

# CSC BOWDEN INSTITUTION SALLY PORT GATE REPLACEMENT

BOWDEN INSTITUTION, HIGHWAY #2, P.O. BOX 6000, INNISFAIL, ALBERTA

ISSUED FOR TENDER

MAY 1, 2020

**PRELIMINARY**  
**NOT FOR CONSTRUCTION**

| x | architecture inc.  
120 Fort Street, Suite 103 Winnipeg, Manitoba R3C 1C7 204 318 2010

## GENERAL DRAWING NOTES

THE DRAWINGS SHALL NOT BE SCALED. FOLLOW GIVEN DIMENSIONS ONLY.

THE CONTRACTOR SHALL SATISFY THEMSELVES THAT ALL DIMENSIONS, ELEVATIONS, DATUMS, AND INFORMATION SHOWN ARE CORRECT. VERIFY ALL DIMENSIONS ON SITE.

PRIOR TO COMMENCEMENT OF WORK, REPORT ANY DISCREPANCIES TO THE DEPARTMENTAL REPRESENTATIVE.

VARIATIONS AND MODIFICATIONS TO WORK SHOWN WILL NOT BE ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE DEPARTMENTAL REPRESENTATIVE.

ALL DIMENSIONS ARE METRIC UNLESS OTHERWISE NOTED.

NO REPRODUCTION OF THE DRAWINGS MAY BE MADE WITHOUT THE WRITTEN CONSENT OF THE DEPARTMENTAL REPRESENTATIVE.

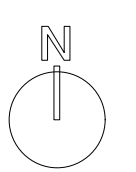

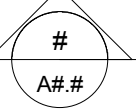

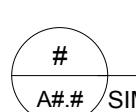

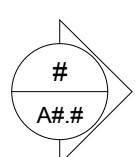

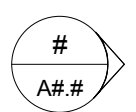

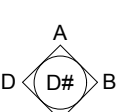

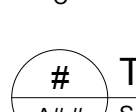

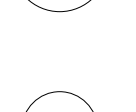



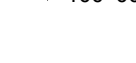


PATCH AND MAKE GOOD ALL EXISTING SURFACES AFFECTED BY DEMOLITION WORK. PREPARE ANY DAMAGED SURFACES TO ACCEPT NEW FINISHES SPECIFIED.

CONTRACTOR RESPONSIBLE FOR PROVIDING ALL REQUIRED HOARDING AND DUST PROTECTION AT ALL TIMES DURING THE DURATION OF PROJECT.

## ABBREVIATIONS

A/FL	ABOVE FLOOR	LOC	LOCATION
ALUM	ALUMINUM	MAS	MASONRY
ANOD	ANODIZED	MAX	MAXIMUM
BLDG	BUILDING	MECH	MECHANICAL
BM	BEAM	MN	MINIMUM
BOT, BTM	BOTTOM	MISC	MISCELLANEOUS
B.S	BOTH SIDES	M.O.	MASONRY OPENING
BTWN	BETWEEN	MR	MIRROR
C.I.P	CAST IN PLACE	MTL	METAL
CL	CENTER LINE	N.I.C	NOT IN CONTRACT
C.P	CENTER POINT	O.C	ON CENTER
C.L.F	CHAIN LINK FENCE	O.D	OUTSIDE DIAMETER
COL	COLUMN	O.F	OUTSIDE FACE
COW	COMPLETE WITH	O.H	OVERHEAD
CONC	CONCRETE	OPNG	OPENING
C.B	CONCRETE BLOCK	O.W.S.J	OPEN WEB STEEL JOIST
CJ	CONTROL JOINT	PL	PLATE
D	DEEP	P.LAM	PLASTIC LAMINATE
DTL	DETAIL	PLYW	PLYWOOD
DN	DOWN	PNL	PANEL
DWG, DRWG	DRAWING	PREFIN	PREFINISHED
EA	EACH	PS	PRESSED STEEL
ELEV	ELEVATION	PTD, PT	PAINTED, PAINT
ELEC	ELECTRICAL	R/CONC	REINFORCED CONCRETE
EPOX	EPOXY	R.D.	ROOF DRAIN
EQ	EQUAL	REINF	REINFORCED
EQUIP	EQUIPMENT	RM	ROOM
EX	EXISTING	R.O.	ROUGH OPENING
EXP	EXPOSED	RPW	REMOVABLE PLYWOOD PANELS
EXT	EXTERIOR	SHWR	SHOWER
FD	FLOOR DRAIN	SIM	SIMILAR
F.H.C	FIRE HOSE CABINET	SLP	SLOPE
FIN	FINISH	SPEC'D	SPECIFIED
FLR, FL	FLOOR	S.S	STAINLESS STEEL
GA	GAUGE	ST, STL	STEEL
GALV	GALVANIZED	STO, STOR	STORAGE
GLUM	GALVALUME	STRUC	STRUCTURAL
G.C	GENERAL CONTRACTOR	SURF MTD	SURFACE MOUNTED
G.L	GRID LINE	SUSP	SUSPENDED
GWB	GYPSPUM WALL BOARD	TH	THICK / THICKNESS
H.W	HAZARDOUS WASTE	T.O	TOP OF
H	HIGH	T.O.C	TOP OF CONCRETE
H.D	HEAVY DUTY	TYP	TYPICAL
HT	HEIGHT	U/F	UNDER FLOOR
H.M	HOLLOW METAL	U/G	UNDER GROUND
HOR, HORIZ	HORIZONTAL	U/S	UNDER SIDE
HR	HOUR	V.B	VAPOUR BARRIER
HSS	HOLLOW STEEL SECTION	VEH	VEHICLE
HYDR	HYDRAULIC	VERT	VERTICAL
ID	INSIDE DIAMETER	VEST	VESTIBULE
I/F	INSIDE FACE	W	WIDE
INT	INTERIOR	WI	WITH
INSUL	INSULATION	W.MEM	WATERPROOFED MEMBRANE
LW	LIGHT WEIGHT	W.T.	WEeping TILE
L	LONG		

## SYMBOLS

	NORTH ARROW		EXTERIOR WALL TYPE
	BUILDING SECTION		INTERIOR WALL TYPES
	SECTION DETAIL		SEPARATION WITH F.R.R.
	WALL SECTION		FULL HEIGHT SEPARATION
	EXTERIOR ELEVATION		GLAZING TYPE
	INTERIOR ELEVATION		CEILING HEIGHT A.F.F.
	DWG TITLE & REFERENCE		DOOR NUMBER
	STRUCTURAL GRID		FIRE RATING
	BENCHMARK ELEVATION		ROOM NAME & NUMBER
	KEY NOTE		REVISION NUMBER
	ELEVATION POINTS IN PLAN		

## CONSULTANT TEAM

**ARCHITECTURAL:** 1x1 ARCHITECTURE INC  
120 FORT STREET, SUITE 103  
WINNIPEG, MANITOBA, R3C 1C7  
TEL: (204) 318-2010

**STRUCTURAL & ELECTRICAL** WSP CANADA INC.  
237 - 4TH AVENUE SW, SUITE 3300  
CALGARY, ALBERTA  
T2P 4K3  
TEL: (587) 390-8211

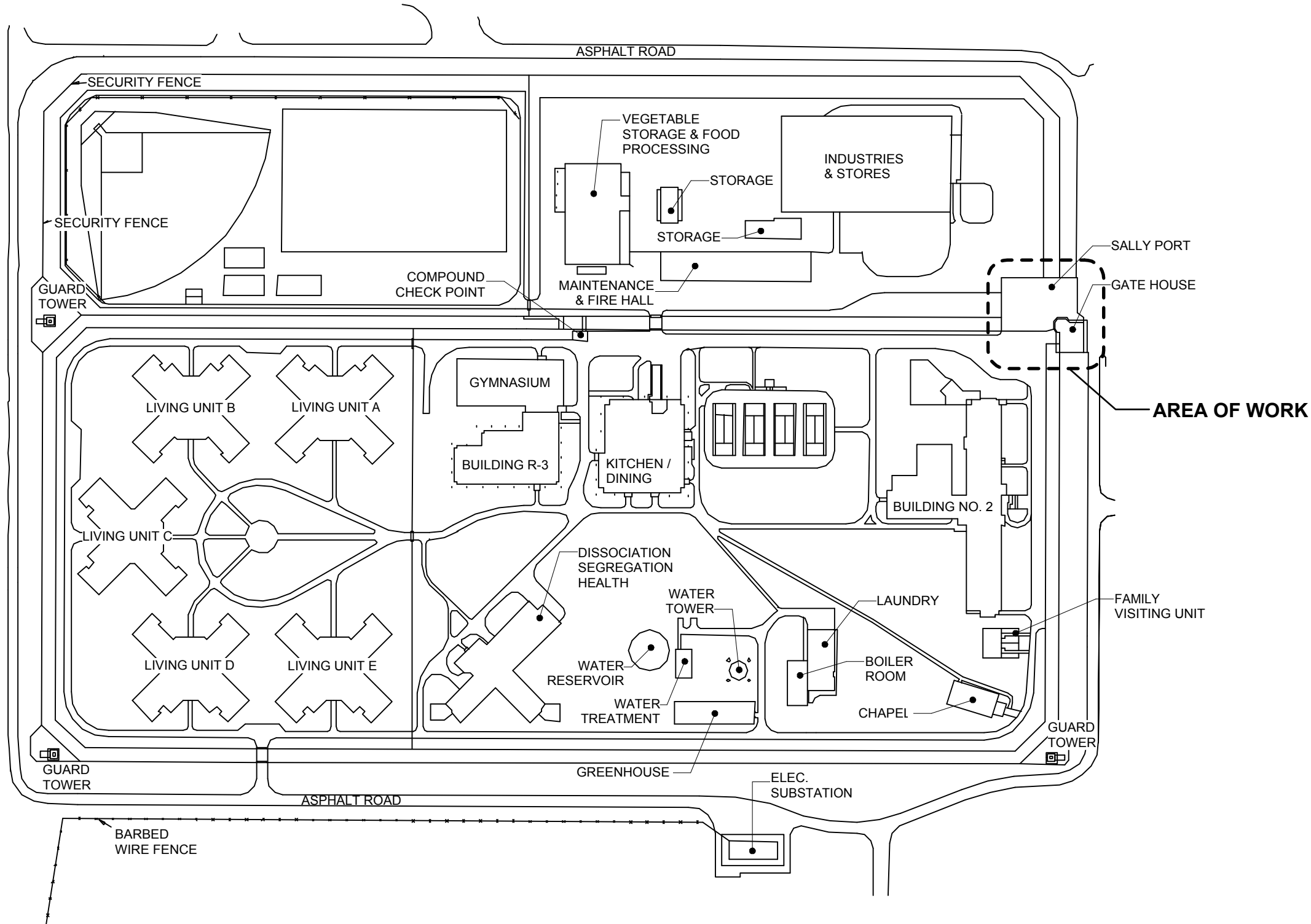
## DRAWING LIST


**ARCHITECTURAL**  
A0.0 COVERSHEET, KEY PLAN, GENERAL NOTES  
A1.0 DEMOLITION PLAN  
A1.1 SITE PLAN & GATE PLANS  
A2.1 ELEVATIONS, SECTIONS & DETAILS

**STRUCTURAL**  
S1.0 GENERAL NOTES  
S2.0 GATE REPLACEMENT - PLAN, SECTIONS AND DETAILS  
S3.0 SECTIONS & DETAILS

**ELECTRICAL**  
E0.1 SITE PLAN, SYMBOL LEGEND & DWG LIST  
ED1.0 DEMOLITION ELECTRICAL LAYOUT  
E1.0 ELECTRICAL LAYOUT  
E2.0 ELECTRICAL DETAILS

**SURVEY**  
191-09179-G0-000-00-SSDSI001-R00 TOPOGRAPHIC SURVEY



  
1  
A0.0  
KEY PLAN  
Scale: 1:2000

4		
3		
2	ISSUED FOR TENDER	2020 05 01
1	ISSUED FOR CLASS 'A' UPDATED COSTING	2020 02 20
0	ISSUED FOR CLASS 'A' COSTING	2019 10 15
Revision	Description	Date
Client		client

