

APPENDIX 1E

CIVIL INFRASTRUCTURE PLANS



R.F. BINNIE & ASSOCIATES LTD.
314-9440 202 Street
Langley, BC V1M 4A6
TEL 604 574 3336
BINNIE.com

FRASER HEALTH AUTHORITY

400-13450 102 AVENUE, SURREY, BC, V3T 0H1

ONSITE CIVIL DRAWINGS

NEW SURREY HOSPITAL CANCER CENTER

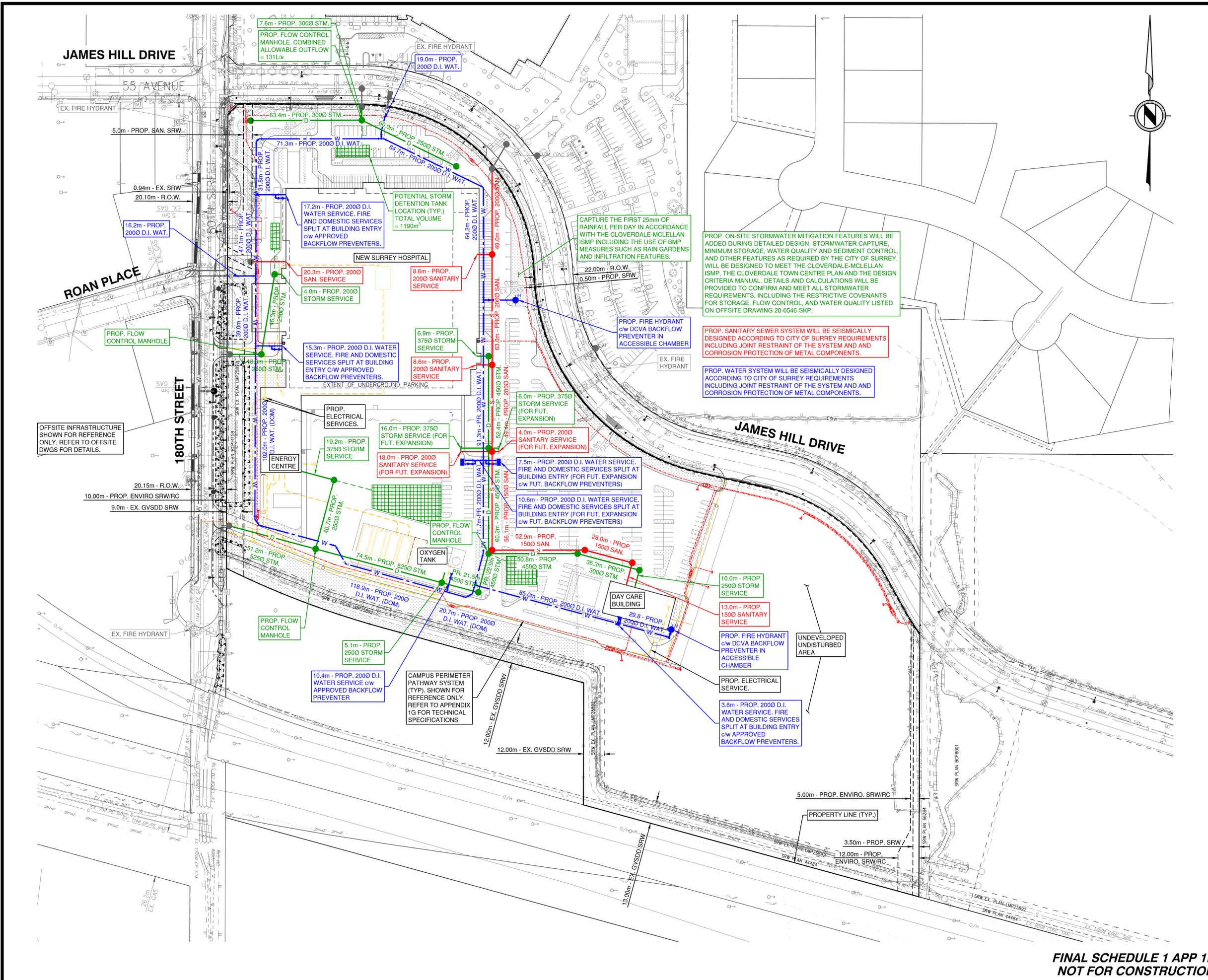
FINAL SCHEDULE 1 APP 1E

LEGEND					
EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
		IRON PROPERTY PIN			WATERMAIN
		BUILDING			WATER SERVICE CONNECTION
		EDGE OF PAVEMENT			WATER VALVE
		CURB & GUTTER			AIR VALVE
		TRUCK ROUTE			HYDRANT & VALVE ASSEMBLY
		SANITARY SEWER			YARD HYDRANT
		SANITARY CONNECTION & INSPECTION CHAMBER			CAPPED END
		STORM SEWER			WATER METER
		STORM CONNECTION & INSPECTION CHAMBER			BLOW-OFF
		STORM SEWER SERVICE			UNDERGROUND TELEPHONE & MANHOLE
		FRENCH DRAIN			UNDERGROUND ELECTRICAL & MANHOLE
		STORM SEWER & CLEANOUT			GASMAIN
		CATCH BASIN - TOP INLET & SIDE INLET			TRAFFIC SIGNAL & STREET LIGHT U/G DUCTS
		LAWN DRAIN			ORNAMENTAL STREET LIGHT - DAVIT
		CATCH BASIN MANHOLE			ORNAMENTAL STREET LIGHT - POST TOP
		SWALE			UTILITY POLE
		DITCH			UTILITY POLE W/ LIGHT
		SIDEWALK (ASPHALT)			JUNCTION BOX
		SIDEWALK (CONCRETE)			GROUND ELEVATION
		RETAINING WALL			DIRECTION OF OVERLAND FLOW

DRAWING INDEX		
SHEET TITLE	DWG #	SHEET #
KEYPLAN	KP	01
SITE GRADING	SG	02



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BENCHMARK:
MONUMENT 5719 LOCATED AT INTERSECTION
OF 58 AVENUE & 180 STREET
ELEV. 11.225M CVD28 G.V.R.D. 2018

SURVEYED BY:
BINNIE LAND SURVEYING LTD, 2019
300 - 4940 CANADA WAY
BURNABY, BC
TEL. 604-420-0721

CIVIC ADDRESS:
5473 - 181A STREET
SURREY, BC V3S 7Z2

LEGAL DESCRIPTION:
PARCEL A, LOT 4, SECTION 5, TWP 8, N.W.D, PLAN 4886
& LOT 8 EXCEPT FIRSTLY: PART SHOWN ON HIGHWAY PLAN 70987;
EXCEPT FIRSTLY: PART SHOWN ON HIGHWAY PLAN 70987; SECONDLY
PART ON PLAN 72926; SECTION 5, TWP 8, N.W.D, PLAN 11286

SCALE:
0 1:1000 50m

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DATE	REVISION	DESCRIPTION
09/01/23	H	FINAL SCHEDULE 1 APP 1E
06/30/23	G	FINAL DRAFT PREFERRED PROPONENT STAGE
03/03/23	F	ISSUED FOR FINAL DRAFT
01/30/23	E	ISSUED FOR ADDENDUM 11
12/15/22	D	ISSUED FOR ADDENDUM 5
11/28/22	C	ISSUED FOR ADDENDUM 4
09/16/22	B	ISSUED FOR ADDENDUM 2
03/04/22	A	ISSUED FOR INITIAL DRAFT SOR

PROJECT:
**NEW SURREY HOSPITAL
CANCER CENTER**

CLIENT:
FRASER HEALTH AUTHORITY
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
314-9440 202 Street
Langley, BC V1M 4A6
TEL 604 574 3336
BINNIE.com

DATE: 08/20/20
DRAWN: KFB
DESIGN: AH
CHECKED: RA
SCALE: 1:1000
SHEET TITLE:

KEYPLAN	
DRAWING NO.:	REV.
KP	H
RFB JOB No. 20-0546	SHEET 01 OF 02

**FINAL SCHEDULE 1 APP 1E
NOT FOR CONSTRUCTION**

PLOTTED: 2023-08-15 9:55:12 AM USER: RANKINS
 FILE: \\C:\Users\rankins\Documents\2023\20-0546\01 - CAD\TEXT\KEYPLAN\20-0546-01.dwg - APP 1E\KEYPLAN.rvt

JAMES HILL DRIVE

ROAN PLACE

180TH STREET

JAMES HILL DRIVE

NEW SURREY HOSPITAL

MBE = 6.0m
P1 = 1.0m
P2 = 2.9m

ENERGY CENTRE

OXYGEN TANK

DAY CARE BUILDING
MFE = 6.0m

UNDEVELOPED UNDISTURBED AREA

0.94m - EX. SRW
20.10m - R.O.W.
5.0m - PROP. SAN. SRW

9.0m - EX. GVSDD SRW
12.5m - PROP. ENVIRO. SRW/RC

10.00m - PROP. ENVIRO SRW/RC
20.15m - R.O.W.

PROPOSED MULTI-USE PATHWAY c/w RIGHT-OF-WAY FOR PUBLIC USE. REFER TO OFFSITE DWGS. FOR DETAILS.

12.00m - EX. GVSDD SRW

12.00m - EX. GVSDD SRW

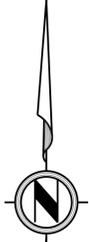
5.00m - PROP. ENVIRO. SRW/RC

PROPERTY LINE (TYP.)

3.50m - PROP. SRW

12.00m - PROP. ENVIRO. SRW/RC

PLOTTED: 2023-08-15 9:55:17 AM USER: BAWKASZ
FILE: \\MC-081-1-000\PROJECTS\2023\2023-08-15\00 - CAD\TEXT\DWG\FINAL\2023-08-15 - SITE.DWG - LAYOUT: 30



BENCHMARK:
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OF 58 AVENUE & 180 STREET
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PART ON PLAN 79296; SECTION 5, TWP 8, NWD, PLAN 11286

SCALE:
0 1:1000 50m

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DATE: 08/20/20	SEAL:
DRAWN: KFB	
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SHEET TITLE:
**SITE GRADING
PLAN**

DRAWING NO.:	REV.
SG	H
RFB JOB No. 20-0546	SHEET 02 OF 02

**FINAL SCHEDULE 1 APP 1E
NOT FOR CONSTRUCTION**

FRASER HEALTH AUTHORITY

400-13450 102 AVENUE, SURREY, BC, V3T 0H1

OFFSITE CIVIL DRAWINGS

NEW SURREY HOSPITAL CANCER CENTER

FINAL SCHEDULE 1 APP 1E

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CIVIL DRAWING INDEX			
DWG TYPE	SHEET TITLE	DWG #	SHEET #
COVER			00
NOTES	GENERAL NOTES	N1	01
SERVICING PLAN	KEY PLAN	SKP	02
PAVEMENT MARKING	PAVEMENT MARKING	PM	03
PAVEMENT MARKING	PAVEMENT MARKING	PM2	04
PAVEMENT MARKING	PAVEMENT MARKING	PM3	05
PAVEMENT MARKING	PAVEMENT MARKING	PM4	06
PAVEMENT MARKING	PAVEMENT MARKING	PM5	07
PAVEMENT MARKING	PAVEMENT MARKING	PM6	08
TYPICAL SECTIONS	180TH STREET & 55TH AVENUE	TS	09
STORM	180TH STREET STORM - PLAN & PROFILE	D1	10
STORM	180TH STREET STORM - NOTES & DETAILS	D2	11
STORMWATER CATCHMENT PLAN	EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE	SWCP	12
KEY PLAN	JAMES HILL DRIVE REMEDIATION WORKS	JHD	13

ELECTRICAL DRAWING INDEX		
DWG TYPE	SHEET TITLE	DWG #
PLAN	OVERALL PLAN AND LEGEND	E100
DETAILS	DETAILS	E101
STREET LIGHTING LAYOUT	PARTIAL JAMES HILL DR	E200
STREET LIGHTING LAYOUT	PARTIAL JAMES HILL DR	E201
STREET LIGHTING LAYOUT	PARTIAL JAMES HILL DR	E202
STREET LIGHTING LAYOUT	PARTIAL 180TH ST	E203
INTERSECTION LAYOUT	180TH STREET AND 55TH AVE	E300
INTERSECTION LAYOUT	184TH STREET AND 53RD AVE	E301



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A. CITY GENERAL NOTES

- CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE SUBDIVISION AND DEVELOPMENT BY-LAW, 1986, NO. 8830, AS AMENDED, HIGHWAY AND TRAFFIC BY-LAW, 1997, NO. 13007, AS AMENDED, LATEST EDITION OF THE CITY OF SURREY DESIGN CRITERIA MANUAL, THE SUPPLEMENTARY SPECIFICATIONS, THE SUPPLEMENTARY STANDARD DRAWINGS AND THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD).
- TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE DEVELOPER AND THE DEVELOPER'S CONTRACTOR, AND BOTH SHALL COMPLY WITH THE INSTRUCTIONS OUTLINED ON THE CITY ROAD AND RIGHT-OF-WAY PERMIT AND TRAFFIC OBSTRUCTION PERMIT.
- THE DEVELOPER AND THE DEVELOPER'S CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CITY PERMITS FOR WORK WITHIN THE CITY ROAD ALLOWANCES AND STATUTORY RIGHTS OF WAYS.
- SURREY'S ISA MONUMENT(S) ARE TO BE PROTECTED AND SHOULD THEY REQUIRE RAISING OR RELOCATING, THE DEVELOPER WILL NOTIFY THE CITY INSPECTOR AT LEAST THREE WORKING DAYS IN ADVANCE OF SCHEDULING WORK AFFECTING THEM.
AN ISA MONUMENT SHALL BE CONSIDERED TO BE DISTURBED OR DESTROYED, BY THE DEVELOPER, IF THE CONSTRUCTION FOR THE PROJECT:
(1) LOWERS THE GRADE OF THE ROAD AT THE LOCATION OF AN ISA MONUMENT(S),
(2) RAISES THE GRADE OF THE ROAD AT THE LOCATION OF AN ISA MONUMENT(S), OR
(3) INSTALLS ANY UNDERGROUND UTILITIES WITHIN 1.5 METRE RADIUS OF THE ISA MONUMENT(S).

THE CITY WILL INVOICE THE DEVELOPER A NON-REFUNDABLE FLAT RATE FEE PER THE FEE-SETTING BYLAW, 001, NO. 14577, AS AMENDED, FOR EACH ISA MONUMENT DISTURBED OR DESTROYED.
- ALL STREET, TRAFFIC, ADVISORY SIGNS, PAVEMENT MARKINGS AND NO-POST GUARDRAILS REQUIRED BUT NOT NECESSARILY SHOWN ON THE DRAWINGS, SHALL BE INSTALLED AT THE DEVELOPER'S COST.
- ALL TEMPORARY SIGNAGE, INCLUDING STOP SIGNS AND STOP BARS, REQUIRED TO MAINTAIN SAFE VEHICULAR AND PEDESTRIAN ACCESS ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL AND MAINTAIN.
- RESIDENTS AND BUSINESSES AFFECTED BY CONSTRUCTION OF THIS PROJECT MUST BE PROVIDED WRITTEN NOTICE OF THE PROPOSED START OF CONSTRUCTION WITHIN 2-10 BUSINESS DAYS.
- THE DEVELOPER SHALL OBTAIN WRITTEN AUTHORIZATION FROM A PRIVATE PROPERTY OWNER, WITH A COPY TO THE CITY, PRIOR TO ENTRY OR WORKS ON PRIVATE PROPERTY. A COPY OF A SIGNED LETTER OF RELEASE SHALL BE PROVIDED TO THE CITY INDICATING THE PRIVATE PROPERTY HAS BEEN RESTORED TO THE OWNER'S SATISFACTION.
- THE DEVELOPER SHALL FACILITATE AND SUPPLY ALL NECESSARY SAFETY EQUIPMENT AS REQUIRED BY THE CITY AND WORKERS COMPENSATION ACT & OHS REGULATIONS FOR THE CITY TO INSPECT THE PROPOSED WORKS AND SERVICES.
- THE DEVELOPER SHALL CONFIRM THAT THE WORKS AND SERVICES ARE NOT IN CONFLICT WITH EXISTING UNDERGROUND UTILITIES AND ABOVE GROUND INFRASTRUCTURE PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF RECORD OF ANY CONFLICTS.
- THE DEVELOPER SHALL ABIDE BY THE EROSION AND SEDIMENT CONTROL BY-LAW, 2006, NO. 16138, AS AMENDED.
- THE DEVELOPER SHALL ABIDE BY THE SURREY TREE PROTECTION BYLAW, 2006, NO. 16100, AS AMENDED.

B. CITY ROAD WORK NOTES

- THE DEVELOPER SHALL EMPLOY A PROFESSIONAL ENGINEER WITH EXPERIENCE IN GEOTECHNICAL ENGINEERING FOR PERFORMANCE OF IN PLACE TESTING DURING THE PREPARATION OF THE SUB-GRADE AND CONSTRUCTION OF THE PROPOSED ROAD STRUCTURE TO VERIFY THE EXISTING ASPHALT, ROAD STRUCTURE AND SUB-GRADE IS ADEQUATE TO BE BUILT UPON.
- EXISTING CITY AND EXTERNAL UTILITY COMPANY INFRASTRUCTURE (I.E. UTILITY BOXES, MANHOLES, KIOSKS, ETC.) MUST BE ADJUSTED TO SUIT THE PROPOSED FINISHED GRADE.
- ALL UNCONSOLIDATED, ORGANIC, AND/OR OTHERWISE DELETERIOUS MATERIALS ARE TO BE EXCAVATED AND REMOVED FROM THE ROADWAY AND UTILITY TRENCHES IN THE ROADWAY AS PER THE GEOTECHNICAL ENGINEER'S REPORT OR AS DIRECTED BY THE CITY.

C. CITY SANITARY SEWER AND STORM SEWER NOTES

- ALL SANITARY SEWER SERVICE CONNECTIONS ARE TO BE A MINIMUM 100mm DIAMETER, AND ALL STORM SEWER SERVICE CONNECTIONS ARE TO BE A MINIMUM 150mm DIAMETER.

D. CITY WATER WORKS NOTES

- ALL NEW WATER MAINS, AT TIE-IN POINTS, ARE TO BE CAPPED 2.0m FROM THE EXISTING WATER MAIN. THE PROPOSED WATER MAIN IS TO BE SET AT THE LINE AND GRADE TO MEET THE EXISTING WATER MAIN. THE DEVELOPER IS TO VERIFY THAT THERE ARE NO CONFLICTS BY EXPOSING THE ZONE BETWEEN THE PROPOSED AND EXISTING MAIN.
- PRE-PRESSURE TESTING AND FLUSHING SHALL BE PERFORMED BY THE DEVELOPER. TIE-INS TO EXISTING WATER MAINS AND FINAL TESTING AND CHLORINATION OF NEW MAINS IS TO BE PERFORMED BY THE CITY AT THE DEVELOPER'S COST.
- ALL RESIDENTIAL DOMESTIC SERVICE CONNECTIONS WILL BE 19mm DIAMETER UNLESS OTHERWISE SPECIFIED.
- WHERE 100mm DIAMETER PIPE IS USED, IT WILL BE DUCTILE IRON (D.I.)

E. CITY STREET LIGHT NOTES

- ALL LUMINAIRES SHALL HAVE 7-PIN RECEPTACLES AND BE APPROVED PER THE APPROVED MATERIALS LIST IN THE SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.
- ALL STREET LIGHT POLES AND SERVICE BASES ARE TO BE HOT-DIPPED GALVANIZED AND POWDER COATED COLOUR RAL 7040 GREY UNLESS NOTED OTHERWISE.

- SEE BC HYDRO REGULATIONS FOR SERVICE CONNECTION DETAILS. THE DEVELOPER IS TO ARRANGE FOR EXACT SERVICE LOCATION(S) WITH BC HYDRO PRIOR TO COMMENCING CONSTRUCTION.
- IT IS THE RESPONSIBILITY OF THE DEVELOPER TO CONFIRM THE ADEQUACY OF THE EXISTING STREET LIGHT SERVICE, SERVICE BASE, CONDUIT AND CONDUCTORS AND MAKE ALL NECESSARY REPAIRS TO ADEQUATELY COMPLETE ALL CONNECTIONS INTO THE EXISTING STREET LIGHT SYSTEM. THE DEVELOPER IS TO INSTALL POLE IDENTIFICATION NUMBERS AS PER SURREY STANDARDS AS SHOWN ON THE DRAWINGS.
- THE DEVELOPER IS TO ENSURE THAT ALL STREET LIGHT POLES ARE A MINIMUM 3.0m CLEAR OF ALL B.C. HYDRO POLES AND OVERHEAD PRIMARY WIRES AND 1.0m CLEAR OF ALL OVERHEAD SECONDARY WIRES PRIOR TO INSTALLING BASES.
- ALL STREET LIGHTS ARE TO BE MINIMUM 1.0m CLEAR OF ALL DRIVEWAYS.
- CONDUCTORS INSIDE STREET LIGHT POLES SHALL BE:
NO.12 RW90 X-LINK (CU)
NO.12 RW90 BOND (CU)

ENGINEER'S CERTIFICATION

I, RICHARD AHREND, 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 SUPPLEMENTARY SPECIFICATIONS, THE SUPPLEMENTARY STANDARD DRAWINGS AND THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD).

