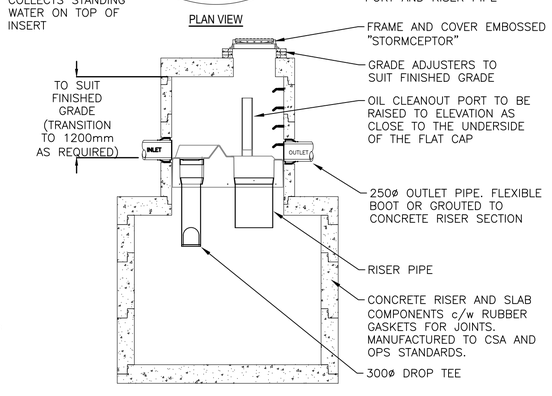
SECTION VIEW

DMH 2

STORM FLOW CONTROL MANHOLE

SCALE: NTS

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF CONTROL MANHOLE FOR APPROVAL PRIOR TO CONSTRUCTION.

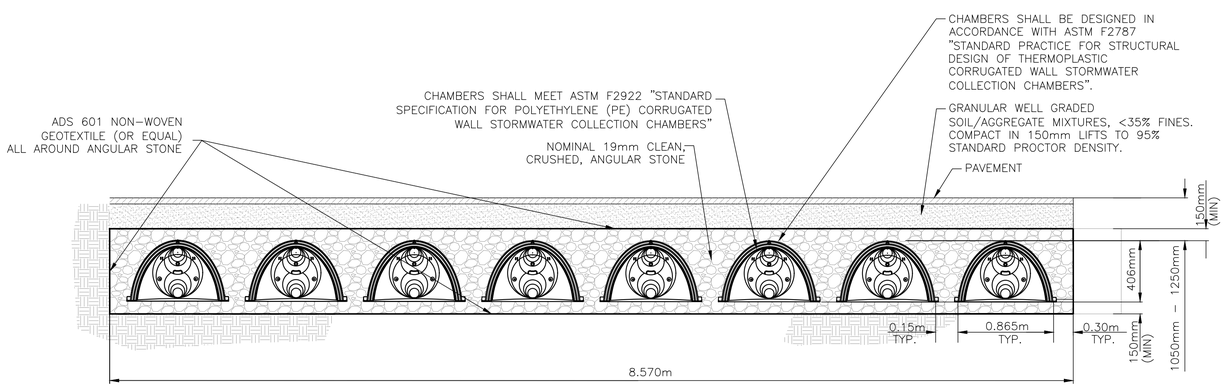


SECTION VIEW

DMH 1

SAMPLE SEDIMENT CONTROL CHAMBER

SCALE: NTS



SC-310 TYPICAL CROSS-SECTION (ON SITE SYSTEM)

SCALE: NTS

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LEGAL DESCRIPTION

SURVEY BENCHMARK .

REV.	DATE	DESCRIPTION	BY
5		=	
4	MAR 26, 2018	ISSUED FOR TENDER	TJA
3	OCT 13, 2017	ISSUED FOR REVIEW	TJA
2	MAY 02, 2017	ISSUED FOR DRAWING COORDINATION	TJA
1	AUG 24, 2016	ISSUED FOR DEVELOPMENT PERMIT	SJV

"I _____ Professional Engineer, in good standing in and for the Province of British Columbia, hereby certify that the works as herein set out on the attached drawings have been designed to good engineering standards and in accordance with the latest edition of the City Of Surrey Design Criteria Manual, the MMCD, and the City of Surrey Standard Construction Documents (General Conditions, Supplementary Specifications and Supplementary Standard Drawings), adopted by the City of Surrey.

CONSULTANT

ISL Engineering and Land Services

SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CLIENT

CITY OF SURREY

City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
DETAILS

SEAL

SCALE: HOR. 1:200
VERT. 1:200

DESIGNED SJV

DRAWN TJA

REVIEWED SJV

DATE (YYYY.MM.DD) 16-08-24

CONSULTANT PROJ. NO. 31566

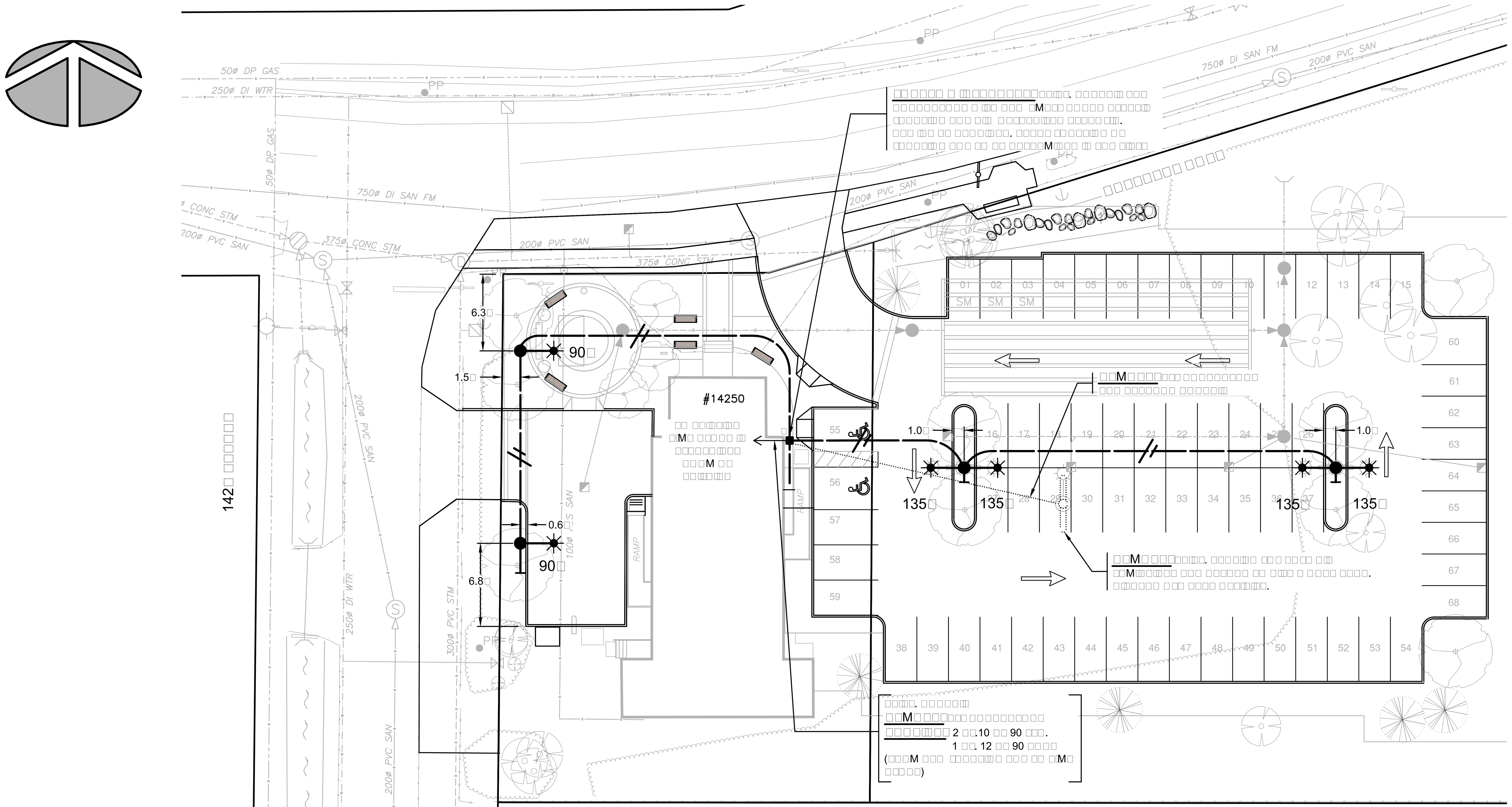
DWG. NO. C05

REV. 4

SURREY PROJECT NUMBER .

SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER



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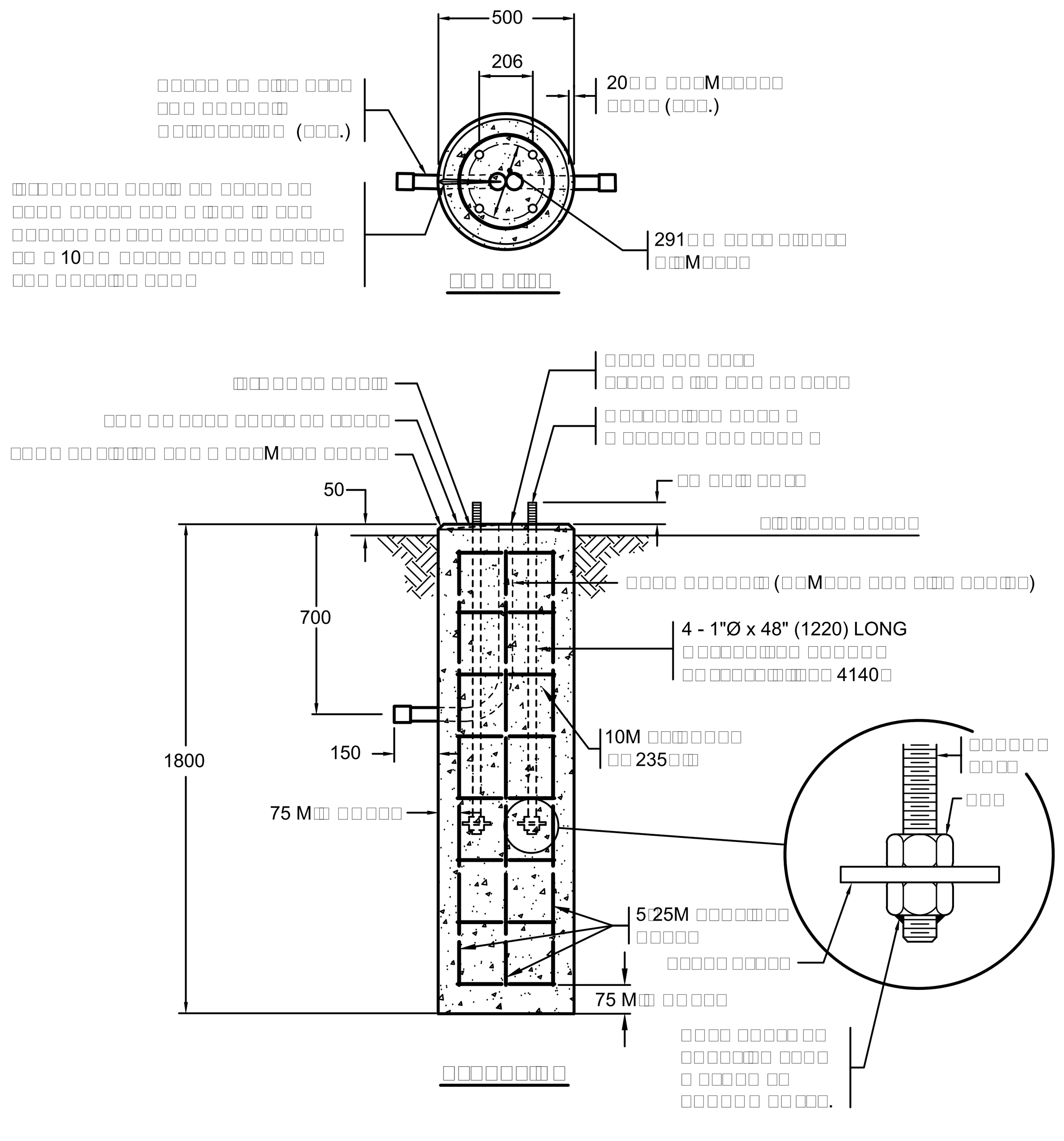

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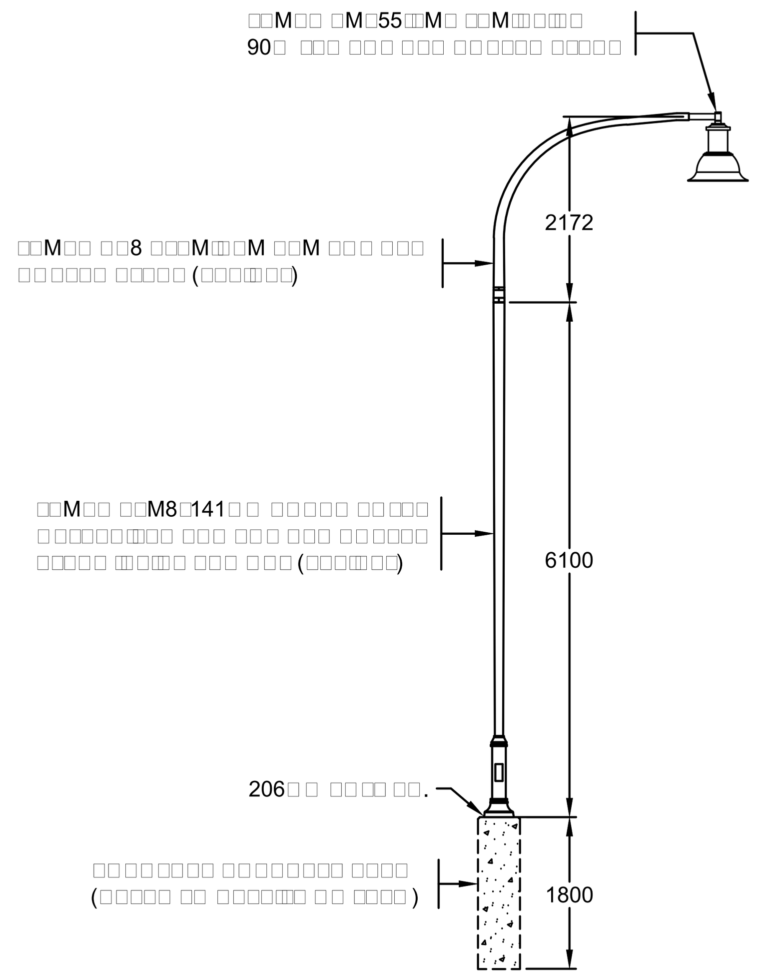

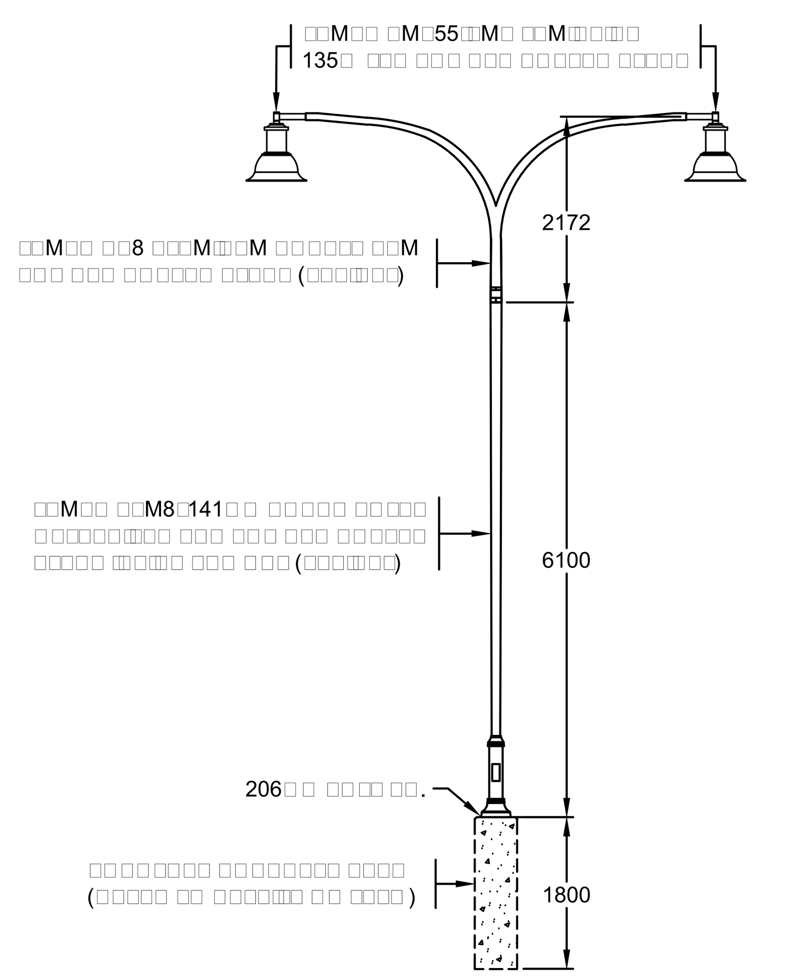

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No.	DATE	REVISION	BY
2	2018 01 12		
1	2016 10 24		
·	2016 08 26		

DMD & Associates Ltd.
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604 589 9012
5445 16 01 01

SEAL

CLIENT
ISL Engineering and Land Services Ltd.
201 – 8506 200 Street, Langley, BC V2Y 0M1 Tel.: 604–530–2288

DRAWING DESCRIPTION
142

DRAWN BY AM
DESIGNED BY RAC
CHECKED BY .

SCALES
HORIZONTAL 1:250
VERTICAL AS NOTED

DATE 2016–07–26
DRAWING No. 1
SHEET 1 OF 1
REV. 2
DESTROY ALL PRINTS BEARING PREVIOUS No.

CITY OF SURREY

THE CITY OF SURREY
TITLE PARKING LOT LTG. – ELGIN HALL 142A AVENUE AND CRESCENT ROAD
SCALE: HOR. 1:250 VER. AS NOTED
SURREY PROJECT No. ·
CHECKED:
SURREY DRAWING No. ·

ELGIN HALL PARKING UPGRADE

SURREY, BC

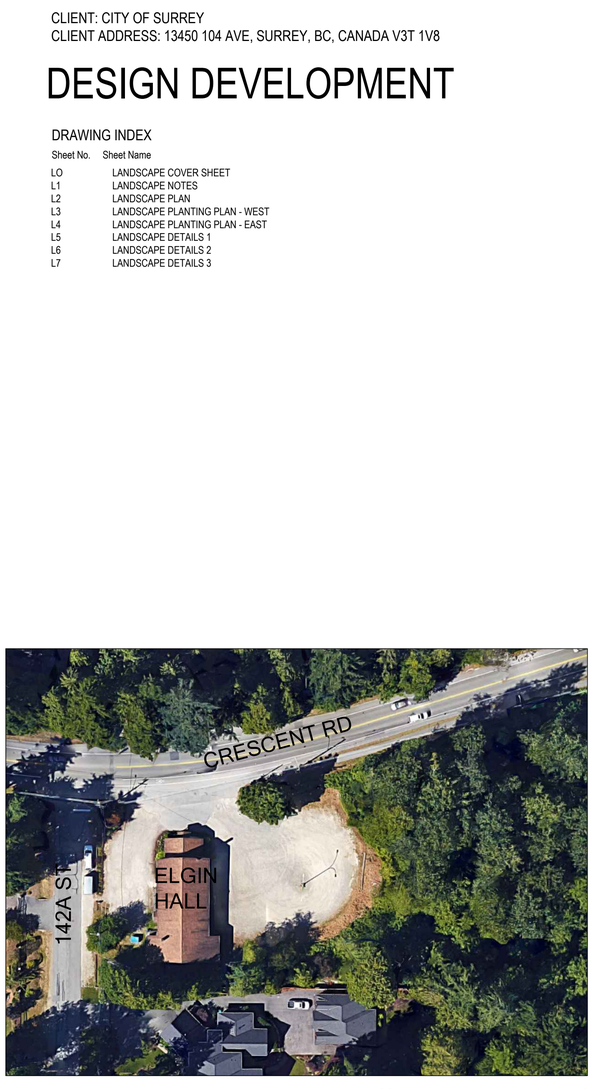
ELGIN HALL ADDRESS: 14250 CRESCENT ROAD, SURREY, BC V4P 1M3

CLIENT: CITY OF SURREY
CLIENT ADDRESS: 13450 104 AVE, SURREY, BC, CANADA V3T 1V8

DESIGN DEVELOPMENT

DRAWING INDEX

Sheet No.	Sheet Name
L0	LANDSCAPE COVER SHEET
L1	LANDSCAPE NOTES
L2	LANDSCAPE PLAN
L3	LANDSCAPE PLANTING PLAN - WEST
L4	LANDSCAPE PLANTING PLAN - EAST
L5	LANDSCAPE DETAILS 1
L6	LANDSCAPE DETAILS 2
L7	LANDSCAPE DETAILS 3



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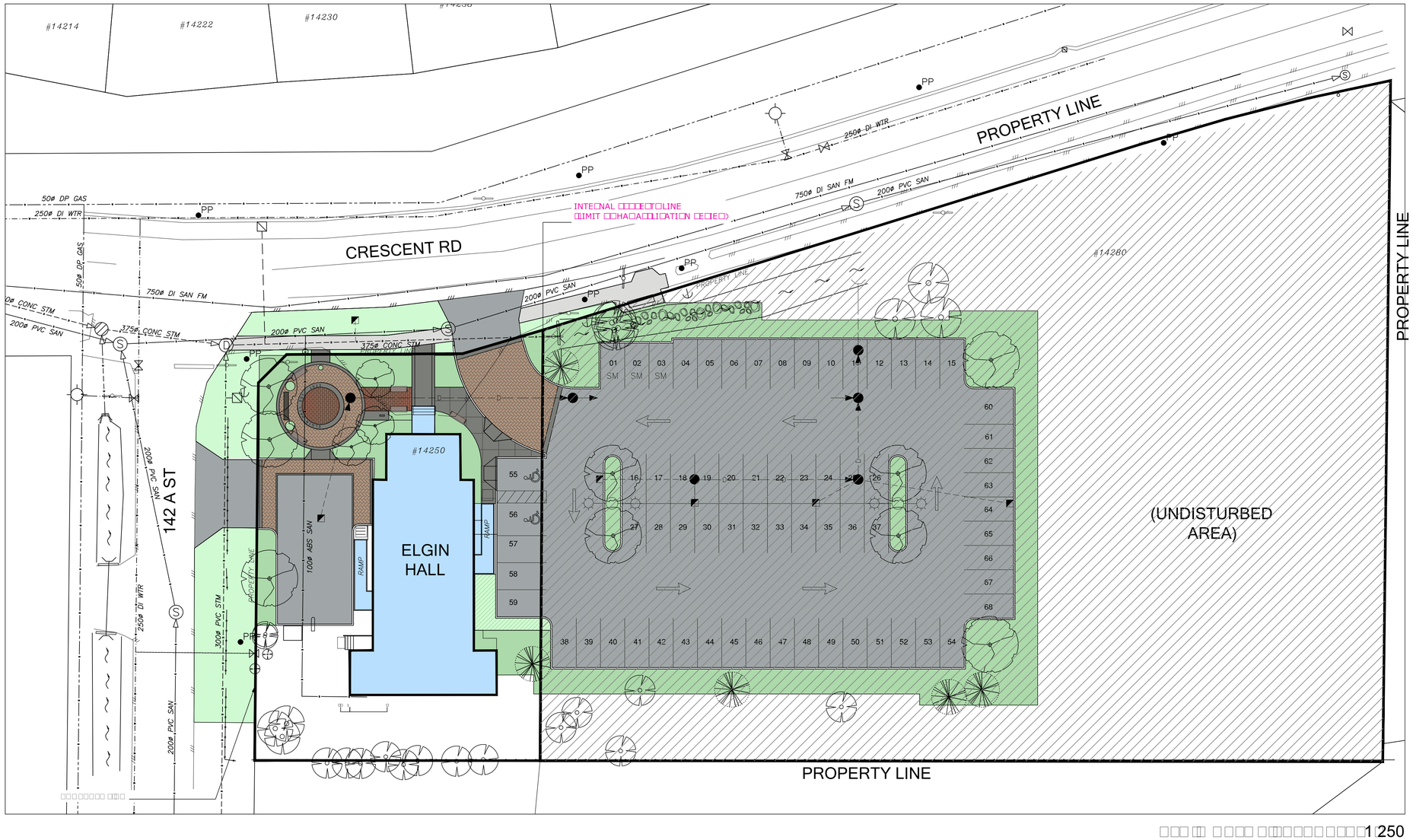

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REV.	DATE	DESCRIPTION	BY
6	FEB 14, 2018	HAP UPDATE	LN

LEGAL DESCRIPTION

SURVEY BENCHMARK

CONSULTANT

ISL Engineering and Land Services
SUITE 301, 20338 - 65 AVENUE
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CLIENT
City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
LANDSCAPE COVER SHEET

SEAL

SCALE: HOR. 1:200 VERT. n/a
DESIGNED JL
DRAWN LN
REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14
CONSULTANT PROJ. NO. 31566
DWG. NO. L0
REV. 6

SURREY PROJECT NUMBER 15-0411
SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER

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LANDSCAPE NOTES TO BIDDERS (CONTRACTORS)

LANDSCAPE NOTES

1.0 GENERAL

.1 CONTRACTOR TO ENSURE DRAWINGS AND SPECIFICATIONS HAVE BEEN REVIEWED (COMPLETE) AND THAT SUB-CONTRACTORS ARE PROVIDED WITH COMPLETE INFORMATION AT TIME OF BIDDING, AND SUBSEQUENT MOBILIZATION UPON AWARD.