**CORRECTIONAL SERVICE  
CANADA (CSC)**

Project title  
**BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB**

**CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT**

Designed by  
**JK**

Drawn by  
**JW**

Approved by

PWGSC Project Manager  
**YOUCEF BRAHIMI**

Administrateur de Projets TPSGC

Drawing title  
**COVER SHEET**

Project no./No. du projet  
**R.100664**

Drawing no./No. du dessin  
**A0.0  
OF**

Revision no.  
**0**













PRELIMINARY  
NOT FOR CONSTRUCTION

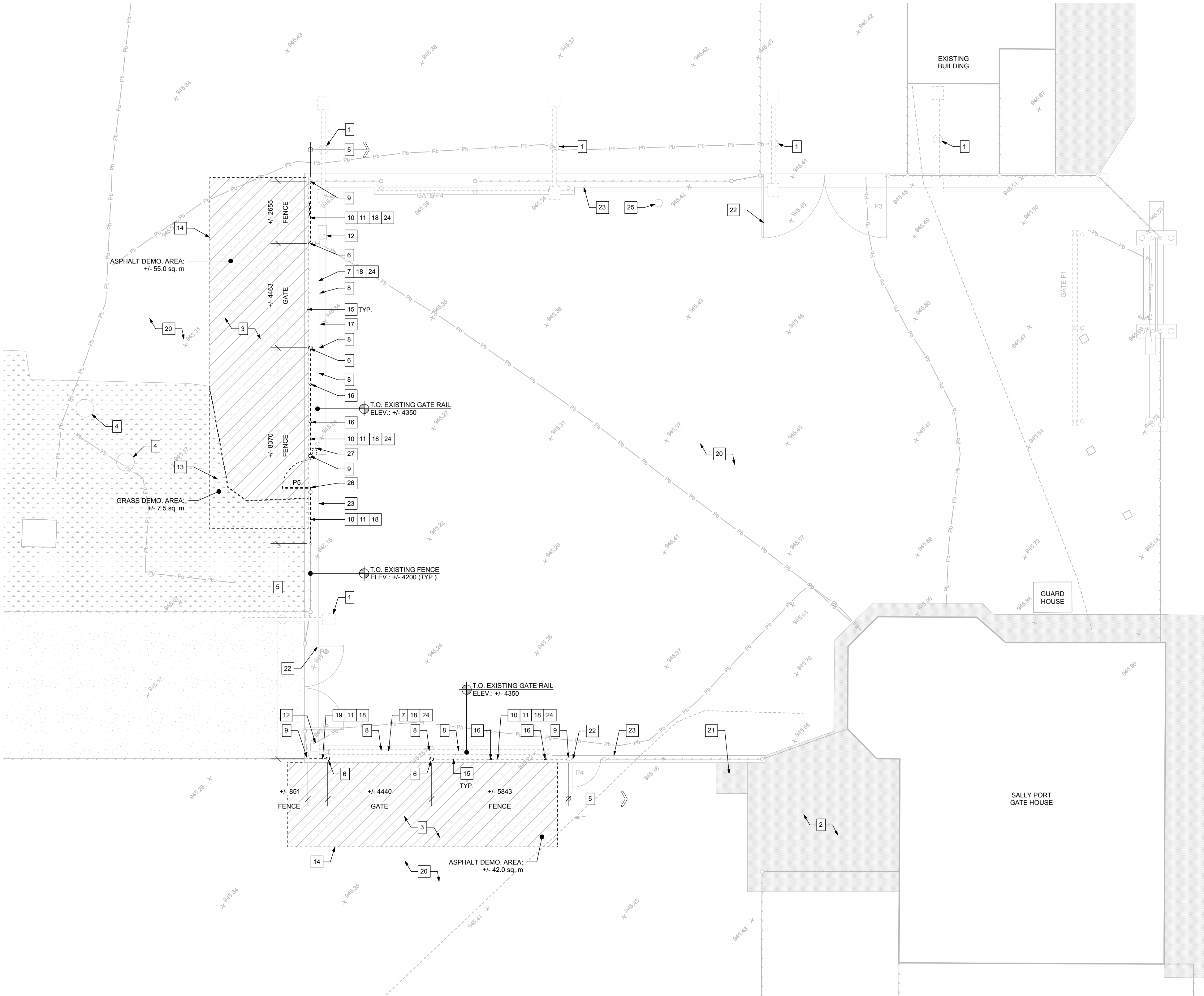
| x | architecture inc.  
120 Fort Street, Suite 103 Winnipeg, Manitoba, R3C 1C7 204 318 2010

SITE DEMOLITION PLAN KEYNOTES:

- EXISTING LIGHT STANDARD TO REMAIN. PROTECT AS REQUIRED DURING DEMOLITION / CONSTRUCTION.
- EXISTING CONCRETE SIDEWALK TO REMAIN
- DEMOLISH EXISTING ASPHALT WITHIN SAWCUT AREA
- EXISTING MANHOLE TO REMAIN. PROTECT DURING DEMOLITION / CONSTRUCTION
- EXISTING FENCE TO REMAIN. PROTECT DURING DEMOLITION / CONSTRUCTION
- DEMOLISH EXISTING 144 DIA. GALV. STEEL POST, POST CAP AND CONCERTINA SUPPORT ARM
- DEMOLISH EXISTING 73 DIA. GALV. STEEL WELDED GATED FRAME AND CHAIN LINK FABRIC INCLUDING ALL ASSOCIATED TIE WIRES AND TENSION STRAPS.
- DEMOLISH EXISTING WELDED STEEL GATE GUIDE CHANNELS. CHANNELS SECURED TO CONCRETE FOUNDATION W/ ANCHOR BOLTS. GRIND ANY PROTRUSIONS AS REQUIRED TO MAKE FLUSH WITH ADJACENT SURFACE
- EXISTING GALV. STEEL POST TO REMAIN. PROTECT DURING DEMOLITION / CONSTRUCTION
- DEMOLISH EXISTING 42mm DIA. GALV. STEEL RAILS (TOP & BOTTOM).
- DEMOLISH EXISTING CHAIN LINK FABRIC AND ALL ASSOCIATED TIES AND STRAPS
- DEMOLISH EXISTING GATE OPERATOR AND TRACK - REFER TO ELEC. FOR POWER SUPPLY REQUIREMENTS.
- REMOVE SECTION OF GRASS AS REQUIRED
- SAWCUT EXISTING ASPHALT AS REQUIRED TO SUIT REQUIRED EXCAVATION FOR NEW CONSTRUCTION. SITE CONFIRM EXTENT.
- DEMOLISH EXISTING CONCERTINA WIRE INCLUDING ALL ASSOCIATED TIE WIRES ABOVE ALL DEMOLISHED FENCE AND GATES.
- DEMOLISH EXISTING 73 DIA. GALV. STEEL LINE POST, POST CAP, AND CONCERTINA SUPPORT ARM
- EXISTING GATE STRUCTURE TO REMAIN INCLUDING POSTS, OVERHEAD TRACK AND STEEL CABINET.
- EXISTING FENCE DETECTION SYSTEM TO BE MODIFIED TO SUIT NEW CONSTRUCTION. CO-ORDINATE ANY REQUIRED SERVICE DISRUPTION W/ DEPARTMENTAL REPRESENTATIVE - REFER TO ELEC. AND CASH ALLOWANCE SECTION OF SPEC.
- MODIFY EXISTING FENCE RAIL. CUT BACK TO SUIT CONNECTION TO NEW CORNER POST LOCATION - REFER TO PLAN 3/A1.1
- EXISTING ASPHALT SURFACE TO REMAIN UNLESS OTHERWISE NOTED. MODIFY AS REQ'D TO SUIT NEW CONSTRUCTION
- EXISTING CONCRETE SLOPED SURFACE TO REMAIN
- EXISTING GATE TO REMAIN. PROTECT DURING CONSTRUCTION
- EXISTING CONCRETE GRADE BEAM TO REMAIN. PROTECT DURING DEMOLITION / CONSTRUCTION. SITE CONFIRM EXTENT.
- REMOVE EXISTING SIGNAGE AND RETAIN FOR RE-INSTALLATION
- EXISTING SURVEILLANCE POLE TO REMAIN. PROTECT DURING DEMOLITION / CONSTRUCTION
- SALVAGE EXISTING GATE, GATE FRAME, WELD PLATES AND LOOKS FOR REINSTALLATION. PATCH, MAKE GOOD AND PAINT EXISTING FENCE POST TO REMAIN.
- DEMOLISH EXISTING GROUND MOUNTED ELEC. ENCLOSURE - REFER TO ELEC.

SITE DEMOLITION PLAN LEGEND:

-  CHAIN LINK MESH
-  EXISTING BELOW GRADE POWERLINE
-  EXISTING BELOW GRADE PIPE
-  EXISTING CONCERTINA WIRE ABOVE TO BE DEMOLISHED
-  EXISTING EXPOSED CONCRETE SURFACE
-  EXISTING COMPACTED GRAVEL SURFACE
-  EXISTING GRASS
-  EXISTING ASPHALT SURFACE TO BE DEMOLISHED
-  EXISTING ASPHALT SURFACE TO REMAIN (NO HATCH)
-  EXISTING SURFACE GRADE



**2**  
**A1.0** SITE DEMOLITION PLAN  
Scale: 1:100

Revision	Description	Date
4		
3		
2	ISSUED FOR TENDER	2020 05 01
1	ISSUED FOR CLASS 'A' UPDATED COSTING	2020 02 20
0	ISSUED FOR CLASS 'A' COSTING	2019 10 15

Client client

**CORRECTIONAL SERVICE  
CANADA (CSC)**

Project title Projet

**BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB**

**CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT**

Designed by <b>JK</b>	Conçu par
Drawn by <b>JW</b>	Dessiné par
Approved by	Approuvé par

PWGSC Project Manager Administrateur de Projets TPSGC  
**YOUSSEF BRAHIMI**

Drawing title Titre du dessin

**DEMOLITION PLAN**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
<b>R.100664</b>	<b>A1.0</b> OF	<b>0</b>



GATE PLAN KEYNOTES:

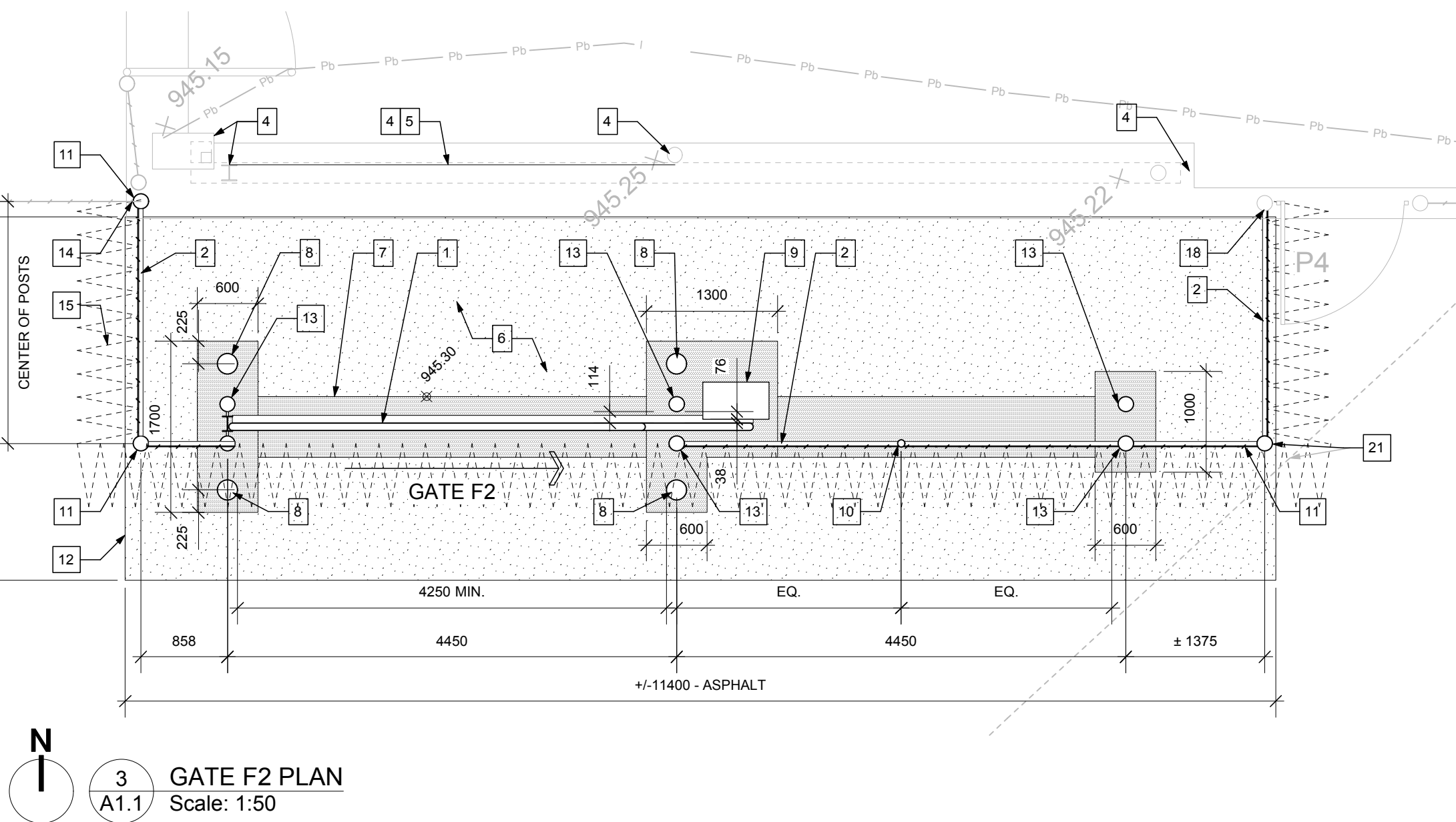
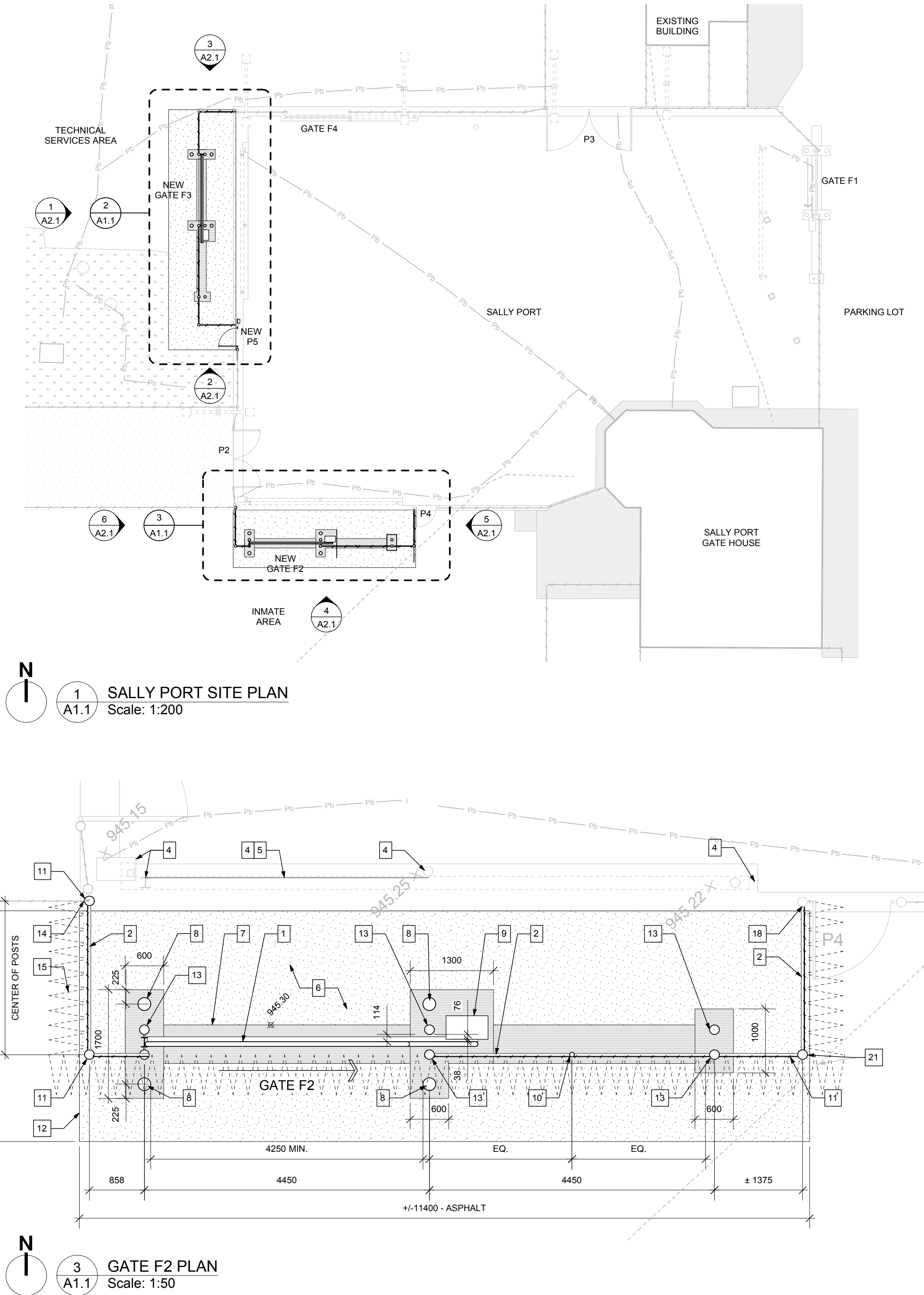
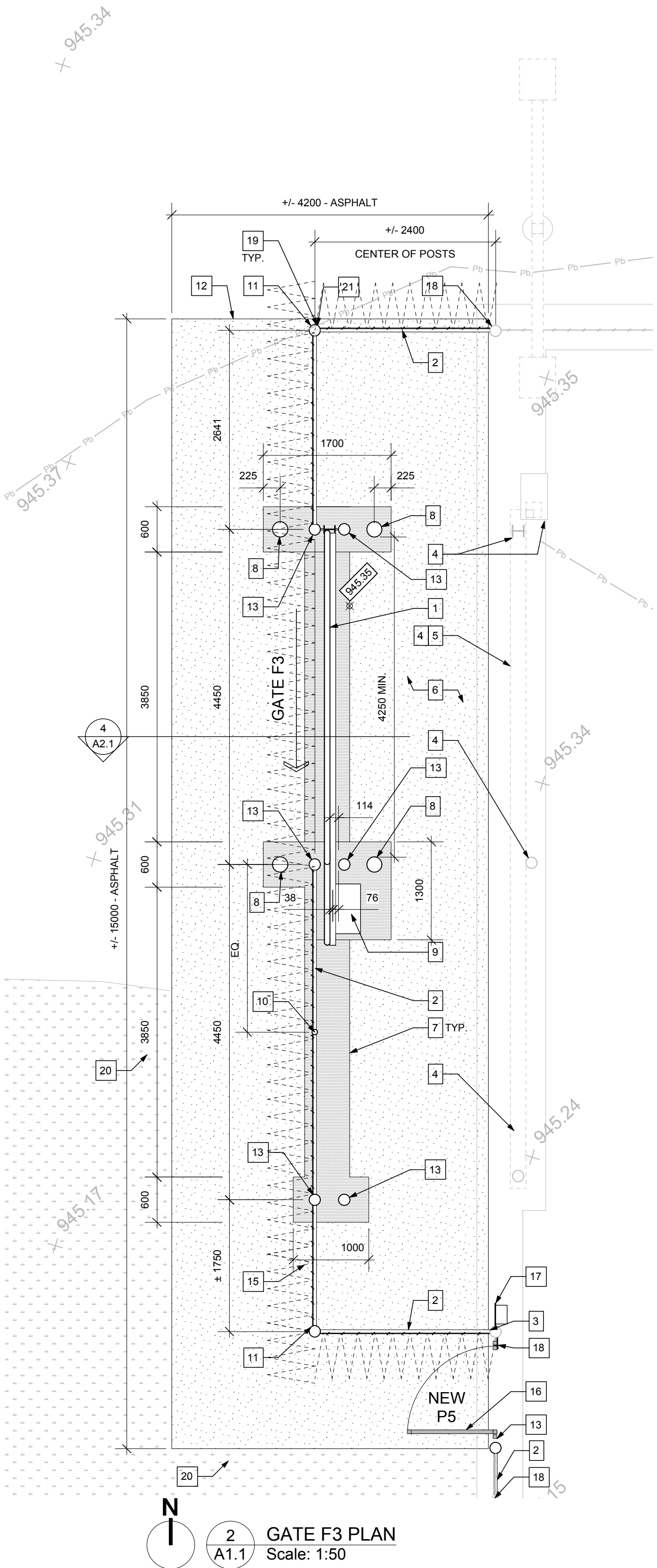
- NEW SALLY PORT GATE (BY FENCE CONTRACTOR) - REFER TO SPECIFICATION, DETAILS & ELEC.
- NEW FENCE INCLUDING WIRE MESH, POSTS, COLUMNS AND CONCERTINA BY FENCE CONTRACTOR - REFER TO SPEC. AND STRUCT.
- REINSTALL EXISTING MAG LOCK AND BUZZER - REFER TO ELEC.
- PAINT REMAINING ABANDONED F2 AND F3 GATE POSTS AND EQUIPMENT WITH HIGH VISIBILITY PAINT & MARKINGS TO MATCH GATE F1. PAINT AND MARKINGS TO BE APPLIED AFTER GATE HAS BEEN FULLY DECOMMISSIONED.
- EXISTING OVERHEAD GATE STRUCTURE TO REMAIN.
- PROVIDE NEW ROAD GRADE ASPHALT & GRANULAR BASE AS REQUIRED FOR CONSTRUCTION OF NEW SALLY PORT GATE FOUNDATIONS - REFER TO SPEC.
- CONC. GRADE BEAM - REFER TO STRUCT.
- 200 DIA. CONC. FILLED BOLLARD C/W BOLLARD COVER - REFER TO STRUCT. & SPEC.
- SLIDE DRIVER BOX - REFER TO SPEC. AND ELEC.
- 73 DIA. FENCE LINE POST (BY FENCE CONTRACTOR)
- 150 DIA. FENCE CORNER POST (BY FENCE CONTRACTOR)
- APPROX. LIMITS OF NEW ROAD GRADE ASPHALT. TIE-IN TO EXISTING ASPHALT - REFER TO DEMOLITION PLAN 1/A1.0
- 150 DIA. GATE POST (BY FENCE CONTRACTOR) - REFER TO STRUCT.
- TIE EXISTING MODIFIED FENCE INTO NEW CORNER POST W/ GALV. STEEL TENSION BAND
- CONCERTINA WIRE ABOVE - REFER TO ELEVATIONS
- REINSTALL SALVAGED GATE, GATE STRUCTURE AND LOCKS. PROVIDE ALL NECESSARY TUBING AND/OR WELD PLATES AS REQUIRED - REFER ALSO TO STRUCT./ELEC.
- NEW ELECTRICAL ENCLOSURE - REFER TO ELEC. PROVIDE 305 mm x 305 mm x 6 mm GALV. STL. PLATE. TACK WELD TO ADJACENT FENCE POST. MOUNT 1220 mm ABOVE GRADE.
- TIE NEW FENCE INTO EXISTING FENCE POST. PROVIDE ALL REQUIRED FITTINGS AND HARDWARE
- HAND DIG IN POST/PILE LOCATIONS CLOSE TO EXISTING UNDERGROUND INFRASTRUCTURE. MODIFY AS REQUIRED
- PROVIDE GRASS SEED AND TOPSOIL AS REQUIRED TO REPAIR ANY TURF DAMAGED DURING CONSTRUCTION.
- HAND-DIG OR HYDRO VAC EXCAVATION FOR PILE TO ENSURE CONCRETE PILE IS NOT IN CONFLICT W/ UNDERGROUND PIPE/UNDERGROUND POWER. ADJUST PILE OR UNDERGROUND SERVICES TO SUIT AS REQUIRED - REFER TO STRUCT.

GENERAL NOTES:

- ALL METAL COMPONENTS FOR BOTH GATES AND FENCES TO BE HOT DIPPED GALVANIZED - REFER TO SPEC.
- NO GAP BETWEEN ANY TWO GATE / FENCE ELEMENTS SHALL EXCEED 125mm UNLESS OTHERWISE NOTED.
- ALL WELDS TO BE GRINDED SMOOTH.
- ALL METAL COMPONENTS FOR BOTH GATES AND FENCES TO BE PAINTED BLACK INCLUDING EXISTING POSTS THAT REMAIN WITHIN THE AREA OF RENOVATION - REFER TO SPEC.
- GRADE NEW ASPHALT TO MATCH ADJACENT EXISTING ASPHALT ELEVATIONS AT ALL TIE-IN LOCATIONS

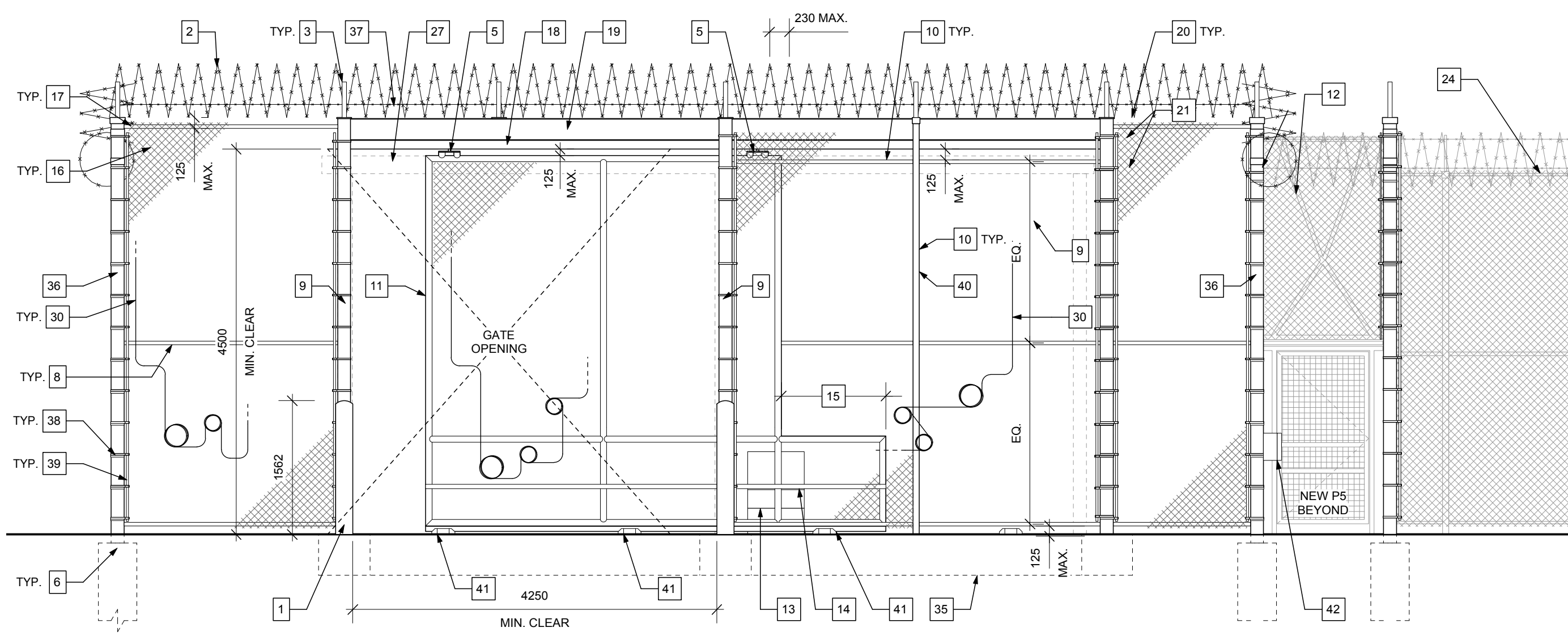
SITE PLAN LEGEND:

- CHAIN LINK MESH
- EXISTING BELOW GRADE POWERLINE
- EXISTING BELOW GRADE PIPE
- NEW CONCERTINA WIRE ABOVE
- EXISTING EXPOSED CONCRETE SURFACE
- NEW ROAD GRADE ASPHALT
- EXISTING GRASS
- EXISTING ASPHALT SURFACE TO BE DEMOLISHED
- EXISTING ASPHALT SURFACE TO REMAIN (NO HATCH)
- EXISTING SURFACE GRADE

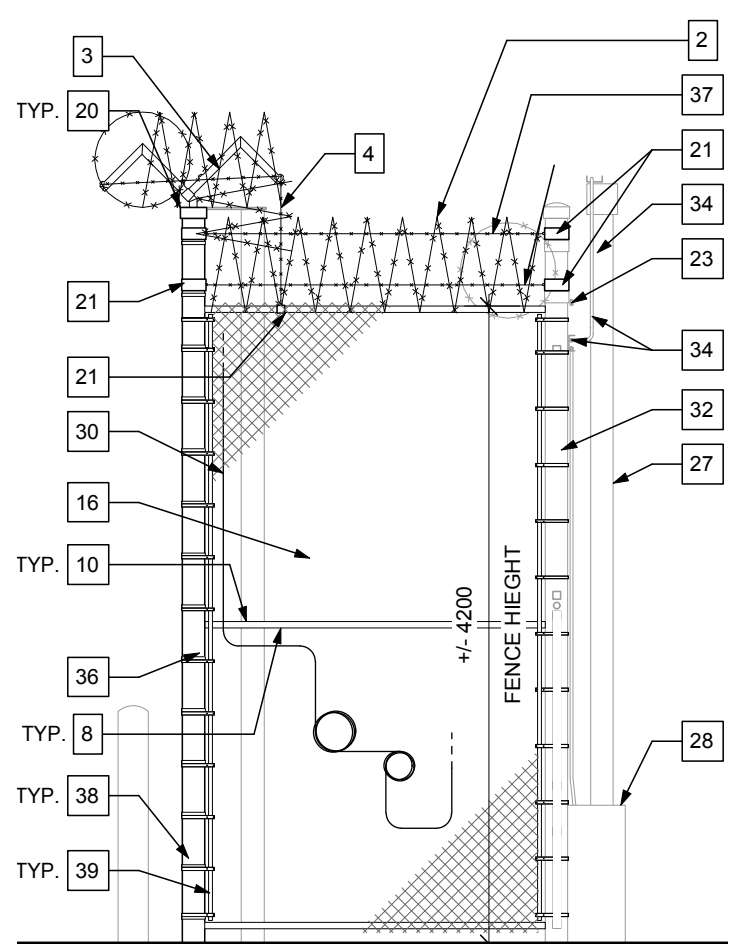


4		
3		
2	ISSUED FOR TENDER	2020 05 01
1	ISSUED FOR CLASS 'A' UPDATED COSTING	2020 02 20
0	ISSUED FOR CLASS 'A' COSTING	2019 10 15
Revision	Description	Date
Client		client
CORRECTIONAL SERVICE CANADA (CSC)		