EXCEPTION(S) TO THE CITY DESIGN CRITERIA MANUAL AND SPECIFICATIONS:

- SLOPE OF PROPOSED DITCH AND CULVERT IS 0.09% TO TIE IN TO EXISTING INVERTS UPSTREAM AND DOWNSTREAM.
- MIN. COVER OVER PROPOSED CULVERTS AT DRIVEWAY CROSSINGS IS 0.3m TO FIT REQUIRED CULVERT SIZE UNDER EXISTING DRIVEWAY AND UNDER PROPOSED DRIVEWAYS AT ACCESSIBLE SLOPES FROM EXISTING ROAD ELEVATION.

DATE SIGNATURE

THE ENGINEERING DEPARTMENT ACKNOWLEDGES THE RECEIPT OF THE ATTACHED PLANS WHICH MAY PROCEED TO CONSTRUCTION PROVIDED PAYMENTS, SERVICING AGREEMENT AND RIGHT-OF-WAY REQUIREMENTS ARE PROCESSED TO THE SATISFACTION OF THE GENERAL MANAGER, ENGINEERING.

DATE SIGNATURE

FINAL SCHEDULE 1 APP 1E

LEGAL DESCRIPTION PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4866 & LOT B EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286			
SURVEY BENCHMARK		SCALE FACTOR: 0.999607	
MON:	N:	ELEV: 11.225M CVD28 C.V.R.D. 2018	
REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-02	FINAL DRAFT PREFERRED PROPONENT STAGE	AH
H	2023-03-03	ISSUED FOR FINAL DRAFT	AH
G	2023-01-09	ISSUED FOR ADDENDUM 11	AH
F	2022-12-15	ISSUED FOR ADDENDUM 9	AH

CONSULTANT



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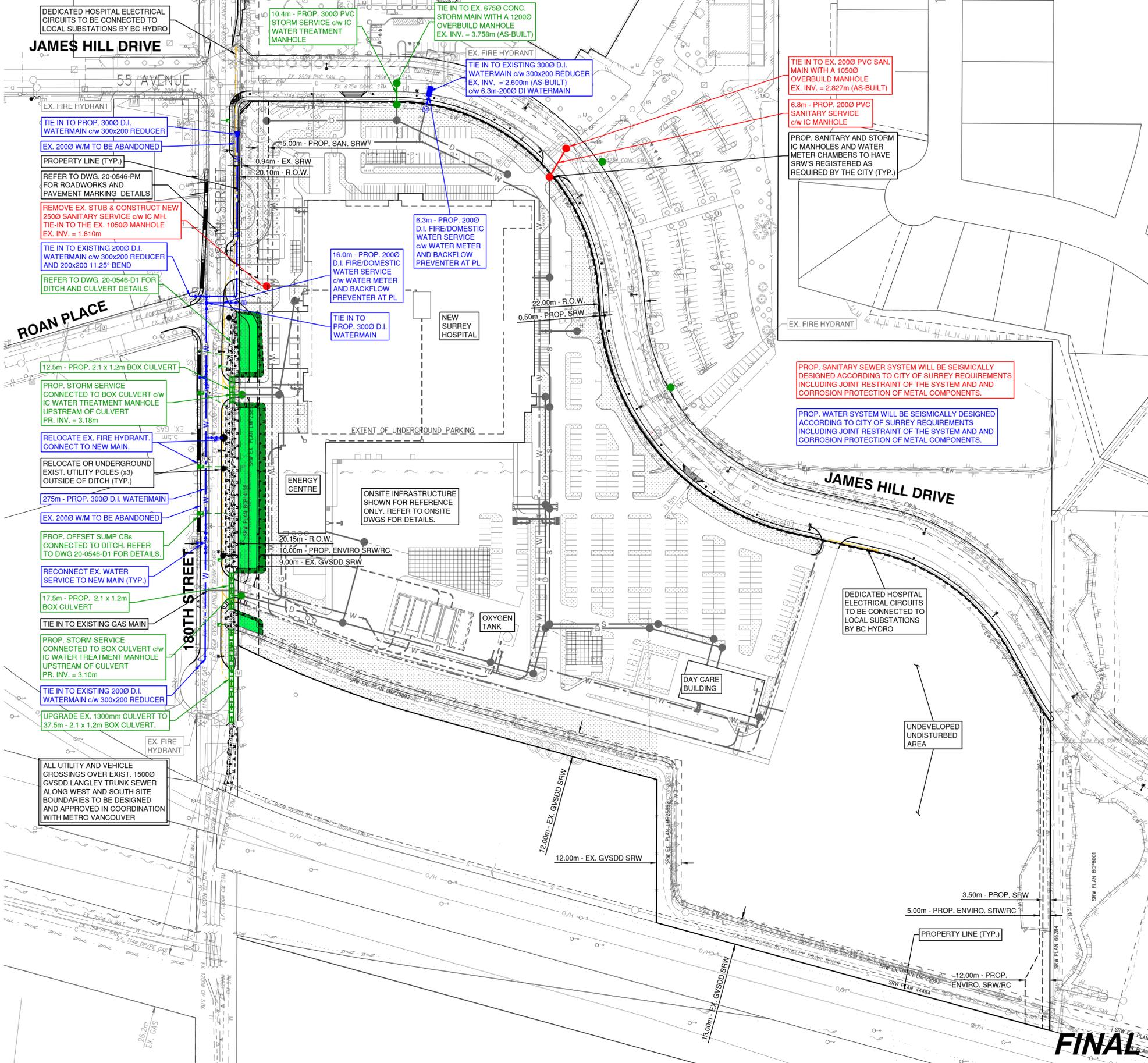
CLIENT

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400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTER
EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE
GENERAL NOTES

SCALE	DATE (YYYY.MM.DD)	SURREY PROJECT NUMBER
AS SHOWN	2021-04-22	7821-0139-00
DESIGNED	CONSULTANT PROJ. NO.	DRAWING TYPE
RA	20-0546	NOTES
DRAWN	DWG. NO.	REV.
KFB	N1	J
REVIEWED		SHEET 01 OF 13
RA		

Aug 15 - 2023 8:42am \\BC-885-FLE003\Projects\2020\20-0546\00 - 04D Files\Drawn\Final\20-0546 - Cover - 071815.dwg/20-0546-N1 - 01.dwg



LEGAL ENCUMBRANCES

THE DEVELOPER IS RESPONSIBLE TO REGISTER THE FOLLOWING LEGAL DOCUMENTS REGARDING STATUTORY RIGHTS-OF-WAY AND RESTRICTIVE COVENANTS FOR THE PROJECT. THE EXACT LOCATIONS WILL BE FINALIZED DURING THE DETAILED DESIGN PROCESS BY THE DESIGN BUILDER IN COORDINATION WITH THE CITY OF SURREY THROUGH THE LONG FORM SERVICING AGREEMENT PROCESS.

- 0.5m STATUTORY RIGHT-OF-WAY FOR MAINTENANCE OF THE SIDEWALK ALONG THE FRONTAGE OF JAMES HILL DRIVE
- 0.5m STATUTORY RIGHT-OF-WAY FOR THE MAINTENANCE OF THE SIDEWALK ALONG THE WEST SIDE OF 180TH STREET
- STATUTORY RIGHT-OF-WAY FOR MAINTENANCE ACCESS AT EACH STORM AND SANITARY INSPECTION CHAMBER MANHOLE
- STATUTORY RIGHT-OF-WAY FOR MAINTENANCE ACCESS AT EACH WATER METER CHAMBER AT PROPERTY LINE
- MINIMUM 5.0m WIDE STATUTORY RIGHT-OF-WAY ALONG THE EXISTING SANITARY SEWER MAIN IN THE NORTHWEST CORNER OF THE SITE, FROM JAMES HILL DRIVE TO 180TH STREET
- MINIMUM 3.5m WIDE STATUTORY RIGHT-OF-WAY FOR THE EXISTING SANITARY SEWER MAIN ALONG THE EAST PROPERTY LINE OF THE SITE BETWEEN JAMES HILL DRIVE AND THE CANADIAN PACIFIC RAILWAY
- STATUTORY RIGHT-OF-WAY FOR THE USE AND MAINTENANCE OF THE WIDENED BUS BAY AND BUS STOP LANDING PADS ON THE EAST SIDE OF 180TH STREET NORTH OF JAMES HILL DRIVE
- STATUTORY RIGHT-OF-WAY FOR A MINIMUM 3.0m x 3.0m CORNER CUT-OFF AT THE SOUTHWEST CORNER OF 180TH STREET AND ROAN PLACE
- PRIVATE AGREEMENT OF MINIMUM 1.0m TEMPORARY WORKING EASEMENTS (NOT FOR REGISTRATION ON TITLE):
 - ALONG THE WEST PROPERTY LINE OF 180TH STREET FOR THE CONSTRUCTION OF THE ADJUTING SIDEWALK
 - ON THE EAST SIDE OF 180TH STREET NORTH OF JAMES HILL DRIVE FOR THE CONSTRUCTION OF THE BUS STOP LANDING PADS
- RESTRICTIVE COVENANT FOR ONSITE STORMWATER MITIGATION FEATURES REQUIRED UNDER THE CLOVERDALE-MCLELLAN ISMP, CLOVERDALE TOWN CENTRE PLAN, AND CITY OF SURREY DESIGN CRITERIA INCLUDING:
 - ALLOWABLE DISCHARGE RATE AS DETERMINED THROUGH DETAILED DESIGN
 - MINIMUM TOTAL STORMWATER DETENTION VOLUME AS DETERMINED THROUGH DETAILED DESIGN
- RESTRICTIVE COVENANT FOR THE MAINTENANCE OF THE WATER QUALITY/ SEDIMENT CONTROL FACILITIES
- RESTRICTIVE COVENANT FOR ANY PUMPED STORM AND/OR SANITARY SERVICE CONNECTIONS
- RESTRICTIVE COVENANT FOR MAINTENANCE OF PRIVATE SANITARY SERVICE CONNECTION TO EXISTING CITY SEWER IN STATUTORY RIGHT-OF-WAY
- RESTRICTIVE COVENANT FOR PUMPING OF FOUNDATION DRAINAGE
- RESTRICTIVE COVENANT FOR MINIMUM 10m SETBACK FROM THE TOP OF BANK OF THE EXISTING DITCH ALONG THE SOUTH BOUNDARY OF THE SITE
- COMBINED STATUTORY RIGHT-OF-WAY AND RESTRICTIVE COVENANT ALONG THE EAST BOUNDARY OF THE SITE VARYING 5-12m WIDE FOR SETBACK FROM THE TOP OF BANK OF THE EXISTING WETLAND AREA
- COMBINED STATUTORY RIGHT-OF-WAY AND RESTRICTIVE COVENANT 10.0m WIDE FOR SETBACK FROM THE TOP OF BANK OF THE DITCH WIDENING ALONG 180TH STREET

REFER TO DWG. 20-0546-JHD FOR ADDITIONAL UTILITY WORKS ON JAMES HILL DRIVE

FINAL SCHEDULE 1 APP 1E

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SURVEY BENCHMARK MON: 5719

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ELEV: 11.225M CVD28 G.V.R.D. 2018

REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-02	FINAL DRAFT PREFERRED PROPONENT STAGE	AH
H	2023-03-03	ISSUED FOR FINAL DRAFT	AH
G	2023-01-09	ISSUED FOR ADDENDUM 11	AH
F	2022-12-15	ISSUED FOR ADDENDUM 5	AH

CONSULTANT

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CLIENT

FRASER HEALTH AUTHORITY
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTER
EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE
SITE SERVICES KEY PLAN

SCALE 0 1:1000 40m

DATE (YYYY.MM.DD) 2020-08-20

CONSULTANT PROJ. NO. 20-0546

DWG. NO. SKP

REVIEWED GL

SURREY PROJECT NUMBER 7821-0139-00

DRAWING TYPE **SERVICING PLAN**

SHEET 02 OF 13

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER

JAMES HILL DRIVE

PROPOSED BUS STOPS TO BE PROVIDED c/w PULLOUTS, BUS PADS, AND/OR SHELTERS AS REQUIRED BY THE CITY OF SURREY AND COAST MOUNTAIN BUS COMPANY TO PROVIDE SERVICE TO SITE. QUANTITY, LOCATION, AND INFRASTRUCTURE REQUIREMENTS TO BE CONFIRMED THROUGH DETAILED DESIGN.

EX. DRIVEWAY ACCESSES TO BE MAINTAINED c/w NEW CONCRETE LETDOWNS. DRIVEWAYS TO BE REPAVED AS REQUIRED TO MEET NEW GRADES

PROP. CURB RETURNS TO AMBULANCE EMERGENCY ACCESSES (TYP.)

EX. FENCE ALONG PROPERTY LINE. IMPACTS TO BE ASSESSED AT DETAILED DESIGN. FENCE TO REMAIN WHERE FEASIBLE OR BE REINSTATED AS REQUIRED (TYP.)

EX. FENCE ENCRDACHING ON PUBLIC RIGHT-OF-WAY TO BE REPLACED TO SUIT

EX. LAWN BASIN TO BE RELOCATED

EX. FIRE HYDRANT TO BE RELOCATED BEHIND EAST SIDEWALK

3.20m - TRAVEL LANE

3.30m - TRAVEL LANE

3.50m - TRUCK QUEUING LANE

RELOCATE EXIST. UTILITY POLES (x3) OUTSIDE OF DITCH (TYP.)

PROP. CATCHBASIN. REFER TO DWG. 20-0546-D1 FOR DETAILS (TYP.)

EX. LARGE STREET TREES (x5) TO BE REMOVED AND REPLACED IN COORDINATION WITH ARBORIST AND THE CITY OF SURREY (TYP.)

REFER TO DWG. 20-0546-D1 FOR DITCH AND CULVERT DETAILS (TYP.)

ROAN PLACE

180TH STREET

NEW SURREY HOSPITAL

EX. PROPERTY LINE TO REMAIN.

ENERGY CENTRE

ONSITE INFRASTRUCTURE SHOWN FOR REFERENCE ONLY. REFER TO ONSITE DWGS FOR DETAILS.

OXYGEN TANK

DAY CARE BUILDING

JAMES HILL DRIVE

UNDEVELOPED UNDISTURBED AREA

REFER TO DWG. 20-0546-JHD FOR ADDITIONAL ROADWORKS ON JAMES HILL DRIVE

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 9, NWD, PLAN 4886 & LOT B EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987, EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296, SEC 5, TWP 9, NWD, PLAN 11286		SCALE FACTOR: 0.999607	
SURVEY BENCHMARK MON: 5719		ELEV: 11.225M CVD28 G.V.R.D. 2018	
REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-30	FINAL DRAFT PREFERRED PROPONENT STAGE	AH
H	2023-03-30	ISSUED FOR FINAL DRAFT	AH
G	2023-01-30	ISSUED FOR ADDENDUM 11	AH
F	2022-12-15	ISSUED FOR ADDENDUM 5	AH

CONSULTANT

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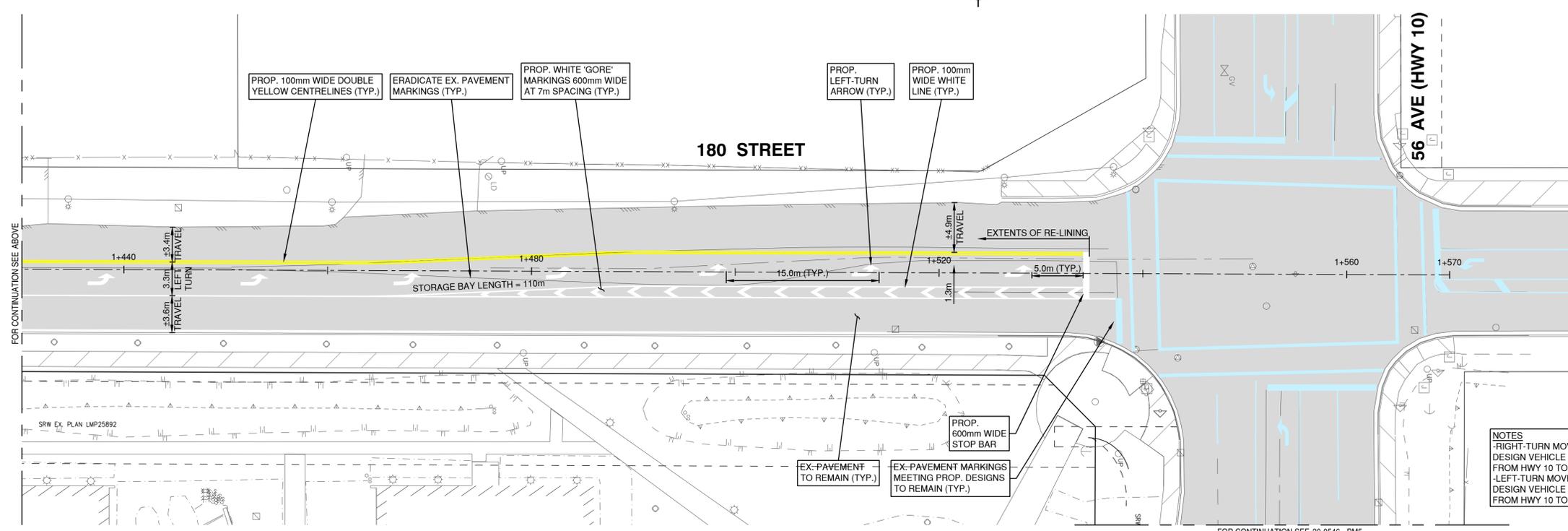
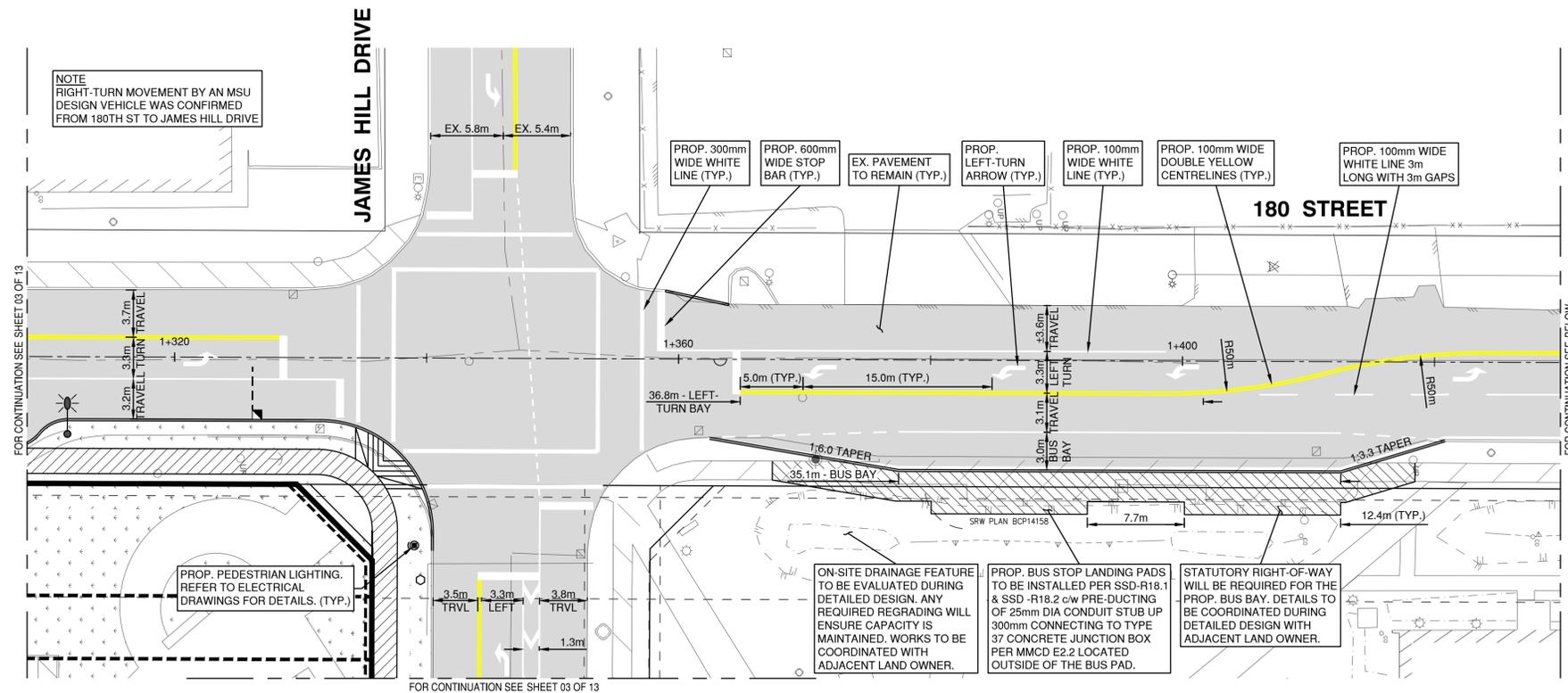


CLIENT **FRASER HEALTH AUTHORITY**
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE

PAVEMENT MARKING

SCALE	DATE (YYYY.MM.DD)	SURREY PROJECT NUMBER
0 1:1000 40m	2020-08-20	7821-0139-00
DESIGNED	CONSULTANT PROJ. NO.	DRAWING TYPE
AH	20-0546	PAVEMENT MARKING
DRAWN	DWG. NO.	REV.
RL		J
REVIEWED	PM	SHEET 03 OF 13
RA		



FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4886 & LOT B EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296, SEC 5, TWP 8, NWD, PLAN 11286

SURVEY BENCHMARK: MON: 5719

SCALE FACTOR: 0.999607
ELEV: 11.225M CVD28 G.V.R.D. 2018

REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-02	FINAL DRAFT PREFERRED PROPOSAL STAGE	AH
H	2023-03-03	ISSUED FOR FINAL DRAFT	AH
G	2023-01-09	ISSUED FOR ADDENDUM 11	AH
F	2022-12-15	ISSUED FOR ADDENDUM 5	AH