.2 CONTRACTOR TO VERIFY ALL UNITS AND QUANTITIES SHOWN.

.3 CONTRACTOR TO IMMEDIATELY NOTIFY CONTRACT ADMINISTRATOR OF ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING WORK. DO NOT COMMENCE WORK UNTIL DISCREPANCY IS CLARIFIED OR RESOLVED.

.4 CONTRACTOR TO IMMEDIATELY NOTIFY CONTRACT ADMINISTRATOR OF ANY SCHEDULE DELAYS IMPOSED BY UNFORESEEN ISSUES. SUBMIT WRITTEN NOTICE.

.5 CONTRACTOR TO PROVIDE A WEEKLY EMAIL SUMMARIZING WORKS COMPLETED IN THE WEEK AND WORKS SCHEDULED FOR THE FOLLOWING WEEK.

.6 CONTRACTOR TO PROVIDE WEEKLY SITE PROGRESS IMAGES TO A DEDICATED CLOUD WEBSITE. A DIGITAL CLOUD STORAGE SITE WILL BE PROVIDED AT CONSTRUCTION START-UP.

.7 CONTRACTOR TO SUBMIT RFI'S THROUGH EMAIL FOR FORMAL RECORD.

.8 CONTRACTOR TO SUBMIT REQUESTS FOR REVIEW BY CONSULTANTS MINIMUM 72HRS IN ADVANCE OF REBAR AND FORM WORKS, ELECTRICAL AND CIVIL ENGINEERING RELATED UTILITY TRENCHING, AND GENERAL PREPARATIONS PRIOR TO LARGE CONCRETE POURS.

.9 CONTRACTOR WILL RECEIVE TWO COPIES OF THE ISSUE FOR CONSTRUCTION DRAWING SET AND A DIGITAL PDF AT THE TIME OF AWARD. MAINTAIN ONE COPY ON SITE IN CLEAN CONDITION, AND MAINTAIN REGULAR SITE NOTES AND REDLINES REGARDING SITE CHANGES ON THE COPY. PROVIDE THE REDLINE DRAWING SET, AND A MARKED UP PDF SET FOR PROJECT RECORDS AT THE TIME OF SUBSTANTIAL COMPLETION. PROVIDE A SUPPORTING DIGITAL SURVEY OF WORK AS CONSTRUCTED. INCLUDE INVERTS AND RIM ELEVATIONS OF ALL STORM INFRASTRUCTURE.THE VALUE OF THE REDLINE SET AND SURVEY WILL BE A $10,000 DEFICIENCY ITEM IF NOT PROVIDED AT THE TIME OF SUBSTANTIAL REVIEW.

.10 INCLUDE A STATUTORY DECLARATION OF PROGRESS PAYMENT AND WCB SUBMITTAL WITH EACH PROGRESS CLAIM. FAILURE TO PROVIDE THESE SUBMITTALS WILL INHIBIT THE CONTRACT ADMINISTRATOR FROM REVIEWING A CLAIM OR PREPARING A PAYMENT CERTIFICATE.

2.0 SCHEDULE

.1 COMPLETE WORK FOR CRITICAL SCHEDULE MILESTONES. FAILURE TO COMPLETE THE MILESTONES MAY TRIGGER THE DAMAGES CLAUSE LISTED IN THE FRONT END OF THE TENDER DOCUMENT.

3.0 WARRANTY

.1 THE PROJECT REQUIRES A ONE YEAR WARRANTY ON ALL HARD AND SOFTSCAPE WORK.

.2 THE WARRANTY PHASE WILL COMMENCE AT THE TIME OF SUBSTANTIAL COMPLETION OF THE TOTAL CONTRACT.

.3 ESTABLISHMENT MAINTENANCE OF SOFT LANDSCAPES IS TO BE PROVIDED THROUGH SUBSTANTIAL COMPLETION UNTIL THE TIME OF FINAL ACCEPTANCE OF THE TOTAL CONTRACT WHEN DEFICIENCIES HAVE BEEN AMENDED TO THE SATISFACTION OF THE OWNER, OR AT THE COMPLETION OF THE LIEN 55 DAY HOLDBACK. WHICHEVER DATE IS THE LONGER OF THE TWO WILL BE USED.

4.0 PERMITS

.1 CONTRACTOR TO PROVIDE PERMITS:

.1 REFER TO CONTRACT DOCUMENTS (TYP).

5.0 FIELD LAYOUT AND SURVEY COORDINATION

.1 SITE LAYOUT TO BE BASED ON TSS (TOTAL STATIONING SURVEY) OR APPROVED EQUAL GPS METHOD TO ENSURE ACCURACY IN LAYOUT.

.2 SITE LAYOUT AND SURVEY FILES CAN BE PROVIDED IN AUTOCAD FORMAT AT THE TIME OF CONSTRUCTION START-UP.

6.0 SITE MOBILIZATION, STAGING, AND SAFETY

.1 PROVIDE MOD-U-LOCK FENCE OR APPROVED EQUAL AROUND THE LIMIT OF CONSTRUCTION AND PROTECT THE SITE AT ALL TIMES FROM PUBLIC ACCESS.

.2 PROVIDE INFORMATION ON INTENDED SITE STORAGE AND STAGING AREA(S) AND HAULING AT CONSTRUCTION START-UP. IF STORAGE OR STAGING AREA(S) ARE TO BE MOVED BETWEEN DIFFERENT PHASES OF WORK, INFORM OWNER AND CONTRACT ADMINISTRATOR AT CONSTRUCTION START-UP WITH MARKED UP PLANS.

.3 PROVIDE PROOF OF A BC-ONE (BC-1) CALL AT THE TIME OF CONSTRUCTION START-UP MEETING.

.4 ENSURE ESC (EROSION AND SEDIMENT CONTROL) MEASURES HAVE BEEN REVIEWED PRIOR TO COMMENCING DEMOLITION OR EXCAVATION WORKS OF THE SITE. AMEND ANY ESC RELATED REQUESTS FROM THE ENVIRONMENTAL ENGINEER IMMEDIATELY. PROVIDE PHOTO PROOF AND EMAIL CONFIRMATION TO THE CONTRACT ADMINISTRATOR AND ENVIRONMENTAL ENGINEER FOR APPROVAL PRIOR COMMENCING WORK.

5. ENSURE TREE PROTECTION FENCING HAS BEEN REVIEWED PRIOR TO COMMENCING WORK.

7.0 SITE CLEANLINESS

.1 MAINTAIN THE SITE IN A CLEAN AND ORDERLY FASHION AND FOLLOWING BEST PRACTICES WITH CURRENT WCB SAFETY REQUIREMENTS.

.2 RECYCLE CARDBOARD AND WASTE MATERIALS AS PER WASTE MANAGEMENT AND DISPOSAL PROCEDURES DEFINED UNDER DIVISION 1 OF THE SPECIFICATIONS.

.3 ENSURE A POWER WASH AND CLEAN-UP HAS BEEN PROVIDED PRIOR TO THE SUBSTANTIAL COMPLETION REVIEW.

.4 ENSURE CLEAN ROADS AND SITE ENTRY/EXIT THROUGH THE ENTIRE COURSE OF CONSTRUCTION. PROVIDE ADDITIONAL CLEANING AS REQUESTED BY THE CONTRACT ADMINISTRATOR.

8.0 HARDSCAPES

.1 GENERAL REQUIREMENTS

.1 ENSURE THAT HARDSCAPES MEET FLUSH WITH ADJOINING SURFACES UNLESS NOTED OTHERWISE.

.2 PROVIDE A MOCK-UP AS PER PROJECT SPECIFICATIONS.

.3 MOCK-UPS TO INCLUDE A SAMPLE OF JOINT QUALITY, INCLUDING ANY FILLERS OR SEALANTS (I.E. SIKAFLEX) SPECIFIED. REFER TO SPECIFICATIONS.

.4 ENSURE JOINT SEALANTS SPECIFIED ARE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.

.5 INSTALL FILLERS (I.E. MORTAR, GROUT) OR SEALANTS A MINIMUM 48 HOURS PRIOR TO REVIEW OF SITE MOCK-UPS TO ENSURE COLOUR IN PRODUCTS HAS SET TO TRUE FINISH.

.6 ENSURE THAT TRENCHING HAS BEEN REVIEWED AND ACCEPTED PRIOR TO BACKFILLING OF MATERIALS.

.7 PROVIDE COPIES OF ELECTRICAL TRENCHING REPORTS AND PLUMBING REPORTS PROVIDED BY BUILDING INSPECTION DEPARTMENT TO THE CONTRACT ADMINISTRATOR AND OWNER.

.8 ENSURE BACKFILL MATERIALS ARE AS PER SPECIFICATIONS.

.9 PROVIDE SIEVE TESTS AND AFFILIATED SUBMITTALS OF ALL SANDS AND BACKFILL MATERIALS FOR APPROVAL PRIOR TO ORDER AND INSTALLATION. REFER TO SPECIFICATIONS.

.10 WHEN MEETING A NEW HARDSURFACE TO AN EXISTING HARD SURFACE, PROVIDE NOTICE TO THE CONTRACT ADMINISTRATOR OF ANY CONDITIONS WHERE THE JOINT WILL RESULT IN MORE THAN A 6MM DIFFERENTIAL (*I.E. A NEW CONCRETE SIDEWALK IS MEETING AGAINST AN EXISTING ASPHALT SIDEWALK THAT HAS A SMALL DEPRESSION*). DO NOT COMMENCE WORK UNTIL THE CONTRACT ADMINISTRATOR HAS CLARIFIED IF RECTIFICATION OF THE EXISTING SURFACE IS NEEDED TO AVOID TRIPPING HAZARD.

.11 CONFIRM DESIGN GRADES HAVE BEEN CHECKED PRIOR TO POURING, LAYING OR INSTALLING ANY HARD SURFACE MATERIALS OVER PREPARED BACKFILL.

.12 REPORT ANY GRADES THAT CONTRADICT BEST CONSTRUCTION PRACTICES IMMEDIATELY TO THE CONTRACT ADMINISTRATOR (*I.E WATER FLOWS TOWARDS A BUILDING OR IS GOING TO PUDDLE IN AN AREA, OR AN AREA OF SURFACE APPEARS FLAT*). DO NOT PROCEED UNTIL SLOPES AND DESIGN HAVE BEEN CLARIFIED.

.13 PROVIDE ANY SURVEY SHOTS OR SPOT GRADE CHECKS AS REQUESTED BY CONTRACT ADMINISTRATOR.

.14 REFER TO CIVIL ENGINEERING DRAWINGS FOR ADDITIONAL HARDSCAPE REQUIREMENTS, AND GEOTECHNICAL REPORT.

.2 CONCRETE PAVING

.1 PROVIDE A MOCK-UP AS NOTED ABOVE.

.2 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

.3 ENSURE ADJOINING CURBS OR BANDS MAINTAIN THE SAME SAW-CUT OR EXPANSION JOINT PATTERNS AS SHOWN IN DESIGN DRAWINGS.

.4 CHALK-LINE ALL SAW-CUTS FOR REVIEW PRIOR TO CUTTING.

.5 IN AREAS WITHOUT CUSTOM SAW-CUT OR EXPANSION JOINT PATTERNING, PROVIDE:

.1 EXPANSION JOINTS MAXIMUM EVERY 9M ON CENTER.

.2 SAW-CUT JOINTS MAXIMUM EVERY 3M ON CENTER.

.3 CONFIRM LOCATIONS WITH CONSULTANT PRIOR TO COMMENCING FORMWORK.

.6 ALL HORIZONTAL FLAT CONCRETE TO HAVE A MEDIUM SANDBLAST FINISH UNLESS NOTED OTHERWISE.

.7 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. CONCRETE TO COMPLY WITH STANDARD DIVISION 3 SPECIFICATIONS FOR MMCD PLATINUM SPECIFICATIONS.

.8 CONCRETE THAT IS REINFORCED MUST BE REVIEWED PRIOR TO POURING. ENSURE REBAR IS 'CHAIRED' AND SUSTAINED IN AN UPRIGHT POSITION.

.9 REFER TO CIVIL ENGINEERING DRAWINGS FOR ADDITIONAL CONCRETE PAVING REQUIREMENTS.

.3 ASPHALT PAVING

.1 PROVIDE A MOCK-UP AS NOTED ABOVE.

.2 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

.3 PROVIDE SUBMITTALS THAT DEMONSTRATE UPPER OR LOWER COURSE MIX TYPE AS SPECIFIED.

.4 ENSURE ASPHALT APPLICATION IS PROVIDED IN A SAFE AND CLEANLY MANNER, SUCH AS TO NOT TRANSFER OR SMEAR BITUMEN THAT COULD POTENTIALLY STAIN THE SITE ELEMENTS.

.4 UNIT PAVING

.1 PROVIDE A MOCK-UP AS NOTED ABOVE.

.2 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

.3 SUBMIT MINIMUM THREE (3) SAMPLES OF EACH UNIT PAVING TYPE SPECIFIED FOR THE PROJECT FOR CONFIRMATION OF COLOUR AND FINISH PRIOR TO COMMENCING MOCK-UP.

.4 CONFIRM PATTERN, ANGLES, START POINTS FOR LAYOUT, AND ANY SOLDIER OR SAILOR COURSE TERMINATION WITH CONSULTANT PRIOR TO COMMENCING MOCK-UP AND SUBSEQUENT WORK.

.5 ENSURE UNIT PAVING TERMINATES IN COMPLETE PIECES. IN INSTANCES WHERE AN ANGLE REQUIRES A CUT OF A PAVER, THE PAVER CANNOT BE REDUCED TO LESS THAN A 50MM X 50MM SIZE. STRONGLY CONSIDER THESE CONDITIONS PRIOR TO COMMENCING LAYOUT.

.6 IMMEDIATELY NOTIFY CONTRACT ADMINISTRATOR IF JOINT SPACING OF MANUFACTURER'S SPECIFICATIONS CONFLICTS WITH DRAWING DETAILS. DO NOT PROCEED WITH WORK UNTIL JOINT SPACING HAS BEEN CLARIFIED.

9.0 WALLS

.1 GENERAL REQUIREMENTS

.1 PROVIDE MOCK-UP FOR REVIEW OF FORM, QUALITY AND FINISH PRIOR TO INSTALLING ADDITIONAL WORK. REFER TO SPECIFICATIONS.

.2 MOCK-UPS TO INCLUDE A SAMPLE OF JOINT QUALITY, INCLUDING ANY FILLERS, EPOXIES OR SEALANTS (I.E. SIKAFLEX) SPECIFIED.

.3 ENSURE JOINT EPOXIES AND SEALANTS SPECIFIED ARE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.

.4 MOCK-UPS TO INCLUDE ANY GEO-GRID OR SUPPORTING ANCHOR SYSTEM REQUIREMENTS. SUBMIT MATERIAL PRODUCT INFORMATION FOR APPROVAL PRIOR TO COMMENCING MOCK-UP.

.5 INSTALL FILLERS (I.E. MORTAR, GROUT) OR SEALANTS A MINIMUM 48 HOURS PRIOR TO REVIEW OF SITE MOCK-UPS TO ENSURE COLOUR IN PRODUCTS HAS SET TO TRUE FINISH.

.6 ENSURE REINFORCING HAS BEEN REVIEWED BY CONSULTANT AND STRUCTURAL ENGINEER. REVIEWER CONTACT WILL BE PROVIDED AT CONSTRUCTION KICK-OFF MEETING.

.7 ENSURE THAT TRENCHING HAS BEEN REVIEWED AND ACCEPTED PRIOR TO BACKFILLING OF MATERIALS.

.8 ENSURE BACKFILL MATERIALS ARE AS PER SPECIFICATIONS.

.9 PROVIDE SIEVE TESTS AND AFFILIATED SUBMITTALS OF ALL SANDS AND BACKFILL MATERIALS FOR APPROVAL PRIOR TO ORDER AND INSTALLATION. REFER TO SPECIFICATIONS.

.10 REPORT ANY ISSUES THAT CONTRADICT BEST CONSTRUCTION PRACTICES IMMEDIATELY TO THE CONTRACT ADMINISTRATOR (*I.E A RETAINING WALL DOES NOT HAVE A DRAIN BEHIND IT*). DO NOT PROCEED UNTIL DESIGN HAS BEEN CLARIFIED.

.11 PROVIDE ANY SURVEY SHOTS OR SPOT GRADE CHECKS AS REQUESTED BY CONTRACT ADMINISTRATOR.

.12 REFER TO CIVIL ENGINEER, STRUCTURAL ENGINEER AND ELECTRICAL ENGINEER'S DRAWINGS FOR ADDITIONAL REQUIREMENTS, AS WELL AS GEOTECHNICAL REPORT. REPORT DISCREPANCIES IMMEDIATELY TO CONTRACT ADMINISTRATOR.

.13 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

.2 CONCRETE WALLS (IF REQUIRED):

.1 PROVIDE A MOCK-UP. REFER TO SPECIFICATIONS.

.2 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

.3 WALLS TO RECEIVE A 13MM ROUNDED BEVEL ('FILLET') UNLESS NOTED OTHERWISE.

.4 CHALK-LINE ALL SAW-CUTS FOR REVIEW PRIOR TO CUTTING.

.5 IN AREAS WITHOUT CUSTOM SAW-CUT OR EXPANSION JOINT PATTERNING, PROVIDE:

.1 EXPANSION JOINTS MAXIMUM EVERY 9M ON CENTER.

.2 SAW-CUT JOINTS MAXIMUM EVERY 3M ON CENTER.

.3 CONFIRMATION OF LOCATIONS WITH CONSULTANT PRIOR TO COMMENCING FORMWORK.

.4 ENSURE A MINIMUM 40MM CONCRETE BETWEEN SAW-CUT AND REBAR INSIDE THE CONCRETE FORM.

.6 PROVIDE A MINIMUM 75MM (3") COVER OF CONCRETE OVER ALL CONCRETE REINFORCING, WITH THE EXCEPTION OF CONTROL JOINTS AS NOTED ABOVE.

.7 ALL VERTICAL CONCRETE TO RECEIVE A LIGHT SANDBLAST FINISH UNLESS NOTED OTHERWISE.

.8 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. CONCRETE TO COMPLY WITH STANDARD DIVISION 3 SPECIFICATIONS FOR MMCD PLATINUM SPECIFICATIONS, AND CCDC MASTER SPECIFICATIONS RESPECTIVELY.

.9 CONCRETE THAT IS REINFORCED MUST BE REVIEWED PRIOR TO POURING.

.10 REFER TO CIVIL ENGINEER, STRUCTURAL ENGINEER AND ELECTRICAL ENGINEER'S DRAWINGS FOR ADDITIONAL REQUIREMENTS, AS WELL AS GEOTECHNICAL REPORT. REPORT DISCREPANCIES IMMEDIATELY TO CONTRACT ADMINISTRATOR.

.11 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

.3 SEGMENTAL RETAINING WALLS (IF REQUIRED):

.1 PROVIDE A MOCK-UP AS PER SPECIFICATIONS

.2 PROVIDE SUBMITTALS AS PER SPECIFICATIONS.

.3 CONFIRM PRODUCT COLOUR AND FINISH PRIOR TO PREPARING MOCK-UP.

.4 GEO-SYNTHETIC SUPPORT: ENSURE PRODUCT IS REVIEWED PRIOR TO ORDER. CONFIRM SIZE AND DEPTH OF MATERIAL. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS. NOTE: IMMEDIATELY CONTACT CONTRACT ADMINISTRATOR IF BACKFILL DEPTH OR MATERIAL SHOW IN MANUFACTURER'S SPECIFICATIONS CONTRADICTS REQUIREMENTS SHOWN IN CONSULTANT DRAWINGS OR GEOTECHNICAL REPORT.

.5 REBAR SUPPORT: ENSURE REBAR IS REVIEWED BY CONSULTANT PRIOR TO MORTAR SACKING OR ALTERNATE FORM OF CONCEALMENT.

.6 WALL CAPS: MITRE CORNERS. ENSURE CLEAN POINTED EDGES.

.7 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

10.0 METALS

.1 REFER TO PROJECT SPECIFICATIONS FOR FURTHER INFORMATION.

.2 SUBMIT SHOP DRAWINGS FOR METAL WORKS (I.E. FENCES, FASTENERS AND RAILINGS). REFER TO SPECIFICATIONS.

.3 TREAT METAL WORK FOR PROTECTION FROM CORROSION AND ABRASION. STEEL TO BE GALVANIZED OR STAINLESS. ALUMINUM TO BE ANODIZED. THIS APPLIES TO FASTENERS.

.4 ENSURE ANCHOR PLATES, HANGERS, AND AFFILIATED FASTENER JOINING MATERIALS MEET FLUSH BETWEEN JOINING SURFACES WITHOUT GAPS, UNLESS SPECIFIED OTHERWISE.

.5 COMPLETE METAL BONDING (I.E. WELDING, SOLDERING) SUCH THAT WORK IS TREATED FOR PROTECTION AND WILL NOT CORRODE.

.6 CONCEAL BONDING WORK IN THE FINISHING OF THE METAL WORK.

.7 ENSURE SMOOTH FINISH WITH SANDING OR OTHER APPLICABLE HANDWORK NEEDED TO PROVIDE SMOOTH AND CONSISTENT APPEARANCE.

.8 INSTALL A GROUNDING ROD FOR ALL VERTICAL METAL ELEMENTS TALLER THAN 1800MM IN HEIGHT.

.9 ENSURE SHOP DRAWINGS WITH PICKETS OR RAILINGS COMPLY WITH BC BUILDING CODE REQUIREMENTS (I.E. RAILING HEIGHT, PICKET SPACING).