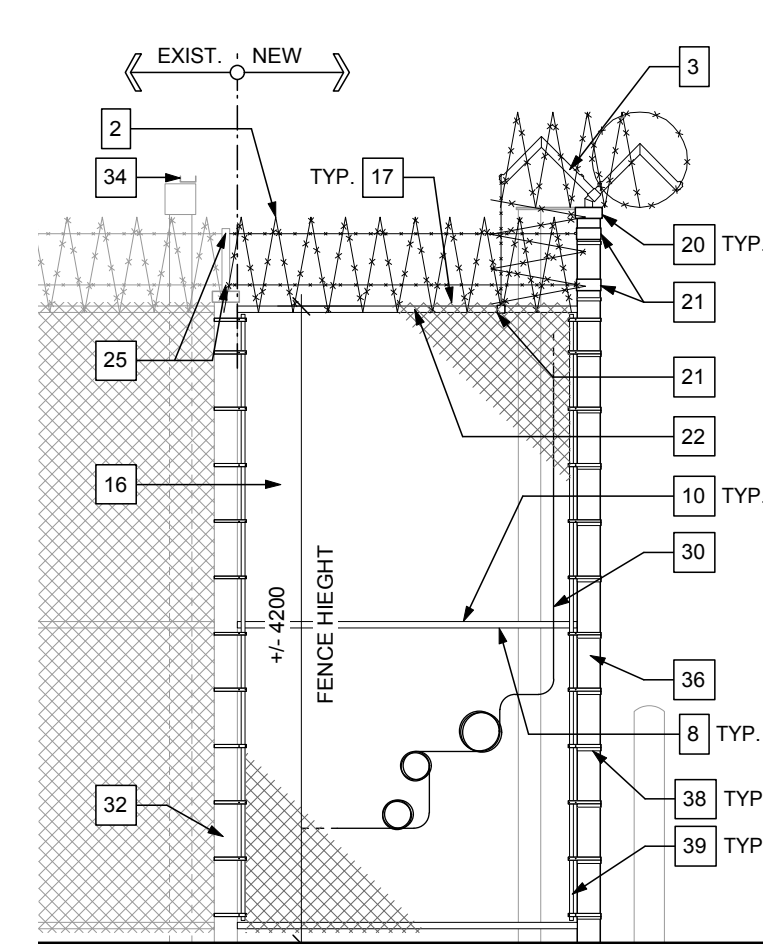




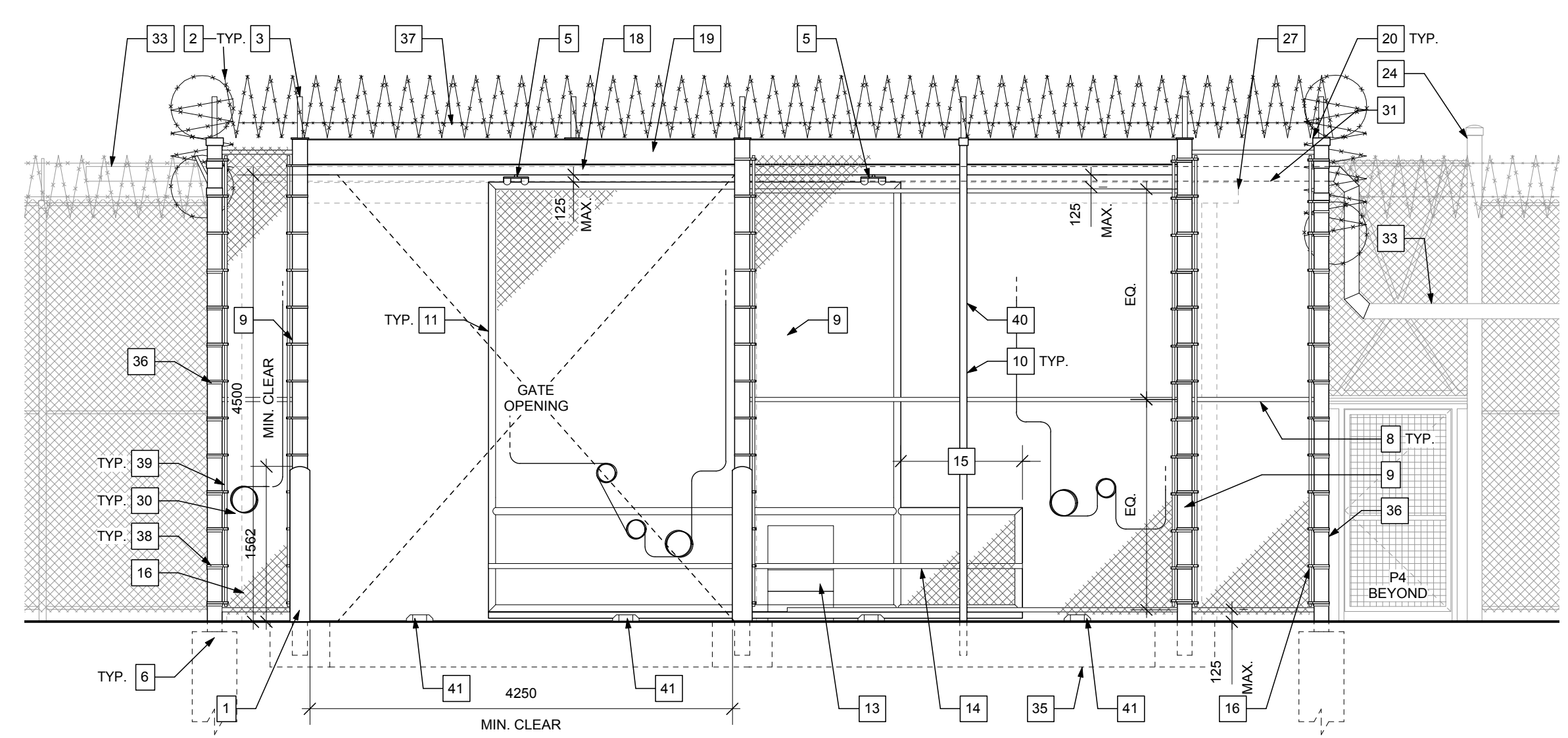
1 F3 GATE WEST ELEVATION  
Scale: 1:50



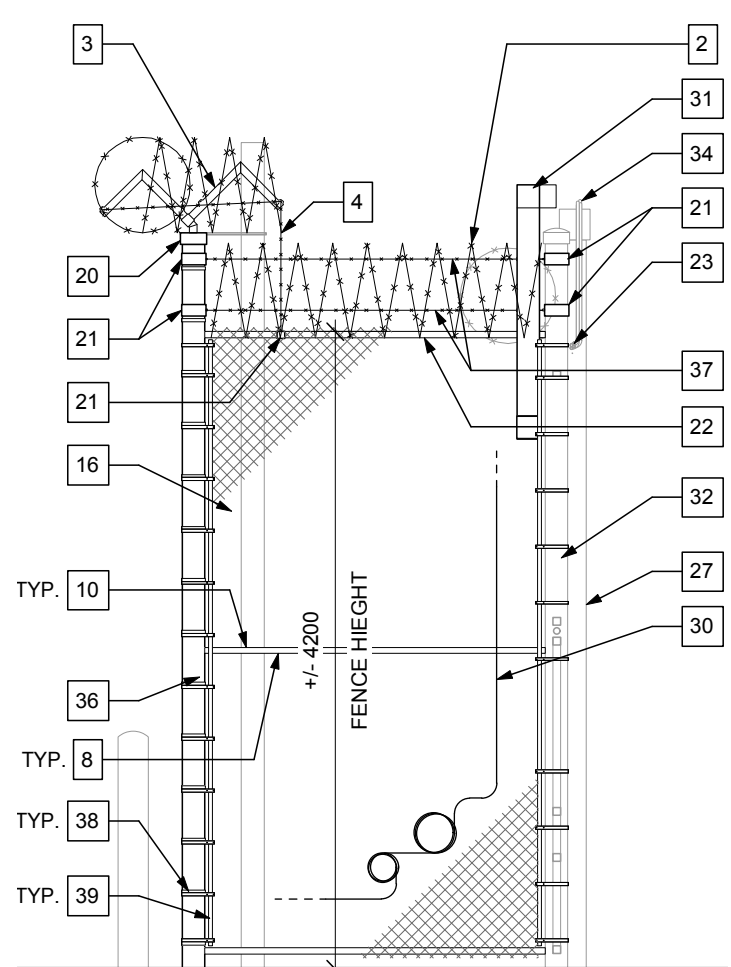
2 F3 GATE SOUTH ELEVATION  
Scale: 1:50



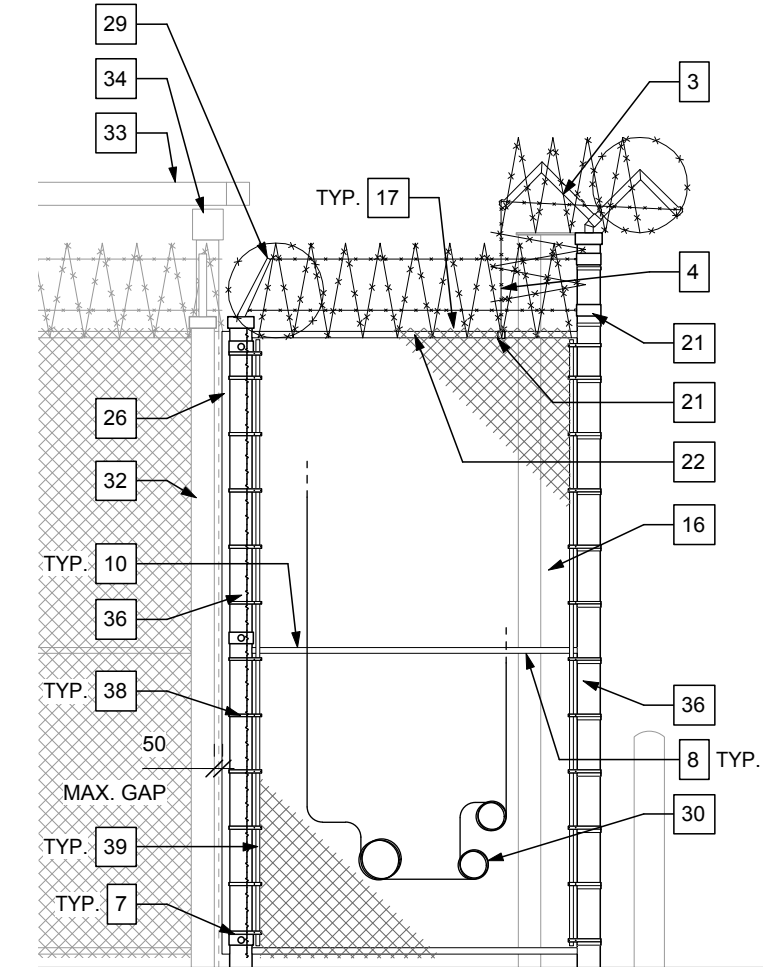
3 F3 GATE NORTH ELEVATION  
Scale: 1:50



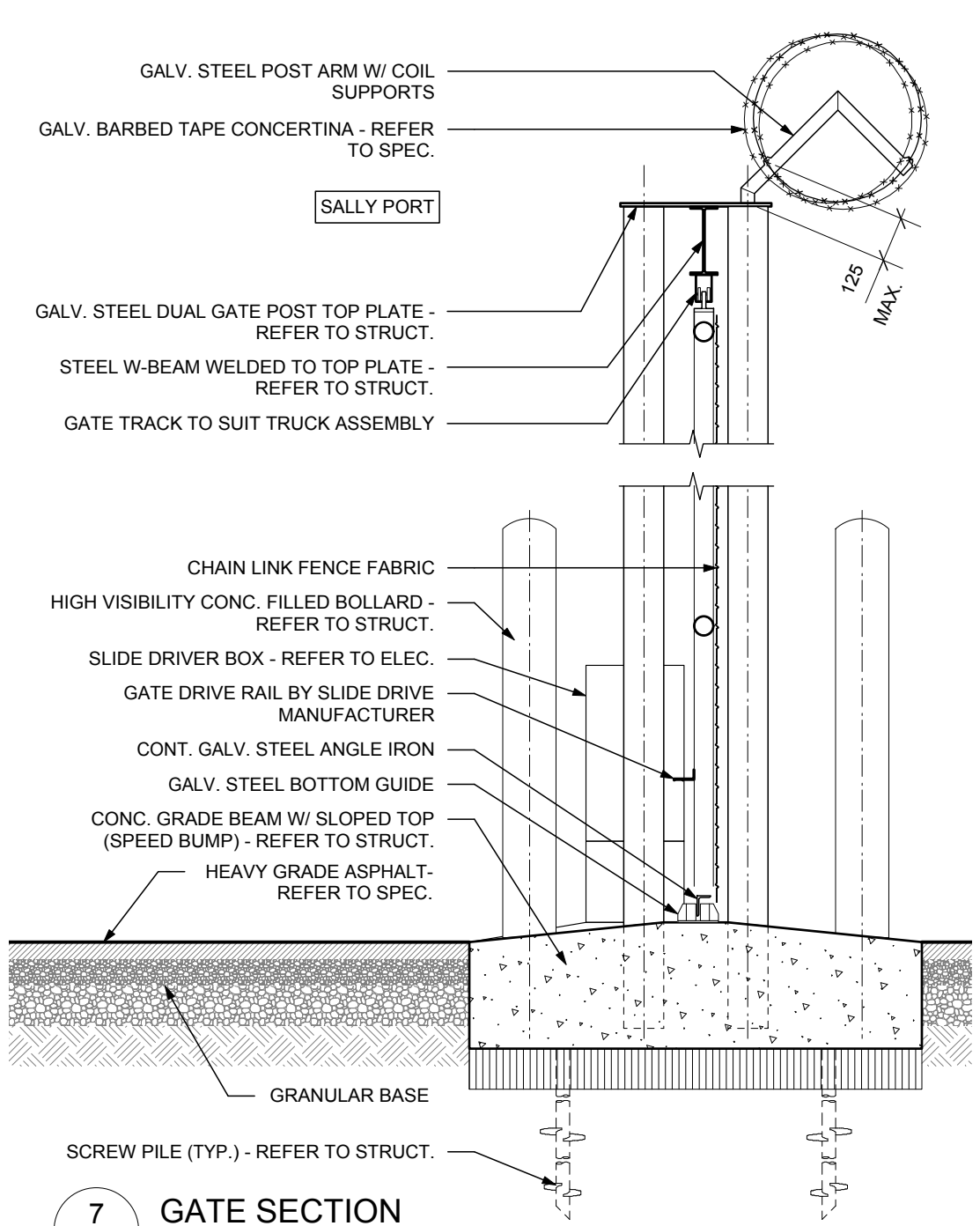
4 F2 GATE SOUTH ELEVATION  
Scale: 1:50



5 F2 GATE EAST ELEVATION  
Scale: 1:50

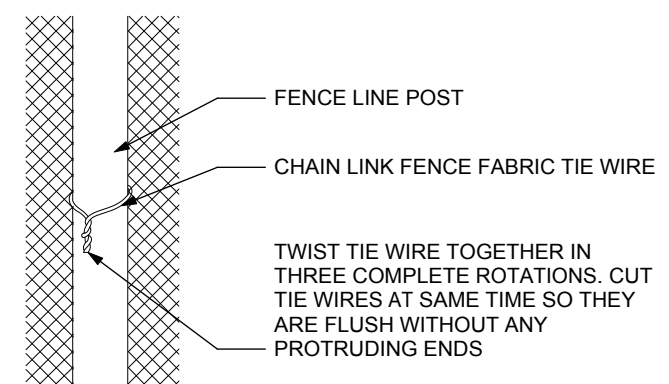


6 F3 GATE WEST ELEVATION  
Scale: 1:50



7 GATE SECTION  
Scale: 1:50

CHAINLINK MESH FABRIC  
WIRE SIZE: 4.8mm (MIN.) (6 GAUGE)  
MESH SIZE: 50.8mm  
HT. OF WIRE: AS SHOWN  
BARBED EDGES TOP & BOTTOM  
ZINC COATING: NOT LESS THAN 610G/SQ.M  
OF UNCOATED WIRE.  
BREAKING STRENGTH: 10,000 N MIN.



8 TIE WIRE DETAIL  
Scale: 1:10

GATE ELEVATION KEYNOTES:

- 200 DIA. CONC. FILLED BOLLARD (TYP. EACH SIDE OF GATE). COVER WITH PRE-FABRICATED HIGH VISIBILITY SLEEVE - REFER TO STRUCT.
- GALVANIZED BARBED TAPE CONCERTINA. LOOP SPACING MAX. 230 mm - REFER TO SPEC.
- GALVANIZED STEEL POST ARM (CONCERTINA SUPPORT). PAINT
- VERTICAL 12 GA. BARBED COIL SUPPORT WIRE. PAINT - REFER TO SPEC.
- GATE TRUCK ASSEMBLY (BY FENCE CONTRACTOR)
- FENCE POSTS EMBEDDED IN CAST-IN-PLACE CONCRETE PILE (PILES BY FENCE CONTRACTOR)
- GALV. TENSION STRAPS TO CONNECT EXIST. FENCE RAILS TO NEW CORNER POST. PAINT
- 42.2 mm DIA. GALV. STEEL TOP, MIDDLE & BOTTOM HORIZONTAL RAILS. WELD TO VERTICAL POSTS UNLESS OTHERWISE NOTED. PAINT - REFER TO SPEC.
- 150 mm DIA. GALV. STEEL GATE POST. PAINT - REFER TO SPEC. & PLAN 2/A1.2
- TIE WIRE TO SECURE CHAIN LINK FENCE FABRIC TO LINE POSTS, GATE FRAME AND HORIZONTAL RAILS - REFER TO DETAIL 8/A2.1
- 73 mm DIA. GALV. STEEL GATE FRAMING. ALL JOINTS WELDED (TYP.)
- WELD SALVAGED GALV. MTL. FRAME TO NEW AND EXISTING POST. PATCH AND MAKE GOOD POSTS-TYP.
- SLIDE DRIVER BOX W/ BASE EXTENSION - REFER TO SPEC. & ELEC.
- GATE DRIVE RAIL BY SLIDE DRIVER MANUFACTURER
- GATE EXTENSION AS REQUIRED TO SUPPORT DRIVE RAIL. PAINT
- BLACK CHAIN LINK FENCE FABRIC - REFER TO SPEC.
- EXTEND CHAIN LINK BEYOND TOP & BOTTOM HORIZ. RAILS MIN. 25 mm (TYP.)
- GATE TRACK TO SUIT TRUCK ASSEMBLY (BY FENCE CONTRACTOR)
- STEEL W-BEAM. PAINT - REFER TO STRUCT.
- POST CAP. PAINT (TYP.)
- GALV. BARBED COIL SUPPORT WIRE TENSION BAND
- TOP FENCE RAIL TO MATCH HEIGHT OF EXISTING FENCE RAIL. SITE CONFIRM
- EXISTING FENCE DETECTION SYSTEM CABLES TO BE RE-ROUTED. CO-ORDINATE WITH SECURITY SYSTEM CONTRACTOR
- EXIST. FENCE BEYOND
- TIE NEW BARBED COIL SUPPORT WIRE TO EXISTING POST ARM
- CONT. 10 mm GALV. STEEL FILLER PLATE TO REDUCE GAP BETWEEN FENCE POSTS. STITCH WELD TO POST (50 LONG @ 300 O.C.). SITE VERIFY REQUIRED DEPTH. PAINT
- EXISTING ABANDONED GATE STRUCTURE BEYOND
- EXISTING SECURITY CONTROL STATION TO REMAIN OPERATIONAL DURING CONSTRUCTION. PROTECT DURING CONSTRUCTION - REFER TO ELEC.
- GALV. STEEL POST ARM ROTATED 45 DEGREES
- FENCE DETECTION SYSTEM. CO-ORDINATE WITH SECURITY SYSTEM CONTRACTOR - REFER TO ELEC.
- NEW SEGMENT OF GALV. STEEL ENCLOSED CABLE TRAY - REFER TO ELEC.
- EXISTING GALV. STEEL CORNER POST
- PORTION OF EXISTING ENCLOSED CABLE TRAY TO REMAIN. PROTECT DURING CONSTRUCTION - REFER TO ELEC.
- EXISTING CABLE TRAY AND CABLES TO REMAIN. PROTECT DURING CONSTRUCTION - REFER TO ELEC.
- CONCRETE GRADE BEAM (BELOW GROUND) - REFER TO STRUCT.
- 150 mm DIA. GALV. STEEL CORNER POST. PAINT - REFER TO STRUCT.
- 12 GA. BARBED COIL SUPPORT WIRE - REFER TO SPEC.
- GALVANIZED TENSION BAR CONNECTION STRAPS @ EQUAL SPACING. SPOT WELD BOLTS. PAINT.
- GALVANIZED STEEL STRETCHER BAR. PAINT.
- 73 mm DIA. GALV. STEEL LINE POST. PAINT - REFER TO SPEC. & PLAN 2/A1.2
- GATE BOTTOM GUIDE - REFER TO STRUCT.
- REINSTALL SALVAGED GATE. GATE STRUCTURE AND LOCKS. PROVIDE ALL NECESSARY TUBING AND/OR WELD PLATES AS REQUIRED - REFER ALSO TO STRUCT./ELEC.

GENERAL NOTES:

- ALL METAL COMPONENTS FOR BOTH GATES AND FENCES TO BE HOT DIPPED GALVANIZED - REFER TO SPEC.
- NO GAP BETWEEN ANY TWO GATE / FENCE ELEMENTS SHALL EXCEED 125mm UNLESS OTHERWISE NOTED.
- ALL WELDS TO BE GRINDED SMOOTH.
- ALL METAL COMPONENTS FOR BOTH GATES AND FENCES TO BE PAINTED BLACK INCLUDING EXISTING POSTS THAT REMAIN WITHIN THE AREA OF RENOVATION - REFER TO SPEC.
- GRADE NEW ASPHALT TO MATCH ADJACENT EXISTING ASPHALT ELEVATIONS AT ALL TIE-IN LOCATIONS

Revision	Description	Date
4		
3		
2	ISSUED FOR TENDER	2020 05 01
1	ISSUED FOR CLASS 'A' UPDATED COSTING	2020 02 20
0	ISSUED FOR CLASS 'A' COSTING	2019 10 15

Client client

CORRECTIONAL SERVICE  
CANADA (CSC)

Project title  
**BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB**

**CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT**

Designed by <b>JK</b>	Conçu par
Drawn by <b>JW</b>	Dessiné par
Approved by	Approuvé par

PWGSC Project Manager  
**YOUSSEF BRAHIMI**

Administrateur de Projets TP/SGC

Drawing title  
**ELEVATIONS, SECTIONS  
& DETAILS**

Titre du dessin

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
<b>R.100664</b>	<b>A2.1</b> OF	<b>0</b>