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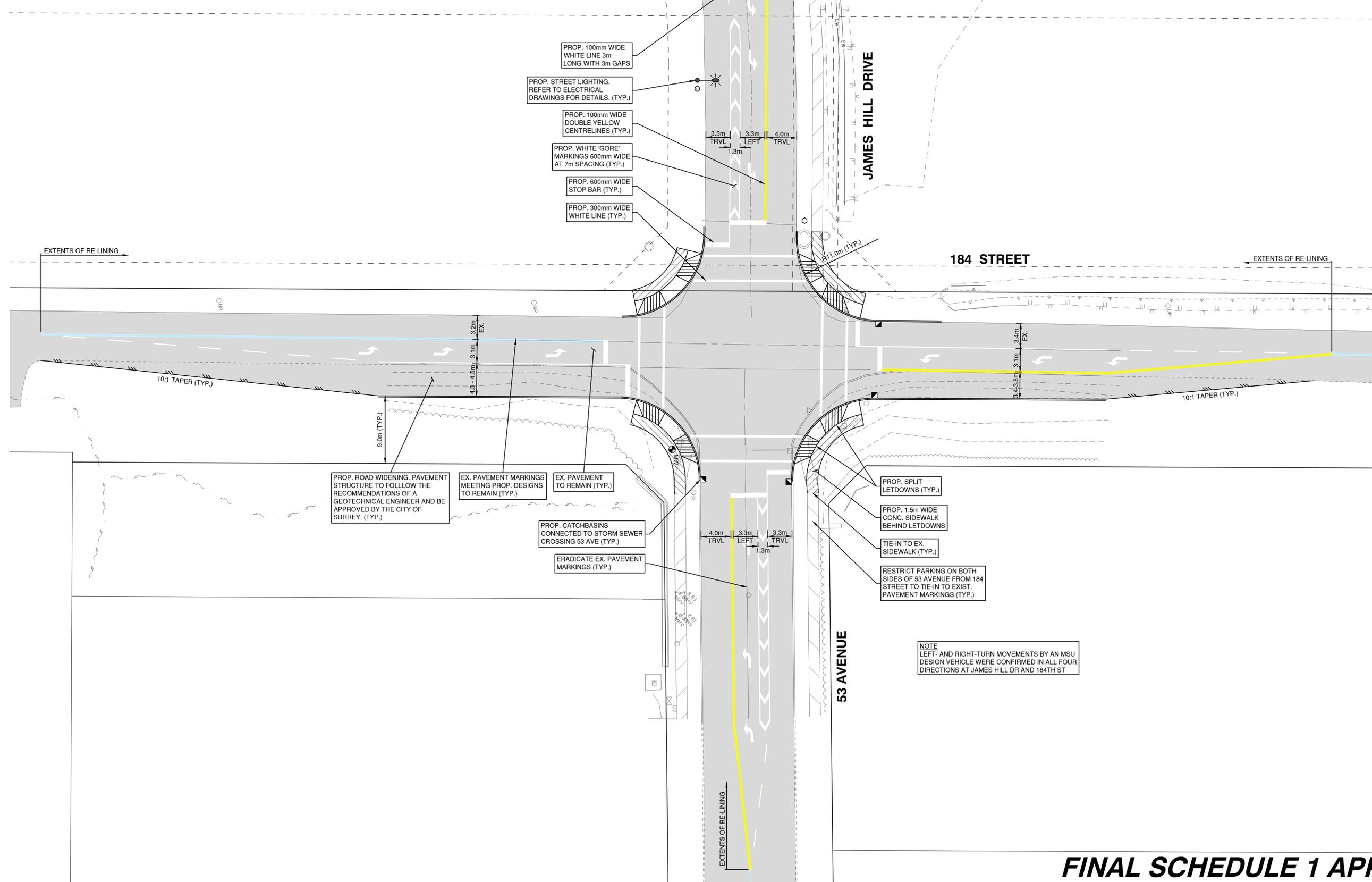
CLIENT
FRASER HEALTH AUTHORITY
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
180 STREET, JAMES HILL DR - HWY 10
PAVEMENT MARKING

SCALE	0 1:250 10m
DESIGNED	AH
DRAWN	KFB
REVIEWED	RA

DATE (YYYY.MM.DD)	2020-08-20
CONSULTANT PROJ. NO.	20-0546
DWG. NO.	PM2
REV.	J

SURREY PROJECT NUMBER	7821-0139-00
DRAWING TYPE	PAVEMENT MARKING
SHEET	04 OF 13



NOTE
LEFT- AND RIGHT-TURN MOVEMENTS BY AN MSU
DESIGN VEHICLE WERE CONFIRMED IN ALL FOUR
DIRECTIONS AT JAMES HILL DR AND 184TH ST

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4886 & LOT 6 EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286

SURVEY BENCHMARK MON: 5719 N: E: SCALE FACTOR: 0.999607 ELEV: 11.225M CVD28 G.V.R.D. 2018

REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-02	FINAL DRAFT PREFERRED PROPOSER STAGE	AH
H	2023-03-03	ISSUED FOR FINAL DRAFT	AH
G	2023-01-09	ISSUED FOR ADDENDUM 11	AH
F	2022-12-15	ISSUED FOR ADDENDUM 5	AH

CONSULTANT

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FRASER HEALTH AUTHORITY
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
184 STREET & JAMES HILL DRIVE
PAVEMENT MARKING

SCALE 0 1:250 10m

DATE (YYYY.MM.DD) 2020-08-20

CONSULTANT PROJ. NO. 20-0546

DWG. NO. PM3

REV. J

DESIGNED AH

DRAWN KFB

REVIEWED RA

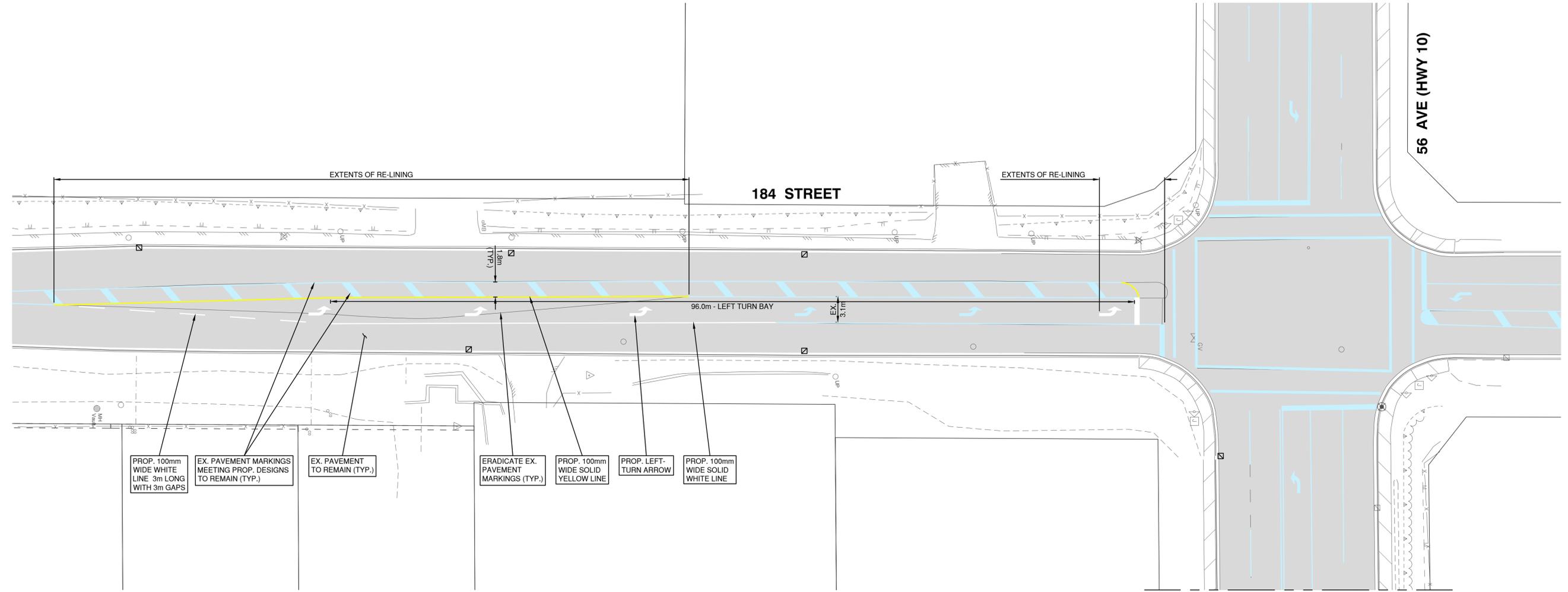
SEAL

SURREY PROJECT NUMBER **7821-0139-00**

DRAWING TYPE **PAVEMENT MARKING**

SHEET 05 OF 13

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FOR CONTINUATION SEE 20-0546 - PM6

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4886 & LOT 6 EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286

SURVEY BENCHMARK MON: 5719 N: E: SCALE FACTOR: 0.999607 ELEV: 11.225M CVD28 G.V.R.D. 2018

REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-02	FINAL DRAFT PREFERRED PROPONENT STAGE	AH
H	2023-03-03	ISSUED FOR FINAL DRAFT	AH
G	2023-01-03	ISSUED FOR ADDENDUM 11	AH
F	2022-12-15	ISSUED FOR ADDENDUM 5	AH

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CLIENT **FRASER HEALTH AUTHORITY**
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
184 STREET, SOUTH OF HWY 10
PAVEMENT MARKING

SEAL

DESIGNED	AH
DRAWN	KFB
REVIEWED	RA

SCALE 0 1:250 10m

DATE (YYYY.MM.DD) 2020-08-20

CONSULTANT PROJ. NO. 20-0546

DWG. NO. PM4

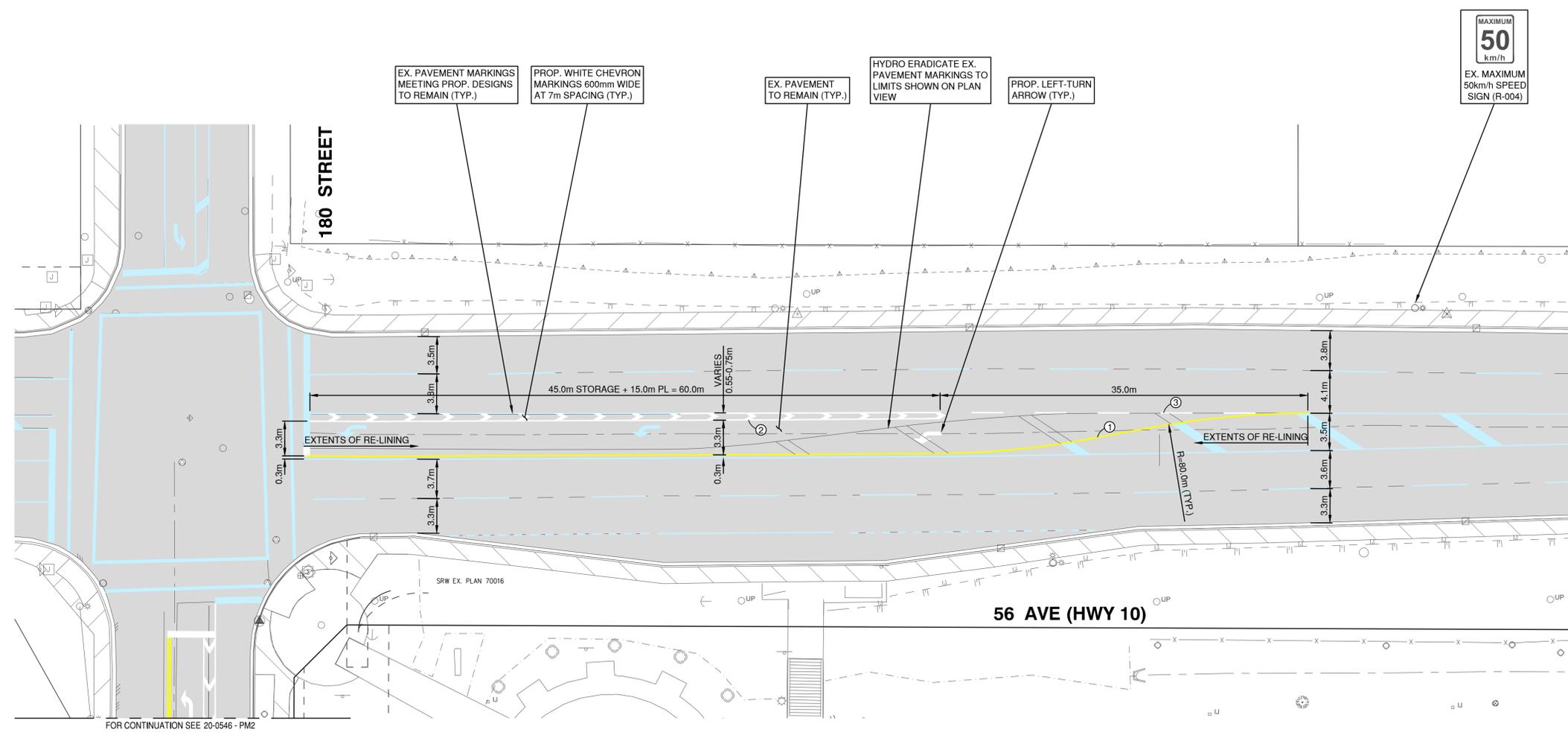
REV. J

SURREY PROJECT NUMBER **7821-0139-00**

DRAWING TYPE **PAVEMENT MARKING**

SHEET 06 OF 13

Aug 15, 2023 8:48am \\ve-03\projects\2020\20-0546\09 - CAD Files\Drawings\20-0546 - PM.dwg/20-0546 - PM.dwg



HWY 10 DESIGN SPEED: 50km/h

PAVEMENT MARKING LEGEND	
①	100mm - DIRECTIONAL DIVIDING LINE (YELLOW)
②	100mm - LANE EDGE LINE (WHITE)
③	100mm - DASHED CONTINUITY LINE (WHITE)

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4886 & LOT 6 EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987, EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296, SEC 5, TWP 8, NWD, PLAN 11286			
SURVEY BENCHMARK MON: 5719	SCALE FACTOR: 0.999607 ELEV: 11.225M CVD28 G.V.R.D. 2018		
REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-02	FINAL DRAFT PREFERRED PROponent STAGE	AH
C	2022-11-29	ISSUED FOR ADDENDUM 4	AH
G	2023-03-03	ISSUED FOR FINAL DRAFT	AH
F	2023-01-20	ISSUED FOR ADDENDUM 11	AH

CONSULTANT	
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FRASER HEALTH AUTHORITY
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

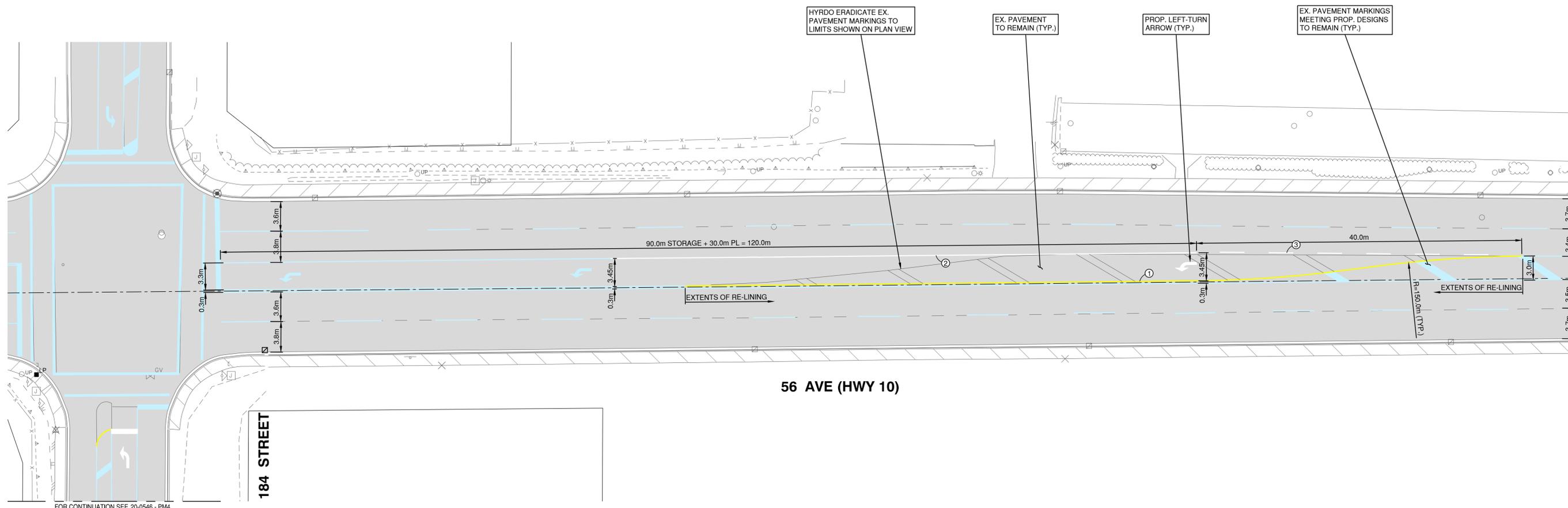
SEAL

NEW SURREY HOSPITAL AND CANCER CENTRE
HWY 10: EAST OF 180 STREET
PAVEMENT MARKING

SCALE 0 1:250 10m	DATE (YYYY.MM.DD) 2020-08-20
DESIGNED AH	CONSULTANT PROJ. NO. 20-0546
DRAWN AH	DWG. NO.
REVIEWED RA	REV. J

SURREY PROJECT NUMBER 7821-0139-00
DRAWING TYPE PAVEMENT MARKING
SHEET 07 OF 13

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HWY 10 DESIGN SPEED: 70km/h

PAVEMENT MARKING LEGEND	
①	100mm - DIRECTIONAL DIVIDING LINE (YELLOW)
②	100mm - LANE EDGE LINE (WHITE)
③	100mm - DASHED CONTINUITY LINE (WHITE)

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4886 & LOT 6 EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286			
SURVEY BENCHMARK MON: 5719		SCALE FACTOR: 0.999607	
N: E: ELEV: 11.225M CVD28 G.V.R.D. 2018			
REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-30	FINAL DRAFT PREFERRED PROPONENT STAGE	AH
C	2022-11-29	ISSUED FOR ADDENDUM 4	AH
G	2023-03-03	ISSUED FOR FINAL DRAFT	AH
F	2023-01-30	ISSUED FOR ADDENDUM 11	AH

CONSULTANT

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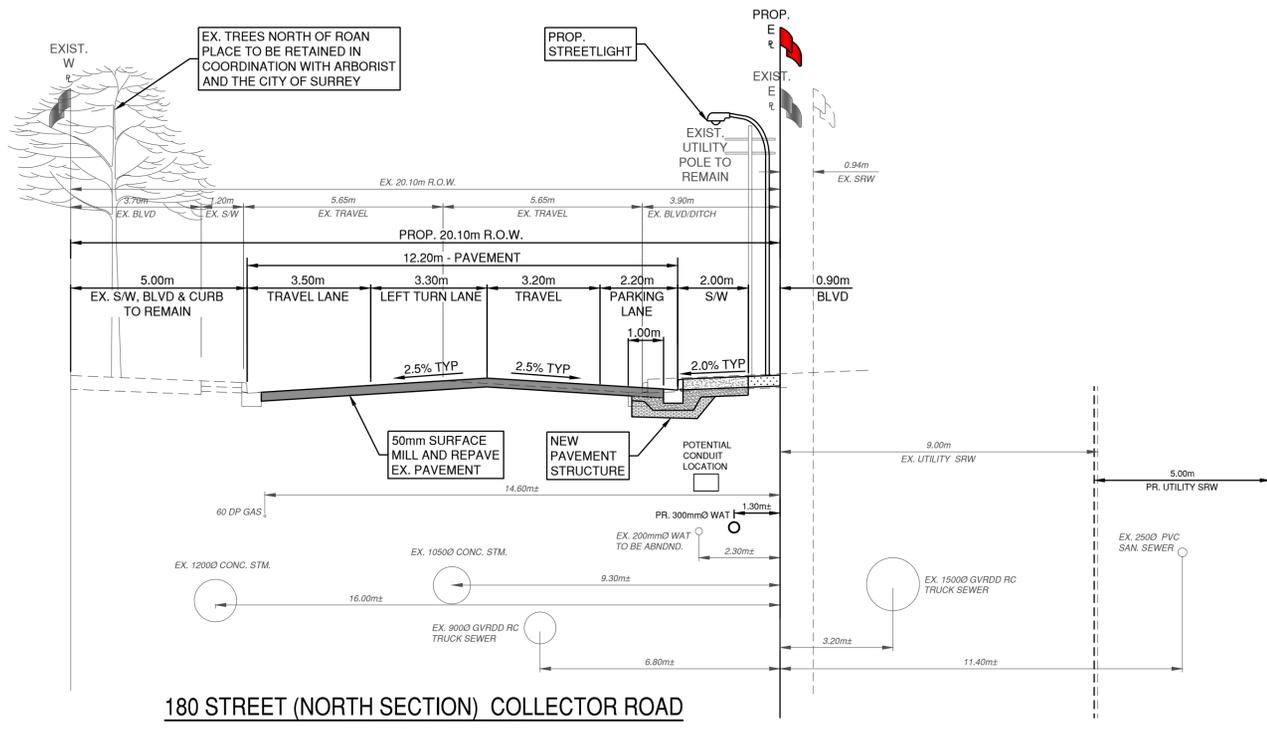