.10 POWDERCOAT APPLICATIONS: ENSURE METAL IS PRETREATED (I.E. GALVANIZED) OR ALTERNATE PROTECTION PROCESS PRIOR TO POWDER COATING. CONFIRM VIA SHOP DRAWING.

11.0 WOOD

.1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

.2 SUBMIT SHOP DRAWINGS FOR WOOD WORKS (I.E. DECKING, BENCHES, CUSTOM ELEMENTS). REFER TO SPECIFICATIONS.

.3 ENSURE WOOD DOES NOT CRACK OR SPLINTER WITH FASTENER CONNECTIONS. PRE-DRILL AND COUNTERSINK AS NEEDED TO PROVIDE SMOOTH CONNECTIONS, UNLESS SPECIFIED OTHERWISE.

.4 ENSURE WOOD IS FREE OF SPLINTERS, SLIVERS, AND INCONSISTENCES.

.5 ENSURE WOOD IS FREE OF DEFECTS THAT COULD IMPACT STRUCTURAL INTEGRITY.

.6 ENSURE WOOD HAS NO EXPOSED SHARP EDGES. SAND SMOOTH UNLESS SPECIFIED OTHERWISE.

.7 TREAT CUTS WITH SPECIFIED WOOD PRESERVATIVE SOLUTION OR ALTERNATE.

12.0 EDGERS

.1 SUBMIT SHOP DRAWINGS FOR REVIEW OF ALL SPECIFIED EDGER PRODUCTS. INCLUDE INSTALLATION GUIDES WHEN AVAILABLE BY MANUFACTURER.

13.0 DRAINAGE

.1 SUBMIT SHOP DRAWINGS FOR REVIEW OF ALL SPECIFIED DRAINAGE FEATURES. THIS APPLIES TO PRE-MANUFACTURED PRODUCTS AND CUSTOM DETAILS. INCLUDE INSTALLATION GUIDES WHEN AVAILABLE BY MANUFACTURER.

14.0 LANDSCAPE LIGHTING

.1 SUBMIT SHOP DRAWINGS FOR REVIEW OF ALL SPECIFIED LIGHTING. THIS APPLIES TO PRE-MANUFACTURED PRODUCTS AND CUSTOM DETAILS. INCLUDE COLOUR AND FINISH INFORMATION WITH DRAWINGS, INCLUDING INFORMATION ON ALL FASTENERS. INCLUDE INSTALLATION GUIDES WHEN AVAILABLE BY MANUFACTURER.

15.0 SITE FURNISHINGS

.1 SUBMIT SHOP DRAWINGS FOR REVIEW OF ALL SPECIFIED SITE FURNISHINGS. THIS APPLIES TO PRE-MANUFACTURED PRODUCTS AND CUSTOM DETAILS. INCLUDE COLOUR AND FINISH INFORMATION WITH DRAWINGS, INCLUDING INFORMATION ON ALL FASTENERS. INCLUDE INSTALLATION GUIDES WHEN AVAILABLE BY MANUFACTURER.

16.0 SOFT LANDSCAPES

.1 REFER TO SPECIFICATIONS AND DRAWINGS FOR ADDITIONAL INFORMATION.

.2 SOFTLANDSCAPE SUPPLY, SUBMITTALS, PREPARATION AND EXECUTION TO COMPLY WITH CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA). FULL DOCUMENT APPLIES.

.3 ENSURE CONTRACTOR INSTALLING SOFTLANDSCAPES HAS A CURRENT COPY OF THE CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA) PRESENT ON SITE.

.4 SUBMIT REQUEST FOR REVIEW BY CONSULTANT OF SITE SOFT LANDSCAPE FINE GRADING PRIOR TO INSTALLATION OF SOD OR SEED.

.5 PLANTS AND TREES:

.1 PROVIDE CONSULTANT WITH OPPORTUNITY TO REVIEW PLANT STOCK AT NURSERY PRIOR TO SHIPMENT TO SITE. CONSULTANT RESERVES RIGHT TO REJECT STOCK ON SITE WHEN INCONSISTENT FROM NURSERY SAMPLE STOCK. PROVIDE CONSULTANT OPPORTUNITY TO REVIEW TREES AT NURSERY AND TAG PREFERRED TREE STOCK FOR THE PROJECT THAT COMPLIES WITH DRAWING SIZE, SPECIES, AND FORM. ONE (1) WEEK NOTICE IS REQUIRED FOR NURSERY REVIEW.

.2 GROWING MEDIUM TO BE "LEVEL 2 GROOMED, 2P" AS PER CHART 6.3.5.1 IN CHAPTER 6 OF THE CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA). MINIMUM 450MM DEPTH REQUIRED FOR PLANTINGS UNLESS NOTED OTHERWISE. TREES REQUIRE ADDITIONAL DEPTH, AS PER TREE INSTALLATION REQUIREMENTS SHOWN IN THE CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA).

.3 SUBMIT GROWING MEDIUM REPORT FOR REVIEW PRIOR TO ORDER OR INSTALLATION. REPORT TO MATCH TABLE 6.3.5.3 "PROPERTIES OF GROWING MEDIA FOR LEVEL 2 "GROOMED" AREAS". ADDITIONAL GROWING MEDIUM REPORT REQUIREMENTS ARE PROVIDED IN PROJECT SPECIFICATIONS.

.6 MULCH:

.1 TO BE DARK BROWN (NOT RED) IN COLOUR. 1L SAMPLE REQUIRED FOR REVIEW PRIOR TO PURCHASE.

.2 TO COMPLY WITH CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA).

.3 REQUIRED FOR ALL NEW TREE AND SHRUB PLANTINGS UNLESS NOTED OTHERWISE.

. 4 BARK MULCH TO BE INCLUDED IN TREE AND SHRUB UNIT PRICING RESPECTIVELY.
MULCH TO BE ORGANIC COMPOSTED BARK MULCH, COMPLIANT WITH CANADIAN LANDSCAPE STANDARDS, PAGE 128, 10.2.2. A ONE (1) LITRE MULCH SUBMITTAL IS REQUIRED FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. DEPTH OF MULCH TO BE 50MM (2") AFTER SETTLEMENT WITH COMPLETE COVERAGE. ENSURE DARK BROWN COLOUR. PROVIDE MULCH RING OF 3' DIAMETER, COMPLIANT WITH BC LANDSCAPE STANDARDS FOR EACH TREE. PROVIDE CONTINUOUS MULCH FOR SHRUB BEDS (ALL LINEAL PLANTINGS) SO THAT SHRUBS HAVE 100% COMPLETE COVERAGE OF ROOT ZONES, COMPLETE FROM SHRUB TO SHRUB.

.7 LAWNS:

.1 SUBMIT SEED CERTIFICATES AND SOD REPORT FOR REVIEW PRIOR TO PURCHASE. ALL SOD OR SEED TO BE "ALL PURPOSE SUN SHADE MIX" UNLESS SPECIFIED OTHERWISE. ENSURE SOD AND SEED ARE NO. 1 TURFGRASS AND NO 1. CANADIAN SEED AS PER CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA).

.2 SOD TO BE NON-NETTED.

.3 GROWING MEDIUM TO BE "LEVEL 2 GROOMED, 2H" AS PER CHART 6.3.5.1 IN CHAPTER 6 OF THE CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA). MINIMUM 150MM DEPTH REQUIRED FOR INSTALLATION UNLESS NOTED OTHERWISE.

.4 SUBMIT GROWING MEDIUM REPORT FOR REVIEW PRIOR TO ORDER OR INSTALLATION. REPORT TO MATCH TABLE 6.3.5.3 "PROPERTIES OF GROWING MEDIA FOR LEVEL 2 "GROOMED" AREAS". ADDITIONAL GROWING MEDIUM REPORT REQUIREMENTS ARE PROVIDED IN PROJECT SPECIFICATIONS.

.5 ENSURE AREAS AT EDGE OF LIMIT OF CONSTRUCTION ARE APPROPRIATELY BLENDED TO MEET EXISTING UNDISTURBED LAWNS. PROVIDE A MINIMUM 50MM IMPORTED GROWING MEDIUM TO BLEND PROPERLY. PROVIDE ADDITIONAL GROWING MEDIUM AS NEEDED.

.6 COMPLETE ESTABLISHMENT (MINIMUM TWO CUTS) REQUIRED AS PER CANADIAN LANDSCAPE STANDARD (BRITISH COLUMBIA).

.8 PLANTED BIO-SWALES OR RAINGARDEN FEATURES:

.1 FILTER FABRIC AND DRAIN ROCK TO BE USED AS A MULCH SUBSTITUTE IN THE BOTTOM OF FEATURES UNLESS NOTED OTHERWISE. PROVIDE SAMPLE OF RIVER ROCK FOR REVIEW. PROVIDE FILTER FABRIC SUBMITTAL AND TECHNICAL SHEETS FOR REVIEW.

.9 THE CONSULTANT MAY REQUEST, AT THE CONTRACTOR'S EXPENSE, UP TO TWO TESTS OF GROWING MEDIUM IF SUSPECTED INCONSISTENCES APPEAR. TESTS SAMPLES WILL BE SUBMITTED TO PACIFIC SOIL ANALYSIS INC. IN RICHMOND BC. SUITE 5 11720 VOYAGUER WAY, RICHMOND, BC, V6X 3G9.

.10 ESTABLISHMENT MAINTENANCE AND WATERING: REFER TO SECTION 1.0 OF THESE LANDSCAPE NOTES. REFER TO EXTERIOR MAINTENANCE SPECIFICATION.

.11 WARRANTY: REFER TO SECTION 1.0 OF THESE LANDSCAPE NOTES.

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LEGAL DESCRIPTION

SURVEY BENCHMARK

REV.	DATE	DESCRIPTION	BY
6	FEB 14, 2018	HAP UPDATE	LN

CONSULTANT

ISL Engineering and Land Services
SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT
City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
LANDSCAPE NOTES

SEAL

SCALE: HOR. 1:200 VERT. n/a

DESIGNED JL

DRAWN LN

REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14

CONSULTANT PROJ. NO. 31566

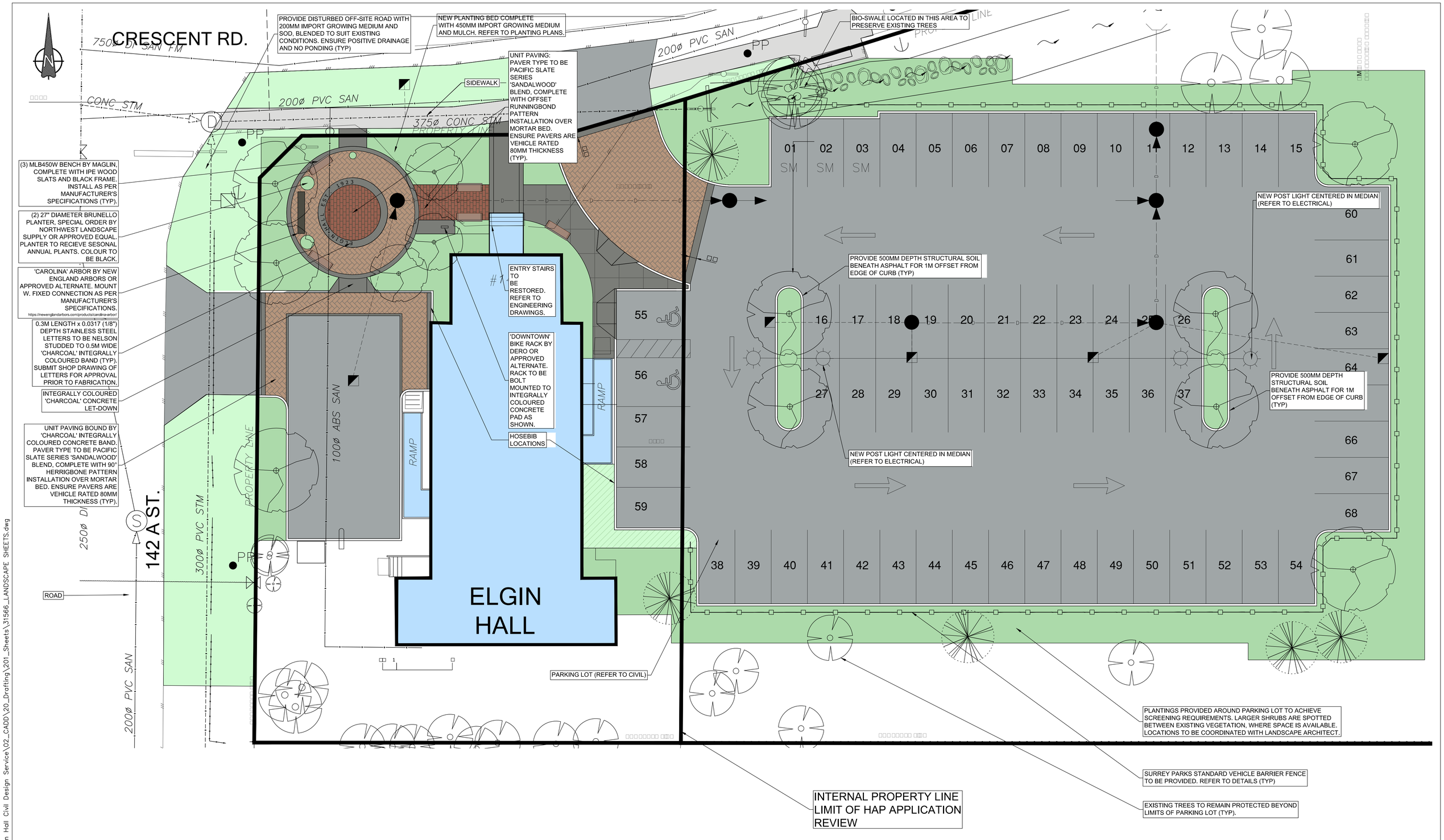
DWG. NO. L1

REV. 6

SURREY PROJECT NUMBER 15-0411

SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER



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[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT

City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
LANDSCAPE PLAN

SEAL

SCALE: HOR. 1:100 VERT. n/a

DESIGNED LN

DRAWN JS

REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14

CONSULTANT PROJ. NO. 31566

DWG. NO. L2

REV. 6

SURREY PROJECT NUMBER 15-0411

SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER

HARDSURFACE MATERIALS LEGEND

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LANDSCAPE ELEMENTS LEGEND

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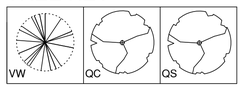
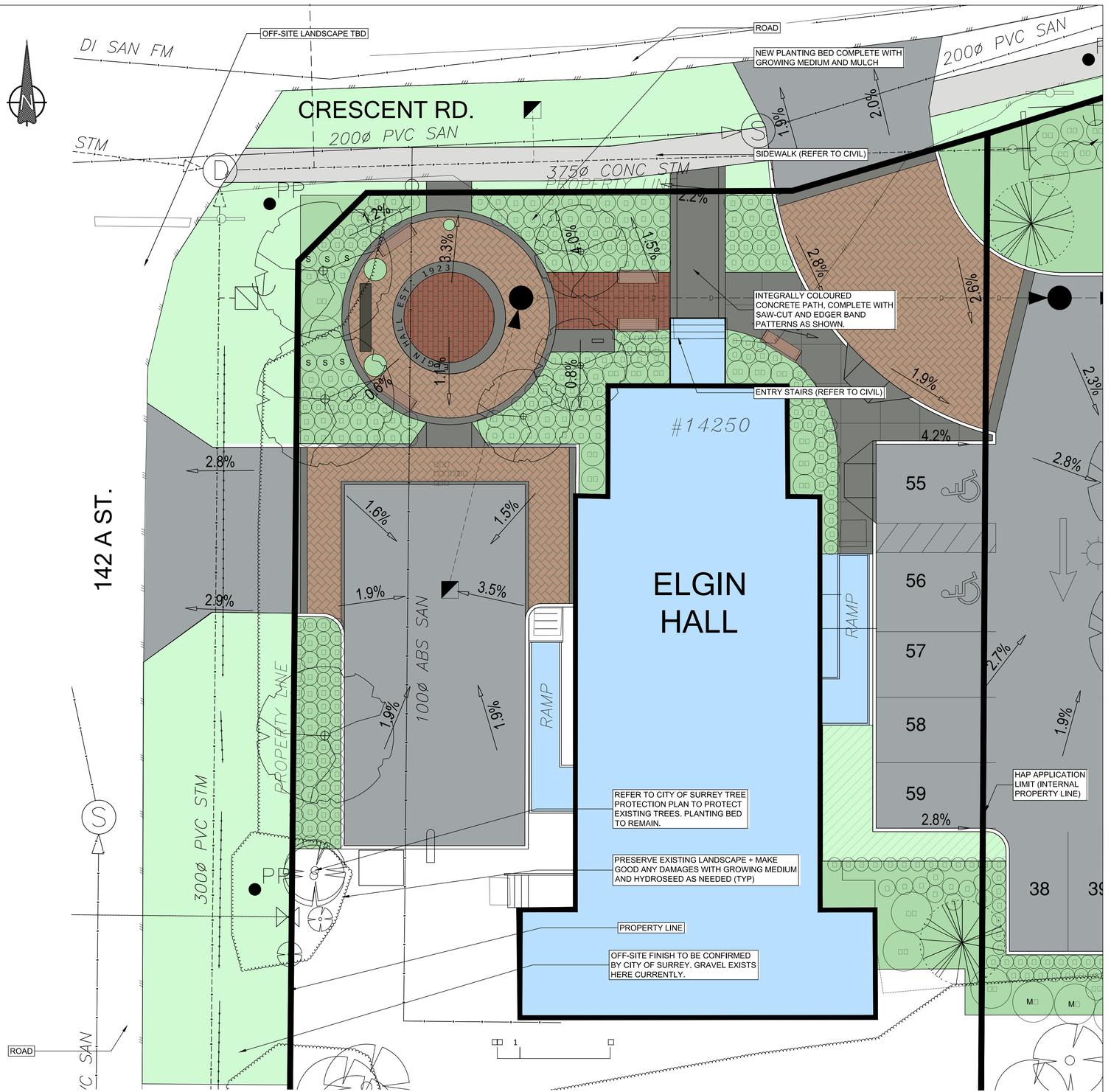
TREE KEY



TREES AND PLANTINGS

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING (O.C.)
Trees					
QC	08	Quercus coccinea	Scarlet Oak	B&B; 8cm caliper, 1.8m standard, specimen	Plant as shown
QS	05	Quercus robur x quercus alba "Crimschmidt"	Crimson Spire Oak	B&B; 8cm caliper, 1.8m standard, specimen	Plant as shown
VW	05	Pinus flexis 'vanderwolf'	Vanderwolf's Pine	B&B; 3m ht, specimen	Plant as shown
Shrub plantings and groundcovers					
CA	02	□□ □i□ □□□n□□□ M□n□□□	Peek-a-boo Camellia	#3 Pot; full	1.8m o.c.
CS	122	Cornus sericea	Red dogwood	#3 pot; full; min 3 stems from base	1.0m o.c.
SY	04	Syringa x Bloomerang	**Bloomerang®** □□r□□□ □□□□□in□ □i□□	#3 Pot; full	1.8m o.c.
S	152	□ir□□□ □ □di□ □M□M□□□□v□ 26 665□□n. □□□□□	Double Play® Blue Kazoo™ Spirea	#2 Pot; full	0.75m o.c.
E	167	Euonymus japonicus 'microphylla'	Boxleaf euonymous	#2 Pot; full	0.60m o.c
	190	**Isotoma** □vi□ti□□ **Blue Star Creeper**	Blue Star Creeper (lawn substitute groundcover)	SP4	0.30m o.c
K	262	Arctostaphylos uva-ursi	Kinnickinnick	#1 Pot; full	0.60m o.c
MG	5	Myrica gale	Native wax myrtle	#3Pot; full; to be field located with Land. Arch.	Approx 1.8m o.c
PL	13	Phildelphus lewisii	Native mock-orange	#3Pot; full; to be field located with Land. Arch.	Approx 1.8m o.c
RN	122	Rosa nutkana	Nutkana Rose	#2 Pot; full	1.0m o.c
L	9	Liriope muscari	Lily turf	#2 Pot; full	0.5m o.c
Entry lawn					
	110m2	Provide chafer beetle resistant sodded lawn, over 150mm of imported growing medium; compliant with Canadian Landscape Standards "Level 2L" lawn mix.Sod to be from Western Turf Farms or approved alternate supplier.			