GENERAL

1. THIS IS A METRIC PROJECT. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS.
2. "WSP-S" REFERS TO WSP CANADA STRUCTURAL CONSULTANT.
3. PROVIDE ALL MATERIAL AND LABOUR REQUIRED FOR COMPLETION OF THE WORK.
4. PRIOR TO CONSTRUCTION, REVIEW STRUCTURAL DRAWINGS IN CONJUNCTION WITH DRAWINGS PROVIDED BY ALL OTHER CONSULTANTS, AND WITH EXISTING CONDITIONS.
5. REPORT DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
6. VERIFY EXISTING DIMENSIONS AND CONDITIONS ON SITE PRIOR TO CONSTRUCTION.
7. USE THESE DRAWINGS ONLY FOR THE PURPOSE IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION".
8. DO NOT USE INFORMATION ON THESE DRAWINGS FOR ANY OTHER PROJECT OR WORKS.
9. DO NOT SCALE THESE DRAWINGS.
10. ALL SECTIONS, DETAILS, AND STATEMENTS NOTED AS "TYPICAL" APPLY TO LIKE/SIMILAR CONDITIONS IN THE STRUCTURE.
11. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATING AND FIREPROOFING REQUIREMENTS.
12. DRAWINGS SHOW COMPLETED STRUCTURE ONLY. THEY DO NOT SHOW TEMPORARY WORKS FOR WHICH THE CONTRACTOR IS RESPONSIBLE AND WHICH MAY BE REQUIRED FOR EXECUTION OF THE PROJECT. THE CONTRACTOR TO ESTABLISH CONSTRUCTION PROCEDURE AND SEQUENCE TO ENSURE SAFETY OF THE WHOLE STRUCTURE AND ALL ITS COMPONENTS DURING ERECTION.
13. MAKE ADEQUATE PROVISIONS FOR ALL LOADS ACTING ON THE STRUCTURE DURING ERECTION. PROVIDE TEMPORARY SHORING AND BRACING TO KEEP THE STRUCTURE PLUMB AND IN TRUE ALIGNMENT DURING CONSTRUCTION.
14. DESIGN OF ALL TEMPORARY WORKS TO BE CARRIED OUT BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED.
15. DESIGN OF NON STRUCTURAL AND SECONDARY STRUCTURAL ELEMENTS (SUCH AS MISCELLANEOUS STEEL STAIRS, RAILINGS AND GUARDRAILS, PARTITIONS, CLADDING, BULKHEADS, ETC.) IS THE RESPONSIBILITY OF SPECIALTY PROFESSIONAL ENGINEERS ENGAGED BY THE CONTRACTOR OR THE SUPLIERS; IT IS NOT WITHIN THE SCOPE OF SERVICES PROVIDED BY WSP-S AND WILL NOT BE REVIEWED BY WSP-S.
16. CONSTRUCTION LOADS ON COMPLETED STRUCTURE NOT TO EXCEED DESIGN LOADS INDICATED ON DRAWINGS. FULL DESIGN LOADS MAY ONLY BE APPLIED AFTER THE CONCRETE REACHES ITS DESIGN STRENGTH.

DESIGN CRITERIA

1. STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2019 NATIONAL BUILDING CODE ALBERTA EDITION.
2. ALL REFERENCED STANDARDS SHALL BE THE CURRENT EDITION UNLESS DIFFERENT EDITION IS REFERENCED BY THE APPLICABLE BUILDING CODE NOTED ABOVE.
3. THE VALUES FOR CLIMATIC DATA USED IN THE DETERMINATION OF DESIGN LOADS HAVE BEEN OBTAINED FROM THE 2019 NBC FOR THE SPECIFIC LOCATION OF BOWDEN ALBERTA.
4. BASED ON THE USE AND OCCUPANCY, THE STRUCTURE IS DESIGNED TO THE REQUIREMENTS OF A NORMAL IMPORTANCE CATEGORY.
5. SELF WEIGHT (SWT) IS DUE TO THE WEIGHT OF THE STRUCTURE ITSELF. IT VARIES WITH THE STRUCTURAL SYSTEM, AND INCLUDES CONCRETE TOPPINGS ON STEEL DECK.
6. SUPERIMPOSED DEAD LOADS (SDL) ARE NON-STRUCTURAL DEAD LOADS DUE TO NON-STRUCTURAL TOPPINGS, FINISHES, PARTITIONS, ROOFING MATERIALS, SUSPENDED EQUIPMENT, PAVERS, SOIL, ETC.
7. DEAD LOAD (DL) IS THE SELF WEIGHT OF THE STRUCTURE PLUS THE SUPERIMPOSED DEAD LOAD.
8. UNLESS OTHERWISE NOTED, DESIGN LOADS SHOWN ON DRAWINGS ARE SPECIFIED (UNFACTORED) LOADS, TO BE USED FOR ULS DESIGN. FOR SLS DESIGN, THESE LOADS CAN BE REDUCED BY MULTIPLYING WITH THE RATIO OF APPROPRIATE IMPORTANCE FACTORS  $\gamma_w(SLS) / \gamma_w(ULS)$  GIVEN BELOW.
9. IF ONLY ONE VALUE IS GIVEN FOR A LOAD, CONSIDER IT LIVE LOAD.
10. FOR CONNECTION LOADS, "+" SIGN INDICATES TENSION AND "-" SIGN INDICATES COMPRESSION, EXCEPT FOR COLUMN LOADS WHERE "+" SIGN INDICATES COMPRESSION AND "-" SIGN INDICATES TENSION.
11. WIND:  $q_{50} = 0.41 \text{ kPa}$ ;  $lw (ULS) = 1.0$ ;  $lw (SLS) = 0.75$   
TERRAIN TYPE: OPEN
12. GATE GRADE BEAM AND FOUNDATION ARE DESIGNED FOR A 9000kg VEHICLE IN ACCORDANCE TO NBC-AE 2019.

SHOP DRAWINGS

1. SUBMIT 4 HARD COPIES OR PDF'S OF SHOP DRAWINGS FOR REVIEW BEFORE START OF WORK. PACKAGES TO BE SUBMITTED ARE NOTED IN THE RELEVANT SECTIONS BELOW.
2. ALL SHOP DRAWINGS ARE TO BE REVIEWED AND STAMPED BY P.ENG PRIOR TO DISTRIBUTION TO CONSULTANTS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. REVIEW OF SHOP DRAWINGS BY WSP-S IS ON A SAMPLING BASIS, FOR GENERAL CONFORMITY WITH STRUCTURAL CONTRACT DOCUMENTS. IT IS NOT A DETAILED CHECK AND MUST NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF HIS RESPONSIBILITY TO MAKE THE WORK ACCURATE AND IN CONFORMITY WITH ALL THE CONTRACT DOCUMENTS, TO REVIEW SHOP DRAWINGS AND TO COORDINATE WORK OF INTERFACING TRADES AND MANUFACTURE OF INTERFACING PRODUCTS.
4. REVIEW OF SHOP DRAWINGS DOES NOT IMPLY ANY CHANGE IN ANY OTHER CONSULTANTS' OR PROFESSIONALS' RESPONSIBILITIES RELATED TO DESIGN OF SPECIFIC ITEMS AS OUTLINED BY THESE DRAWINGS.
5. ALLOW A MINIMUM OF 10 WORKING DAYS FOR REVIEW OF EACH SUBMISSION OF SHOP DRAWINGS IN THE STRUCTURAL CONSULTANT'S OFFICE. ALLOW MORE TIME WHEN LARGE QUANTITIES OF SHOP DRAWINGS ARE SUBMITTED. SUBMIT IN GENERAL CONFORMITY WITH THE SEQUENCE OF CONSTRUCTION INTENDED.
6. AFTER REVIEW, SHOP DRAWINGS WILL BE STAMPED AND RETURNED. DO NOT COMMENCE FABRICATION UNTIL RETURNED SHOP DRAWINGS HAVE BEEN EXAMINED.
7. SHOP DRAWINGS MARKED "REVIEWED" CAN BE USED FOR FABRICATION.
8. SHOP DRAWINGS MARKED "REVIEWED AS NOTED" CAN BE USED FOR FABRICATION AFTER THE REVISIONS NOTED ARE IMPLEMENTED.
9. SHOP DRAWINGS MARKED "REVISE AND RESUBMIT" REQUIRE SUBSTANTIAL REVISIONS AND MUST BE RESUBMITTED FOR ADDITIONAL REVIEW PRIOR TO FABRICATION.
10. SHOP DRAWINGS MARKED "REVIEWED FOR IMPACT ON BASE STRUCTURE ONLY" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES BUT AFFECT BEHAVIOUR OF THE BASE STRUCTURE. WSP-S WILL NOT REVIEW THESE WORKS AND ASSUMES THAT THE INDICATED WEIGHTS AND ALL OTHER LOADS IMPOSED ON THE BASE STRUCTURE ARE CORRECTLY IDENTIFIED BY THE DESIGNER / SUPPLIER OF THESE ELEMENTS.
11. DRAWINGS MARKED "NOT REVIEWED" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES.

FIELD REVIEW

1. STRUCTURAL CONSULTANT WILL PROVIDE PERIODIC FIELD REVIEW OF A REPRESENTATIVE SAMPLE OF THE STRUCTURAL WORKS DETAILED ON THESE DRAWINGS FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. THESE REVIEWS DO NOT REPLACE THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT AND MAINTAIN A QUALITY CONTROL PROGRAM, AND DO NOT MAKE WSP-S. A GUARANTOR OF THE CONTRACTOR'S WORK.
2. ASSIST THE CONSULTANTS DOING FIELD REVIEW, AND PROVIDE SAFE ACCESS TO WORK AREAS AS REQUIRED.
3. CHECK THE WORK PRIOR TO FIELD REVIEW TO CONFIRM IT IS COMPLETED AND IN ACCORDANCE WITH CONTRACT DOCUMENTS.
4. NOTIFY THE CONSULTANT 48 HOURS PRIOR TO CONCRETE POURS, BACKFILLING, AND COVERING UP THE STRUCTURE WITH FINISHES.

EXCAVATION & BACKFILL

1. VERIFY GEOTECHNICAL CONDITIONS ON SITE. REFER TO GEOTECHNICAL REPORT FOR ALL EXCAVATION, BACKFILL, AND COMPACTION REQUIREMENTS. IN CASES OF DISCREPANCY BETWEEN THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT AND THOSE LISTED IN THIS SECTION, FOLLOW THE GEOTECHNICAL REPORT.
2. PRIOR TO COMMENCING EXCAVATION, LOCATE AND IDENTIFY ALL EXISTING UNDERGROUND STRUCTURES AND SERVICES. DESIGN AND PROVIDE PROTECTION FOR EXISTING SERVICES TO REMAIN.
3. EXCAVATE TO EXPOSE NATIVE UNDISTURBED SOIL AND TO ALLOW FOR MINIMUM COMPACTED BACKFILL DEPTH. VERIFY EXPOSED SOIL MEETS THE MINIMUM BEARING CAPACITY LISTED IN THE FOUNDATION NOTES, AND PROTECT FROM EXCESSIVE MOISTURE WITH MUD SLAB IF REQUIRED.
4. BACKFILLING MATERIALS TO BE FREE FROM DEBRIS, ORGANIC, AND FROZEN MATTER WITH NO REACTIVE MINERALS NOR FRIABLE MATERIALS WITH SWELLING POTENTIAL.
5. COMPACT BACKFILL TO ACHIEVE THE FOLLOWING STANDARD PROCTOR MAXIMUM DRY DENSITIES (MAINTAIN MOISTURE CONTENT IN BACKFILLING MATERIAL AS REQUIRED TO ACHIEVE THE SPECIFIED COMPACTION):  
- BELOW GRADE: 98%
6. AN INDEPENDENT INSPECTION AND TESTING AGENCY TO MONITOR COMPACTION AND CONDUCT DENSITY TESTING DURING INSTALLATION OF ALL GRANULAR MATERIALS, AND TO VERIFY THE ASSUMED SOIL BEARING CAPACITY. CONTRACTOR TO RETAIN AND PAY FOR TESTING AGENCY.

FOUNDATIONS

1. STRUCTURAL DESIGN IS BASED ON THE GEOTECHNICAL REPORT PREPARED BY WSP CANADA; REPORT NUMBER 191-09179-00, DATED OCTOBER 11, 2019. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL FOUNDATION AND EARTHWORK INFORMATION.
2. GEOTECHNICAL ENGINEER TO REVIEW ALL EARTHWORK INCLUDING EXCAVATION, BACKFILL AND SUBGRADE PREPARATION. CONTRACTOR TO FOLLOW GEOTECHNICAL REPORT AND RECOMMENDATIONS.
3. PROVIDE HELICAL PILES ENGINEERED BY SUPPLIER, TO CARRY LOADS SHOWN ON DRAWINGS. PILES TO BE STAMPED BY P.ENG.
4. UNLESS OTHERWISE NOTED, LAP ALL HORIZONTAL GRADE BEAM REINFORCING WITH CLASS B LAPS. CARRY CONTINUOUSLY THROUGH PIERS AND PILE CAPS WHERE APPLICABLE
5. UNLESS OTHERWISE NOTED, CENTRE FOOTINGS, PIERS, PILES, AND PILE CAPS UNDER CENTROID OF COLUMNS. WHERE THERE ARE NO COLUMNS ABOVE, CENTRE UNDER WALLS OR GRADE BEAMS.
6. LOCATE ALL EXISTING UNDERGROUND SERVICES PRIOR TO EXCAVATION.
7. PROTECT FOOTINGS, PIERS, PILE TOPS, PILE CAPS, GRADE BEAMS, FOUNDATION WALLS, SLABS-ON-GRADE AND ADJACENT SOIL AGAINST FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION. DO NOT POUR CONCRETE AGAINST FROZEN EARTH.
8. DO NOT PLACE CONCRETE IN WATER OR ON FROZEN SOIL.
9. FOR ELEMENTS THAT ARE TO BE BACKFILLED ON BOTH SIDES, PLACE BACKFILL SIMULTANEOUSLY ON BOTH SIDES SUCH THAT HEIGHTS DO NOT VARY BY MORE THAN 600 (2') FROM ONE SIDE TO THE OTHER.