CLIENT **FRASER HEALTH AUTHORITY**
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
HWY 10: EAST OF 184 STREET
PAVEMENT MARKING

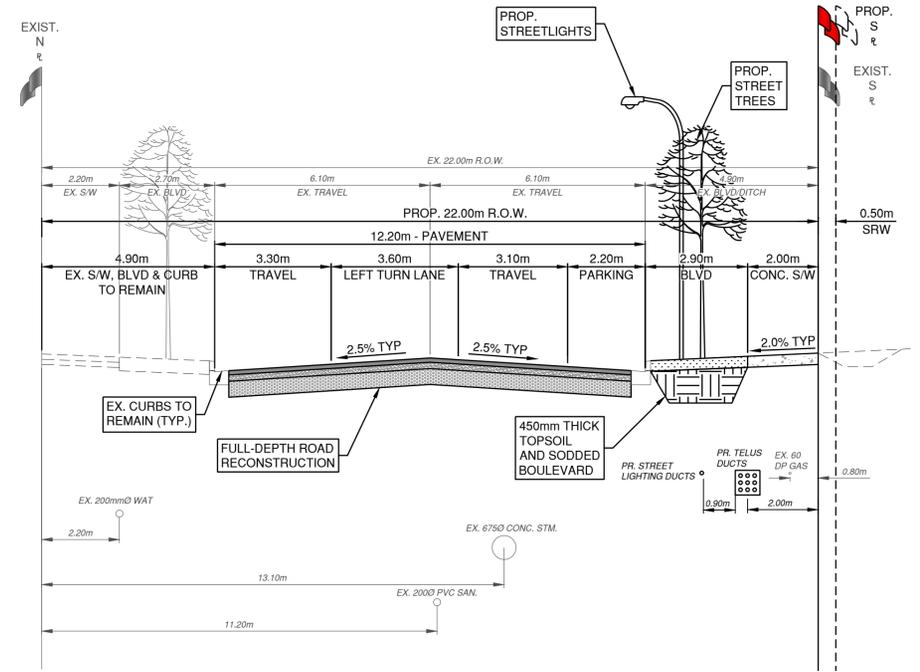
SCALE	DATE (YYYY.MM.DD)	SURREY PROJECT NUMBER
0 1:250 10m	2020-08-20	7821-0139-00
DESIGNED	CONSULTANT PROJ. NO.	DRAWING TYPE
AH	20-0546	PAVEMENT MARKING
DRAWN	DWG. NO.	REV.
AH		J
REVIEWED	PM6	SHEET 08 OF 13
RA		

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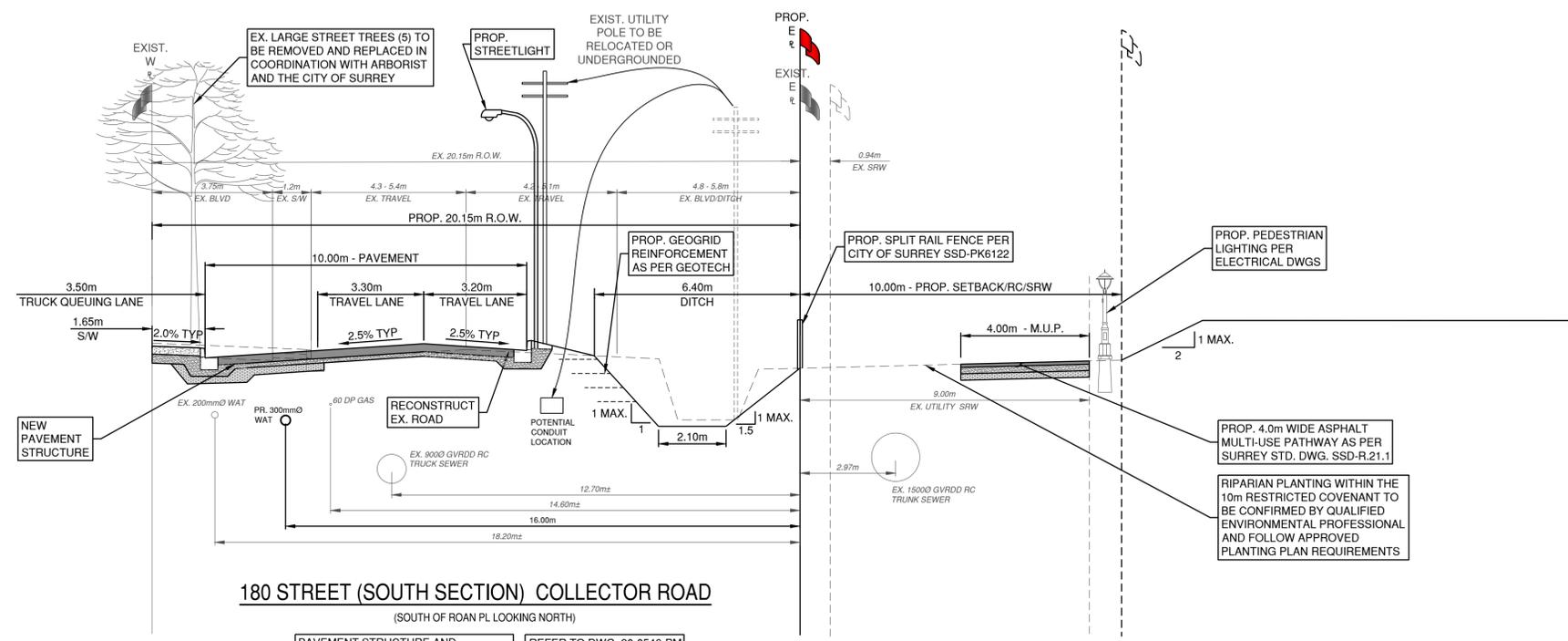
180 STREET (NORTH SECTION) COLLECTOR ROAD
(NORTH OF ROAN PL LOOKING NORTH)

PAVEMENT STRUCTURE AND REHABILITATION REQUIREMENTS WILL FOLLOW THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER AND BE APPROVED BY THE CITY OF SURREY.
REFER TO DWG. 20-0546-PM FOR ROADWORKS DETAILS.



JAMES HILL DRIVE COLLECTOR ROAD
(180 ST LOOKING EAST)

PAVEMENT STRUCTURE WILL FOLLOW RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT #17036 BY GEOPACIFIC DATED 2021-12-01 AND BE APPROVED BY THE CITY OF SURREY.
REFER TO DWGS. 20-0546-PM & 20-0546-JHD FOR ROADWORKS DETAILS.



180 STREET (SOUTH SECTION) COLLECTOR ROAD
(SOUTH OF ROAN PL LOOKING NORTH)

PAVEMENT STRUCTURE AND REHABILITATION REQUIREMENTS WILL FOLLOW THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER AND BE APPROVED BY THE CITY OF SURREY.
REFER TO DWG. 20-0546-PM FOR ROADWORKS DETAILS.

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4866 & LOT B EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286

SURVEY BENCHMARK MON: 5719 N: SCALE FACTOR: 0.999607 ELEV: 11.225M CVD28 C.V.R.D. 2018

REV.	DATE	DESCRIPTION	BY
J	2023-06-30	FINAL DRAFT PREFERRED PROPOSITION STAGE	AH
I	2023-03-03	ISSUED FOR FINAL DRAFT	AH
H	2023-01-30	ISSUED FOR ADDENDUM 11	AH
G	2022-12-15	ISSUED FOR ADDENDUM 5	AH
K	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH

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CLIENT **FRASER HEALTH AUTHORITY**
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

CITY OF SURREY

NEW SURREY HOSPITAL AND CANCER CENTER
180TH STREET AND JAMES HILL DRIVE
TYPICAL SECTIONS

SCALE	NOT TO SCALE
DESIGNED	GL
DRAWN	RL
REVIEWED	GL

DATE (YYYY.MM.DD)	2020-08-20
CONSULTANT PROJ. NO.	20-0546
DWG. NO.	TS
REV. K	

SURREY PROJECT NUMBER	7821-0139-00
DRAWING TYPE	TYPICAL SECTIONS
SHEET	09 OF 13



ALL WORKS SHALL FOLLOW THE RECOMMENDATIONS AND DIRECTIONS OF A GEOTECHNICAL ENGINEER

REFER TO ENVIRONMENTAL PLANS FOR LANDSCAPING AND ASSOCIATED TREATMENT OF DITCH, SETBACK, AND SLOPE

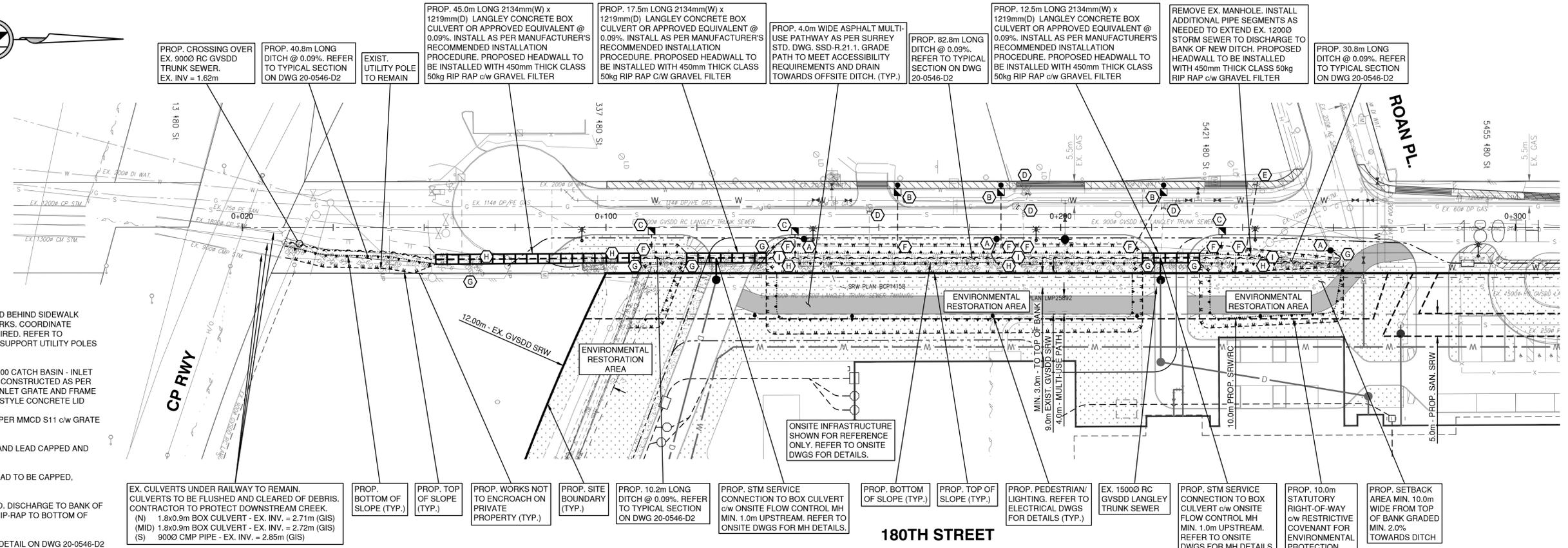
CONTRACTOR TO CONTACT METRO VANCOUVER'S UTILITY OPERATIONS PLANNER AT 604-522-7405 NO LESS THAN 10 BUSINESS DAYS PRIOR TO ANY PRELOCATION, BACKFILL, EXCAVATION, CONSTRUCTION, EXPOSURE OR OTHER WORKS ADJACENT TO OR CROSSING GVSDD MAINS AND FEATURES, TO ARRANGE FOR THE PRESENCE OF A MV REPRESENTATIVE ON SITE.

STORM KEY NOTES

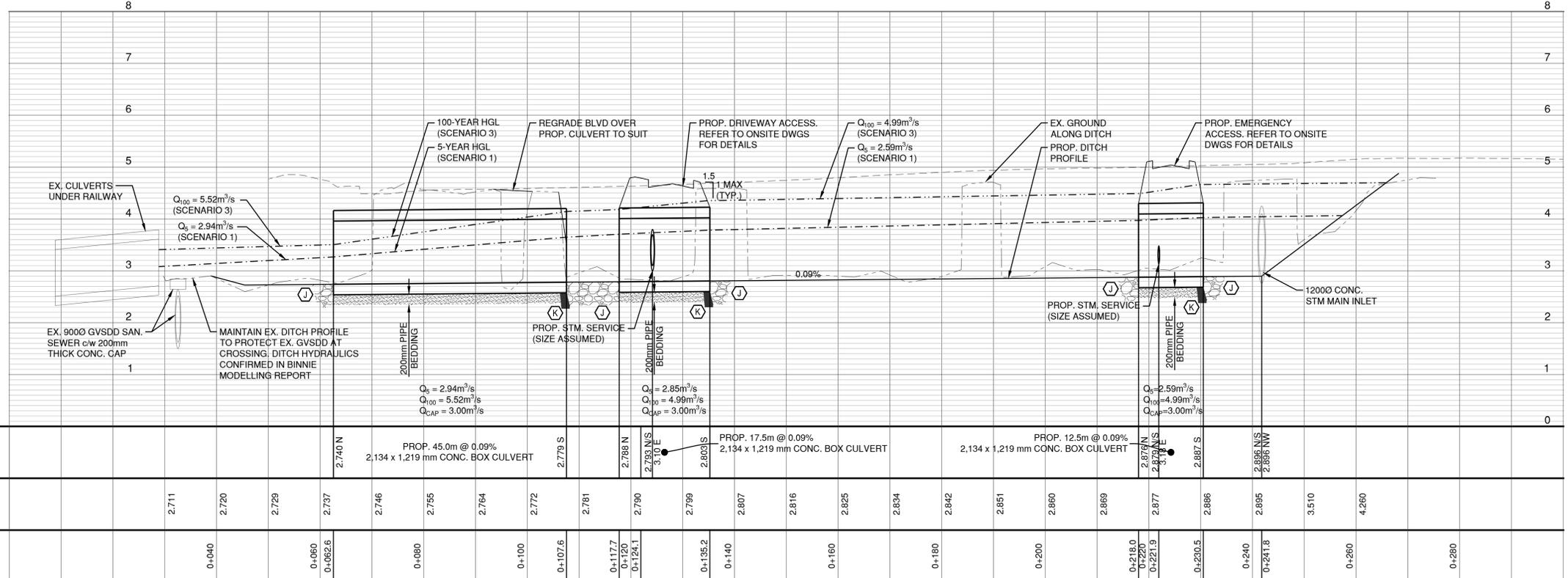
- A EX. UTILITY POLE TO BE RELOCATED BEHIND SIDEWALK PRIOR TO DITCH AND CULVERT WORKS. COORDINATE CONSTRUCTION PHASING AS REQUIRED. REFER TO ROADWORKS PLANS FOR DETAILS. SUPPORT UTILITY POLES DURING CONSTRUCTION
- B PROP. LANGLEY CONCRETE Ø600x600 CATCH BASIN - INLET STYLE OR APPROVED EQUIVALENT CONSTRUCTED AS PER MMCD S11 c/w OFFSET SUMP. TOP INLET GRATE AND FRAME AS PER CoS SSD-D.6 SET ON CURB STYLE CONCRETE LID
- C PROP. TOP INLET CATCH BASIN AS PER MMCD S11 c/w GRATE AND FRAME AS PER CoS SSD-D.6
- D EX. CATCHBASIN TO BE REMOVED AND LEAD CAPPED AND ABANDONED
- E EX. LAWN DRAIN TO REMAIN. EX. LEAD TO BE CAPPED, ABANDONED, AND REPLACED.
- F PROP. 2000 PVC SDR 28 CBLB LEAD. DISCHARGE TO BANK OF DITCH c/w 350mm THICK CLASS 10 RIP-RAP TO BOTTOM OF BANK MIN. 1.0m WIDE
- G PROP. RIP-RAP HEADWALL AS PER DETAIL ON DWG 20-0546-D2
- H EX. CULVERT TO BE REMOVED
- I PROP. DITCH DAYLIGHTING. REFER TO TYPICAL SECTION ON DWG 20-0546-D2
- J INSTALL MIN. 450mm-THICK COBBLES AT INLETS AND OUTLETS
- K INSTALL CLAY PLUG BENEATH LIP OF CULVERT TO PREVENT PIPING. CLAY MATERIAL TO BE APPROVED BY GEOTECHNICAL ENGINEER

GENERAL CONSTRUCTION NOTES FOR STORM

1. ANY EXISTING SIGNS TEMPORARILY REMOVED DURING CONSTRUCTION WILL BE REINSTATED AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
2. CONTRACTOR TO PROTECT EXISTING GAS AS REQUIRED TO COMPLETE ALL CULVERT REPLACEMENT WORKS. ALL FORTIS PERMITS AND COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. RIP RAP TO BE CLEAN ANGULAR HARD FRACTURED STONE (GRADATION AS SPECIFIED IN PLAN VIEW), COBBLES TO BE CLEAN ROUNDED HARD STONE 300mm MINUS.
4. CARE IS TO BE TAKEN TO MINIMIZE DISTURBANCE TO STREAM SIDE VEGETATION.
5. HYDROSEED TO CONSIST OF COASTAL MIX.
6. ALL TREES TO BE RETAINED, UNLESS SPECIFICALLY NOTED FOR REMOVAL ON DRAWINGS. IF REMOVAL IS REQUIRED FOR CONSTRUCTION, CONTRACTOR TO REVIEW AND CONFIRM WITH CITY OF SURREY PARKS PRIOR TO PROCEEDING.
7. CONTRACTOR TO EXPOSE AND VERIFY ALL EXISTING UTILITY CROSSINGS. NOTIFY THE CONTRACT ADMINISTRATOR OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO CONSTRUCTION.



- EX. CULVERTS UNDER RAILWAY TO REMAIN. CULVERTS TO BE FLUSHED AND CLEARED OF DEBRIS. CONTRACTOR TO PROTECT DOWNSTREAM CREEK.
(N) 1.8x0.9m BOX CULVERT - EX. INV. = 2.71m (GIS)
(MID) 1.8x0.9m BOX CULVERT - EX. INV. = 2.72m (GIS)
(S) 9000 CMP PIPE - EX. INV. = 2.85m (GIS)
- PROP. BOTTOM OF SLOPE (TYP.)
- PROP. TOP OF SLOPE (TYP.)
- PROP. WORKS NOT TO ENCROACH ON PRIVATE PROPERTY (TYP.)
- PROP. SITE BOUNDARY (TYP.)
- PROP. 10.2m LONG DITCH @ 0.09%. REFER TO TYPICAL SECTION ON DWG 20-0546-D2
- PROP. STM SERVICE CONNECTION TO BOX CULVERT c/w ONSITE FLOW CONTROL MH MIN. 1.0m UPSTREAM. REFER TO ONSITE DWGS FOR MH DETAILS.
- PROP. BOTTOM OF SLOPE (TYP.)
- PROP. TOP OF SLOPE (TYP.)
- PROP. PEDESTRIAN/LIGHTING. REFER TO ELECTRICAL DWGS FOR DETAILS (TYP.)
- EX. 1500Ø RC GVSDD LANGLEY TRUNK SEWER
- PROP. STM SERVICE CONNECTION TO BOX CULVERT c/w ONSITE FLOW CONTROL MH MIN. 1.0m UPSTREAM. REFER TO ONSITE DWGS FOR MH DETAILS.
- PROP. 10.0m STATUTORY RIGHT-OF-WAY c/w RESTRICTIVE COVENANT FOR ENVIRONMENTAL PROTECTION
- PROP. SETBACK AREA MIN. 10.0m WIDE FROM TOP OF BANK GRADED MIN. 2.0% TOWARDS DITCH



PROP. CULVERT DATA	PROP. DITCH ELEV.	STATION
PROP. 45.0m @ 0.09% 2,134 x 1,219 mm CONC. BOX CULVERT	2.711	0+040
PROP. 17.5m @ 0.09% 2,134 x 1,219 mm CONC. BOX CULVERT	2.720	0+060
PROP. 12.5m @ 0.09% 2,134 x 1,219 mm CONC. BOX CULVERT	2.729	0+080
	2.737	0+100
	2.746	0+117.7
	2.755	0+120
	2.764	0+124.1
	2.772	0+135.2
	2.781	0+140
	2.790	0+160
	2.799	0+180
	2.807	0+200
	2.816	0+216.0
	2.825	0+220
	2.834	0+221.9
	2.842	0+230.5
	2.851	0+240
	2.860	0+241.8
	2.869	0+260
	2.877	0+280
	2.886	
	2.895	
	3.510	
	4.260	

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4866 & LOT B EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286	CONSULTANT	CLIENT	SCALE	DATE	SURREY PROJECT NUMBER
SURVEY BENCHMARK MON: 5719	BINNIE	FRASER HEALTH AUTHORITY	0 H 1:500 20m	2021-07-14	7821-0139-00
SCALE FACTOR: 0.999607	R.F. BINNIE & ASSOCIATES LTD.	400-13450 102 AVENUE, SURREY, BC, V3T 0H1	0 V 1:50 2m	CONSULTANT PROJ. NO.	20-0546
ELEV: 11.225M CVD28 C.V.R.D. 2018	300-4940 Canada Way, Burnaby, BC V5G 4K6 TEL 604 430 3723 BINNIE.com	NEW SURREY HOSPITAL AND CANCER CENTRE	DESIGNED	DWG. NO.	STORM
		EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE	DRAWN	REV. NO.	D1
		180TH STREET STORM - PLAN & PROFILE	REVIEWED	REV. K	SHEET 10 OF 13

CONSULTANT

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300-4940 Canada Way, Burnaby, BC V5G 4K6 TEL 604 430 3723 BINNIE.com

CITY OF SURREY

CLIENT

FRASER HEALTH AUTHORITY

400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE

EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE

180TH STREET STORM - PLAN & PROFILE

SCALE

0 H 1:500 20m

0 V 1:50 2m

DATE (YYYY.MM.DD)

2021-07-14

SURREY PROJECT NUMBER

7821-0139-00

CONSULTANT PROJ. NO.