*All tree locations to be staked for review. See planting notes.
* Trees to receive a minimum of 6m3 of growing medium; at a 900mm depth.
* Shrubs to receive a minimum of 450mm depth import growing medium, compliant with "Level 2P" growing media definitions, as per Canadian Landscape Standards
* Lawn and/or lawn substitutes to receieve 150mm depth import growing medium, compliant with "Level 2L" growing media definitions, as per Canadian Landscape Standards



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REV.	DATE	DESCRIPTION	BY
6	FEB 14, 2018	HAP UPDATE	LN

LEGAL DESCRIPTION

SURVEY BENCHMARK

CONSULTANT

ISL Engineering and Land Services
SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT
City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
LANDSCAPE PLANTING PLAN - WEST

SEAL

SCALE: HOR. 1:100 VERT. n/a

DESIGNED JL

DRAWN LN

REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14

CONSULTANT PROJ. NO. 31566

DWG. NO. L3

REV. 6

SURREY PROJECT NUMBER 15-0411

SURREY DRAWING NUMBER

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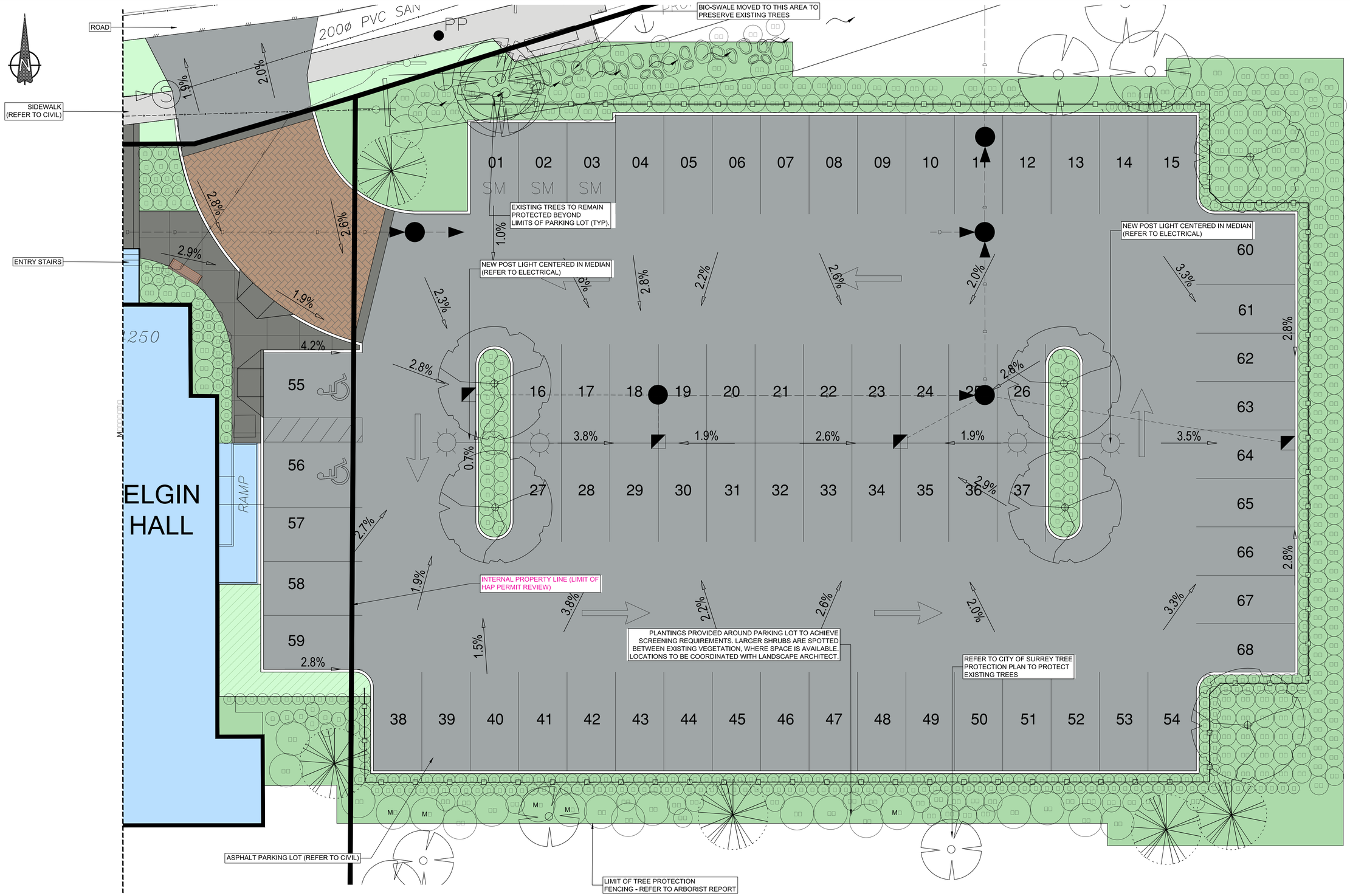

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SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT

City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
LANDSCAPE PLANTING PLAN - EAST

SEAL

SCALE: HOR. 1:100 VERT. n/a

DESIGNED JL

DRAWN LN

REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14

CONSULTANT PROJ. NO. 31566

DWG. NO. L4

REV. 6

SURREY PROJECT NUMBER 15-0411

SURREY DRAWING NUMBER

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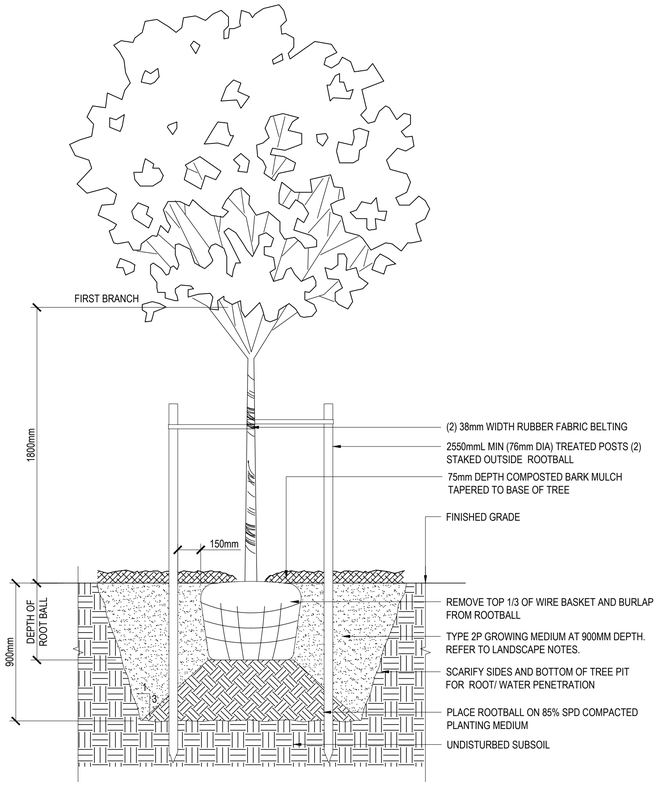
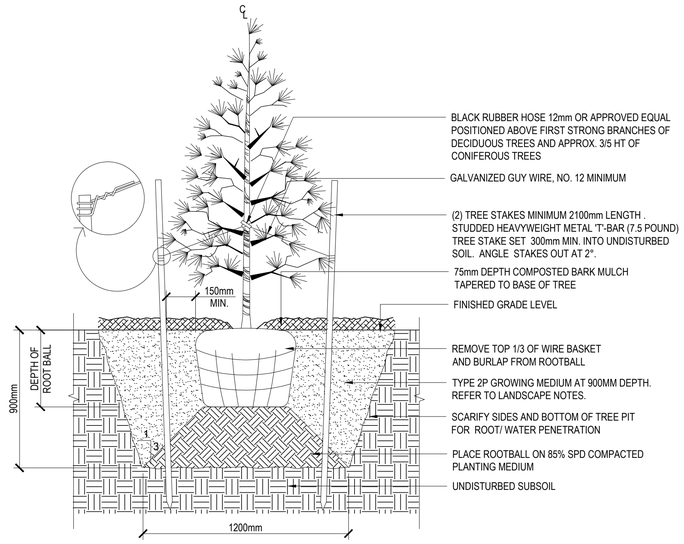
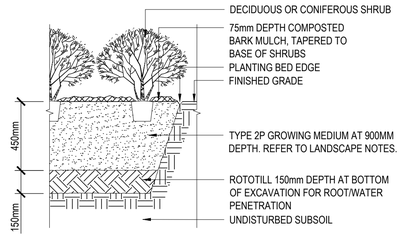


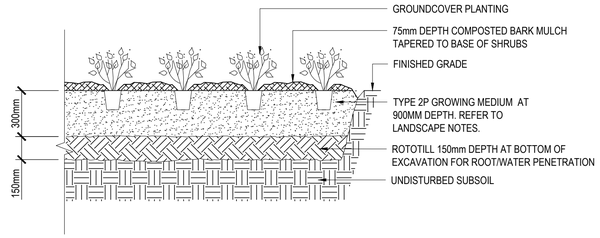
1 L5 DECIDUOUS TREE PLANTING 1:20



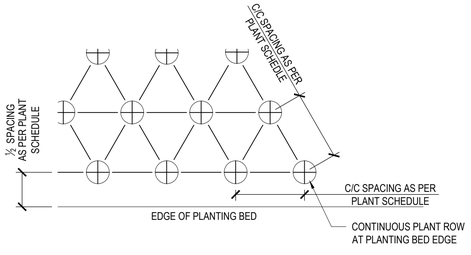
2 L5 CONIFEROUS TREE PLANTING 1:20



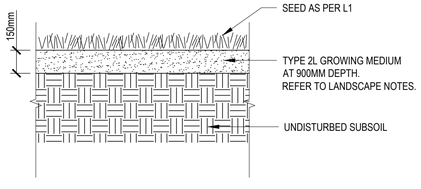
3 L5 SHRUB PLANTING 1:20



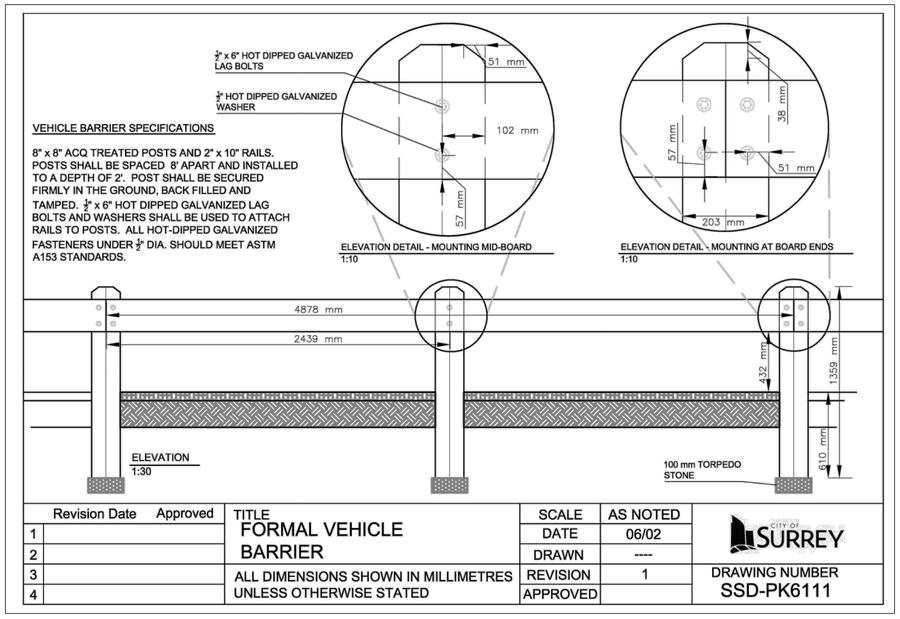
4 L5 GROUNDCOVER PLANTING 1:20



5 L5 SHRUB + GROUNDCOVER SPACING PLAN 1:20



6 L5 HYDROSEEDED LAWN 1:20



Revision	Date	Approved
1		
2		
3		
4		

TITLE: FORMAL VEHICLE BARRIER

ALL DIMENSIONS SHOWN IN MILLIMETRES UNLESS OTHERWISE STATED

SCALE	AS NOTED
DATE	06/02
DRAWN	----
REVISION	1
APPROVED	

CITY OF SURREY

DRAWING NUMBER SSD-PK6111

7 L5 TWO RAIL SPLIT FENCE N/A

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LEGAL DESCRIPTION

SURVEY BENCHMARK .

REV.	DATE	DESCRIPTION	BY
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CONSULTANT

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SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT

City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
LANDSCAPE PLANTING DETAILS

SEAL

SCALE: HOR. n/a VERT. n/a

DESIGNED JL

DRAWN LN

REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14

CONSULTANT PROJ. NO. 31566

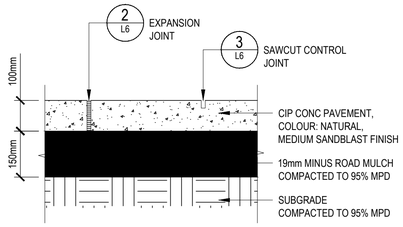
DWG. NO. L5

REV. 6

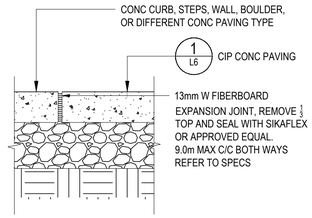
SURREY PROJECT NUMBER 15-0411

SURREY DRAWING NUMBER

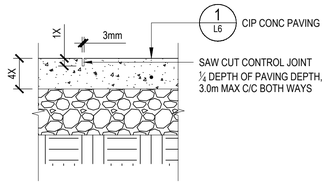
DESTROY ALL PRINTS BEARING PREVIOUS NUMBER



1 L6 CIP CONCRETE PAVEMENT 1:10



2 L6 EXPANSION JOINT 1:10



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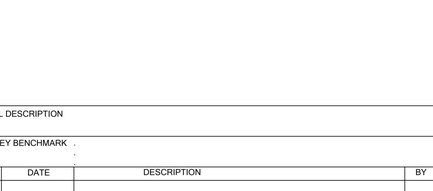

4 L6 CONCRETE PAVERS 1:10

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LEGAL DESCRIPTION

SURVEY BENCHMARK .
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REV.	DATE	DESCRIPTION	BY
6	FEB 14, 2018	HAP UPDATE	LN

CONSULTANT

ISL Engineering and Land Services
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CITY OF SURREY

CLIENT
City of Surrey
13450 104 Ave. Surrey, BC,
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TITLE ELGIN HALL PARKING UPGRADE
LANDSCAPE PLANTING DETAILS

SEAL

SCALE: HOR. n/a VERT. n/a

DESIGNED JL

DRAWN LN

REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14

CONSULTANT PROJ. NO. 31566

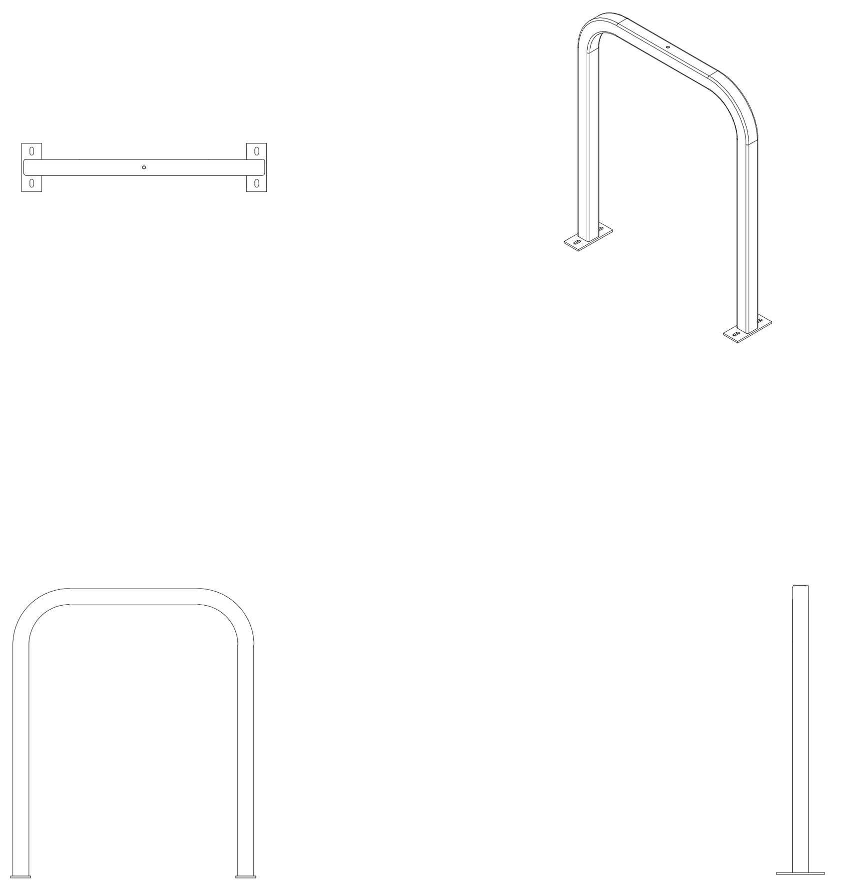
DWG. NO. L6

REV. 6

SURREY PROJECT NUMBER 15-0411

SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER



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1 BIKE RACK
L7 — 1:20

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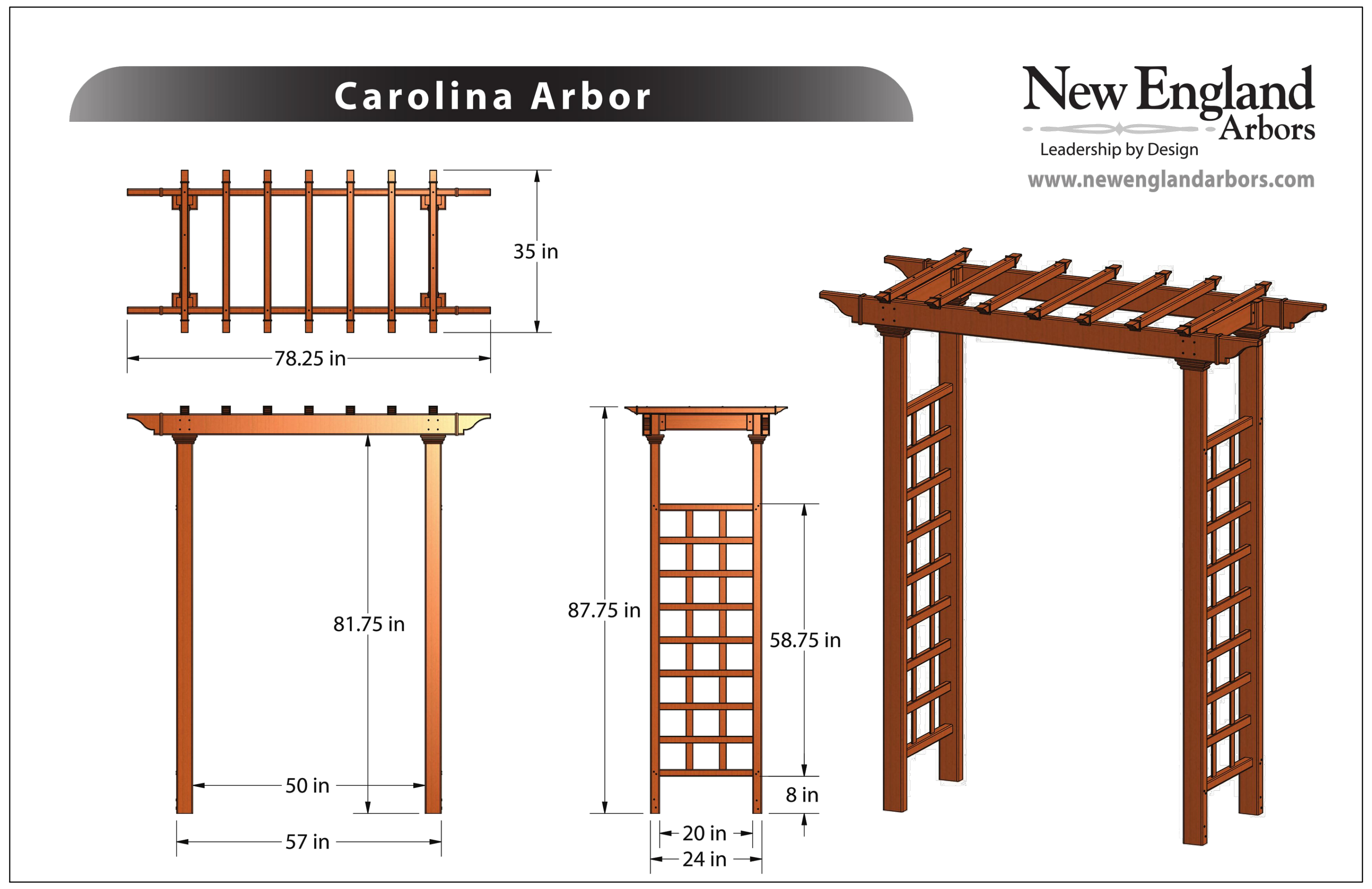
2 PLANTER
L7 — N/A



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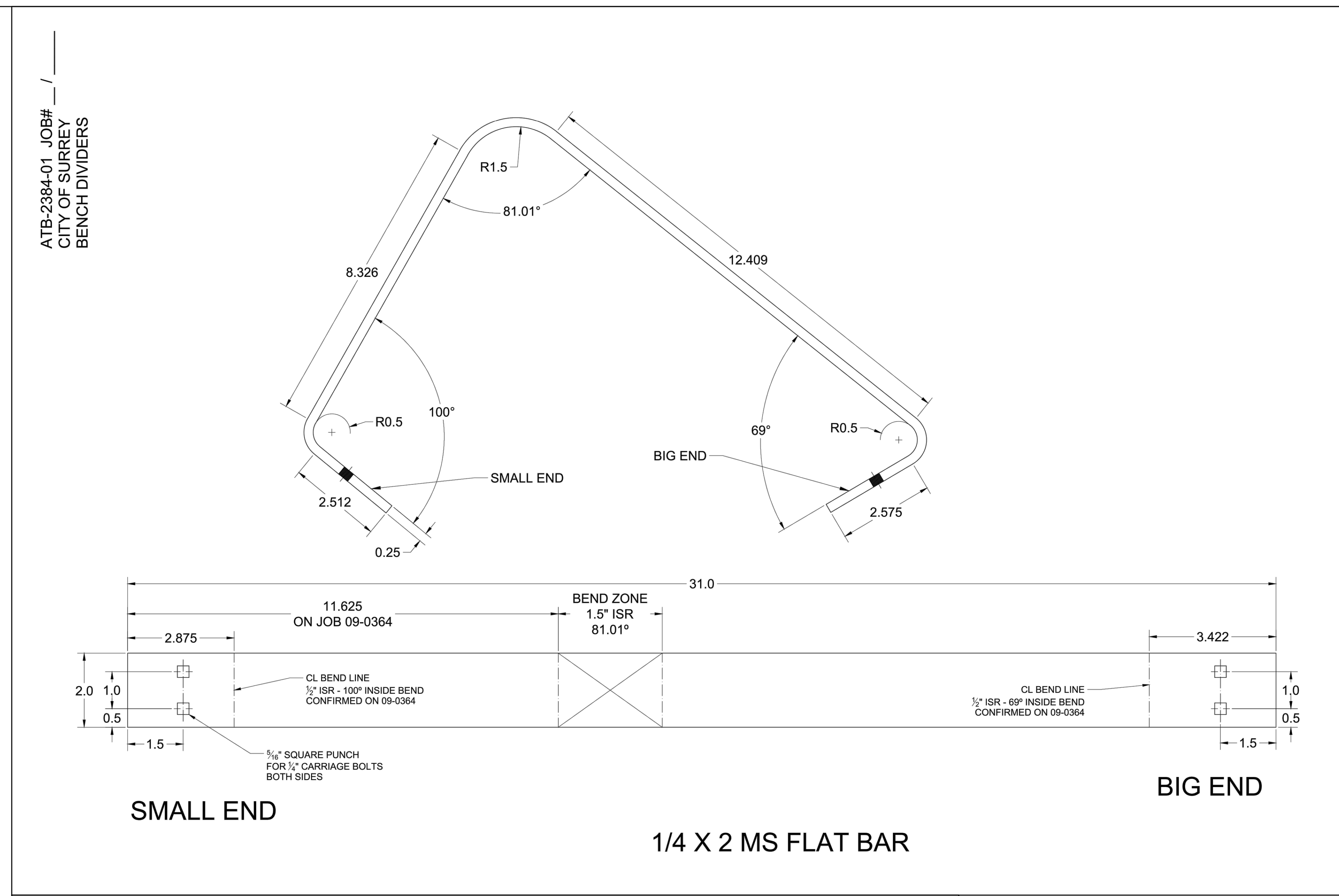
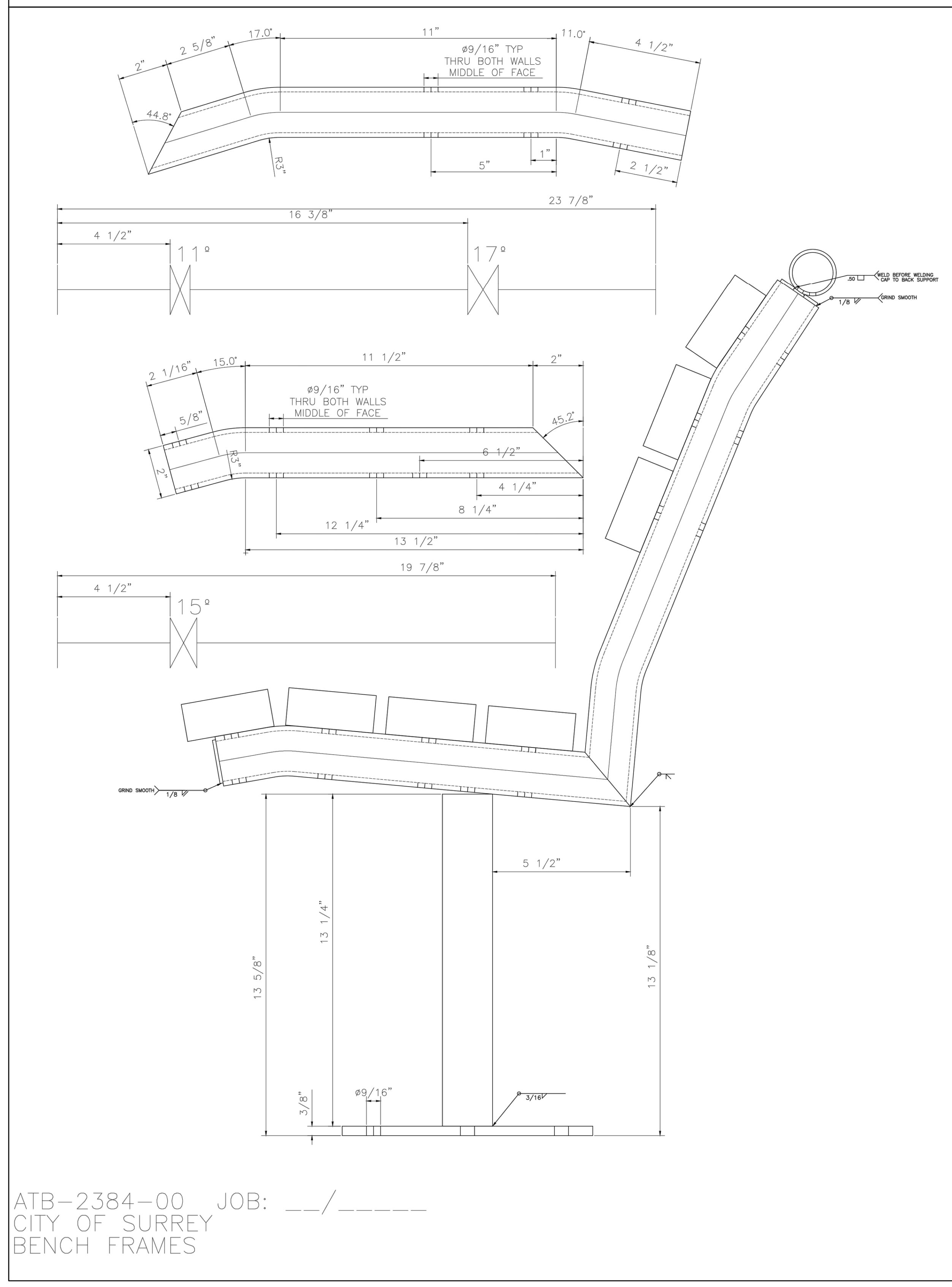
L7 — N/A