CONCRETE

1. CONFORM TO CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION".
2. CONCRETE IS SPECIFIED PER ALTERNATIVE 1 - PERFORMANCE SPECIFICATION, AS OUTLINED IN CAN/CSA A23.1. THE CONTRACTOR AND THE CONCRETE SUPPLIER TO MEET ALL CERTIFICATION, DOCUMENTATION, AND QUALITY CONTROL REQUIREMENTS.
3. THE CONCRETE SUPPLIER TO BE CERTIFIED BY THE ALBERTA READY MIXED CONCRETE ASSOCIATION.
4. CONCRETE TO BE NORMAL DENSITY (MIN. 2300 kg/m<sup>3</sup>) UNLESS NOTED OTHERWISE.
5. CEMENT TO BE PORTLAND CEMENT TYPE GU, UNLESS NOTED OTHERWISE OR REQUIRED BY EXPOSURE CLASS. CEMENT TO CONFORM TO CSA A3000.
6. AGGREGATE TO CONFORM TO CSA A23.1 / A23.2. DO NOT USE RECYCLED CONCRETE AS AGGREGATE.
7. CONCRETE ADMIXTURES SHALL NOT CONTAIN CHLORIDES.
8. PERIMETER AND EXTERIOR GRADE BEAMS AND PILE CAPS:  
- EXPOSURE CLASS: C1  
- MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35 MPa  
- NOMINAL SIZE OF COARSE AGGREGATE: 20 (3/4")
9. PROTECT CONCRETE FROM EXCESSIVE HEAT AND DRYING. USE HOT WEATHER CONCRETING METHODS IN ACCORDANCE WITH CAN/CSA-A23.1 WHENEVER THE OUTDOOR TEMPERATURE IS GREATER THAN 27°C.
10. PROTECT CONCRETE FROM FREEZING. USE COLD WEATHER CONCRETING METHODS IN ACCORDANCE WITH CAN/CSA-A23.1 WHENEVER OUTDOOR TEMPERATURE IS LESS THAN +5°C. ALL INSULATED COVERS, HEATERS AND OTHER MATERIALS NEEDED TO PROTECT CONCRETE TO BE ON HAND PRIOR TO POUR. DELIVER CONCRETE AT A TEMPERATURE BETWEEN +15°C AND +27°C. ENSURE A MINIMUM CONCRETE TEMPERATURE OF 10° IS MAINTAINED THROUGHOUT THE CURING PERIOD (MINIMUM 3 DAYS).
11. FORMWORK DESIGN, MATERIAL, FABRICATION, AND ERECTION TO CONFORM TO CSA S269.1
12. FORMWORK MATERIAL TO BE NEW EXTERIOR PLYWOOD CONFORMING TO CSA O121, EXCEPT FOR ROUGH CONCRETE IN UNEXPOSED LOCATIONS (SUCH AS FOUNDATIONS) WHERE USED MATERIAL IS ACCEPTABLE.
13. USE REMOVABLE INTERNAL FORM TIES OR ADJUSTABLE METAL TIES DESIGNED TO ACT AS SPREADERS, WHICH WILL, WHEN REMOVED, LEAVE NO METAL CLOSER THAN 25 (1") TO CONCRETE SURFACE.
14. DO NOT SUPPORT FORMWORK SHORING ON FROZEN SOILS.
15. PROVIDE 25 (1") CHAMFER STRIPS ON EXTERNAL CORNERS AND 25 (1") FILLETS AT INTERIOR CORNERS.
16. VOID FORM TO BE CELLULAR CARDBOARD WITH A MINIMUM COMPRESSIVE STRENGTH OF 62 kPa (9 psi) DESIGNED TO DISINTEGRATE AND CREATE AN AIR SPACE BELOW THE FULLY HARDENED CONCRETE. IF VOID FORM COLLAPSES DURING CONSTRUCTION, REMOVE AND REPLACE AFFECTED AREA.
17. CONVEY CONCRETE FROM TRUCK TO FINAL LOCATION BY METHODS WHICH WILL PREVENT SEPARATION OR LOSS OF MATERIAL. MAXIMUM FREE FALL NOT TO EXCEED 1.5m (5'-0"). CONSOLIDATE CONCRETE USING MECHANICAL VIBRATORS.

18. CURE CONCRETE SURFACES NOT IN CONTACT WITH FORMS IN ACCORDANCE WITH A23.1 / A23.2, BY APPLICATION OF A CURING-SEALING COMPOUND CONFORMING TO ASTM C309 IMMEDIATELY AFTER DISAPPEARANCE OF SURFACE WATER SHEEN. ENSURE CURING-SEALING COMPOUND IS COMPATIBLE WITH APPLIED FINISHES.
19. PILE DESIGN LOADS PER PILE IN GROUP OF 2

CASE	VERTICAL LOAD	HORIZONTAL LOAD
1	60kN	28kN
2	-90kN (UPLIFT)	28kN

\*PILE LOADS ARE FACTORED  
\*PILE LOADS DO NOT INCLUDE UPLIFT FROM FROST JACKING

CONCRETE REINFORCEMENT

1. CONFORM TO CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION".
2. REINFORCEMENT - DEFORMED BAR REINFORCEMENT CONFORMING TO CSA G30.18 GRADE 400R. USE 400W ONLY WHERE NOTED ON DRAWINGS.
3. ACCESSORIES, BAR SUPPORTS, AND TIES TO CONFORM TO REINFORCING STEEL INSTITUTE OF CANADA (RSIC) MANUAL OF STANDARD PRACTICE AND CSA A23.1 / A23.2.
4. ALL REINFORCING BAR SIZES ARE METRIC; "M" IS NOT NECESSARILY MARKED AFTER A BAR SIZE. FOR EXAMPLE, 10-15B NOTED ON PLAN INDICATES 10 BARS OF 15M DIAMETER, PLACED AT BOTTOM.
5. SUBMIT SHOP DRAWINGS FOR REINFORCEMENT DETAILED IN ACCORDANCE WITH THE RSIC MANUAL OF STANDARD PRACTICE. SUBMIT PLANS AND DETAILS NECESSARY TO FABRICATE, PLACE, AND REVIEW REINFORCEMENT.
6. ALL REBAR HOOKS TO BE STANDARD LENGTH 90° OR 180° HOOKS. REBAR LENGTHS LISTED ON DRAWINGS DO NOT INCLUDE THE HOOK LENGTH.
7. FIELD BENDING OF BARS IS NOT PERMITTED UNLESS INDICATED OR APPROVED BY WSP-S. APPROVED FIELD BENDING TO BE DONE WITHOUT THE USE OF HEAT, THROUGH APPLICATION OF SLOW AND STEADY PRESSURE. REPLACE BARS WITH CRACKS OR SPLITS.
8. ALL REINFORCING TO BE CLEAN, FREE OF LOOSE SCALE, OIL, DIRT, RUST, AND ANY OTHER FOREIGN COATING THAT AFFECT BONDING CAPACITY.
9. UNLESS OTHERWISE NOTED, LAP ALL HORIZONTAL GRADE BEAM REINFORCING WITH CLASS B LAPS. CARRY CONTINUOUSLY THROUGH PIERS AND PILE CAPS WHERE APPLICABLE
10. WHERE CONCRETE IS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH, MINIMUM CONCRETE COVER TO REINFORCING BARS CLOSEST TO THE CONCRETE SURFACE TO BE 75 (3").
11. FOR CLASS C-1 CONCRETE, MINIMUM COVER TO BE 60 (2 1/2") EXCEPT FOR SLABS PROTECTED BY MEMBRANE WHERE THE COVER SHALL BE 40 (1 1/2") TO THE TOP BARS AND 30 (1 1/4") TO THE BOTTOM BARS.
12. INCREASE COVER WHERE REQUIRED TO MAINTAIN MINIMUM RATIO OF COVER TO NOMINAL BAR DIAMETER OF 2 FOR CLASS C1.
13. ENSURE COVER TO REINFORCEMENT IS MAINTAINED DURING CONCRETE POUR.

POST-INSTALLED ANCHORS AND DOWELS

1. WHERE ADHESIVE CONCRETE ANCHORS (ACA) ARE NOTED ON DRAWINGS, PROVIDE HILTI HIT-RE 500 V3 EPOXY ADHESIVE ANCHORING SYSTEM WITH HILTI HAS THREADED RODS. EFFECTIVE EMBEDMENT LENGTHS AS FOLLOWS:  
12 (1/2") DIAMETER - 114 (4-1/2") EMBEDMENT  
16 (5/8") DIAMETER - 143 (5-5/8") EMBEDMENT  
19 (3/4") DIAMETER - 171 (6-3/4") EMBEDMENT
2. ANCHORS LOCATED OUTSIDE THE BUILDING ENVELOPE'S VAPOUR BARRIER TO BE HOT DIP GALVANIZED.
3. CONCRETE TO BE MINIMUM 28 DAYS OLD AT THE TIME OF ANCHOR INSTALLATION.
4. USE DRILLING AND INSTALLATION TOOLS AND PROCEDURES PER MANUFACTURERS' RECOMMENDATIONS.
5. DO NOT CUT REINFORCEMENT TO ACCOMMODATE DRILLED ANCHORS AND DOWELS.
6. WHEN OBSTRUCTIONS PREVENT DRILLING HOLES IN SPECIFIED LOCATIONS TO THE REQUIRED DEPTH, RELOCATE AT NO EXTRA COST TO THE CONTRACT. OBTAIN WSP-S APPROVAL OF NEW LOCATIONS BEFORE DRILLING HOLES. FILL ALL ABANDONED HOLES WITH MIN. 30MPa GROUT. DO NOT TIGHTEN ANCHORS UNTIL GROUT IN ADJACENT ABANDONED HOLES REACHES 75% f<sub>c</sub>.

STRUCTURAL STEEL

1. CONFORM TO CSA S16 "LIMIT STATES DESIGN OF STEEL STRUCTURES".
2. FABRICATOR TO BE CERTIFIED BY THE CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF CSA W47.1, DIVISION 1 OR 2, AND/OR CSA W55.3.
3. WELDERS TO BE CWB CERTIFIED. WELDING TO BE IN ACCORDANCE WITH CSA W59.
4. MATERIALS (TO CSA G40.21 UNLESS NOTED OTHERWISE):  
- WIDE FLANGE SECTIONS, CHANNELS AND ANGLES: GRADE 350W  
- PLATES, BARS: GRADE 300W  
- PIPE: ASTM A53, 240W  
- BOLTS, NUTS AND WASHERS: ASTM F3125, GRADE A325  
- ANCHOR RODS: GRADE 300W; OR ASTM F1554 GRADE 36  
- SHOP PAINT: CISC/CPMA 1-73A  
- SHOP PRIMER PAINT: CISC/CPMA 2-75  
- ZINC-RICH PAINT (ZRP) COATING: SSPC PAINT SPECIFICATION NO. 20  
- HOT DIP GALVANIZING: ASTM A123/A123M  
- WELDING MATERIALS: CSA W48 AND CSA W59
5. SHOP DRAWINGS FOR STRUCTURAL STEEL, STEEL CONNECTIONS, AND STEEL JOISTS TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR DESIGN, RETAINED BY THE CONTRACTOR AND REGISTERED IN THE PLACE THE PROJECT IS LOCATED. ENGINEER TO CARRY MINIMUM \$1,000,000 IN LIABILITY INSURANCE.
6. CONNECT BEAMS FOR THE FORCES SHOWN ON DRAWINGS USING THE CISC "HANDBOOK OF STEEL CONSTRUCTION". IF NO FORCE IS INDICATED, CONNECT NON-COMPOSITE BEAMS FOR THE REACTION DUE TO MAXIMUM UNIFORMLY DISTRIBUTED LOAD CAPACITY OF THE BEAM IN BENDING, AND CONNECT COMPOSITE BEAMS FOR ONE AND A HALF TIMES THE REACTION DUE TO MAXIMUM UNIFORMLY DISTRIBUTED LOAD CAPACITY OF THE NON COMPOSITE SECTION IN BENDING.
7. WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN FOR MOMENT CAPACITY OF THE SMALLER MEMBER IN THE CONNECTION.
8. DO NOT SPLICE SECTIONS WITHOUT PRIOR ACCEPTANCE BY THE CONSULTANT AND SUBMISSION OF PERTINENT SHOP DRAWINGS. ACCEPTED SPLICES TO DEVELOP THE FULL MOMENT CAPACITY OF THE SECTION. EACH SPLICE TO BE GIVEN A NON-DESTRUCTIVE TEST BY AN INDEPENDENT INSPECTION COMPANY ACCEPTABLE TO WSP-S. TESTING TO BE AT THE CONTRACTOR'S EXPENSE. EVALUATE RESULTS IN ACCORDANCE WITH CSA W59 AND REPORT TO WSP-S.
9. DO NOT CUT HOLES OR OTHERWISE MODIFY STRUCTURAL MEMBERS ON SITE.
10. DO NOT OVERSIZE ANCHOR ROD HOLES FOR SITE TOLERANCES. USE HOLE SIZES SUGGESTED IN THE CISC "HANDBOOK OF STEEL CONSTRUCTION".
11. PROTECT COMBUSTIBLE MATERIALS AND FINISHES DURING WELDING OPERATIONS.
12. ALL STEEL TO BE HOT DIPPED GALVANIZED.
13. CLEAN SURFACES DOWN TO BARE METAL AND APPLY TWO COATS OF TOUCH-UP ZRP TO ANY GALVANIZED OR ZRP SURFACE THAT HAS BEEN DAMAGED OR FIELD WELDED.
14. PROVIDE ALL ERECTION BRACING REQUIRED TO KEEP THE STRUCTURE STABLE AND IN ALIGNMENT DURING CONSTRUCTION.