20-0546

DWG. NO.

D1

DESIGNED

AH

DRAWN

AH

REVIEWED

RA

REV. K

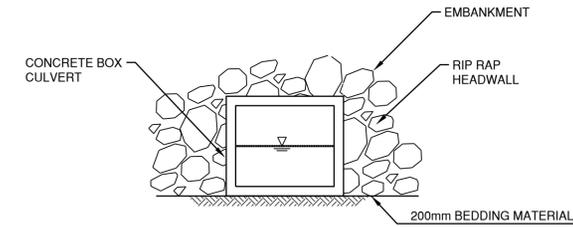
SHEET 10 OF 13

PROJECT DRAINAGE NOTES

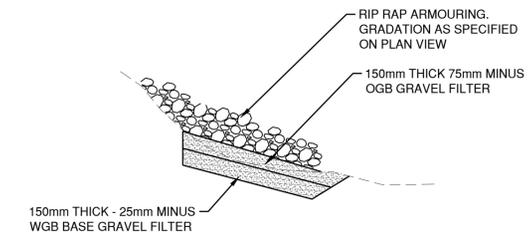
1. CB/LB LEADS SHALL BE 200mmØ PVC SDR 28 AT MIN. 1.0%. DOUBLE CATCH BASIN LEADS SHALL BE 250mmØ AND WILL BE CONSTRUCTED SUCH THAT ONE BASIN LEAD WILL WYE INTO THE LEAD OF THE OTHER.
2. REFER TO SSD-G.4 & G.5 FOR STORM SEWER TRENCH DETAIL
3. CONTRACTOR TO EXPOSE AND VERIFY ALL EXISTING UTILITY CROSSINGS AND TIE-IN LOCATIONS AND NOTIFY THE CONTRACT ADMINISTRATOR OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO REPAIR AND REPLACE ANY DAMAGE TO OTHER UTILITIES DURING THE INSTALLATION AND CONSTRUCTION OF DITCHES, CULVERTS, AND ASSOCIATED WORKS UNDER THE CONTRACT.

BOX CULVERT GENERAL NOTES

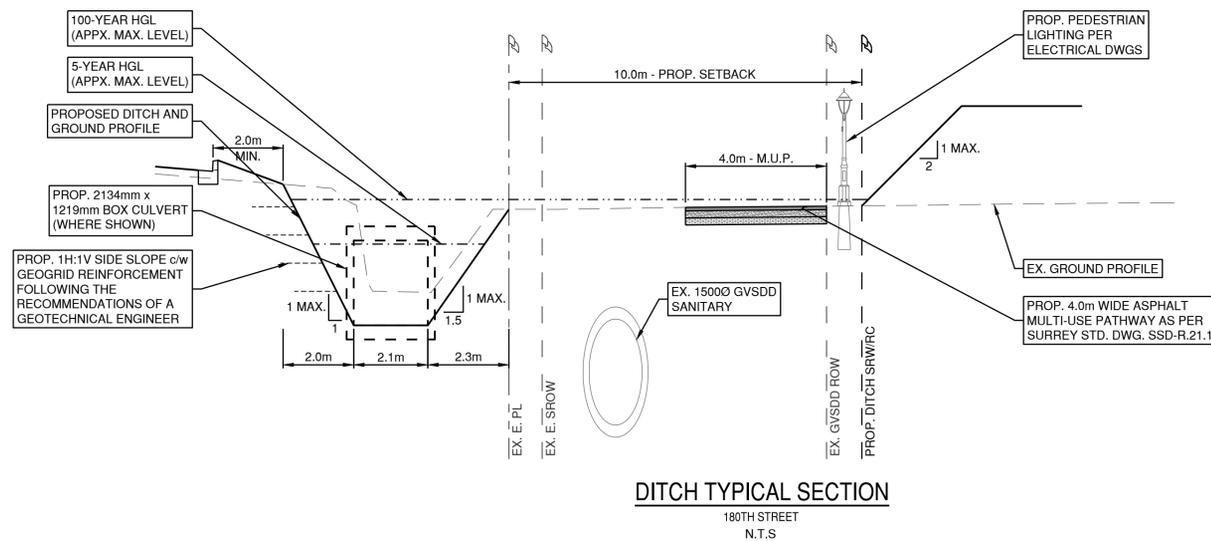
1. CULVERT TO BE INSTALLED WITH RUBBER GASKETED BOX CULVERT (FACTORY INSTALLED PRE-LUBRICATED SUPER-SEAL GASKET) MEETING ASTM C1677-11a SPECIFICATION OR APPROVED EQUIVALENT.
2. REMOVAL OF EXISTING CULVERT AND INSTALLATION OF THE REPLACEMENT BOX CULVERT SECTIONS TO OCCUR IN ISOLATION OF FLOWING WATER. OWNER'S ENVIRONMENTAL MONITOR TO COMPLETE A FISH SALVAGE IN ADVANCE OF CONSTRUCTION.
3. CONSTRUCTION TO BE ISOLATED FROM THE ADJACENT WATERCOURSE TO PREVENT SEDIMENT FROM ENTERING. SEDIMENT CONTAINMENT METHODS AND ISOLATION PROCEDURES TO BE REVIEWED AND APPROVED BY THE ENVIRONMENTAL MONITOR PRIOR TO PROCEEDING.
4. THE PROJECT WORK AREA IS ADJACENT TO FISHERIES SENSITIVE HABITAT. CONTRACTOR'S ACTIVITIES TO COMPLY WITH THE REQUIREMENTS OF THE ENVIRONMENTAL MONITOR, THE CONSTRUCTION MITIGATION PLAN PREPARED FOR THIS PROJECT, AND ALL APPLICABLE REGULATORY REQUIREMENTS OF THE DFO AND BC MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT.
5. BACKFILL OF PROPOSED CULVERT TO BE IMPORTED, WELL-GRADED 75mm MINUS PIT RUN GRAVEL IN ACCORDANCE WITH MMCD. BACKFILL TO BE PLACED IN LIFTS NOT EXCEEDING 300mm IN THICKNESS AND COMPACTED WITH VIBRATORY EQUIPMENT TO NOT LESS THAN 95% MPD.
6. CONCRETE BOX CULVERTS ARE TO BE INSTALLED ON MIN. 200MM PIPE BEDDING IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GEOPACIFIC DATED 2021-11-12, ON SUBGRADE APPROVED BY GEOTECHNICAL ENGINEER.



CULVERT SECTION DETAIL
N.T.S.



GRAVEL FILTER DETAIL
N.T.S.



DITCH TYPICAL SECTION
180TH STREET
N.T.S.

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4866 & LOT B EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 7087; EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 7087; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286			
SURVEY BENCHMARK MON: 5719		SCALE FACTOR: 0.999607	
N: E:		ELEV: 11.225M CVD28 C.V.R.D. 2018	
REV.	DATE	DESCRIPTION	BY
J	2023-06-30	FINAL DRAFT PREFERRED PROPOSITION STAGE	AH
I	2023-03-03	ISSUED FOR FINAL DRAFT	AH
H	2023-01-30	ISSUED FOR ADDENDUM 11	AH
G	2022-12-15	ISSUED FOR ADDENDUM 5	AH
K	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH

CONSULTANT	
BINNIE	R.F. BINNIE & ASSOCIATES LTD. 300 - 4940 Canada Way, Burnaby, BC V5G 4K6 TEL 604 430 1721 BINNIE.com



CLIENT **FRASER HEALTH AUTHORITY**
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE
180TH STREET STORM - NOTES & DETAILS

SCALE	DATE (YYYY.MM.DD)	SURREY PROJECT NUMBER
AS SHOWN	2021-07-14	7821-0139-00
DESIGNED	CONSULTANT PROJ. NO.	DRAWING TYPE
AH	20-0546	STORM
DRAWN	DWG. NO.	REV.
AH		K
REVIEWED	D2	SHEET 11 OF 13
RA		

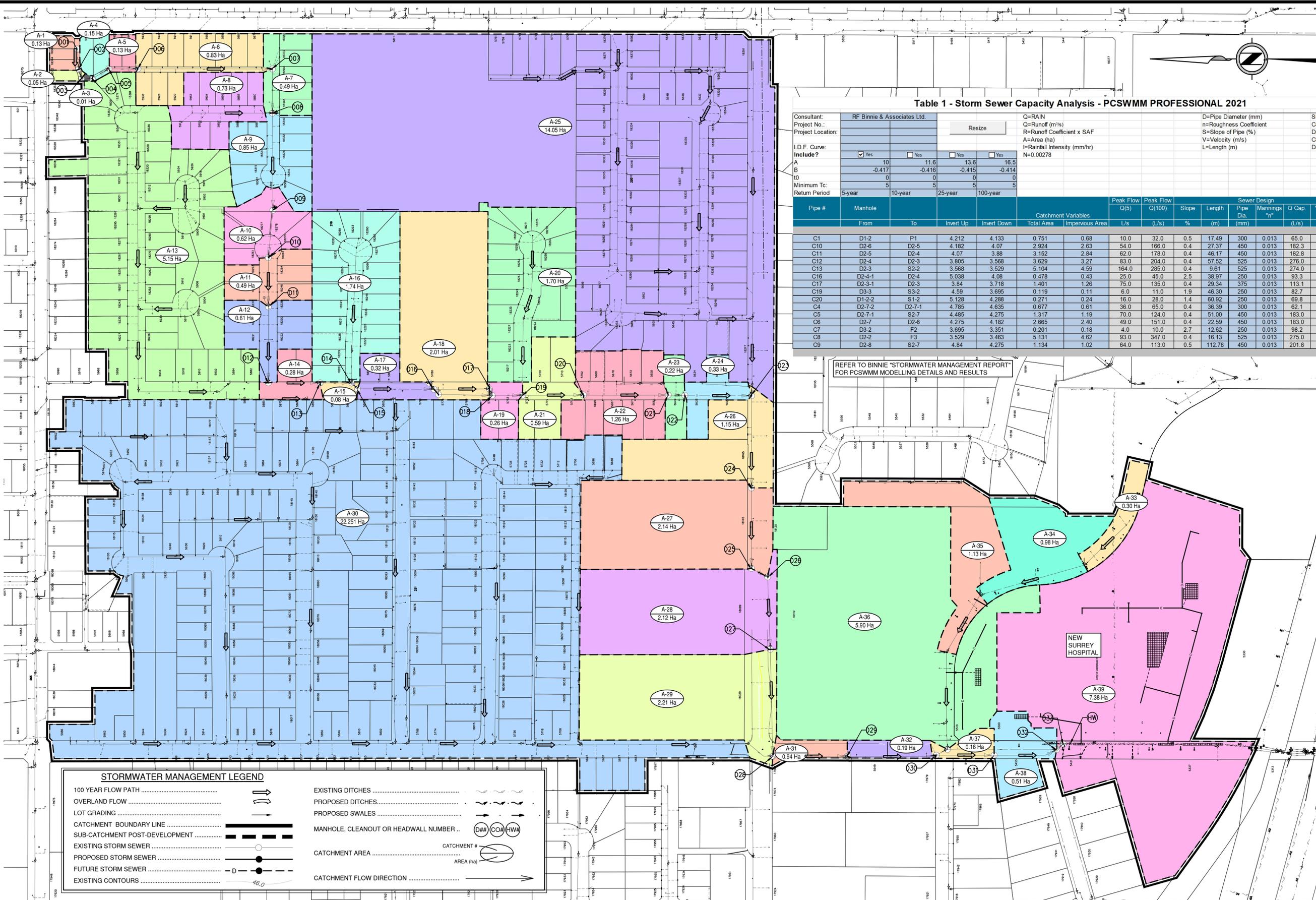


Table 1 - Storm Sewer Capacity Analysis - PCSWMM PROFESSIONAL 2021

Consultant:	RF Binnie & Associates Ltd.				Q=RAIN				D=Pipe Diameter (mm)				Sheet 1 of 1			
Project No.:	Resize				Q=Runoff (m ³ /s)				n=Roughness Coefficient				Completed by:			
Project Location:					R=Runoff Coefficient x SAF				S=Slope of Pipe (%)				Date:			
I.D.F. Cune:					A=Area (ha)				V=Velocity (m/s)				Checked by:			
Include?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No				I=Rainfall Intensity (mm/hr)				L=Length (m)				Date:			
A	10	11.6	13.6	16.5	N=0.00278											
B	-0.417	-0.416	-0.415	-0.414												
10	0	0	0	0												
Minimum Tc:	5	5	5	5												
Return Period	5-year	10-year	25-year	100-year												
Pipe #	Manhole	From	To	Invert Up	Invert Down	Catchment Variables		Peak Flow		Slope	Length	Sewer Design		Q Cap.	V Cap.	Q(5)/Q Cap.
						Total Area	Impervious Area	Q(5)	Q(100)			Pipe Dia.	Manning's "n"			
C1	D1-2	P1		4.212	4.133	0.751	0.68	10.0	32.0	0.5	17.49	300	0.013	65.0	0.92	15.4
C10	D2-6	D2-5		4.182	4.07	2.924	2.63	54.0	166.0	0.4	27.37	450	0.013	182.3	1.15	29.6
C11	D2-5	D2-4		4.07	3.88	3.152	2.84	62.0	178.0	0.4	46.17	450	0.013	182.8	1.15	33.9
C12	D2-4	D2-3		3.805	3.568	3.629	3.27	83.0	204.0	0.4	57.52	525	0.013	276.0	1.28	30.1
C13	D2-3	S2-2		3.568	3.529	5.104	4.59	164.0	285.0	0.4	9.61	525	0.013	274.0	1.27	59.8
C16	D2-4-1	D2-4		5.938	4.08	4.478	4.43	25.0	45.0	2.5	38.97	250	0.013	93.3	1.90	26.8
C17	D2-3-1	D2-3		3.84	3.718	1.401	1.26	75.0	135.0	0.4	29.34	375	0.013	113.1	1.02	66.3
C19	D3-3	S3-2		4.59	3.695	0.119	0.11	6.0	11.0	1.9	46.30	250	0.013	82.7	1.68	7.3
C20	D1-2-2	S1-2		5.128	4.288	0.271	0.24	16.0	28.0	1.4	60.92	250	0.013	69.8	1.42	72.9
C4	D2-7-2	D2-7-1		4.785	4.635	0.677	0.61	36.0	65.0	0.4	36.39	300	0.013	62.1	0.88	58.0
C5	D2-7-1	S2-7		4.485	4.275	1.317	1.19	70.0	124.0	0.4	51.00	450	0.013	183.0	1.15	38.3
C6	D2-7	D2-6		4.275	4.182	2.665	2.40	49.0	151.0	0.4	22.59	450	0.013	183.0	1.15	26.8
C7	D3-2	F2		3.695	3.351	0.201	0.18	4.0	10.0	2.7	12.62	250	0.013	98.2	2.00	4.1
C8	D2-2	F3		3.529	3.463	5.131	4.62	93.0	347.0	0.4	16.13	525	0.013	275.0	1.27	33.8
C9	D2-8	S2-7		4.84	4.275	1.134	1.02	64.0	113.0	0.5	112.78	450	0.013	201.8	1.27	31.7

REFER TO BINNIE "STORMWATER MANAGEMENT REPORT" FOR PCSWMM MODELLING DETAILS AND RESULTS

STORMWATER MANAGEMENT LEGEND

- 100 YEAR FLOW PATH
- OVERLAND FLOW
- LOT GRADING
- CATCHMENT BOUNDARY LINE
- SUB-CATCHMENT POST-DEVELOPMENT
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- FUTURE STORM SEWER
- EXISTING CONTOURS
- EXISTING DITCHES
- PROPOSED DITCHES
- PROPOSED SWALES
- MANHOLE, CLEANOUT OR HEADWALL NUMBER
- CATCHMENT AREA
- CATCHMENT FLOW DIRECTION

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4866 & LOT B EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; EXCEPT FIRSTLY; PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 79296; SEC 5, TWP 8, NWD, PLAN 11286

SURVEY BENCHMARK MON: 5719

SCALE FACTOR: 0.999607

ELEV: 11.225M CVD28 G.V.R.D. 2018

REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-06-02	FINAL DRAFT PREFERRED PROPOSAL STAGE	AH
H	2023-03-03	ISSUED FOR FINAL DRAFT	AH
G	2023-01-09	ISSUED FOR ADDENDUM 11	AH
F	2022-12-15	ISSUED FOR ADDENDUM 5	AH

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R.F. BINNIE & ASSOCIATES LTD.
300 - 4940 Canada Way,
Burnaby, BC V5C 4K6
TEL 604 420 3723
BINNIE.com

CITY OF SURREY

CLIENT

FRASER HEALTH AUTHORITY
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
EAST OF 180TH STREET AND SOUTH OF JAMES HILL DRIVE
STORMWATER CATCHMENT PLAN

SCALE 1:2000 80m

DATE 2021-05-31

CONSULTANT PROJ. NO. 20-0546

DWG. NO.

DESIGNED AH

DRAWN SA

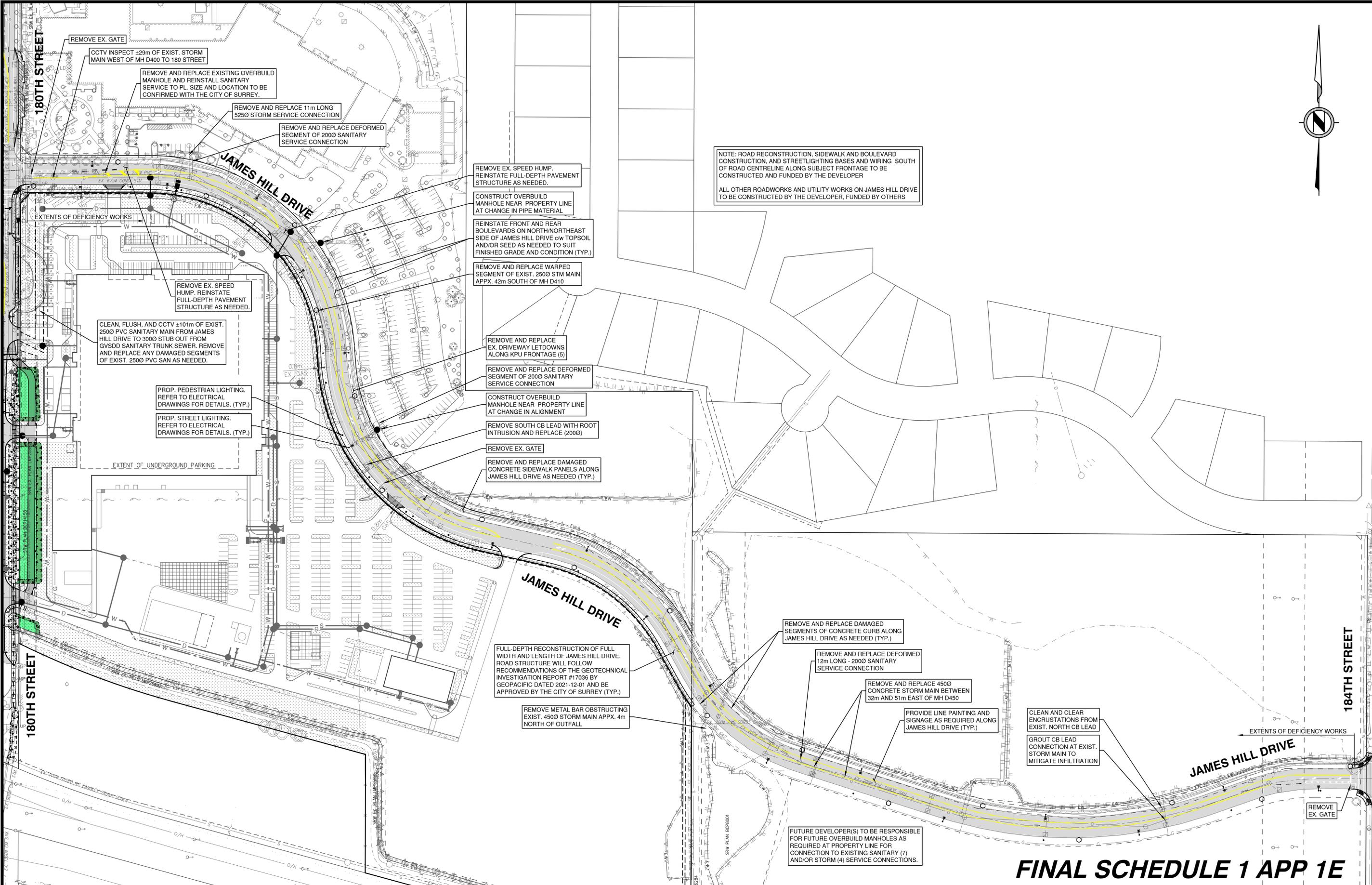
REVIEWED RA

SURREY PROJECT NUMBER 7821-0139-00

DRAWING TYPE STORMWATER CATCHMENT PLAN

REV. J

SHEET 12 OF 13



NOTE: ROAD RECONSTRUCTION, SIDEWALK AND BOULEVARD CONSTRUCTION, AND STREETLIGHTING BASES AND WIRING SOUTH OF ROAD CENTRELINE ALONG SUBJECT FRONTAGE TO BE CONSTRUCTED AND FUNDED BY THE DEVELOPER