4 BENCH
L7 — N/A

LEGAL DESCRIPTION			
SURVEY BENCHMARK			
REV.	DATE	DESCRIPTION	BY
6	FEB 14, 2018	HAP UPDATE	LN

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LANDSCAPE PLANTING DETAILS

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REVIEWED JL

DATE (YYYY.MM.DD) 18-02-14
CONSULTANT PROJ. NO. 31566
DWG. NO. L7
REV. 6

SURREY PROJECT NUMBER 15-0411
SURREY DRAWING NUMBER

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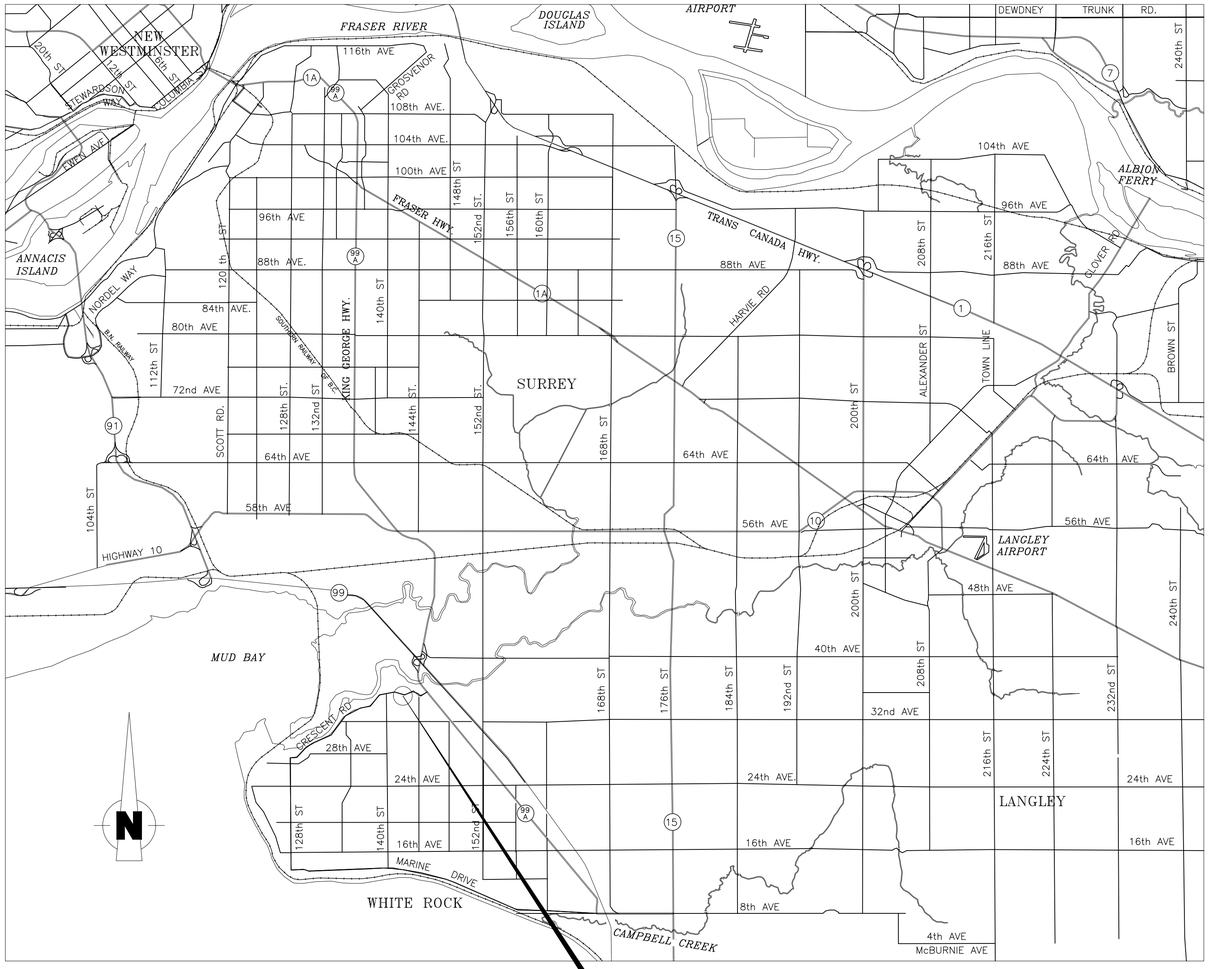
ELGIN HALL PARKING UPGRADE

14250 CRESCENT ROAD, SURREY, BC

EROSION AND SEDIMENT CONTROL PLAN



SITE LOCATION PLAN

SCALE: NTS

ANTICIPATED SOILS:
CLAYEY SILT SOILS

DRAWING SCHEDULE

DRAWING	SHEET NUMBER	DRAWING TITLE
31566-ESC-01	1 OF 5	GENERAL NOTES
31566-ESC-02	2 OF 5	PHASE 1 – SITE PREPARATION, STRIPPING AND GRUBBING
31566-ESC-03	3 OF 5	PHASE 2 – SITE SERVICING AND PARKING LOT CONSTRUCTION
31566-ESC-04	4 OF 5	PHASE 3 – PAVING AND LANDSCAPING
31566-ESC-05	5 OF 5	DETAILS

EROSION AND SEDIMENT CONTROL GENERAL NOTES

1.THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF SURREY EROSION AND SEDIMENT CONTROL BYLAW 2006 No. 16138. MAINTENANCE MAY INCLUDE BUT IS NOT NECESSARILY LIMITED TO REPLACING SILT FENCE, RE-STAKING FALLEN SILT FENCING, DISPOSAL OFFSITE OF DEBRIS AND SEDIMENT, REPLACING FOULED GRAVEL AND CLEANING OUT SEDIMENT PONDS.

2.THE WORKS SHOWN SHALL BE A MINIMUM REQUIREMENT. THE CONTRACTOR SHALL MODIFY AND/OR PROVIDE ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY TO ACCOMMODATE CONSTRUCTION ACTIVITIES AND SATISFY THE REQUIREMENTS OF THE BYLAW.

3.THE SEDIMENT DISCHARGE LIMIT FROM THE SITE IS LESS THAN 75 mg/L TOTAL SUSPENDED SOLIDS (TSS). THIS DISCHARGE LIMIT ROUGHLY CORRESPONDS TO 60 NEPHALOMETRIC TURBIDITY UNITS (NTU). WHEN THE DISCHARGE LIMIT EXCEEDS 60 NTU, THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL TAKE A TSS SAMPLE FOR LAB ANALYSIS TO DETERMINE IF THE DICHARGE EXCEEDS 75 mg/L TSS.

4.THE OLD MUNICIPAL HALL GAUGE WILL BE UTILIZED FOR RAINFALL INTENSITY CALCULATION/DETERMINATION.

5.EROSION AND SEDIMENT CONTROL INSPECTIONS WILL BE UNDERTAKEN DURING EVERY RAINFALL EVENT GREATER THAN 25mm PER 24 HOURS, OTHERWISE AS SET OUT BY CITY'S WEB PORTAL.

6.AN EROSION AND SEDIMENT CONTROL INSPECTOR SHALL MONITOR THE ONGOING WORK, EROSION AND SEDIMENT CONTROL, MEASURES AND REPORT TO THE OWNER AND THE CITY AS PRESCRIBED BY THE PERMIT.

7.IF TEMPORARY SEDIMENT POND FAILS TO MEET CITY OF SURREY EROSION AND SEDIMENT CONTROL BYLAW 2006 NO. 16138. SEDIMENT DISCHARGE LIMITS. THE CONTRACTOR WILL BE REQUIRED TO USE A FLOCCULANT OR PROPRIERTARY PORTABLE TREATMENT SYSTEM (I.E. FILTERTECH, STORMGUARD, STORMTECH ETC) TO ENSURE SITE'S SEDIMENT DISCHARGE IS MET.

8.ALL WATER BEING DISCHARGED FROM THE SITE MUST MEET pH LEVELS BETWEEN 6.5 AND 8.0 OR OTHER LEVELS SPECIFIED BY THE CITY OF SURREY EROSION AND SEDIMENT CONTROL BYLAW 2006 No. 16138.

9.EXPOSED SLOPES AND SOIL STOCK PILES TO BE COVERED WITH ONE LAYER OF 6mil POLY AND WEIGHTED OR STAPLED INTO PLACE

10.ROW/EASEMENTS AND COVENANTED AREAS TO BE KEPT FREE OF EROSION AND SEDIMENT CONTROL FACILITIES, CONSTRUCTION PLANT AND MATERIALS/STOCK PILES.

11.SILT FENCING WILL NEED TO BE REMOVED FROM THE SITE ONCE FINAL STABILIZATION HAS BEEN ACHIEVED.

12.ROADS MUST BE SWEPT DAILY TO CLEAN UP ANY TRANSPORTED SOIL, LOOSE ROAD BASE, EARTH AND SEDIMENT.

13.THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL 90% OF THE LANDSCAPING IS COMPLETED OR UNTIL PERMISSION IS GRANTED IN WRITING BY THE CITY OF SURREY DEVELOPMENT ENGINEERING DEPARTMENT.

14.EXISTING SERVICE CONNECTIONS AND UTILITIES LOCATIONS ARE CALCULATED AND DERIVED FROM AVAILABLE DRAWINGS. THE CONTRACTOR IS TO CONFIRM ELEVATION AND LOCATION OF ALL EXISTING SERVICES PRIOR TO INSTALLATION OF ONSITE SERVICES. REPORT ALL DISCREPANCIES IN EXISTING CONNECTIONS TO DESIGN ENGINEER PRIOR TO CONSTRUCTION.

15.ALL EXISTING LIVE SERVICES SHALL BE MAINTAINED OPERATIONAL UNLESS OTHERWISE NOTED BY THE ENGINEER.

16.IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN PEDESTRIAN AND VEHICULAR TRAFFIC ON ALL MUNICIPAL RIGHTS OF WAY BY THE USE OF SIGNS, BARRICADES, FLAG PERSONS, ETC. ACCEPTABLE TO THE CITY OF SURREY AND BRITISH COLUMBIA MINISTRY OF TRANSPORTATION & INFRASTRUCTURE (BC MoTI).

17.THE CONTRACTOR SHALL KEEP ALL PORTIONS OF THE WORK DRAINED DURING THE CONSTRUCTION AND UNTIL COMPLETION. WHERE NECESSARY, CATCHWATER DITCHES SHALL BE CONSTRUCTED ALONG THE TOPS OF EXCAVATIONS OR FILL SLOPES TO PREVENT WATER FLOWING INTO OR OVER THE EXCAVATED OR FILLED AREAS.

18.THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR FOR DAMAGE, DIRECTLY RESULTING FROM HIS OPERATIONS AND FOR THE REMOVAL OF DIRT OR DEBRIS FROM EXISTING SYSTEMS, WHICH MAY BE CAUSED BY OR WHICH MAY RESULT FROM WATER BACKING UP OR OVERFLOWING THROUGH, FROM, OR ALONG ANY PART OF THE WORK OR ADJACENT PROPERTIES. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH THESE REPAIRS UNTIL WORKS IS COMPLETE AND ACCEPTED BY THE OWNER(S).

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LEGAL DESCRIPTION

SURVEY BENCHMARK .
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REV.	DATE	DESCRIPTION	BY
2	MAR 26, 2018	ISSUED FOR TENDER	TJA
1	AUGUST 18, 2016	ESC PLAN FOR CITY'S REVIEW	TJA

ESC SUPERVISOR

CONSULTANT

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CITY OF SURREY

CLIENT City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE ELGIN HALL PARKING UPGRADE
EROSION AND SEDIMENT CONTROL PLAN
GENERAL NOTES

SEAL

SCALE: HOR. NTS VERT. NTS

DESIGNED MTM

DRAWN TJA

REVIEWED DEN

DATE (YYYY.MM.DD) 16-07-26

CONSULTANT PROJ. NO. 31566

DWG. NO. 01

REV. .

SURREY PROJECT NUMBER .

SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER

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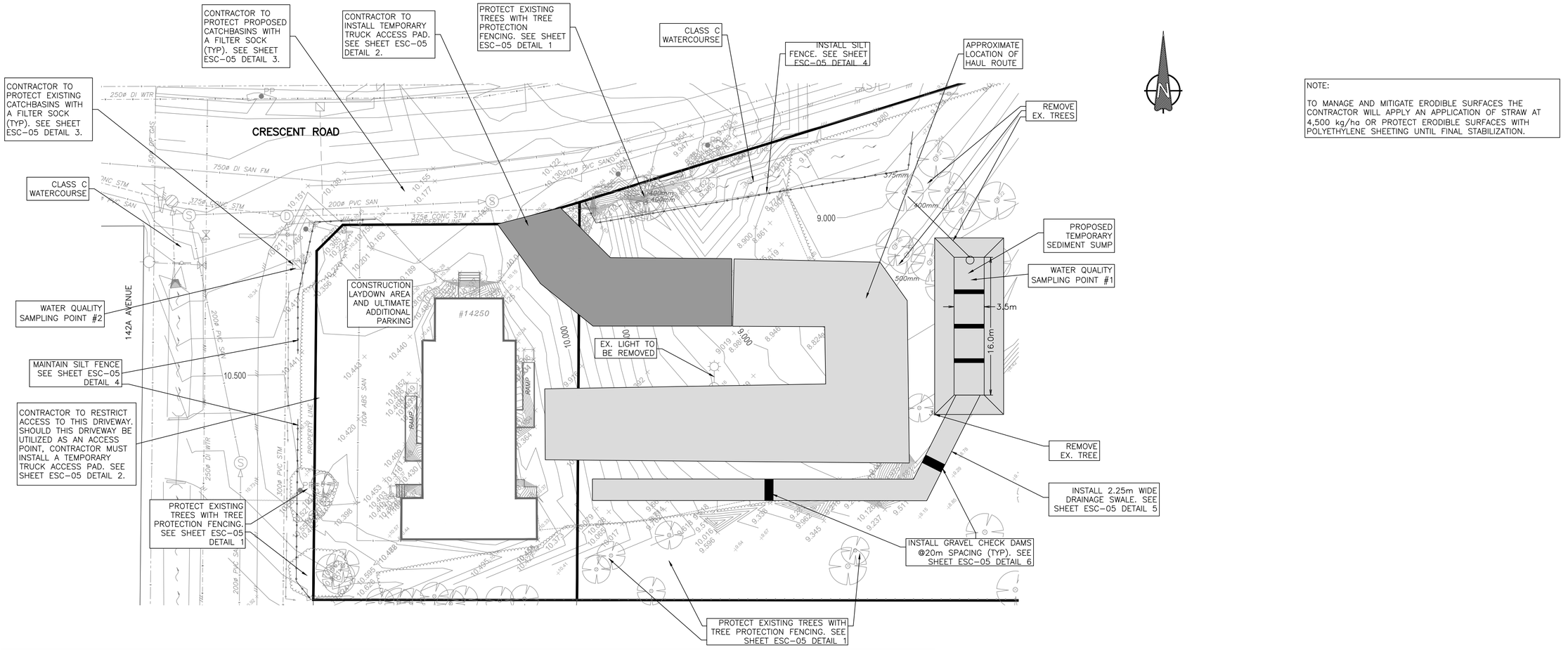

NOTE:

TO MANAGE AND MITIGATE ERODIBLE SURFACES THE CONTRACTOR WILL APPLY AN APPLICATION OF STRAW AT 4,500 kg/ha OR PROTECT ERODIBLE SURFACES WITH POLYETHYLENE SHEETING UNTIL FINAL STABILIZATION.

PHASE 1 NOTES (SITE PREPARATION, STRIPPING AND GRUBBING):

1.DEMARCATE CLEARING LIMITS WITH STORM FENCING OR WITH 'POST AND RIBBON'.

2.TREE MARKING SHALL BE "MARK-TO-STAY" (I.E. TREES SHALL BE FLAGGED AT EYE HEIGHT WITH RIBBON) AND A NO DISTURBANCE AREAS SHALL BE ESTABLISHED AROUND TREE TO AVOID ROOT DAMAGE AS PER DETAIL 1.

3.PRIOR TO WORKS A PRE-CONSTRUCTION SITE MEETING WILL BE ARRANGED AMONGST THE CONTRACTOR'S SITE SUPERVISOR AND THE ESC INSPECTOR.

4.CONSTRUCT A TRUCK ACCESS PAD AS SHOWN ON DETAIL 2 AT THE ENTRANCE/EXIT OF THE SITE. NO MODIFICATIONS WITHOUT WRITTEN APPROVAL OF THE ESC INSPECTOR.

5.CONSTRUCT AN INTERNAL TRUCK HAUL ROUTE INTO THE SITE USING COARSE GRANULAR MINERAL SOIL (ie GRAVEL/ROCK/SAND)

6.WHEN THE TRUCK ACCESS PAD BECOMES FOULED, IT WILL BE SCARIFIED TO REMOVE OCCLUDING SEDIMENTS, AND ADDITIONAL CLEAN ROCK WILL BE ADDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

7.IF THE ROCK ACCESS PAD AND ROAD SWEEPING IS INEFFECTIVE AT CONTROLLING TRACKING OF SEDIMENT FROM THE SITE, A WHEEL WASH WILL HAVE TO BE INSTALLED AT THE CONTRACTOR'S EXPENSE.

8.INSTALL PERIMETER CATCHMENT SWALES (DETAIL 5) CONNECTED TO TEMPORARY SUMP.

9.CHECK DAMS CONSTRUCTED MUST BE INSTALLED AS PER DETAIL 5 AT LOCATIONS AND FREQUENCY SHOWN.

10.STRIP & GRUB ORGANIC MATERIALS AND HAUL FROM SITE PROMPTLY. IN THE EVENT THAT TEMPORARY ONSITE STOCKPILING IS NECESSARY THE CONTRACTOR SHALL COVER THE STOCKPILES WITH POLYETHYLENE SHEETING AS PER DETAIL 7 OR APPROVED EQUIVALENT.

11.CONTRACTOR WILL STRIP AND GRUB ORGANIC MATERIAL FROM EAST TO WEST AND FILL STRIPPED AREA WITH NON-ERODIBLE SUB-GRADE MATERIAL TO ACHIEVE SUB-GRADE ELEVATION DURING THE DURATION OF PHASE 1.

12.EXPOSED SOILS CAN REMAIN UNCOVERED FOR A MAXIMUM OF 4 DAYS DURING FAIR WEATHER.

13. AT THE END OF PHASE I, THE SITE WILL BE CAPPED WITH A MINIMUM 100 MM THICK LAYER OF CRUSHED ROCK TO REDUCE THE GENERATION OF SEDIMENT. ALTERNATIVE MATERIAL FOR SITE COVERAGE AND SOURCE CON

LEGAL DESCRIPTION

SURVEY BENCHMARK .
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REV.	DATE	DESCRIPTION	BY
2	MAR 26, 2018	ISSUED FOR TENDER	TJA
1	AUGUST 18, 2016	ESC PLAN FOR CITY'S REVIEW	TJA

ESC SUPERVISOR

CONSULTANT

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CITY OF SURREY

CLIENT

City of Surrey
13450 104 Ave. Surrey, BC,
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TITLE

ELGIN HALL PARKING UPGRADE
EROSION AND SEDIMENT CONTROL PLAN
PHASE 1 - SITE PREPARATION, STRIPPING AND GRUBBING

SEAL

SCALE: HOR. 1:250 VERT.

DESIGNED MTM

DRAWN DWF

REVIEWED DEN

DATE (YYYY.MM.DD) 16-07-26

CONSULTANT PROJ. NO. 31566

DWG. NO. 02

REV. .

SURREY PROJECT NUMBER .

SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER

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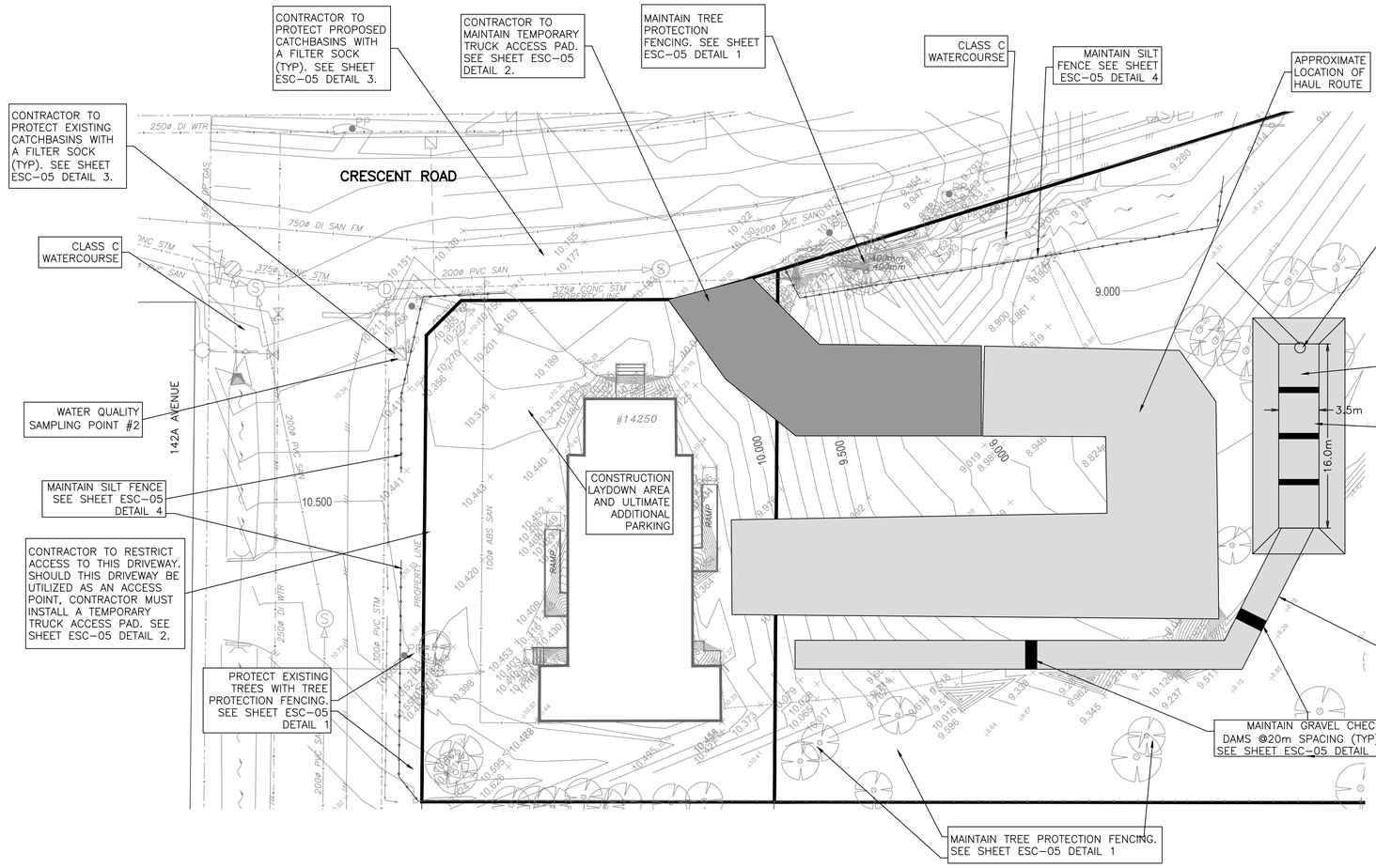

SEDIMENT POND DEACTIVATION NOTES:

1. POND ONLY BE REMOVED AFTER APPROVAL BY CITY OF SURREY ENVIRONMENTAL SECTION STAFF

2. CONTRACTOR WILL DEWATER SEDIMENT POND AND ENSURE WATER WILL BE TREATED IN A MANNER AS TO PREVENT SEDIMENT LADEN WATER FROM ENTERING THE CITY OF SURREY DRAINAGE SYSTEM.

3. REMOVE ALL ACCUMULATED SILT AND SEDIMENT AND DISPOSE OFFSITE.

4. ALL REMAINING TEMPORARY POND INFRASTRUCTURE INCLUDING INLET/OUTLET STRUCTURES, WEIRS, LINERS AND BERMS WILL BE REMOVED AND DISPOSED OFFSITE.

5. CONTRACTOR TO FILL POND WITH APPROVED SUBGRADE MATERIAL TO THE ELEVATIONS DESIGNATED BY THE ENGINEER.

SEDIMENT CONTROL POND NOTES:

1. PROPOSED 3.5m X 16m CHAMBERED SEDIMENT CONTROL POND.

2. POND TO BE LINED WITH NON PERMEABLE LINER.

3. POND TO BE CHAMBERED WITH NON PERMEABLE MATERIAL SUCH AS POLY LINED SANDBAGS FILLED WITH WASHED C–33 OR IMPERVIOUS MATERIAL SUSPENDED BY WIRES AND POSTS.

4. POND SIZE MAY BE SUBSEQUENTLY REDUCED AS CONSTRUCTION PROGRESSES AND AREA OF ERODIBLE SURFACE IS REDUCED.

POND SIZING CALCULATION NOTES

Ca AREA = 0.46 ha
MAX FLOW LENGTH = 50 m
WIDTH = 35 m

RUNOFF FLOW (Q)
Q = (R x I X A)
R = LAND COVER FACTOR, VALUE FOR GRADED/SMOOTH SOILS = 0.4
I = FROM IDF CURVE, 1:5 Event = 34.5 mm/hr
A = AREA = 0.46 ha

Q(1:2) = (0.4 x 34.5 mm/HR X 0.50 HA)/360 = 0.0176 m3/s

POND AREA
AREA = (1.2 x Q)/Vs
A(1:2) = (1.2 x 0.0176 m3/s/ 0.0004 m/s) = 52.9 m2

POND DIMENSIONS
5w2 = A
5w2 = A(1:2)
5W2 = 52.9
w2 = 52.9/5
w2 = 10.6 m
w = 3.3 m

EFFECTIVE WIDTH TO LENGTH RATIO FOR PONDS IS 5:1

3.3 m x 16.3 m = 53.8 m2

Use 3.5 m WIDE x 16 m LONG SEDIMENT POND

NOTE:

TO MANAGE AND MITIGATE ERODIBLE SURFACES THE CONTRACTOR WILL APPLY AN APPLICATION OF STRAW AT 4,500 kg/ha OR PROTECT ERODIBLE SURFACES WITH POLYETHYLENE SHEETING UNTIL FINAL STABILIZATION.

PHASE 2 NOTES (SERVICING & BUILDING CONSTRUCTION):

1.WHEN THE TRUCK ACCESS PAD BECOMES FOULED, IT WILL BE SCARIFIED AND LOFTED TO REMOVE OCCLUDING SEDIMENTS, AND ADDITIONAL CLEAN MATERIAL WILL BE ADDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

2.MINIMIZE EXPOSURE OF MINERAL SOILS DURING THIS PHASE OF WORKS BY APPLICATION OF MULCHES (STRAW, PLASTIC, COMPOST, ETC.). ORGANIC MULCHES WILL BE APPLIED AT A RATE OF 4,500 KILOGRAMS PER HECTARE AND TO A DEPTH OF NOT LESS THAN 3cm.

3.APPLY SUB–GRADE AND BUILD TO SPECIFIED DEPTH.

4.INSTALL SERVICES, AFFIX TEMPORARY FILTER SOCKS TO APPROVED CATCHBASINS. APPLICATION OF GEOTEXTILE TO CATCH BASIN INLETS IS NOT AN ACCEPTABLE METHOD OF SEDIMENT CONTROL AND IS NOT PERMITTED.

5.ALL UNDERGROUND SERVICING WILL BE BACKFILLED AND CAPPED WITH CLEAN COARSE GRANULAR MATERIAL IMMEDIATELY FOLLOWING PIPE INSTALLATION AND PRIOR TO THE END OF THE WORK DAY.

6.DECOMMISSION PERIMETER CATCHMENT SWALES. CONTRACTOR WILL REMOVE ACCUMULATED SEDIMENT AND GEOTEXTILE FABRIC OR POLYETHYLENE LINER FROM SWALES AND DISPOSE OFFSITE.

7.CATCHBASIN FILTER SOCKS MUST BE INSPECTED DAILY AND CLEANED DAILY FOR ACCUMULATIONS OF SAND, SOIL AND SILT.

8.DEACTIVATE TEMPORARY SEDIMENT POND PER "SEDIMENT POND DEACTIVATION NOTES".

LEGAL DESCRIPTION

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CLIENT
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TITLE
ELGIN HALL PARKING UPGRADE
EROSION AND SEDIMENT CONTROL PLAN
PHASE 2 - CIVIL SITE SERVICING AND PARKING LOT CONSTRUCTION

SEAL

SCALE: HOR. 1:250 VERT.
DESIGNED MTM
DRAWN DWF
REVIEWED DEN

DATE (YYYY.MM.DD) 16-07-26
CONSULTANT PROJ. NO. 31566
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REV. .

SURREY PROJECT NUMBER .
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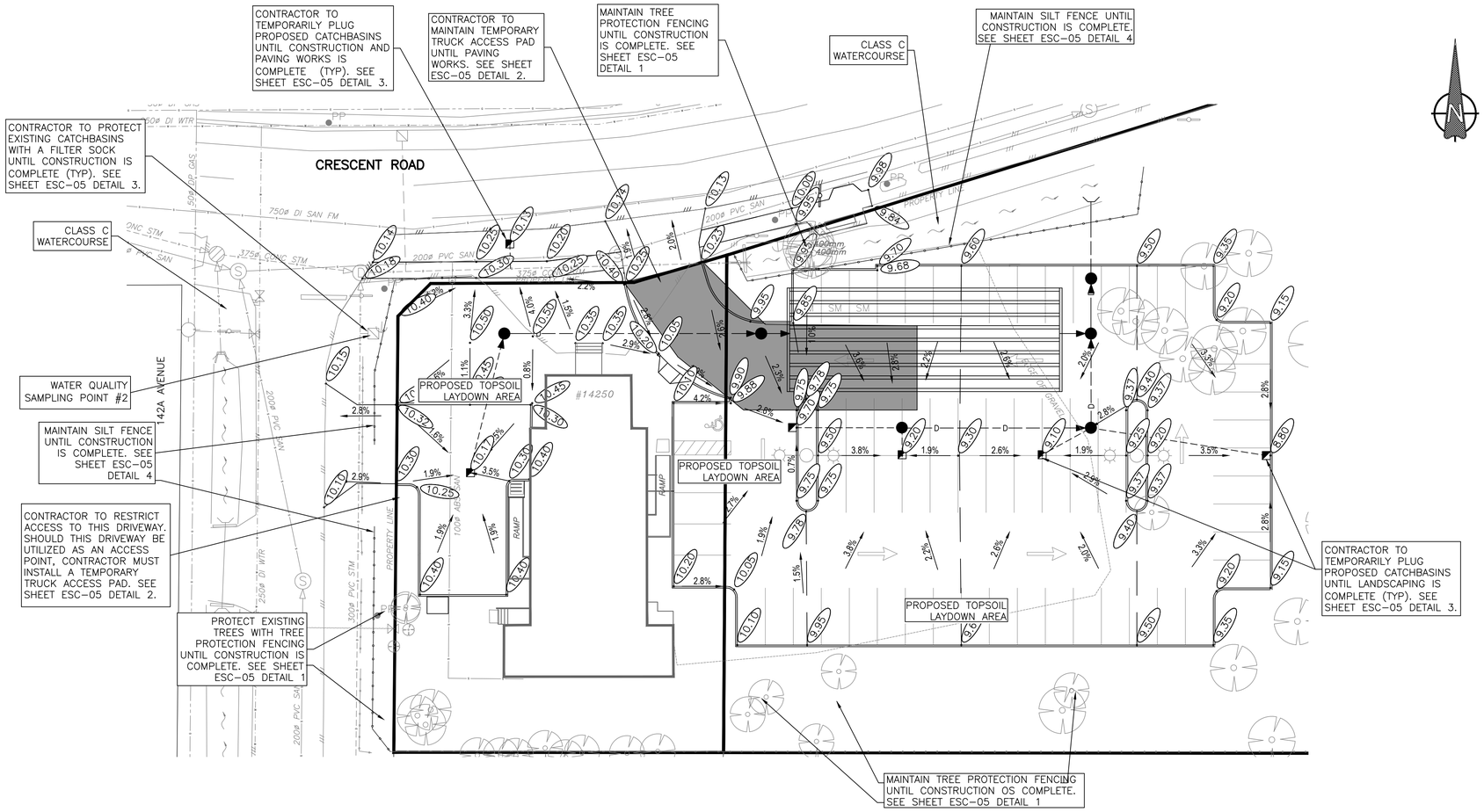

NOTE:

TO MANAGE AND MITIGATE ERODIBLE SURFACES THE CONTRACTOR WILL APPLY AN APPLICATION OF STRAW AT 4,500 kg/ha OR PROTECT ERODIBLE SURFACES WITH POLYETHYLENE SHEETING UNTIL FINAL STABILIZATION.

PHASE 3 NOTES (PAVING & LANDSCAPING):

1. DECOMMISSION TRUCK ACCESS RAMP PRIOR TO PAVING APPLICATION.
2. PAVING PRE-COAT AND PAVING APPLICATION MUST BE DONE DURING PERIODS OF DRY WEATHER.
3. PREVENT CONCRETE LADEN WATER FROM DRAINING TO STORM SEWERS.
4. DECOMMISSION TRUCK ACCESS RAMP PRIOR TO PAVING APPLICATION.
5. LANDSCAPERS WILL USE DEMARCATED AREAS (NOT CITY STREETS) FOR LAYDOWN OF TOPSOIL, TURF, ETC.
6. LANDSCAPERS WILL COVER ALL SOIL STOCKPILES AND WILL SWEEP CLEAN THE LAYDOWN AREAS AT COMPLETION OF THEIR WORK, TO THE SATISFACTION OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.
7. REMOVE SILT FENCING AND ALL TEMPORARY ESC MEASURES FROM THE SITE ONCE SITE SOIL STABILIZATION HAS BEEN ACHIEVED.
8. REMOVE FILTER SOCKS ONCE PAVING & LANDSCAPING IS COMPLETE.
9. PERMANENTLY STABILIZE EXPOSED SOILS AND DISTURBED AREAS BY APPLICATION OF TURF OR NATIVE GRASS SEED,

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CITY OF SURREY

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TITLE

ELGIN HALL PARKING UPGRADE
EROSION AND SEDIMENT CONTROL PLAN
PHASE 3 - PAVING AND LANDSCAPING

SEAL

SCALE: HOR. 1:250 VERT.

DESIGNED MTM
DRAWN DWF
REVIEWED DEN

DATE (YYYY.MM.DD) 16-07-26
CONSULTANT PROJ. NO. 31566
DWG. NO. 04
REV. .

SURREY PROJECT NUMBER .
SURREY DRAWING NUMBER

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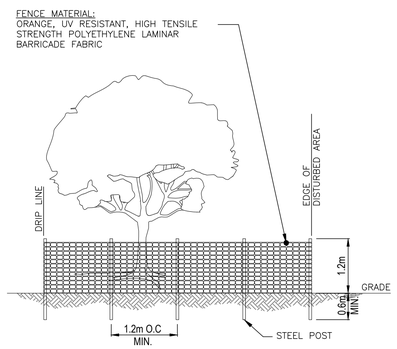
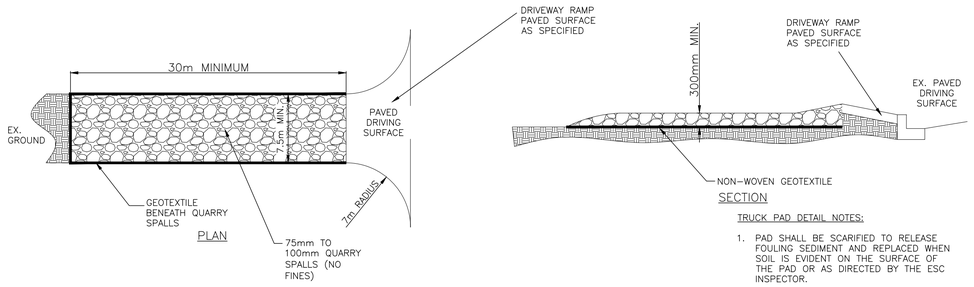


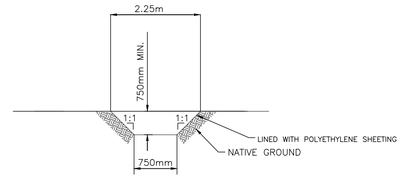
DETAIL 1: TREE PROTECTION
SCALE: NTS



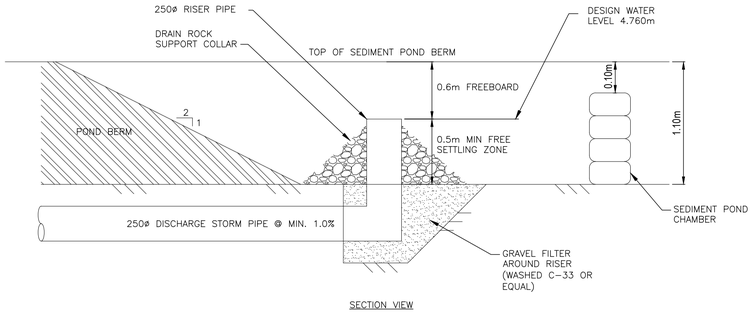
TRUCK PAD DETAIL NOTES:

1. PAD SHALL BE SCARIFIED TO RELEASE FOULING SEDIMENT AND REPLACED WHEN SOIL IS EVIDENT ON THE SURFACE OF THE PAD OR AS DIRECTED BY THE ESC INSPECTOR.
2. ADDITIONAL CLEAN ROCK PER SPECIFICATION MUST BE ADDED IF CONDITIONS DICTATE OR PER THE DIRECTION OF THE ENVIRONMENTAL MONITOR.

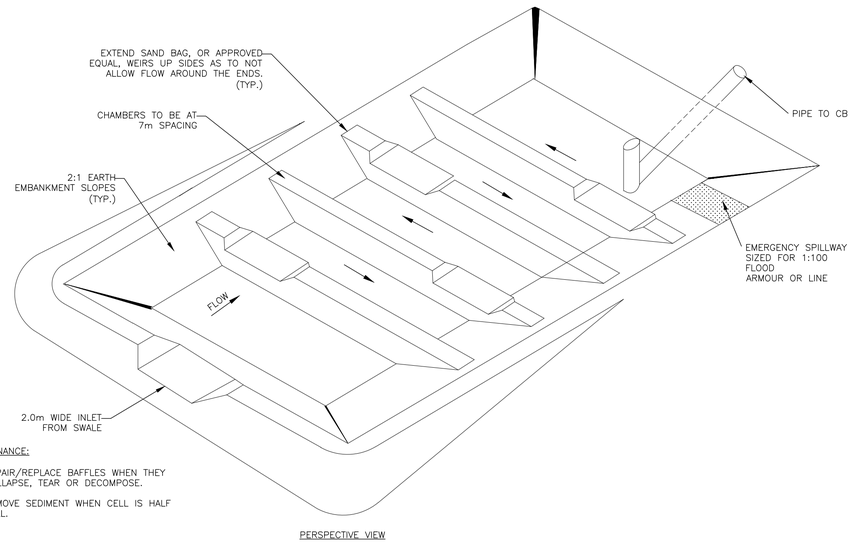
DETAIL 2: TEMPORARY TRUCK ACCESS PAD
SCALE: NTS



DETAIL 3: TYPICAL CONSTRUCTION DRAINAGE SWALE SECTION
SCALE: NTS



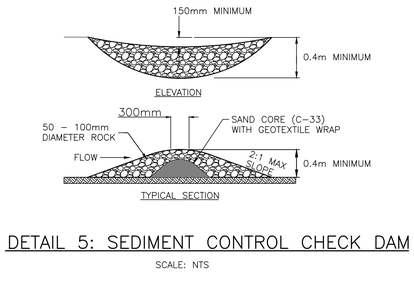
DETAIL 4: SEDIMENT POND SECTION
SCALE: NTS



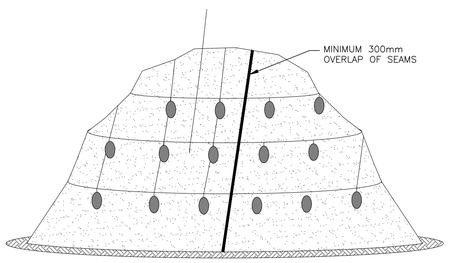
MAINTENANCE:

1. REPAIR/REPLACE BAFFLES WHEN THEY COLLAPSE, TEAR OR DECOMPOSE.
2. REMOVE SEDIMENT WHEN CELL IS HALF FULL.

DETAIL 4: SEDIMENT POND
SCALE: NTS

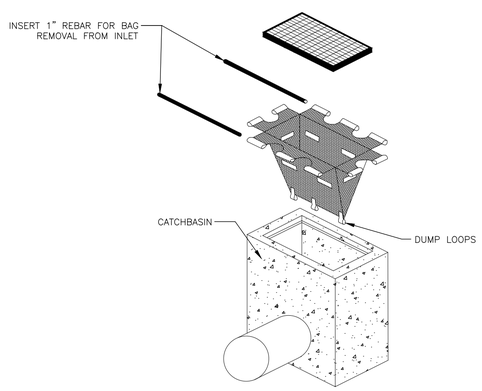


DETAIL 5: SEDIMENT CONTROL CHECK DAM
SCALE: NTS

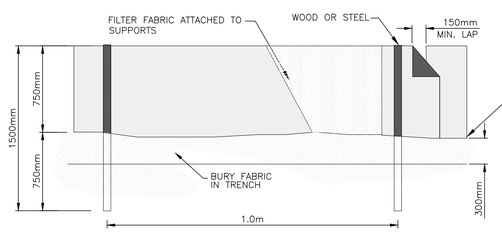


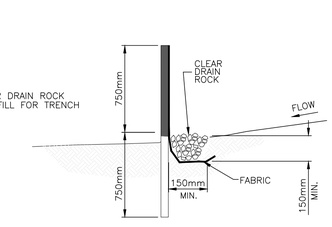
NOTES:
1. MINIMUM 300mm OVERLAP OF ALL SEAMS REQUIRED.
2. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 3.0m GRID SPACING IN ALL DIRECTIONS.

DETAIL 6: PLASTIC SHEETING
SCALE: NTS



DETAIL 7: FILTER SOCK
SCALE: NTS





DETAIL 8: SILT FENCE
SCALE: NTS

H:\projects\31566 CoS Elgin Hall Civil Design Service\02_CADD\20_Drafting\201_Sheets\ESC\31566_05_ESC DETAILS.dwg

LEGAL DESCRIPTION #####

SURVEY BENCHMARK .

REV.	DATE	DESCRIPTION	BY
2	MAR 26, 2018	ISSUED FOR TENDER	TJA
1	AUGUST 18, 2016	ESC PLAN FOR CITY'S REVIEW	TJA

ESC SUPERVISOR

CONSULTANT

ISL Engineering and Land Services
SUITE 301, 20338 - 65 AVENUE
LANGLEY, BRITISH COLUMBIA, V2Y 2X3
[604] 530-2288 FAX : [604] 530-1132

CITY OF SURREY

CLIENT: City of Surrey
13450 104 Ave. Surrey, BC,
Canada V3T 1V8

TITLE: ELGIN HALL PARKING UPGRADE
EROSION AND SEDIMENT CONTROL PLAN
DETAILS

SEAL

SCALE: HOR. NTS VERT.

DESIGNED MTM

DRAWN ###

REVIEWED DEN

DATE (YYYY.MM.DD) 16-07-26

CONSULTANT PROJ. NO. 31566

DWG. NO. 05

REV. .

SURREY PROJECT NUMBER .

SURREY DRAWING NUMBER

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER

SECTION D

Supplementary General Conditions (Project)

and

Supplementary Specifications (Project)

SUPPLEMENTARY GENERAL CONDITIONS (PROJECT)			
GC#	**Paragraph#**	**Title**	**Action**
SGC 4.6	4.6.10	**Construction Schedule**	Add SGC 4.6.10 as follows: (a) The *Contractor* hours of work shall be restricted to the following: a. All local roads shall maintain Single Lane Alternating Traffic (SLAT) between the hours of 7:00am-6:00pm. b. All collector roads shall maintain traffic in both directions (SLAT not permitted) between the hours of 9:00am-5:00pm.
SGC 10.1	**10.1.1**	**Force Account**	Deletion from 10.1.1 (2)(a) plus a 10% markup to cover all overhead costs and profit

SUPPLEMENTARY SPECIFICATIONS (PROJECT)		
Section	**Title**	**SSP**
01 55 00	**Traffic Control, Vehicle Access and Parking**	Delete paragraph SS 1.5.1 in Section 01 55 00 and replace as follows: Payment for all work performed under this Section will be on a Lump Sum basis unless noted otherwise in the Schedule of Quantities and Prices. Payment shall be 10% upon preparing TMP's, securing permits and erecting traffic control devices; 80% distributed in monthly Progress Payments for traffic control persons and related control devices; and 10% upon Substantial Performance.
01 57 01	**Environmental Protection**	Delete paragraph SS 1.6.1 in Section 01 57 00 and replace as follows: Payment for all work performed under this Section will be on a Lump Sum basis unless noted otherwise in the Schedule of Quantities and Prices. Payment shall be 10% upon installing ESC measures; 80% distributed in monthly Progress Payments for maintenance and monitoring work; and 10% upon Total Performance.
31 11 01	**Clearing and Grubbing**	Delete paragraph SS 1.4.2 in Section 31 11 01 and replace as follows: Payment for all work performed under this Section will be on a Lump Sum basis unless noted otherwise in the Schedule of Quantities and Prices.
31 22 01	**Site Grading**	Delete paragraph SS 1.4.2 in Section 31 22 01 and replace as follows: Payment for all work performed under this Section will be on a Lump Sum basis unless noted otherwise in the Schedule of Quantities and Prices.
31 24 13	**Roadway Excavation, Embankment and Compaction**	Append to SS 1.8.4 in Section 31 24 13 as follows: Payment shall be 20% upon mobilization; 70% upon removals and disposals; and 10% upon Substantial Performance.
31 24 13	**Roadway Excavation, Embankment and Compaction**	Delete paragraph SS 1.8.5.1 in Section 31 24 13 and replace as follows: Payment for all work performed under this section will be on a Lump Sum basis unless noted otherwise in the Schedule of Quantities and Prices.
32 93 01	**Planting of Trees, Shrubs and Ground Covers**	Append to Paragraph 1.9.1: Payment will be 90% upon completion of planting and watering, based on progress payments, and the final 10% will be paid upon

		achieving Total Performance after a plant/shrub survival count and assessment has been completed by the Contract Administrator.
32 12 16	**Hot-Mix Asphalt Concrete Paving** **Asphalt Unit Price Adjustment**	Add Paragraph 1.5.9 to Section 32 12 16 and Paragraph 1.5.11 to Section 32 12 17 as follows: The *Contractor* or the *Owner* may request adjustment of the unit prices submitted for Asphalt Pavement if the Composite Rack Posting (CRP) varies by more than 5.0% from Tender Closing Date to the time the asphalt paving is actually performed. The CRP is a composite of the available Rack Postings for PG 64-22 FOB Langley BC. Requests for asphalt pavement unit price adjustment must be made prior to commencing asphalt paving. Payment for asphalt paving performed prior to a request for price adjustment will be made at the unit price submitted. Unit prices will be increased or decreased as applicable using the following formula: Adjustment $= (CRP_{work} - CRP_{tender}) \times AC_{volume}$ *Adjustment* amount in dollars per tonne the unit price is modified CRP_{work} is the CRP at the time paving is performed CRP_{tender} is the CRP at the Tender Closing Date AC_{volume} is the mixture design percent asphalt content, by volume.

SECTION E

Samples of Bond, Agreement to Bond and Insurance

A. Bid Bond
B. Letter of Credit Format
C. Agreement to Bond - Performance and Labour and Materials Payment
D. Performance Bond
E. Certificate of Insurance
F. Labour and Material Payment Bond
G. Notice of Certificate of Completion
H. Certificate of Completion

APPENDIX A

BID BOND

No._____ $_____

KNOW ALL MEN BY THESE PRESENTS THAT _____

_____as Principal hereinafter called the Principal, and _____

_____a corporation created and existing under the laws of _____ and duly authorized to transact the business of Suretyship in _____ as Surety, hereinafter called the Surety, are held and firmly bound unto _____

_____ as Obligee hereinafter called the Obligee, in the amount of _____

_____ Dollars ($_____) lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors, and assigned, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a written tender to the Obligee, dated the _____ day of _____ 20 _____ for _____

_____

_____

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the aforesaid Principal shall have the tender accepted within sixty (60) days from the closing date of tender, and the said Principal will, within the time required, enter into a formal contract and give the specified security to secure the performance of the terms and conditions of Contract, then his obligation shall be null and void; otherwise the Principal and the Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount is in excess of the former.

The Principal and the Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of six months from the date of Bond.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond this _____ day of _____, 20____.

SIGNED AND SEALED
in the presence of

(
(
(_____(Seal)
Principal

(
(
(_____(Seal)
Surety

APPENDIX B

(TO BE ON BANK LETTERHEAD)

_____ day of _____ , A.D., 20_____

The City of Surrey
13450-104 Avenue
Surrey, B.C.
V3T 1V8

Dear Sirs:

IRREVOCABLE COMMERCIAL LETTER OF CREDIT NO._____

We hereby authorize you to draw on (NAME OF BANK), (ADDRESS OF BANK), Province of British Columbia, for account of (NAME OF TENDERER), up to an aggregate amount of $_____ available by drafts at sight for 100% of value:

1. Drawings are to be made in writing to (NAME OF BANK) .....

2. Partial drawings may be made.

3. The Bank will not inquire as to whether or not The City has a right to make demand on this Letter of Credit.

4. This Letter of Credit is irrevocable up to the expiry date.

DRAFTS MUST BE DRAWN AND NEGOTIATED NOT LATER THAN

_____ day of _____ , A.D., 20 _____

The drafts drawn under this Credit are to be endorsed hereon and shall state on their face that they are drawn under (NAME OF BANK), (ADDRESS OF BANK), Vancouver, B.C., Letter of Credit No.

Yours truly,

Manager
On Behalf of
(NAME OF BANK)

APPENDIX C

Agreement to Bond
Performance and Labour and Materials Payment

For the CITY OF SURREY

We, the undersigned, hereby agree to become bound as surety for

_____

_____

in a Performance Bond totaling fifty percent (50%) of the Contract Price, and in a Labour and Materials Payment Bond totaling fifty percent (50%) of the Contract price, and conforming to the Instruments of Contract attached hereto, for the full and due performance of the works shown as described herein, if the Tender for _____

_____

_____

is accepted by the City of Surrey.

It is a condition of this Agreement that if the above mentioned Tender is accepted, application for the above mentioned Bonds must be completed with the undersigned within eight (8) Days of acceptance of the tender related thereto, otherwise this Agreement shall be null and void.

DATED this _____ day of _____, 20___.

_____

Name of Bonding Company

BY:

_____

Signature of Authorized Person
Signing for Company

(Company Seal)

_____

Position

APPENDIX D

Form of Performance Bond

BOND NO. _____

KNOW THEREFORE ALL MEN BY THESE PRESENTS THAT _____ (hereinafter called the "Principal") and _____ a corporation created and existing under the laws of _____ and whose principal office for Canada is located in the _____ (hereinafter called the "Surety") are held and firmly bound unto the City of Surrey (hereinafter called the "Obligee") in the amount of $_____, lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves and their respective heirs, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a contract with the Obligee dated the _____ day of _____, 200____, for Contract No. _____ which by reference hereto is made a part hereof as fully to all intents and purposes as though recited in full herein and which contract as amended, supplemented, modified or restated from time to time is hereinafter called the "Contract".

NOW THEREFORE, the condition of the foregoing obligation is such that, if the Principal shall well and truly observe and perform all the obligations of the Contract on the part of the Principal to be observed and performed, then this obligation shall be void but otherwise shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Obligee.

Whenever the Principal shall be, and declared by the Obligee to be in default under the Contract, the Surety shall:

(a) if the work is not taken out of the Principal's hands, remedy the default of the Principal;

(b) if the work is taken out of the Principal's hands and the Obligee directs the Surety to undertake the completion of the work, complete the work in accordance with the Contract provided that if a contract is entered into for the completion of the work:

  (i) such contract shall be between the Surety and the completing contractor; and

  (ii) the selection of the completing contractor shall be subject to the approval of the Obligee;

(c) if the work is taken out of the Principal's hands and the Obligee does not direct the Surety to undertake completion of the work, assume financial responsibility for the costs of completion and be liable for and pay the costs of completion of the Contract.

No action shall be instituted by the Obligee herein against the Surety pursuant to these presents after the expiration of three (3) years from the date upon which final payment under the Contract is made.

APPENDIX D

The Surety shall be liable as principal and nothing of any kind or matter whatsoever shall operate as a discharge or release of the liability of the Surety notwithstanding any law or usage relating to the liability of sureties to the contrary, until all obligations of the Contract have been observed and performed.

In witness whereof, the Principal and Surety have hereunto affixed their corporate seals and caused their presents to be signed by their duly authorized officers.

DATED THIS _____ day of _____, 200___.

_____
Name - Surety

c/s

_____
Signature and Signing Authority

_____
Name - Principal

c/s

_____
Signature and Signing Authority

APPENDIX E

This certifies that policies of insurance as described below have been issued to the Insured named below and are in full force and effect at this time. It is understood and agreed that thirty (30) days' written notice of any cancellation or change in applicable limit of any of the policies listed below, with the exception of ICBC, will be given to the holder of this certificate.

NOTE: PROOF OF INSURANCE WILL BE ACCEPTED ON THIS FORM ONLY. INSURANCE COMPANIES MUST BE LICENSED TO OPERATE IN CANADA.
This Certificate is issued to: City of Surrey, 13450 104 Avenue, Surrey, B.C. V3T1V8

Insured:	**Name:**
	Address:

Broker:	**Name:**	**Broker's Name:**
	Address:	**Phone:**

Location, Project No. and nature of contract, permit, lease, license or operation to which this Certificate applies:

Type of Insurance	Company and Policy Number	Policy Term yyyy/mm/dd	Limits of Liability/Amount
Section 1 ☒ Commercial General Liability ☐ Wrap-up ☐ Umbrella Liability ☐ Excess Liability Sudden & Accidental Pollution ☒ **$ 2,000,000** ☐ **$ 20,000,000** (adjacent to Kinder Morgan Pipeline)		From: To:	Bodily Injury, Death & Property Damage $ Per Occurrence $ Aggregate $ Deductible $ Umbrella Liability $ Excess Liability ☒ **MINIMUM $5,000,000** ☐ **MINIMUM $10,000,000**
Section 2 Automobile Liability (owned or leased vehicles)		From: To:	Bodily Injury & Property Damage $ Limit **MINIMUM $3,000,000**
Section 3 ☐ Professional Liability		From: To:	$ Each Claim $ Aggregate $ Deductible **MINIMUM $2,000,000**
Section 4 ☐ Builder's Risk		From: To:	$ Limit $ Deductible **MINIMUM: CONSTRUCTION VALUE**
Section 5 Contractor's Equipment Insurance		From: To:	$ Limit
Section 6 ☐ Boiler & Machinery Insurance		From: To:	$ Limit $ Extra Expense Limit $ Deductible **MINIMUM: CONSTRUCTION VALUE**

Particulars of Wrap-up/Commercial General Liability Insurance (Sections 1 & 2): X indicates that the coverage is included.

- ☒ City of Surrey as Additional Insured
- ☒ Contract Administrator as Additional Insured
- ☒ Premises & Operations
- ☒ Broad Form Products & Completed Operations
- ☒ Owners & Contractors Protective
- ☒ Blanket Contractual
- ☒ Cross Liability/Severability of Interests
- ☒ Employees as additional insured
- ☒ Attached Machinery
- ☒ Broad Form Property Damage
- ☒ Non-Owned Automobile
- ☒ Contingent Employer's
- ☒ Personal Injury
- ☒ Incidental Medical Malpractice
- ☒ 24 months Completed Operations
- ☒ Elevator & Hoist Liability
- ☒ Operation of Attached Equipment
- ☐ Removal or weakening of support of property, building or land whether the support is natural or otherwise
- ☐ Work below ground level over 3 meters (XCU extension)
- ☐ Use of explosives for blasting
- ☒ Vibration from pile driving or caisson work
- ☐ Shoring, blasting, excavation, underpinning, demolition, debris removal, tunneling and grading (as applicable)

Particulars of Professional Liability Insurance (Sections 3): X indicates that the coverage is included.

- ☒ 24 Months Maintenance Period
- ☐ Insures all professionals on the project

Particulars of Property Insurance (Sections 4,5 & 6): X indicates that the coverage is included

- ☒ Builder's Risk (All Risks)
- ☒ Flood & Earthquake
- ☒ 30 Days Testing & Commissioning
- ☒ Breach of Conditions Clause
- ☒ City as First Loss Payee to extent of its insurable interest
- ☒ Materials On & Off Site & In Transit

It is understood and agreed any deductible or reimbursement clause contained in the policy shall be the sole responsibility of the Named Insured.

Authorized to Sign on Behalf of Insured — Date Signed

Authorized to Sign on Behalf of Insurers & Broker Stamp — Date Signed

APPENDIX F

Form Of Labour And Material Payment Bond

BOND NO. _____

KNOW THEREFORE ALL MEN BY THESE PRESENTS THAT _____ (hereinafter called the "Principal") and _____ a corporation created and existing under the laws of _____ and whose principal office for Canada is located in the _____ (hereinafter called the "Surety") are held and firmly bound unto the City of Surrey (hereinafter called the "Obligee") in the amount of $_____, lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves and their respective heirs, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a contract with the Obligee dated the _____ day of _____, 200____, for Contract No. _____ which by reference hereto is made a part hereof as fully to all intents and purposes as though recited in full herein and which contract as amended, supplemented, modified or restated from time to time is hereinafter called the "Contract".

NOW THEREFORE, the condition of the foregoing obligation is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void but otherwise shall remain in full force and effect.

A Claimant for the purpose of this Bond is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial rental value of equipment shall be determined, insofar as it is practical to do so, in accordance with and in the manner provided for in the latest revised edition of the "Equipment Rental Rate Guide" of the Ministry of Transportation and Highways, B.C., published prior to the period during which the equipment was used in the performance of the Contract.

The Principal and the Surety, hereby jointly and severally agree with the Obligee, as Trustee, that every Claimant who has not been paid as provided for under the terms of its contract with the Principal, before the expiration of a period of 90 days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of its contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants, or any of them, to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceeding, then such act, action or proceeding, shall be taken on the understanding and basis that the Claimants or any of them, who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Obligee by reason thereof.

APPENDIX F

No suit or action shall be commenced hereunder by any Claimant:

(a) unless such Claimant shall have given written notice within the time limits hereinafter set forth to each of the Principal, the Surety and the Obligee, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal, the Surety and the Obligee, at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or other part of Canada in which the subject matter of the Contract is located. Such notice shall be given:

(i) in respect of any claim for the amount or any portion thereof, required to be held back, from the Claimant by the Principal, under either the terms of the Claimant's contract with the Principal, or under construction lien legislation applicable to the Claimant's contract with the Principal, whichever is the greater, within 120 days after such Claimant should have been paid in full under the Claimant's contract with the Principal;

(ii) in respect of any claim other than for the holdback, or portion thereof, referred to above, within 120 days after the date upon which such Claimant did, or performed, the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with the Principal;

(b) after the expiration of one (1) year following the date on which the Principal ceased work on the Contract, including work performed under the guarantees provided in the Contract;

(c) other than in a Court of competent jurisdiction in the Province of British Columbia, or District of Canada in which the subject matter of the Contract, or any part thereof, is situated and not elsewhere, and the parties hereto agree to submit to the jurisdiction of such Court.

Any material change in the contract between the Principal and the Obligee shall not prejudice the rights or interest of any Claimant under this Bond, who is not instrumental in bringing about or has not caused such change.

The amount of this Bond shall be reduced by, and to the extent of any payment or payments made in good faith, and in accordance with the provisions hereof, inclusive of the payment by the Surety of construction liens which may be filed on record against the subject matter of the Contract, whether or not claim for the amount of such lien be presented under and against this Bond.

The Surety shall be liable as principal and nothing of any kind or matter whatsoever shall operate as a discharge or release of the liability of the Surety notwithstanding any law or usage relating to the liability of sureties to the contrary.

In witness whereof, the Principal and Surety have hereunto affixed their corporate seals and caused their presents to be signed by their duly authorized officers.

DATED THIS _____ day of _____, 200___.

APPENDIX F

_____

Name - Surety

c/s

_____

Signature and Signing Authority

_____

Name - Principal

c/s

_____

Signature and Signing Authority

APPENDIX G

Form 2

Builders Lien Act
(Section 7 (4))

Notice of Certification of Completion

NOTICE: Re _____
[Name or popular description of project]

Take notice that on _____ [date] a certificate of completion, or court order to that effect, was issued with respect to a contract (or subcontract) between _____ [owner, contractor or subcontractor]

and

_____ [contractor or subcontractor]

in connection with an improvement on land described as follows:

for the provision of [brief, general description of work done under contract or subcontract]:

all persons entitled to claim a lien under the Builders Lien Act and who performed work or supplied material in connection with or under the contract are warned that the time to file a claim of lien may be abridged and section 20 of the Act should be consulted.

APPENDIX H

Form 3

Builders Lien Act
(Section 7 (10))

Certificate of Completion

I _____ [name of payment certifier], of _____ [address], British Columbia certify that, for the purposes of the Builders Lien Act, the following contract or subcontract was completed on _____ [month, day, year].

Street address or other description of the land affected by the improvement:

_____

Brief description of the improvement: _____

_____

Brief description of the contract or subcontract, including the date of the contract and the names of the parties to it: _____

_____

Signed:_____ [signature of payment certifier] _____ [month, day, year].

SECTION F

Geotechnical Investigation Reports
(For Information Only)

Foundations, Excavation & Shoring Specialists

Braun Geotechnical
106A – 9785 192 St.
Surrey, BC
V4N 4C7
Tel: 604-513-4190
Fax: 604-513-4195
info@braungeo.com

www.braungeo.com

Foundations

Excavation & Shoring

Slope Stability

Natural Hazards

Pavement Design and Management

Reinforced Soil Walls and Slopes

Rev. May 6, 2007

Professional Engineers and Geoscientists of BC MEMBER

March 18, 2016

Our File: 16-6710

Via email: carlos.aller@surrey.ca

Cc: AArar@surrey.ca

City of Surrey
Planning and Development, Civic Facilities
13450 104 Avenue
Surrey, BC V3T 1V8

Attn: Aiman Arar, P.Eng., Capital Projects Manager
Carlos Aller, Project Coordinator

Re: Geotechnical Exploration Report
Proposed Parking Lot Upgrade
Elgin Community Hall – 14250/14280 Crescent Road, Surrey, BC

1.0 INTRODUCTION

As requested, Braun Geotechnical Ltd. has carried out a geotechnical exploration for the above-referenced project. The geotechnical work has been performed in general accordance with the terms and conditions of the Braun Geotechnical proposal dated August 12, 2015 (our reference No. P15-4675). The scope of work included subsurface exploration and provision of geotechnical recommendations for the project. No consideration has been given to any environmental aspects.

Braun Geotechnical should be forwarded final civil drawings when they become available and be provided the opportunity to comment on geotechnical aspects.

2.0 SITE DESCRIPTION AND PROPOSED PROJECT

The subject site area is the existing Elgin Community Hall parking lot located at 14250/14280 Crescent Road, in the City of Surrey, BC.

It is understood that the City of Surrey is considering upgrading the existing approximately 1800m^2 gravel surfaced parking lot at Elgin Community Hall to an asphalt surfaced lot. The area proposed for the upgrade is outlined in Figure 1 Below.

It is understood that the proposed parking lot upgrade may also include extending the parking lot with beyond the limits of the existing gravel surfaced area (within existing grass covered and/or large tree/low underbrush type vegetated areas).

Figure 1: Approximate parking lot upgrade location

3.0 SITE EXPLORATION

Five test holes (TH16-01 to TH16-05) were drilled on March 15, 2016, using a truck mounted solid stem auger drill under subcontract to Braun Geotechnical. The test holes were drilled to a depth of 1.5m at the locations shown on the attached location plan (Dwg. 16-6710-01). TH16-01 to TH16-04 were drilled within the existing gravel surfaced areas, and TH16-05 was drilled within an existing grass covered area.

Existing aggregate surfaced pavement materials are considered suitable for subbase within the new asphalt pavement section.

The soil conditions were logged in the field by a representative from Braun Geotechnical and representative soil samples were returned for further classification.

4.0 SOIL AND GROUNDWATER CONDITIONS

A review of available published and in-house geological information indicated that the study site area is underlain by natural soils comprised of marine and glaciomarine stony (including till-like deposits) to stoneless silt loam to clay loam, with minor sand and silt, normally less than 3m thick, but up to 30m thick (Capilano Sediments).

The findings of the test hole exploration were generally consistent with the regional geological information. The findings of the test hole exploration are detailed on the attached test hole logs. A generalized subsoil profile based on the machine excavated test pits is provided below.

FILL

Granular FILL, grey, damp, compact GRAVEL with trace to some sand and trace to some silt (surfacing aggregate), ASPHALT/MILLINGS, and/or grey-brown to dark-brown, damp to wet, loose to compact SAND and GRAVEL with some silt and

trace organics was encountered immediately below existing grades within each of the test holes except TH16-05 to depths of 0.1 to 0.6m. The thickness of surfacing aggregate varied from approximately 40mm to 150mm.

ORGANICS
Dark-brown, damp, loose SAND with some silt, some organics, and trace gravel was encountered immediately below existing grade within TH16-05 to a depth of 0.3m. This zone was inferred to be the disturbed natural surficial organics horizon.

Thin zones (50 to 150mm thick) zones of brown to dark-brown, damp to wet, loose to compact SAND and GRAVEL to SAND with some gravel, with trace to some organics were encountered within TH16-02 and TH16-03 to depths of 0.1 and 0.3m, respectively. This zone was inferred to be remnant of the disturbed/re-graded surficial organics horizon prior to fill placement.

SAND and GRAVEL
Grey to brown, humid to wet, SAND and GRAVEL with trace to some silt to silty SAND (with occasional cobbles inferred from drilling) was encountered below the fill/organics to the depth of the test hole exploration. This zone was generally loose to compact, becoming dense to very dense with depth.

GROUNDWATER
Sidewall seepage was encountered within each of the test holes below depths of 0.3 to 1.2m. The seepage was interpreted as near surface groundwater flows above natural very dense/very stiff soil layers. Depending on the season and/or weather conditions, near-surface seepage flows should be anticipated within natural and fill soil layers overlying the relatively impervious very dense/very stiff soils. Groundwater levels and near-surface run-off flows are expected to fluctuate seasonally, and with drainage conditions.