ALL OTHER ROADWORKS AND UTILITY WORKS ON JAMES HILL DRIVE TO BE CONSTRUCTED BY THE DEVELOPER, FUNDED BY OTHERS

FINAL SCHEDULE 1 APP 1E

LEGAL DESC: PARCEL A, LOT 4, SEC 5, TWP 8, NWD, PLAN 4866 & LOT B EXCEPT FIRSTLY, PART SHOWN ON HWY PLAN 70987; SECONDLY PART ON PLAN 70296; SEC 5, TWP 8, NWD, PLAN 11286

SURVEY BENCHMARK MON: 5719 N: E: SCALE FACTOR: 0.999607 ELEV: 11.225M CVD28 G.V.R.D. 2018

REV.	DATE	DESCRIPTION	BY
J	2023-09-01	FINAL SCHEDULE 1 APP 1E	AH
I	2023-09-00	FINAL DRAFT PREFERRED PROPONENT STAGE	AH
H	2023-05-03	ISSUED FOR FINAL DRAFT	AH
G	2023-04-00	ISSUED FOR ADDENDUM 11	AH
F	2023-10-15	ISSUED FOR ADDENDUM 5	AH

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300 - 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1723
BINNIE.com



CLIENT **FRASER HEALTH AUTHORITY**
400-13450 102 AVENUE, SURREY, BC, V3T 0H1

NEW SURREY HOSPITAL AND CANCER CENTRE
JAMES HILL DRIVE - 180TH STREET TO 184TH STREET
JAMES HILL DRIVE REMEDIATION WORKS

SEAL

SCALE	DATE (YYYY.MM.DD)	SURREY PROJECT NUMBER
0 1:1000 40m	2021-11-09	7821-0139-00
DESIGNED	CONSULTANT PROJ. NO.	DRAWING TYPE
AH	20-0546	KEY PLAN
DRAWN	DWG. NO.	REV.
AH		J
REVIEWED		
RA		

SHEET 13 OF 13

DESIGNER: AH

DRAWN: AH

REVIEWED: RA

DATE: 2021-11-09

CONSULTANT PROJ. NO.: 20-0546

DWG. NO.:

REV. J

SHEET 13 OF 13

DESTROY ALL PRINTS BEARING PREVIOUS NUMBER

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

DO NOT SCALE DRAWINGS

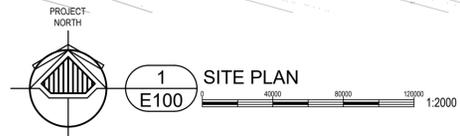
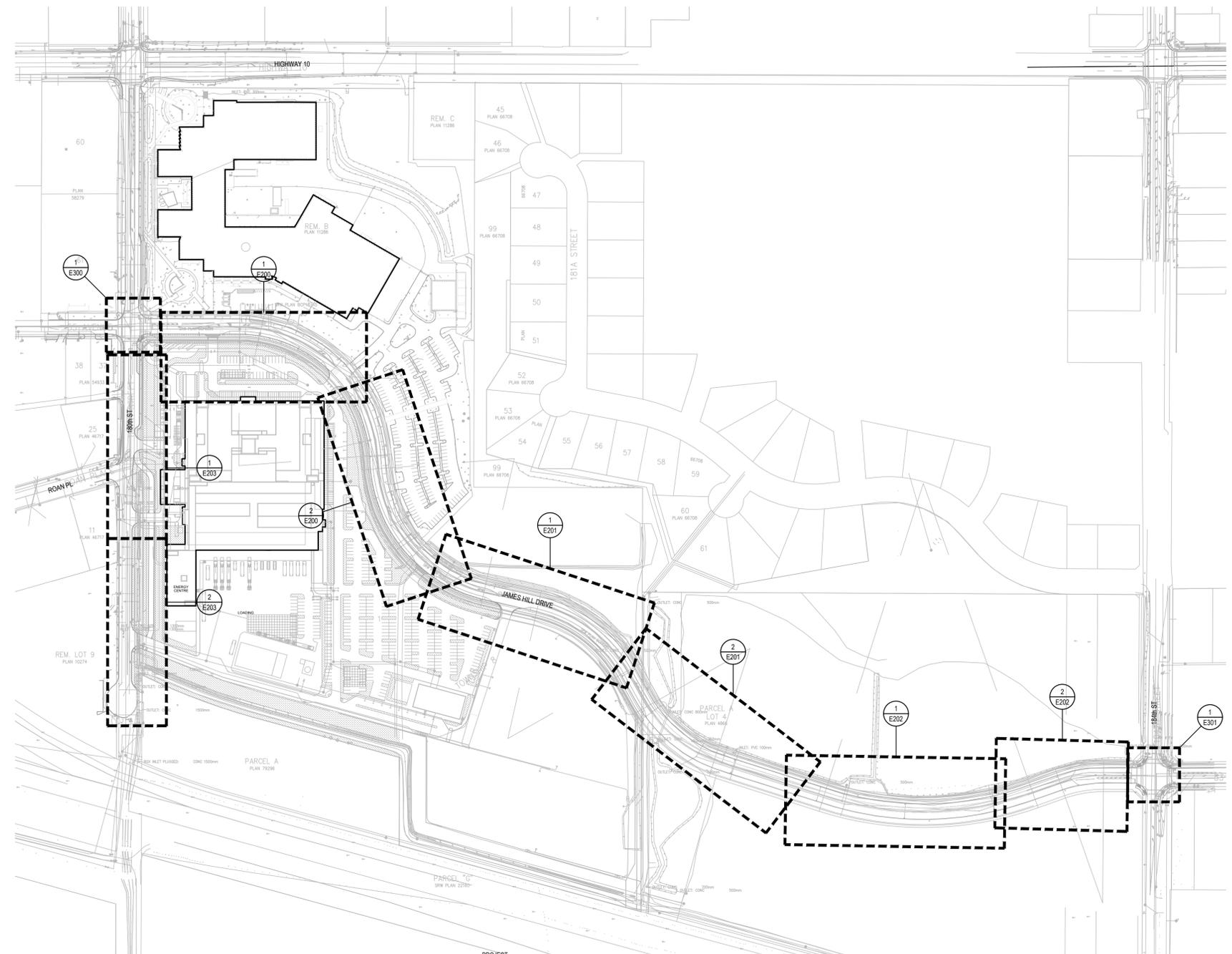
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ELECTRICAL SYMBOL LEGEND	
NOTE	EQUIPMENT SHOWN DOTTED IS EXISTING AND TO REMAIN UNLESS INDICATED OTHERWISE
●	PEDESTRIAN LUMINAIRE
○	COBRA HEAD LUMINAIRE
⊕	JUNCTION BOX
CCT-#	DENOTES CIRCUIT

ILLUMINATION DESIGN CRITERIA		
	DESIGN REQUIREMENTS	DESIGN ACHIEVED
STREET NAME	JAMES HILL DR SIDEWALK	
PEDESTRIAN CONFLICT		HIGH
ROAD CLASSIFICATION		COLLECTOR
ILLUMINANCE LEVEL (AVG)	20.0 lux	22.0 lux
ILLUMINANCE UNIFORMITY RATIO (AVG:MIN)	4.0:1	3.1:1

ILLUMINATION DESIGN CRITERIA		
	DESIGN REQUIREMENTS	DESIGN ACHIEVED
STREET NAME	JAMES HILL DR	
PEDESTRIAN CONFLICT		HIGH
ROAD CLASSIFICATION		COLLECTOR
ILLUMINANCE LEVEL (AVG)	10.0 lux	12.0 lux
ILLUMINANCE UNIFORMITY RATIO (AVG:MIN)	4.0:1	4.0:1

ILLUMINATION DESIGN CRITERIA		
	DESIGN REQUIREMENTS	DESIGN ACHIEVED
STREET NAME	180th ST	
PEDESTRIAN CONFLICT		HIGH
ROAD CLASSIFICATION		COLLECTOR
ILLUMINANCE LEVEL (AVG)	10.0 lux	11.0 lux
ILLUMINANCE UNIFORMITY RATIO (AVG:MIN)	4.0:1	3.7:1



- CITY STREET LIGHT NOTES**
- ALL LUMINAIRES SHALL HAVE 7-PIN RECEPTACLES AND BE APPROVED PER THE APPROVED MATERIALS LIST IN THE SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.
 - ALL STREET LIGHT POLES AND SERVICE BASES ARE TO BE HOT-DIPPED GALVANIZED AND POWDER COATED COLOUR RAL 7040 GREY UNLESS NOTED OTHERWISE.
 - SEE BC HYDRO REGULATIONS FOR SERVICE CONNECTION DETAILS. THE DEVELOPER IS TO ARRANGE FOR EXACT SERVICE LOCATION(S) WITH BC HYDRO PRIOR TO COMMENCING CONSTRUCTION.
 - IT IS THE RESPONSIBILITY OF THE DEVELOPER TO CONFIRM THE ADEQUACY OF THE EXISTING STREET LIGHT SERVICE. SERVICE BASE, CONDUIT AND CONDUCTORS AND MAKE ALL NECESSARY REPAIRS TO ADEQUATELY COMPLETE ALL CONNECTIONS INTO THE EXISTING STREET LIGHT SYSTEM. THE DEVELOPER IS TO INSTALL POLE IDENTIFICATION NUMBERS AS PER SURREY STANDARDS AS SHOWN ON THE DRAWINGS.
 - THE DEVELOPER IS TO ENSURE THAT ALL STREET LIGHT POLES ARE A MINIMUM 3.0m CLEAR OF ALL B.C. HYDRO POLES AND OVERHEAD PRIMARY WIRES AND 1.0m CLEAR OF ALL OVERHEAD SECONDARY WIRES PRIOR TO INSTALLING BASES.
 - ALL STREET LIGHTS ARE TO BE MINIMUM 1.0m CLEAR OF ALL DRIVEWAYS.
 - CONDUCTORS INSIDE STREET LIGHT POLES SHALL BE:
 - No. 12 RW90 XLINK (CU)
 - No. 12 RW90 BOND (CU)

PRODUCTION DRAWINGS BY:



FINAL SCHEDULE 1 APP 1E

REV	DESCRIPTION	DATE
8	FINAL SCHEDULE 1 APP 1E	09/01/2023
7	FINAL DRAFT PREFERRED PROPOSER STAGE	06/30/2023
6	ISSUED FOR FINAL DRAFT	03/03/2023
5	ISSUED FOR ADDENDUM 14	02/27/2023
4	ISSUED FOR ADDENDUM 11	01/20/2023
3	ISSUED FOR SHORT-FORM SERVICING AGREEMENT	01/21/2022
2	ISSUED FOR FINAL REVIEW	12/22/2021
1	ISSUED FOR 50%	11/16/2021

PROJECT NAME:
New Surrey Hospital Roadway and Intersection Improvements

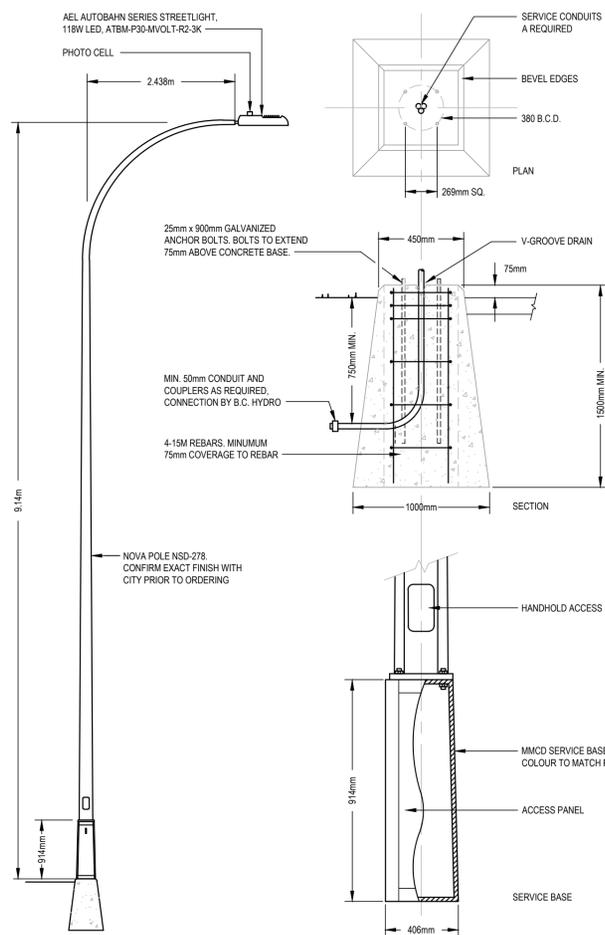
5400 180th St
Surrey, BC

DRAWING TITLE:
OVERALL PLAN AND LEGEND

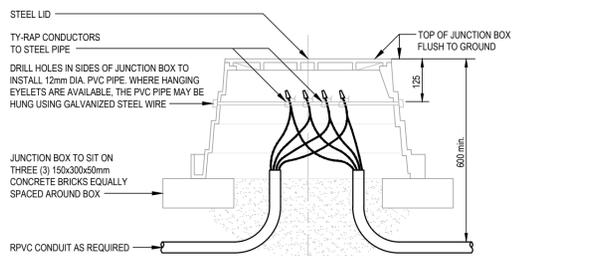
DATE:	JANUARY 2023
SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

DRAWING NUMBER:

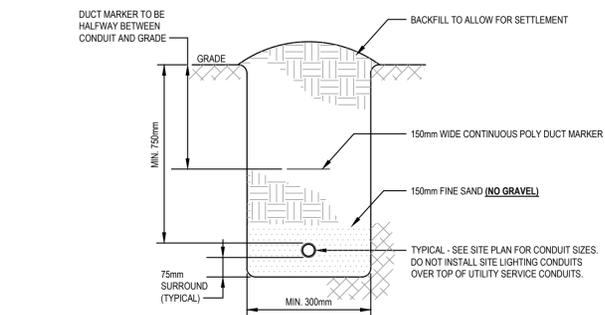
E100



1
E101 COBRA HEAD LUMINAIRE C/W SERVICE BASE
NOT TO SCALE

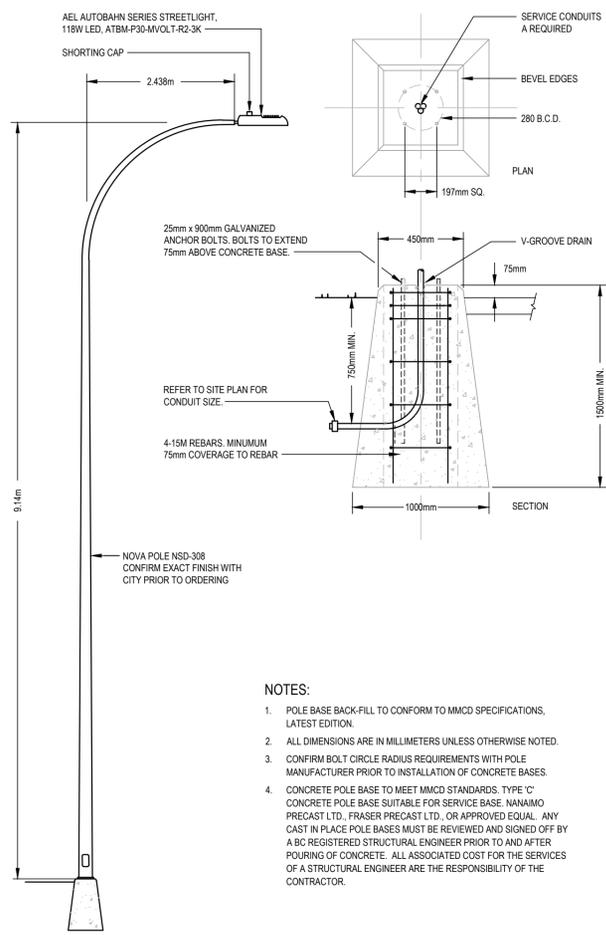


4
E101 JUNCTION BOX DETAIL
NOT TO SCALE



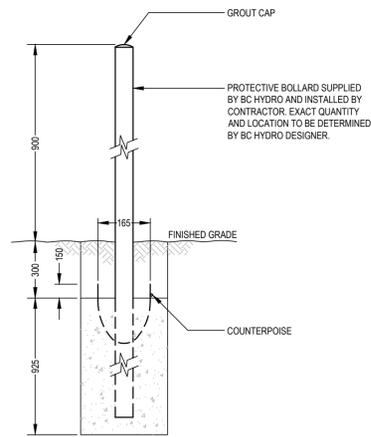
6
E101 TYPICAL TRENCH SECTION
NOT TO SCALE

- NOTES:**
- POLE BASE BACK-FILL TO CONFORM TO MMCD SPECIFICATIONS, LATEST EDITION.
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 - PROVIDE GROUND ROD ADJACENT TO POLE BASE. GROUND ROD TO EXTEND 0.8m PAST BOTTOM OF CONCRETE AND MINIMUM 3.0m LONG.
 - CONFIRM BOLT CIRCLE REQUIREMENTS WITH POLE MANUFACTURER PRIOR TO INSTALLATION OF CONCRETE BASES.
 - CONCRETE POLE BASE TO MEET MMCD STANDARDS, TYPE 'C1' CONCRETE POLE BASE SUITABLE FOR SERVICE BASE. NANAIMO PRECAST LTD., FRASER PRECAST LTD., OR APPROVED EQUAL. ANY CAST IN PLACE POLE BASES MUST BE REVIEWED AND SIGNED OFF BY A BC REGISTERED STRUCTURAL ENGINEER PRIOR TO AND AFTER POURING OF CONCRETE. ALL ASSOCIATED COST FOR THE SERVICES OF A STRUCTURAL ENGINEER ARE THE RESPONSIBILITY OF THE CONTRACTOR.



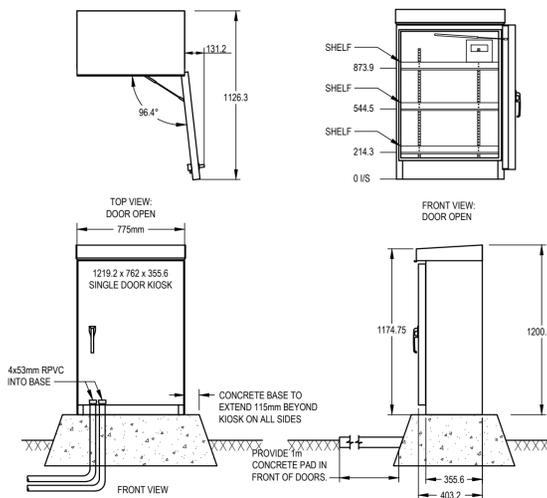
2
E101 COBRA HEAD LUMINAIRE
NOT TO SCALE

- NOTES:**
- POLE BASE BACK-FILL TO CONFORM TO MMCD SPECIFICATIONS, LATEST EDITION.
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 - CONFIRM BOLT CIRCLE REQUIREMENTS WITH POLE MANUFACTURER PRIOR TO INSTALLATION OF CONCRETE BASES.
 - CONCRETE POLE BASE TO MEET MMCD STANDARDS, TYPE 'C' CONCRETE POLE BASE SUITABLE FOR SERVICE BASE. NANAIMO PRECAST LTD., FRASER PRECAST LTD., OR APPROVED EQUAL. ANY CAST IN PLACE POLE BASES MUST BE REVIEWED AND SIGNED OFF BY A BC REGISTERED STRUCTURAL ENGINEER PRIOR TO AND AFTER POURING OF CONCRETE. ALL ASSOCIATED COST FOR THE SERVICES OF A STRUCTURAL ENGINEER ARE THE RESPONSIBILITY OF THE CONTRACTOR.



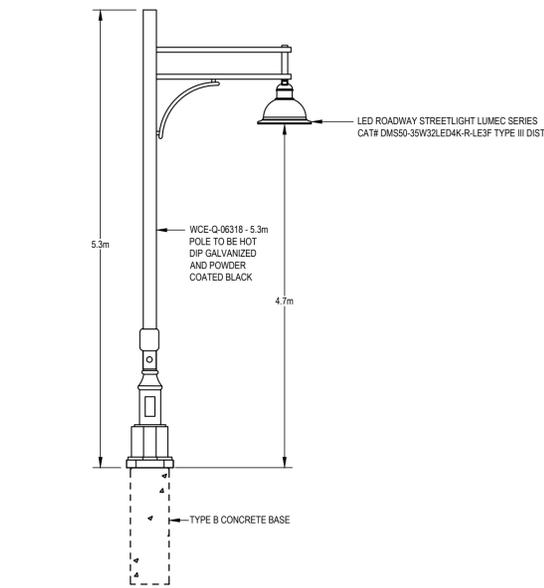
- NOTES:**
- BOLLARDS OR ROADSIDE BARRIER PROTECTION ARE REQUIRED WHEN ABOVE GROUND EQUIPMENT IS LOCATED WITHIN THE PARKING, STREET OR ROADWAY RIGHT-OF-WAY (ROW), OR A DISTANCE OF 3m FROM THE CURB, WHATEVER IS GREATER. THE 3m DISTANCE FROM THE CURB CAN BE REDUCED TO 1.5m WHEN A RECTANGULAR CURB IS INSTALLED AND EXTENDS A MINIMUM 15m ON THE APPROACH TRAFFIC SIDE AND 1.5m ON THE OPPOSING SIDE BEYOND THE ABOVE GROUND EQUIPMENT.
 - MATERIAL AND CONSTRUCTION SHALL COMPLY WITH SECTION W1.
 - GROUNDING SHALL COMPLY WITH R1-02.

7
E101 PROTECTIVE STANCHION
NOT TO SCALE

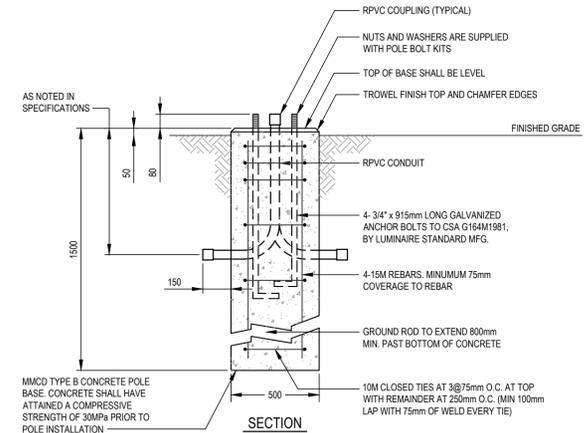
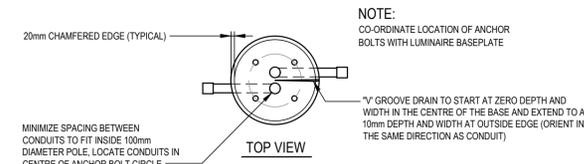


- NOTE:**
- PROVIDE AND MOUNT ECONOLITE COBALT CONTROLLER, REAR MOUNTED UPS TO BE ALPHA FXM1100.
 - PROVIDE MMCD TYPE M BASE FOR INSTALLATION OF CABINET. POUR IN PLACE TO SPECS

8
E101 TRAFFIC CONTROLLER KIOSK DETAIL
NOT TO SCALE

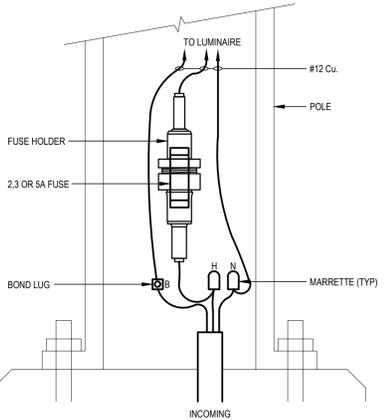


3
E101 PEDESTRIAN LUMINAIRE DETAIL
NOT TO SCALE



- NOTES:**
- POLE BASE BACK-FILL TO CONFORM TO MMCD SPECIFICATIONS, LATEST EDITION.
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 - CONFIRM BOLT CIRCLE REQUIREMENTS PRIOR TO INSTALLATION OF CONCRETE BASES.
 - CONCRETE POLE BASE TO MEET MMCD STANDARDS, TYPE 'B' CONCRETE POLE BASE. FRASER PRECAST LTD OR APPROVED EQUAL.

5
E101 POLE BASE DETAIL
NOT TO SCALE



9
E101 POLE WIRING DIAGRAM
NOT TO SCALE

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work.

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4	ISSUED FOR ADDENDUM 11	01/20/2023
3	ISSUED FOR SHORT-FORM SERVICING AGREEMENT	01/21/2022
2	ISSUED FOR FINAL REVIEW	12/22/2021
1	ISSUED FOR 50%	11/16/2021

PROJECT NAME:
New Surrey Hospital Roadway and Intersection Improvements

5400 180th St
Surrey, BC

DRAWING TITLE:

DETAILS

DATE:	JANUARY 2023
SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

DRAWING NUMBER:

E101

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1	ISSUED FOR 50%	11/16/2021

REV	DESCRIPTION	DATE
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PROJECT NAME:
**New Surrey Hospital
Roadway and Intersection
Improvements**

5400 180th St
Surrey, BC

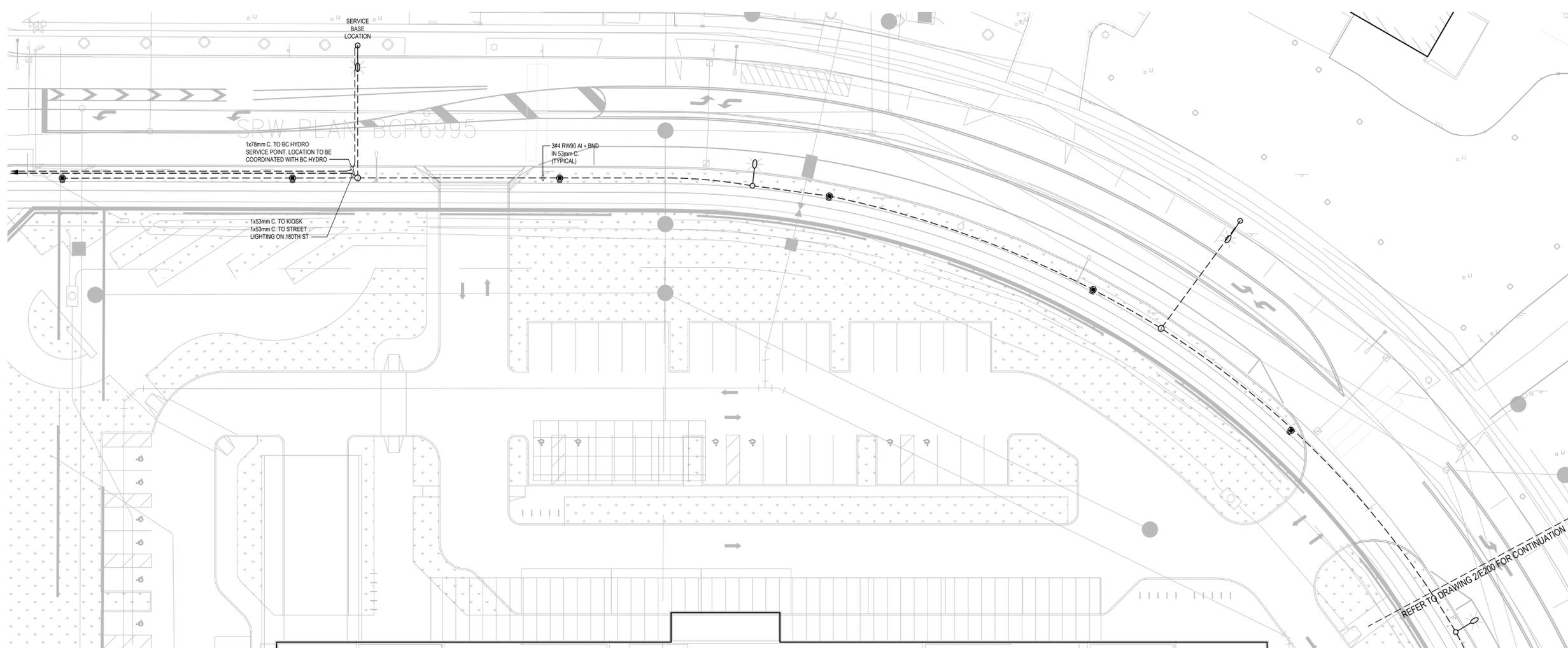
DRAWING TITLE:
**PARTIAL JAMES HILL DR
STREET LIGHTING
LAYOUT**

DATE:	JANUARY 2023
SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

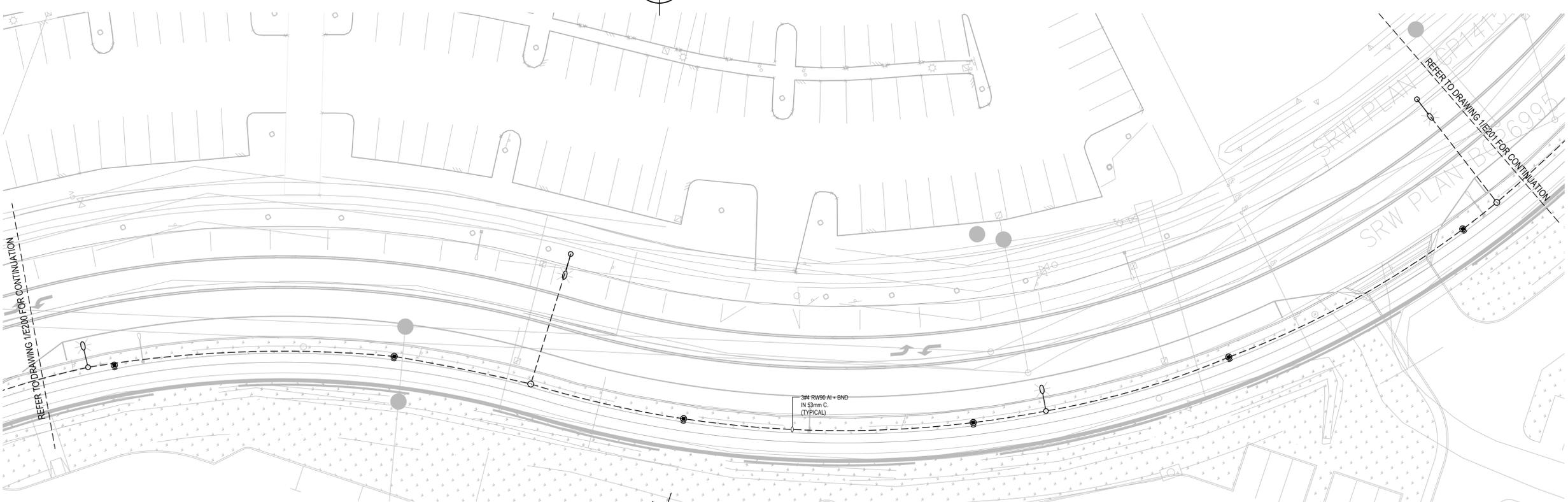
DRAWING NUMBER:

E200

NOTES:
1. EXISTING POLE BASES AND CONDUITS TO BE REMOVED.



PROJECT NORTH
1
E200
PARTIAL JAMES HILL DRIVE
STREET LIGHTING LAYOUT



PROJECT NORTH
2
E200
PARTIAL JAMES HILL DRIVE
STREET LIGHTING LAYOUT

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work.

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1	ISSUED FOR 50%	11/16/2021

REV	DESCRIPTION	DATE
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PROJECT NAME:
**New Surrey Hospital
Roadway and Intersection
Improvements**

5400 180th St
Surrey, BC

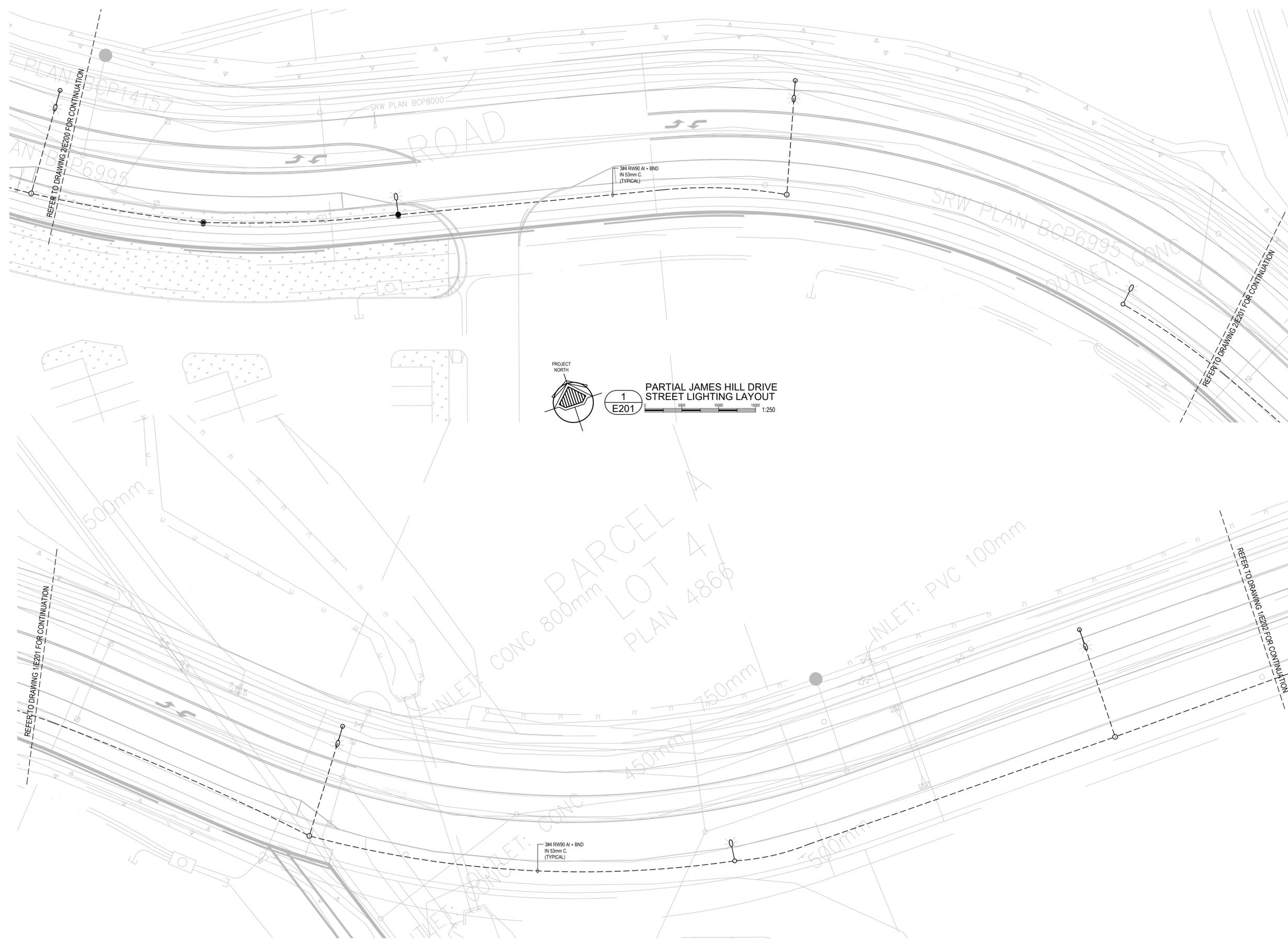
DRAWING TITLE:
**PARTIAL JAMES HILL DR
STREET LIGHTING
LAYOUT**

DATE:	JANUARY 2023
SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

DRAWING NUMBER:

E201

NOTES:
1. EXISTING POLE BASES AND CONDUITS TO BE REMOVED.



PROJECT NORTH

1
E201

PARTIAL JAMES HILL DRIVE
STREET LIGHTING LAYOUT

5000 10000 15000 1:250

PROJECT NORTH

2
E201

PARTIAL JAMES HILL DRIVE
STREET LIGHTING LAYOUT

5000 10000 15000 1:250

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REV	DESCRIPTION	DATE
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PROJECT NAME:
**New Surrey Hospital
Roadway and Intersection
Improvements**

5400 180th St
Surrey, BC

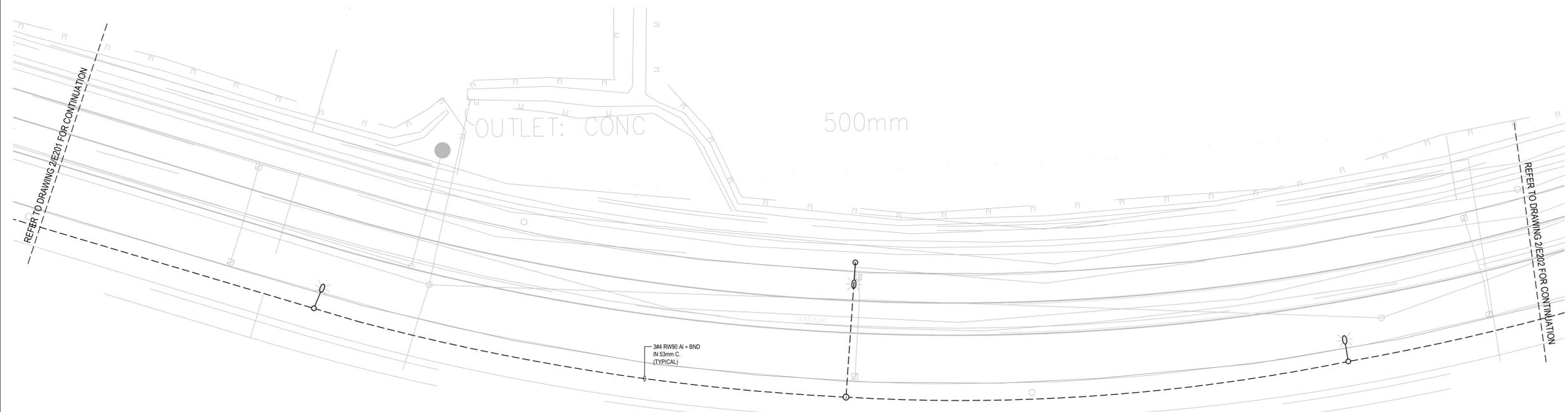
DRAWING TITLE:
**PARTIAL JAMES HILL DR
STREET LIGHTING
LAYOUT**

DATE:	JANUARY 2023
SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

DRAWING NUMBER:

E202

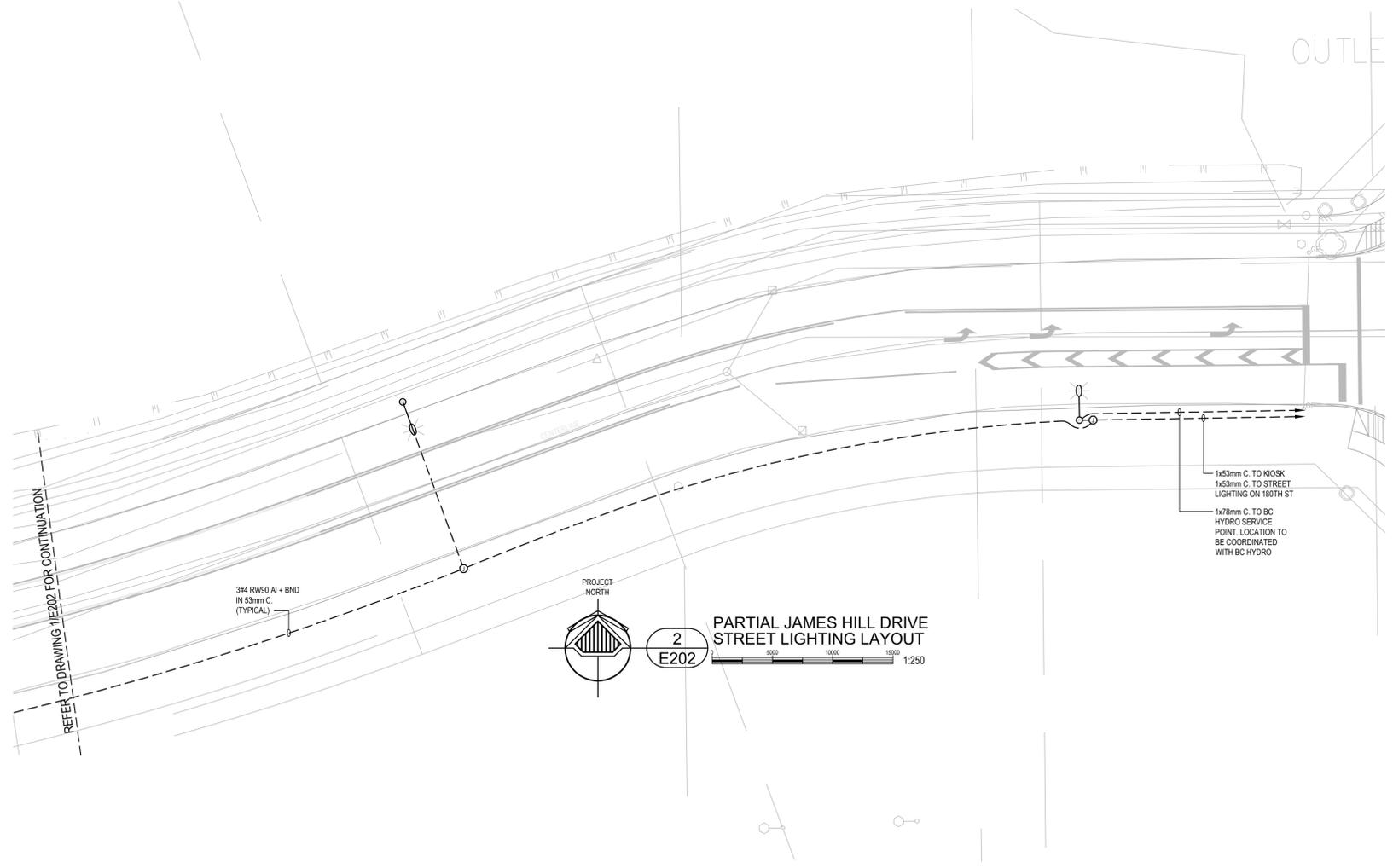
NOTES:
1. EXISTING POLE BASES AND CONDUITS TO BE REMOVED.