The subsurface conditions described above were encountered at the test hole locations only. Subsurface conditions at other locations could vary.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 General

The geotechnical exploration encountered existing surficial fill and/or organics overlying natural sand and gravel type soils in loose to compact condition, becoming dense to very dense with depth. The existing granular fills and/or the underlying natural sand and gravel soils are considered suitable for subgrade support for the proposed paved parking lot.

The following sections provide our specific geotechnical recommendations.

5.2 Site Preparation

Site preparation below the proposed paved parking lot within existing grass covered/vegetated areas should include removal of all vegetation, organic soils, soft disturbed soils, any existing poor quality fill and other deleterious material down to the natural, undisturbed mineral subgrade substantially free of organics/roots.

Natural loose to compact subgrade areas should typically be re-compacted to at least 95% Modified Proctor Density (MPD).

Existing granular fills should be re-compacted to at least 95% MPD and then proof rolled with a fully loaded dual axle dump truck. Soft areas exhibiting substantial deflection under wheel load

during proof-roll testing should be over-excavated as necessary and replaced with granular structural fill.

All stripped surfaces should be reviewed by Braun Geotechnical. Drainage measures should be implemented to reduce potential for water ponding on exposed subgrades. Temporary and final grades should be established so as to avoid uncontrolled offsite discharge of surface and/or near-surface run-off flows.

5.3 Structural Fill

Subgrade restoration fills below pavement areas should consist of structural fill comprised of MMCD compliant subbase material with less than 5% fines (percent passing the #200 sieve). Structural fill should be placed and compacted in maximum 300mm loose lifts with each lift compacted to at least 95% MPD. Structural fill placed under pavement areas should extend horizontally beyond by a distance equal to at least the thickness of structural fill for confined areas and at least 2 times the thickness of structural fill for unconfined areas.

Density testing should be carried out during fill placement on a regular basis to confirm adequacy of compaction, and the results forwarded to Braun Geotechnical for review. Braun Geotechnical should also be contacted to review fill quality, and placement and compaction procedures.

5.4 Permanent Slopes

The recommended maximum permanent cut slope angle is 2H:1V. Fill slopes consisting of suitably compacted native mineral or import granular soils should be constructed at gradients no steeper than 2.5H:1V. Permanent slopes should typically be planted or otherwise protected from erosion as soon as practical.

5.5 Pavement

The minimum recommended pavement structure within existing aggregate surfaced areas outlined below.

Minimum Thickness	***Material***
65mm[1]	Hot Mix Asphalt Surface - UC #2 (MMCD Hot Mix Asphalt, HMA)
150mm	MMCD Granular Base

The minimum recommended pavement structure within existing grass covered/vegetated areas is outlined below.

Minimum Thickness	***Material***
65mm[1]	Hot Mix Asphalt Surface - UC #2 (MMCD Hot Mix Asphalt, HMA)
100mm	MMCD Granular Base
200mm	MMCD Granular Subbase (SGSB type)[2]

Note[1]: The proposed asphalt thickness should be increased to 75mm for asphalt pavement areas subjected to regular heavy axle vehicle loads (buses, garbage truck, etc.).

Note[2]: The use of MMCD Granular Base material for subbase is considered suitable with respect to geotechnical considerations and for ease of construction.

Where proposed final grades do not allow for placement of an additional 150mm of granular base and 65mm asphalt over the existing aggregate surfaced parking lot, the minimum recommended pavement structure for existing grass covered/vegetated areas should be used within existing aggregate surfaced areas. It is expected that the existing granular fill may be salvaged for reuse as structural fill and/or subbase.

The gradation of the above materials should comply with the appropriate Master Municipal Specifications. Road construction materials should be placed and compacted in compliance with the current MMCD specifications.

Adequate drainage and/or cross falls should be provided to ensure that the base and subbase materials will not become saturated.

6.0 GEOTECHNICAL FIELD REVIEWS

Geotechnical field reviews are required by the Geotechnical Engineer of Record to confirm that the recommendations of the geotechnical report are understood and followed. Geotechnical field reviews should be arranged by the Contractor to address the following:

- Removal of unsuitable materials below proposed parking lot areas;
- Review and density testing of structural fill placed below parking lot areas;
- Review and density testing of pavement structure fills;
- Asphalt hot mix field sampling and Marshall Mix Design testing;
- Retrieval of asphalt cores for thickness and density.

7.0 CLOSURE

This report is prepared for the exclusive use of the City of Surrey and their designated representatives and may not be used by other parties without the written permission of Braun Geotechnical Ltd. If the development plans change, or if during construction soil conditions are noted to be different from those described in this report, Braun Geotechnical should be notified immediately in order that the geotechnical recommendations can be confirmed or modified, as required. Further, this report assumes that field reviews will be completed by Braun Geotechnical during construction.

The site Contractor should make their own assessment of subsurface conditions and select the construction means and methods most appropriate to the site conditions.

This report should not be included in the specifications without suitable qualifications approved by the geotechnical engineer.

The use of this assessment report is subject to the conditions on the attached Report Interpretation and Limitations sheet. The reader's attention is drawn specifically to those conditions, as it is considered essential that they be followed for proper use and interpretation of this report.

We hope the above meets with your requirements. Should any questions arise, please do not hesitate to contact the undersigned.

Yours truly,

Braun Geotechnical Ltd.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
H. DHILLON
39484

March 18, 2016

Harman Dhillon, P.Eng.
Geotechnical Engineer

Braun Geotechnical Ltd.

Stuart Hrysio, P.Eng.
Geotechnical Engineer

Encl: Report Interpretation and Limitations
Location Plan
Test Hole Logs

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BRAUN GEOTECHNICAL LTD.

REPORT INTERPRETATION AND LIMITATIONS

1. STANDARD OF CARE

Braun Geotechnical Ltd. (Braun) has prepared this report in a manner consistent with generally accepted engineering consulting practices in this area, subject to the time and physical constraints applicable. No other warranty, expressed or implied, is made.

2. COMPLETENESS OF THIS REPORT

This Report represents a summary of paper, electronic and other documents, records, data and files and is not intended to stand alone without reference to the instructions given to Braun by the Client, communications between Braun and the Client, and/or to any other reports, writings, proposals or documents prepared by Braun for the Client relating to the specific site described herein.

This report is intended to be used and quoted in its entirety. Any references to this report must include the whole of the report and any appendices or supporting material. Braun cannot be responsible for use by any party of portions of this report without reference to the entire report.

3. BASIS OF THIS REPORT

This report has been prepared for the specific site, development, design objective, and purpose described to Braun by the Client or the Client's Representatives or Consultants. The applicability and reliability of any of the factual data, findings, recommendations or opinions expressed in this document pertain to a specific project at described in this report and are not applicable to any other project or site, and are valid only to the extent that there has been no material alteration to or variation from any of the descriptions provided to Braun. Braun cannot be responsible for use of this report, or portions thereof, unless we were specifically requested by the Client to review and revise the Report in light of any alterations or variations to the project description provided by the Client.

If the project does not commence within 18 months of the report date, the report may become invalid and further review may be required.

The recommendations of this report should only be used for design. The extent of exploration including number of test pits or test holes necessary to thoroughly investigate the site for conditions that may affect construction costs will generally be greater than that required for design purposes. Contractors should rely upon their own explorations and interpretation of the factual data provided for costing purposes, equipment requirements, construction techniques, or to establish project schedule.

The information provided in this report is based on limited exploration, for a specific project scope. Braun cannot accept responsibility for independent conclusions, interpretations, interpolations or decisions by the Client or others based on information contained in this Report. This restriction of liability includes decisions made to purchase or sell land.

4. USE OF THIS REPORT

The contents of this report, including plans, data, drawings and all other documents including electronic and hard copies remain the copyright property of Braun Geotechnical Ltd. However, we will consider any reasonable request by the Client to approve the use of this report by other parties as "Approved Users." With regard to the duplication and distribution of this Report or its contents, we authorize only the Client and Approved Users to make copies of the Report only in such quantities as are reasonably necessary for the use of this Report by those parties. The Client and "Approved Users" may not give, lend, sell or otherwise make this Report or any portion thereof available to any other party without express written permission from Braun. Any use which a third party makes of this Report – in its entirety or portions thereof – is the sole responsibility of such third parties. BRAUN GEOTECHNICAL LTD. ACCEPTS NO RESPONSIBILITY FOR DAMAGES SUFFERED BY ANY PARTY RESULTING FROM THE UNAUTHORIZED USE OF THIS REPORT.

Electronic media is susceptible to unauthorized modification or unintended alteration, and the Client should not rely on electronic versions of reports or other documents. All documents should be obtained directly from Braun.

5. INTERPRETATION OF THIS REPORT

Classification and identification of soils and rock and other geological units, including groundwater conditions have been based on exploration(s) performed in accordance with the standards set out in Paragraph 1. These tasks are judgemental in nature; despite comprehensive sampling and testing programs properly performed by experienced personnel with the appropriate equipment, some conditions may elude detection. As such, all explorations involve an inherent risk that some conditions will not be detected.

Further, all documents or records summarizing such exploration will be based on assumptions of what exists between the actual points sampled at the time of the site exploration. Actual conditions may vary

significantly between the points investigated and all persons making use of such documents or records should be aware of and accept this risk.
The Client and "Approved Users" accept that subsurface conditions may change with time and this report only represents the soil conditions encountered at the time of exploration and/or review. Soil and ground water conditions may change due to construction activity on the site or on adjacent sites, and also from other causes, including climactic conditions.
The exploration and review provided in this report were for geotechnical purposes only. Environmental aspects of soil and groundwater have not been included in the exploration or review, or addressed in any other way.
The exploration and Report is based on information provided by the Client or the Client's Consultants, and conditions observed at the time of our site reconnaissance or exploration. Braun has relied in good faith upon all information provided. Accordingly, Braun cannot accept responsibility for inaccuracies, misstatements, omissions, or deficiencies in this Report resulting from misstatements, omissions, misrepresentations or fraudulent acts of persons or sources providing this information.

6. DESIGN AND CONSTRUCTION REVIEW

This report assumes that Braun will be retained to work and coordinate design and construction with other Design Professionals and the Contractor. Further, it is assumed that Braun will be retained to provide field reviews during construction to confirm adherence to building code guidelines and generally accepted engineering practices, and the recommendations provided in this report. Field services recommended for the project represent the minimum necessary to confirm that the work is being carried out in general conformance with Braun's recommendations and generally accepted engineering standards. It is the Client's or the Client's Contractor's responsibility to provide timely notice to Braun to carry out site reviews. The Client acknowledges that unsatisfactory or unsafe conditions may be missed by intermittent site reviews by Braun. Accordingly, it is the Client's or Client's Contractor's responsibility to inform Braun of any such conditions.
Work that is covered prior to review by Braun may have to be re-exposed at considerable cost to the Client. Review of all Geotechnical aspects of the project are required for submittal of unconditional Letters of Assurance to regulatory authorities. The site reviews are not carried out for the benefit of the Contractor(s) and therefore do not in any way effect the Contractor(s) obligations to perform under the terms of his/her Contract.

7. SAMPLE DISPOSAL

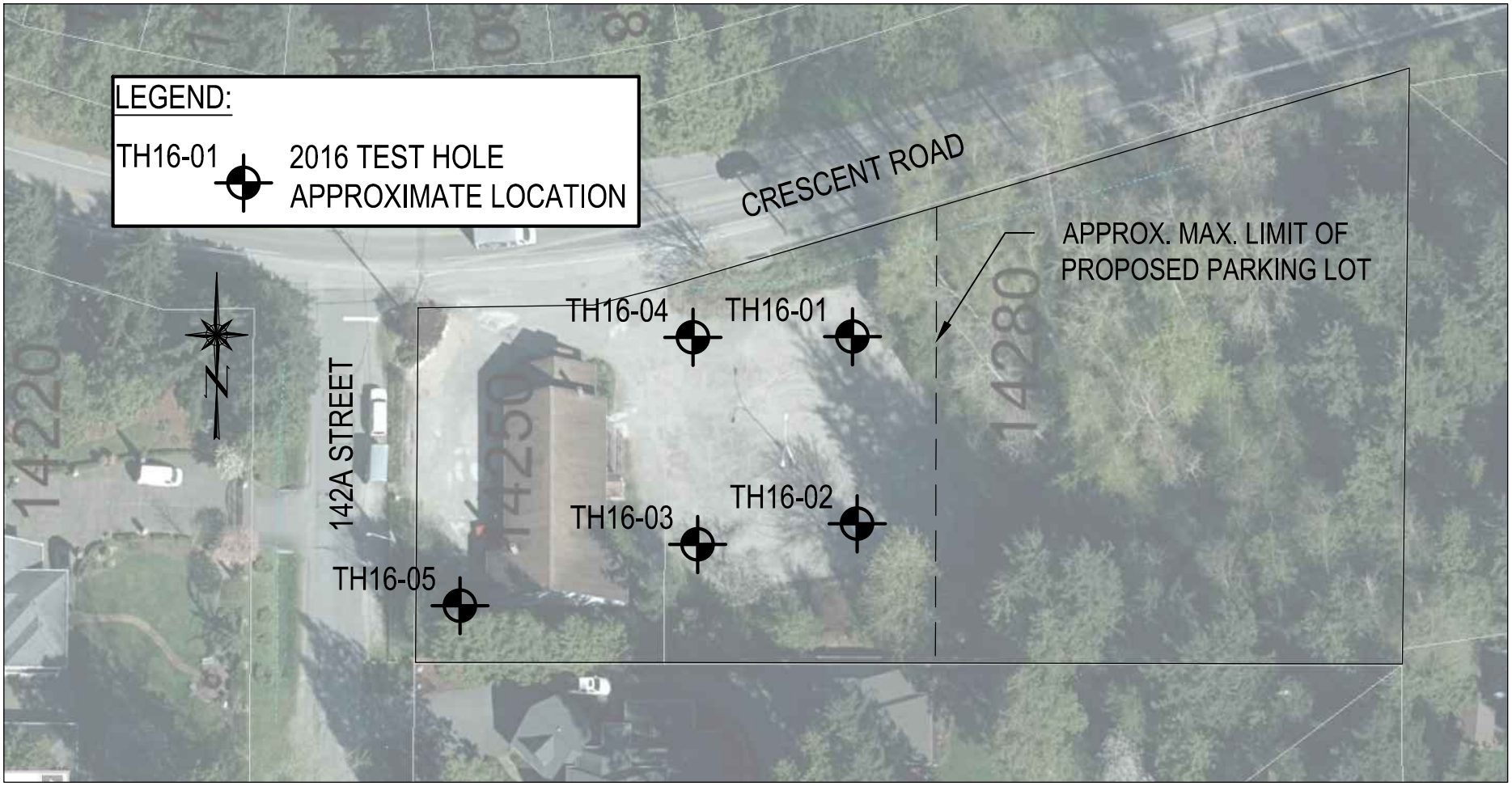
Braun will dispose of all samples 3 months after issuance of this report, or after a longer period of time at the Client's expense if requested by the Client. All contaminated samples remain the property of the Client and it will be the Client's responsibility to dispose of them properly.

8. SUBCONSULTANTS AND CONTRACTORS

Engineering studies frequently requires hiring the services of individuals and companies with special expertise and/or services which Braun Geotechnical Ltd. does not provide. These services are arranged as a convenience to our Clients, for the Client's benefit. Accordingly, the Client agrees to hold the Company harmless and to indemnify and defend Braun Geotechnical Ltd. from and against all claims arising through such Subconsultants or Contractors as though the Client had retained those services directly. This includes responsibility for payment of services rendered and the pursuit of damages for errors, omissions or negligence by those parties in carrying out their work. These conditions apply to specialized subconsultants and the use of drilling, excavation and laboratory testing services, and any other Subconsultant or Contractor.

9. SITE SAFETY

Braun Geotechnical Ltd. assumes responsibility for site safety solely for the activities of our employees on the jobsite. The Client or any Contractors on the site will be responsible for their own personnel. The Client or his representatives, Contractors or others retain control of the site. It is the Client's or the Client's Contractors responsibility to inform Braun of conditions pertaining to the safety and security of the site – hazardous or otherwise – of which the Client or Contractor is aware.
Exploration or construction activities could uncover previously unknown hazardous conditions, materials, or substances that may result in the necessity to undertake emergency procedures to protect workers, the public or the environment. Additional work may be required that is outside of any previously established budget(s). The Client agrees to reimburse Braun for fees and expenses resulting from such discoveries. The Client acknowledges that some discoveries require that certain regulatory bodies be informed. The Client agrees that notification to such bodies by Braun Geotechnical Ltd. will not be a cause for either action or dispute.



REFERENCE AIR PHOTOGRAPH FROM CITY OF VANCOUVER GIS

BRAUN GEOTECHNICAL LTD.

Client: City of Surrey				Title: LOCATION PLAN			
Project: Proposed Parking Lot Upgrade 14250/14280 Crescent Road, Surrey, BC							
Project no.	Drawn	Design	Checked	Date	Scale	Drawing no.	
16-6710	HD	HD	SH	March 17, 2016	1:400	16-6710-01	

Test Hole Log: TH16-01

File: 16–6710
Project: Proposed Parking Lot Upgrade
Client: City of Surrey
Location: Elgin Community Hall
14250/14280 Crescent Road, Surrey, BC

BRAUN GEOTECHNICAL LTD.

Depth (ft)	Depth (m)	Thickness (mm)	Sample	Soil Description	Sample #	Water Cont.	Remarks
0	0	50	○	grey, damp, compact GRAVEL, trace to some sand, trace to some silt (surfacing aggregate FILL)	S1		
1			○	brown to dark-brown, moist to wet, loose to compact SAND and GRAVEL, some silt, trace organics (FILL and/or disturbed/re-graded natural)	S2		
2				grey to brown, wet, dense SAND and GRAVEL, trace to some silt -occasional cobbles inferred from drilling			-seepage below 0.6m -difficult drilling below 0.6m
3	1		○		S3		
4							
5				End of Test Hole @ 1.5m			
6	2						
7							
8							
9							
10	3						

Equipment: Truck Auger Drill
Sampling Method: Grab off Auger Flight

Datum: Ground Surface
Water Depth: Seepage below 0.6m

Logged By: HD
Exploration Date: March 15, 2016
Dwg No.: 16-6710-TH01
Page: 1 of 1

Test Hole Log: TH16-02

File: 16–6710
Project: Proposed Parking Lot Upgrade
Client: City of Surrey
Location: Elgin Community Hall
14250/14280 Crescent Road, Surrey, BC

BRAUN GEOTECHNICAL LTD.

Depth (ft)	Depth (m)	Thickness (mm)	Sample	Soil Description	Sample #	Water Cont.	Remarks
0	0	150	○	grey, damp, compact GRAVEL, trace to some sand, trace to some silt (surfacing aggregate FILL)	S1		
			○	brown to dark-brown, wet, loose SAND, some gravel, trace organics	S2		
1			○	rust-brown, wet, compact SAND and GRAVEL, trace to some silt	S3		-Seepage from 0.3 to 1.2m
2				grey, damp, wet, dense SAND, some gravel, trace to some silt -occasional cobbles inferred from drilling			-difficult drilling below 0.6m
3	1		○		S4		
4			○	rust-brown, damp to moist, dense silty SAND	S5		
5				End of Test Hole @ 1.5m			
6							
7	2						
8							
9							
10	3						

Equipment: Truck Auger Drill
Sampling Method: Grab off Auger Flight

Datum: Ground Surface
Water Depth: Seepage from 0.3 to 1.2m

Logged By: HD
Exploration Date: March 15, 2016
Dwg No.: 16-6710-TH02

Test Hole Log: TH16-03

File: 16–6710
Project: Proposed Parking Lot Upgrade
Client: City of Surrey
Location: Elgin Community Hall
14250/14280 Crescent Road, Surrey, BC

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Depth (ft)	Depth (m)	Thickness (mm)	Sample	Soil Description	Sample #	Water Cont.	Remarks
0	0	50	○	grey, damp, compact GRAVEL, trace to some sand, trace to some silt (surfacing aggregate	S1		
		50	○	FILL)	S2		
				brown, damp, compact SAND, some gravel, trace to some organics			
1			○	rust-brown, damp, compact SAND and GRAVEL, trace to some silt	S3		
2				rust-brown, moist to wet, dense SAND and GRAVEL, trace to some silt -occasional cobbles inferred from drilling			-difficult drilling below 0.5m
3	1		○		S4		-seepage from 0.9 to 1.2m
4				grey, damp, very dense SAND, some silt, some gravel			
			○		S5		
5				End of Test Hole @ 1.5m			
6							
7	2						
8							
9							
10	3						

Equipment: Truck Auger Drill
Sampling Method: Grab off Auger Flight

Datum: Ground Surface
Water Depth: Seepage from 0.9 to 1.2

Logged By: HD
Exploration Date: March 15, 2016
Dwg No.: 16-6710-TH03
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Test Hole Log: TH16-04

File: 16–6710
Project: Proposed Parking Lot Upgrade
Client: City of Surrey
Location: Elgin Community Hall
14250/14280 Crescent Road, Surrey, BC

BRAUN GEOTECHNICAL LTD.

Depth (ft)	Depth (m)	Thickness (mm)	Sample	Soil Description	Sample #	Water Cont.	Remarks
0	0	40	○	grey, damp, compact GRAVEL, trace to some sand, trace to some silt (surfacing aggregate FILL)	S1		
		40	○		S2		
		150	○		S3		
				ASPHALT/MILLINGS			
1				grey-brown, damp, compact SAND and GRAVEL, some silt (FILL)			
			○	brown, damp, loose to compact SAND, some gravel, some silt	S4		
2							
3	1			grey-brow, damp, to wet, dense SAND and GRAVEL, trace to some silt -occasional cobbles inferred from drilling			-difficult drilling below 0.8m
4							-seepage below 1.2m
5				End of Test Hole @ 1.5m			
6	2						
7							
8							
9							
10	3						

Equipment: Truck Auger Drill
Sampling Method: Grab off Auger Flight

Datum: Ground Surface
Water Depth: Seepage below 1.2m (perched)

Logged By: HD
Exploration Date: March 15, 2016
Dwg No.: 16-6710-TH04
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Test Hole Log: TH16-05

File: 16–6710
Project: Proposed Parking Lot Upgrade
Client: City of Surrey
Location: Elgin Community Hall
14250/14280 Crescent Road, Surrey, BC

BRAUN GEOTECHNICAL LTD.

Depth (ft)	Depth (m)	Thickness (mm)	Sample	Soil Description	Sample #	Water Cont.	Remarks
0	0		○	dark-brown, damp, loose SAND, some silt, some organics, trace gravel	S1		
1			○	rust-brown, damp to humid, loose to compact SAND and GRAVEL to SAND with some gravel, trace to some silt	S2		
3	1		○	brown, moist to wet, dense SAND and GRAVEL, trace to some silt -occasional cobbles inferred from drilling	S3		-difficult drilling below 0.8m -seepage below 0.9m
5				End of Test Hole @ 1.5m			
6	2						
7							
8							
9							
10	3						

Equipment: Truck Auger Drill
Sampling Method: Grab off Auger Flight

Datum: Ground Surface
Water Depth: Seepage below 0.9m

Logged By: HD
Exploration Date: March 15, 2016
Dwg No.: 16-6710-TH05
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