PROJECT NORTH

1
E202

PARTIAL JAMES HILL DRIVE
STREET LIGHTING LAYOUT



PROJECT NORTH

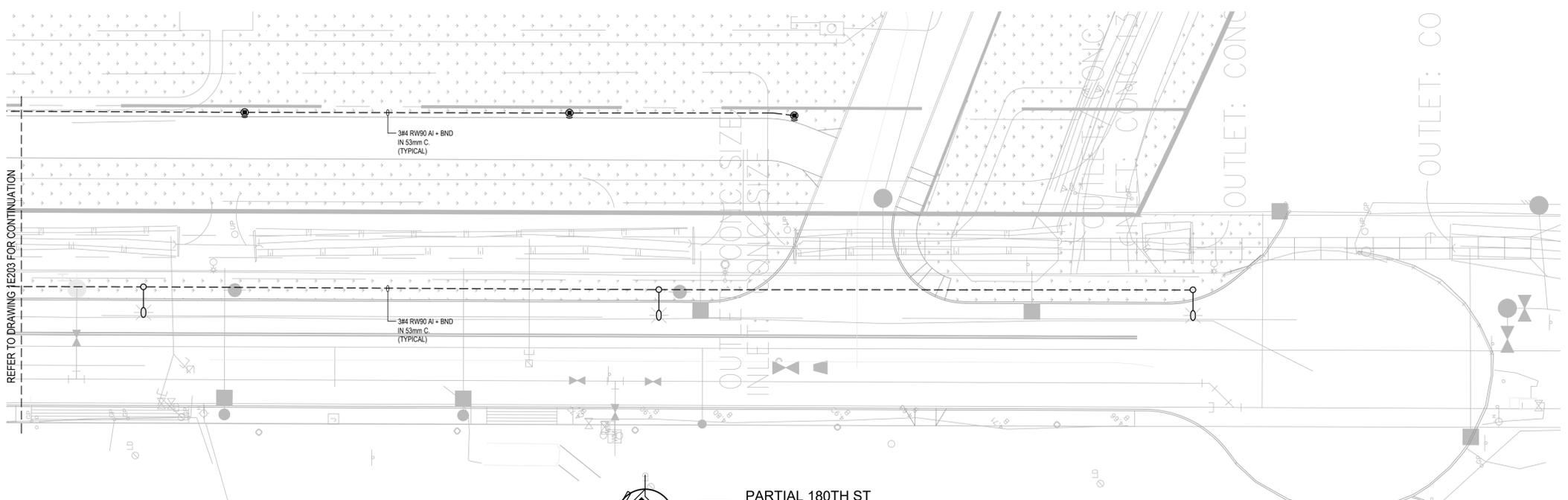
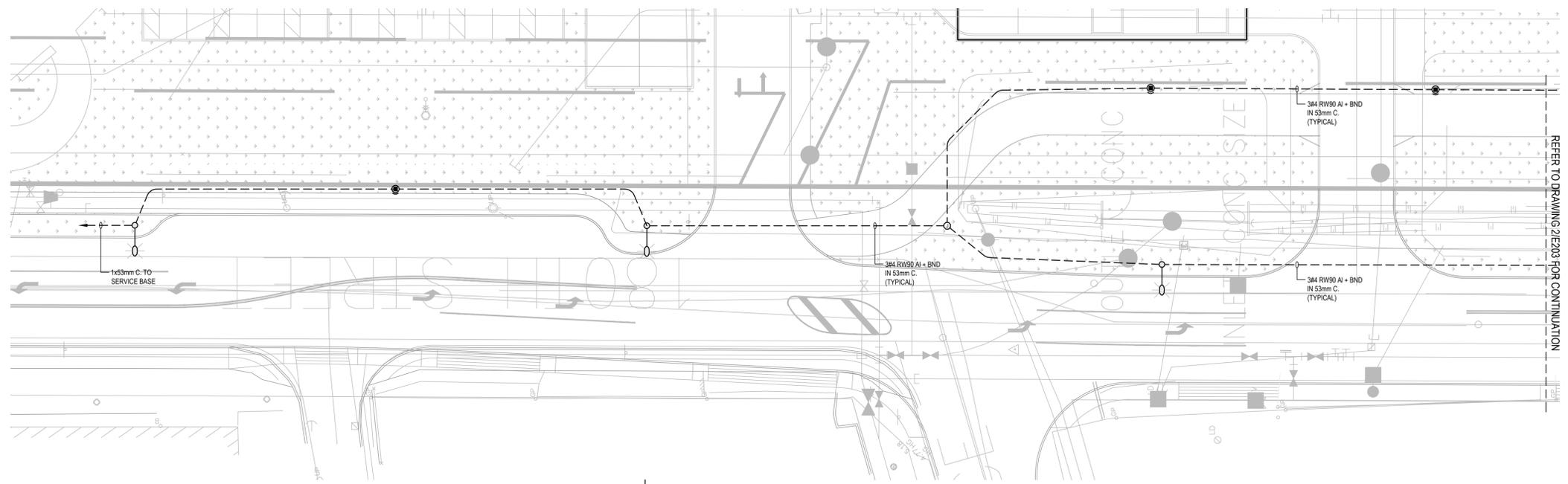
2
E202

PARTIAL JAMES HILL DRIVE
STREET LIGHTING LAYOUT

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REV	DESCRIPTION	DATE
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PROJECT NAME:
New Surrey Hospital Roadway and Intersection Improvements
 5400 180th St
 Surrey, BC

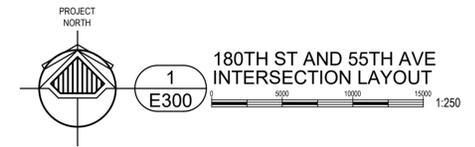
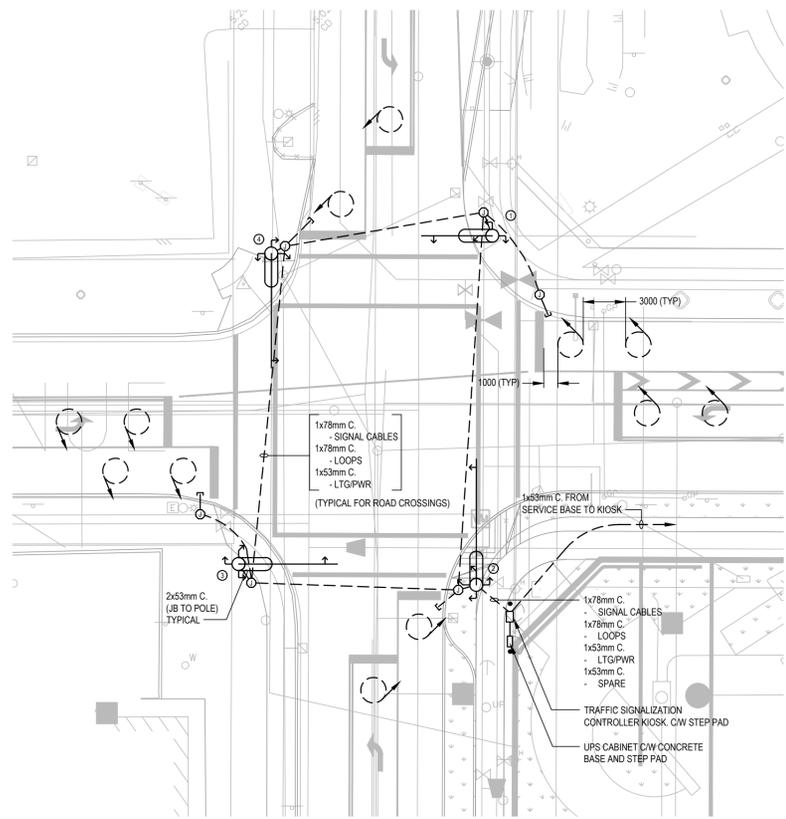
DRAWING TITLE:
PARTIAL JAMES HILL DR STREET LIGHTING LAYOUT

DATE:	JANUARY 2023
SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

DRAWING NUMBER:

E203

- NOTES:
 1. EXISTING POLE BASES AND CONDUITS TO BE REMOVED.



- CITY STREET LIGHT NOTES**
- ALL LUMINAIRES SHALL HAVE 7-PIN RECEPTACLES AND BE APPROVED PER THE APPROVED MATERIALS LIST IN THE SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.
 - ALL STREET LIGHT POLES AND SERVICE BASES ARE TO BE HOT-DIPPED GALVANIZED AND POWDER COATED COLOUR RAL 7040 GREY UNLESS NOTED OTHERWISE.
 - SEE BC HYDRO REGULATIONS FOR SERVICE CONNECTION DETAILS. THE DEVELOPER IS TO ARRANGE FOR EXACT SERVICE LOCATION(S) WITH BC HYDRO PRIOR TO COMMENCING CONSTRUCTION.
 - IT IS THE RESPONSIBILITY OF THE DEVELOPER TO CONFIRM THE ADEQUACY OF THE EXISTING STREET LIGHT SERVICE, SERVICE BASE, CONDUIT AND CONDUCTORS AND MAKE ALL NECESSARY REPAIRS TO ADEQUATELY COMPLETE ALL CONNECTIONS INTO THE EXISTING STREET LIGHT SYSTEM. THE DEVELOPER IS TO INSTALL POLE IDENTIFICATION NUMBERS AS PER SURREY STANDARDS AS SHOWN ON THE DRAWINGS.
 - THE DEVELOPER IS TO ENSURE THAT ALL STREET LIGHT POLES ARE A MINIMUM 3.0m CLEAR OF ALL B.C. HYDRO POLES AND OVERHEAD PRIMARY WIRES AND 1.0m CLEAR OF ALL OVERHEAD SECONDARY WIRES PRIOR TO INSTALLING BASES.
 - ALL STREET LIGHTS ARE TO BE MINIMUM 1.0m CLEAR OF ALL DRIVEWAYS.
 - CONDUCTORS INSIDE STREET LIGHT POLES SHALL BE:
 - No. 12 RW90 X-LINK (CU)
 - No. 12 RW90 BOND (CU)

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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2	ISSUED FOR FINAL REVIEW	12/22/2021
1	ISSUED FOR 50%	11/16/2021

REV	DESCRIPTION	DATE
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PROJECT NAME:
New Surrey Hospital Roadway and Intersection Improvements

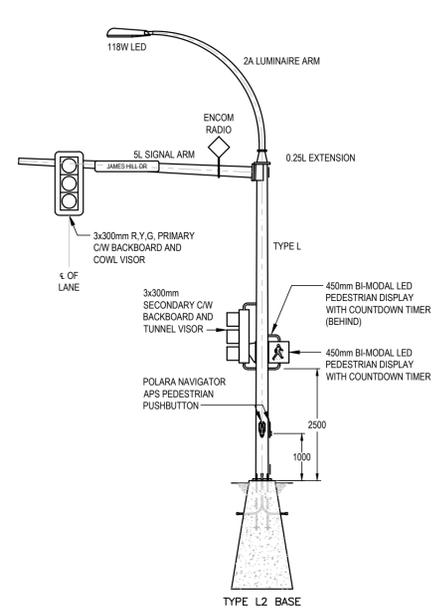
5400 180th St
Surrey, BC

DRAWING TITLE:
180TH ST AND 55TH AVE INTERSECTION LAYOUT

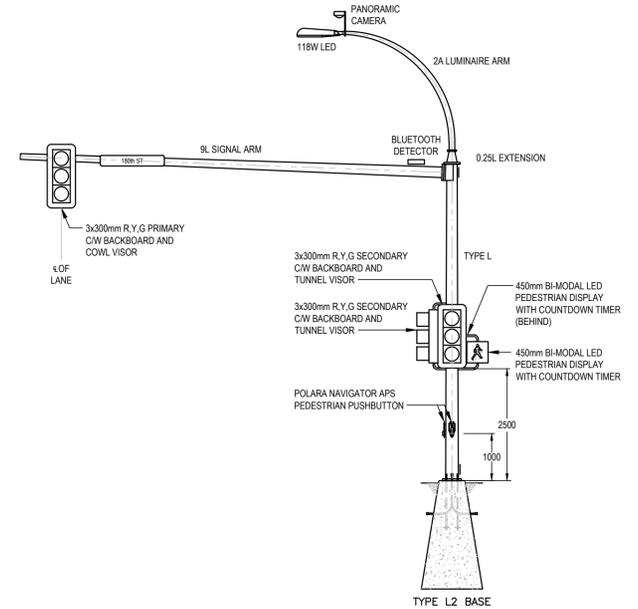
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SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

DRAWING NUMBER:

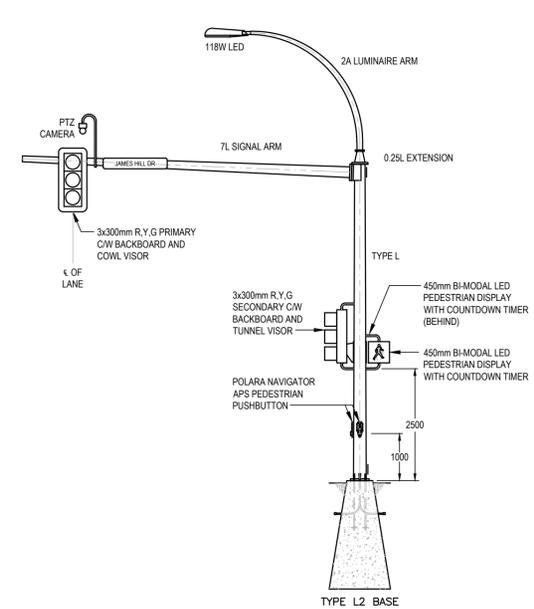
E300



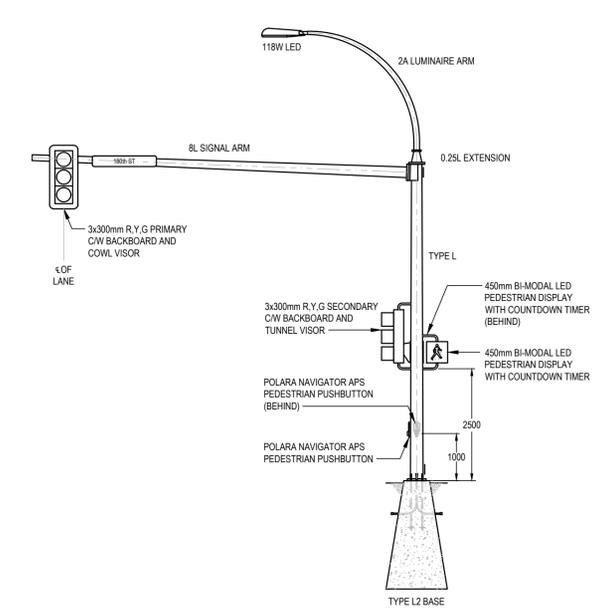
2 POLE 1 ELEVATION
E300 1:75



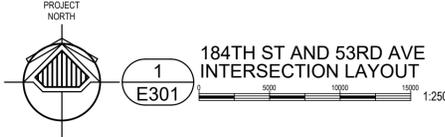
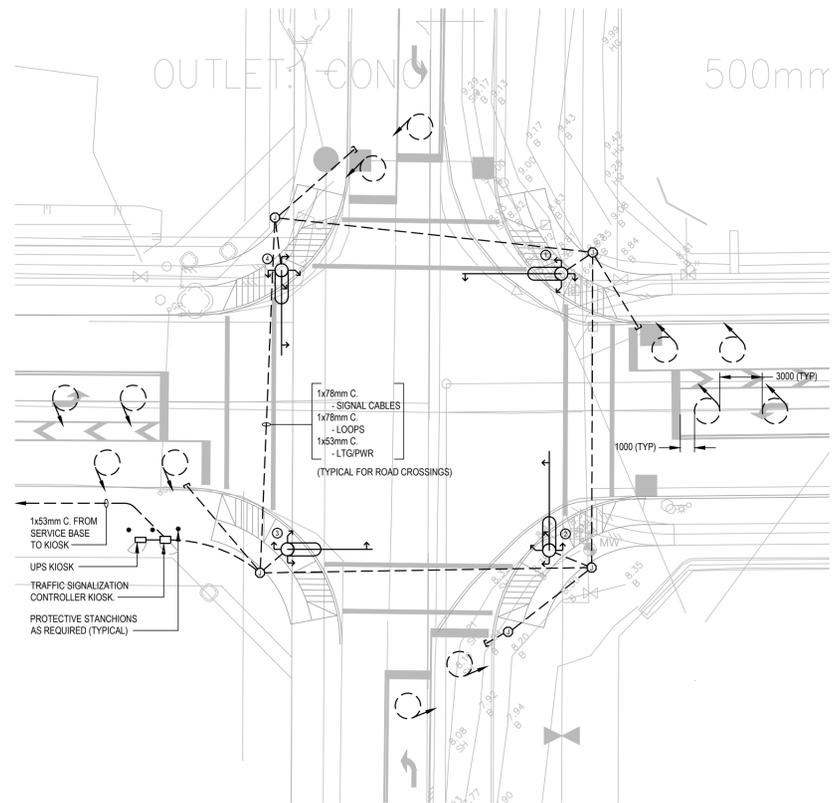
3 POLE 2 ELEVATION
E300 1:75



4 POLE 3 ELEVATION
E300 1:75



5 POLE 4 ELEVATION
E300 1:75



- CITY STREET LIGHT NOTES**
- ALL LUMINAIRES SHALL HAVE 7-PIN RECEPTACLES AND BE APPROVED PER THE APPROVED MATERIALS LIST IN THE SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.
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 - ALL STREET LIGHTS ARE TO BE MINIMUM 1.0m CLEAR OF ALL DRIVEWAYS.
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 - No. 12 RW90 BOND (CU)

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1	ISSUED FOR 50%	11/16/2021

PROJECT NAME:
New Surrey Hospital Roadway and Intersection Improvements

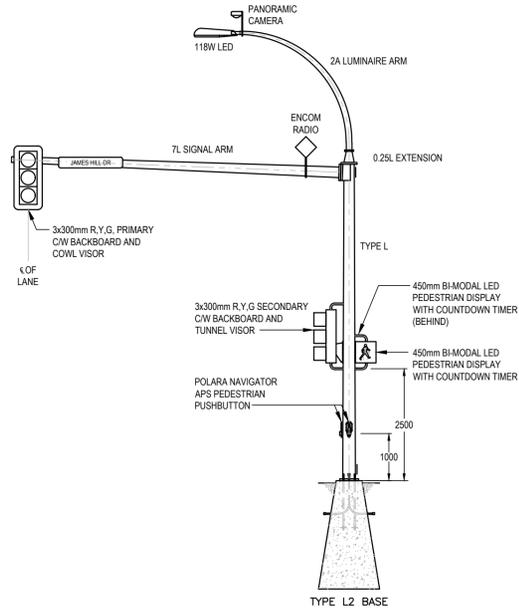
5400 180th St
 Surrey, BC

DRAWING TITLE:
184TH ST AND 53RD AVE INTERSECTION LAYOUT

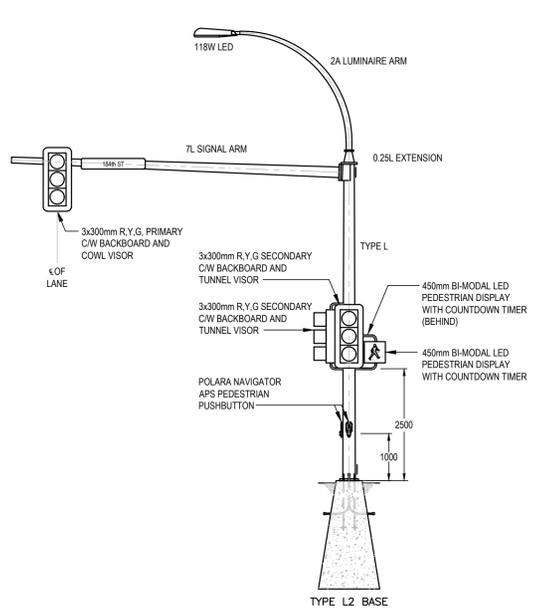
DATE:	JANUARY 2023
SCALE:	AS NOTED
DRAWN BY:	SS
CHECKED BY:	JH
JOB NUMBER:	1-22-005

DRAWING NUMBER:

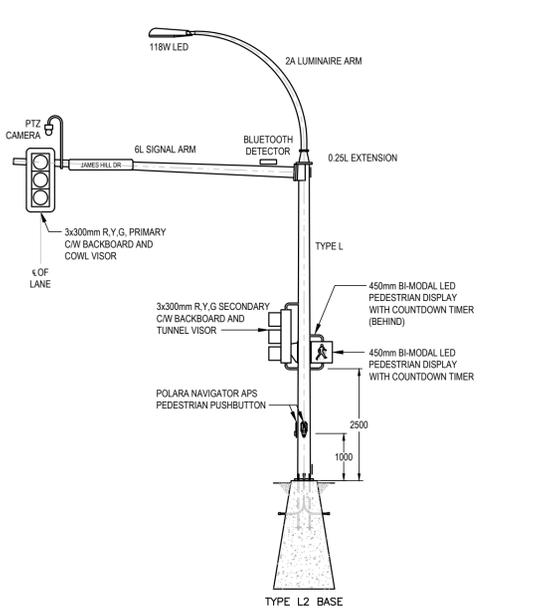
E301



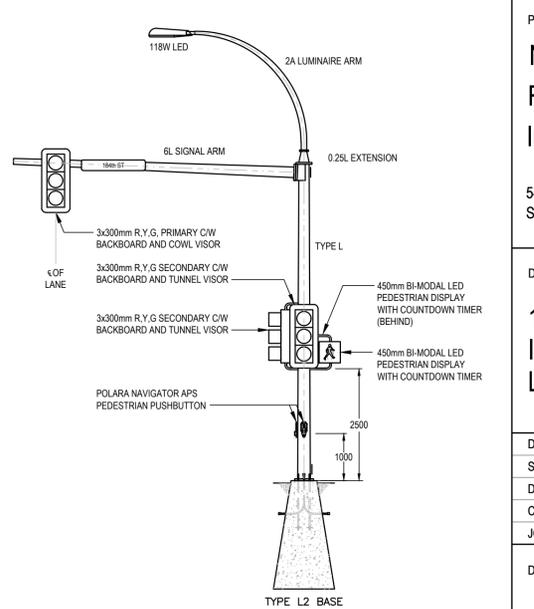
2 POLE 1 ELEVATION
 E301



3 POLE 2 ELEVATION
 E301



4 POLE 3 ELEVATION
 E301



5 POLE 4 ELEVATION
 E301