15. PREMIXED GROUT: NON-SHRINK, MINIMUM STRENGTH 40 MPa AT 28 DAYS.
16. INSTALL GROUT UNDER BASE PLATES AS SOON AS STEEL WORK IS COMPLETE, IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. PROVIDE 100% CONTACT OVER GROUTED AREA. DO NOT APPLY ANY LOADS TO THE STEELWORK BEFORE GROUT ACHIEVES SUFFICIENT STRENGTH.

INSPECTION AND TESTING

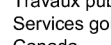
1. PROVIDE INSPECTION REPORTS PREPARED BY AN INDEPENDENT INSPECTION AND TESTING AGENCY FOR THE SCOPES LISTED BELOW.THE COST OF THE INSPECTION WILL BE BORNE BY THE CONTRACTOR.

REJECTED WORK

1. DO NOT DELIVER MATERIALS WHICH ARE KNOWN NOT TO MEET THE REQUIREMENTS OF THE SPECIFICATIONS. IF REJECTED AFTER DELIVERY, REMOVE IMMEDIATELY FROM SITE.




Public Works and  
Government Services  
Canada



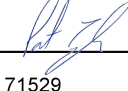
Traavaux publics et  
Services gouvernementaux  
Canada

REAL PROPERTY SERVICES  
Western Region  
SERVICES IMMOBILIERS  
Région de l'ouest



237 - 4 Avenue SW, Suite 3300  
Calgary, Alberta Canada T2P 4K3  
T: 403.243.8380 | wsp.com  
WSP PROJECT No.: 191-09179-00

PERMIT TO PRACTICE  
WSP CANADA INC.

RM SIGNATURE:   
RM APEGA ID #: 71529  
DATE: April 30 2020  
PERMIT NUMBER: P007641  
The Association of Professional Engineers and  
Geoscientists of Alberta (APEGA)

3	ISSUED FOR TENDER	2020.05.01
2	ISSUED FOR CLASS 'A' UPDATED COSTING	2020.02.20
1	ISSUED FOR INFORMATION	2019.11.12
0	ISSUED FOR CLASS A COSTING	2019.10.11
Revision	Description	Date
Client		client

CORRECTIONAL SERVICE  
CANADA (CSC)

Project titleProjet

BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB

CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT

Designed byConcu par  
KV

Drawn byDessine par  
RDP

Approved byApprouve par  
PTT

PWSSC Project ManagerApprouve par

Drawing titleTitre du dessin

GENERAL NOTES

Project no/No du projet

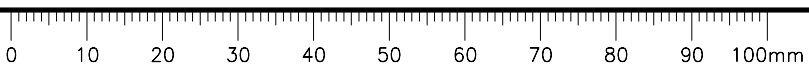
Drawing no/No du dessin

Revision no.

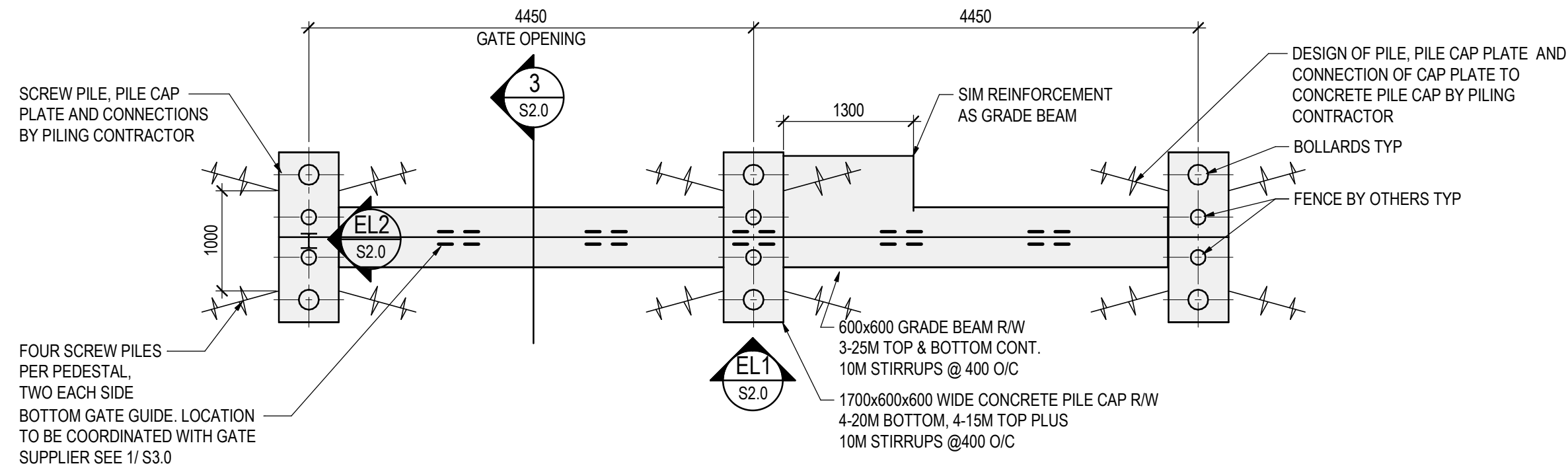
R.100664

S1.0

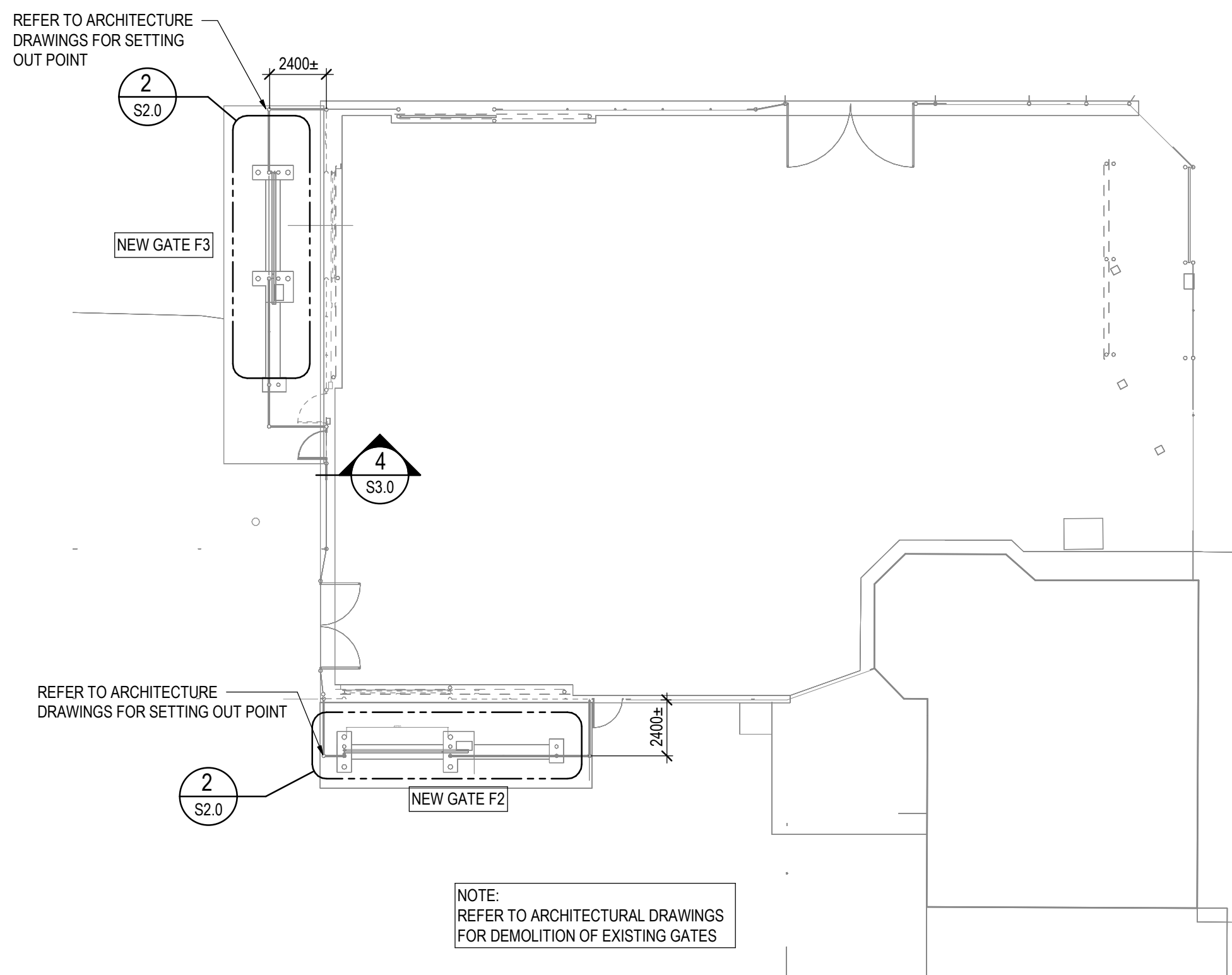
OF



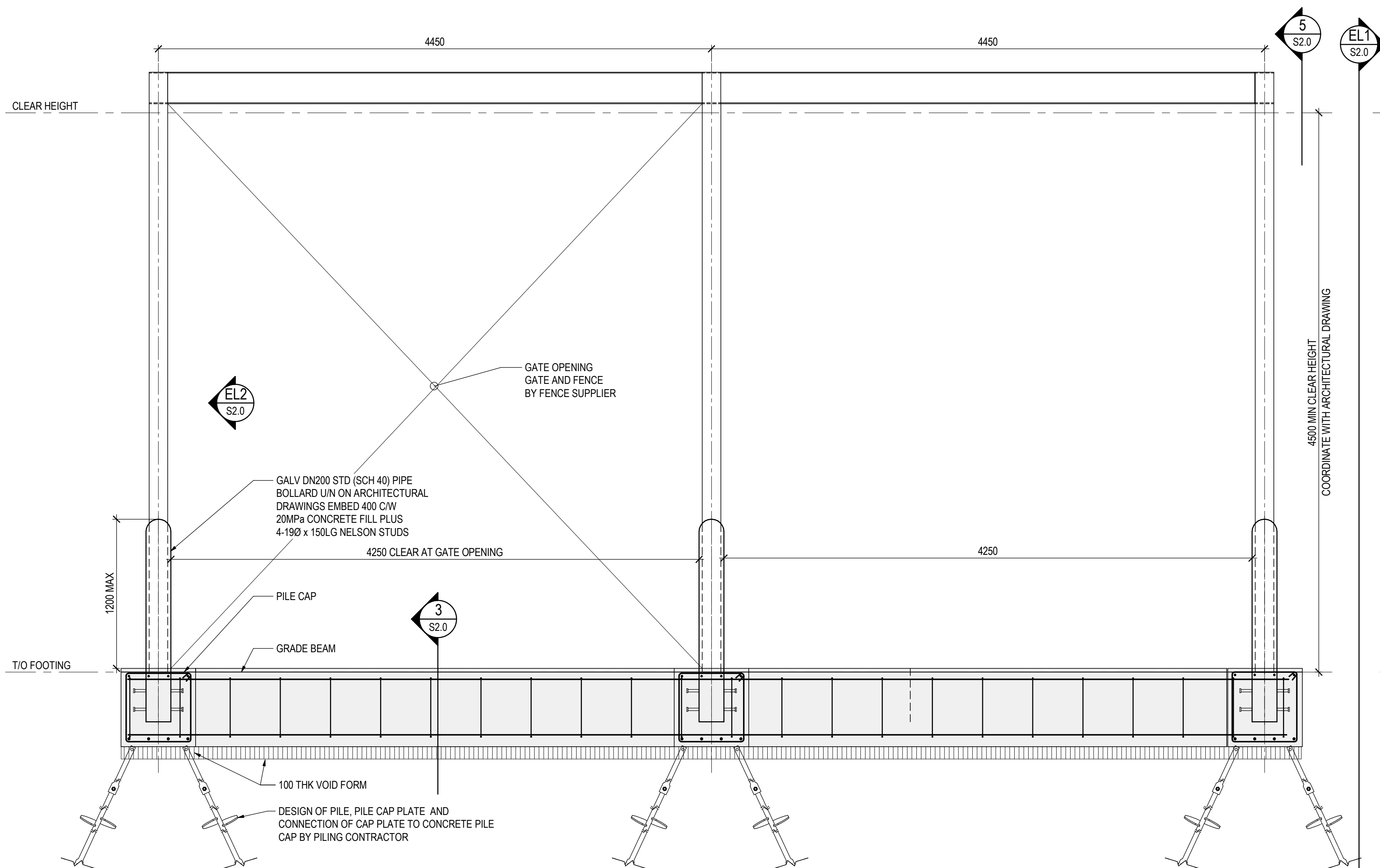




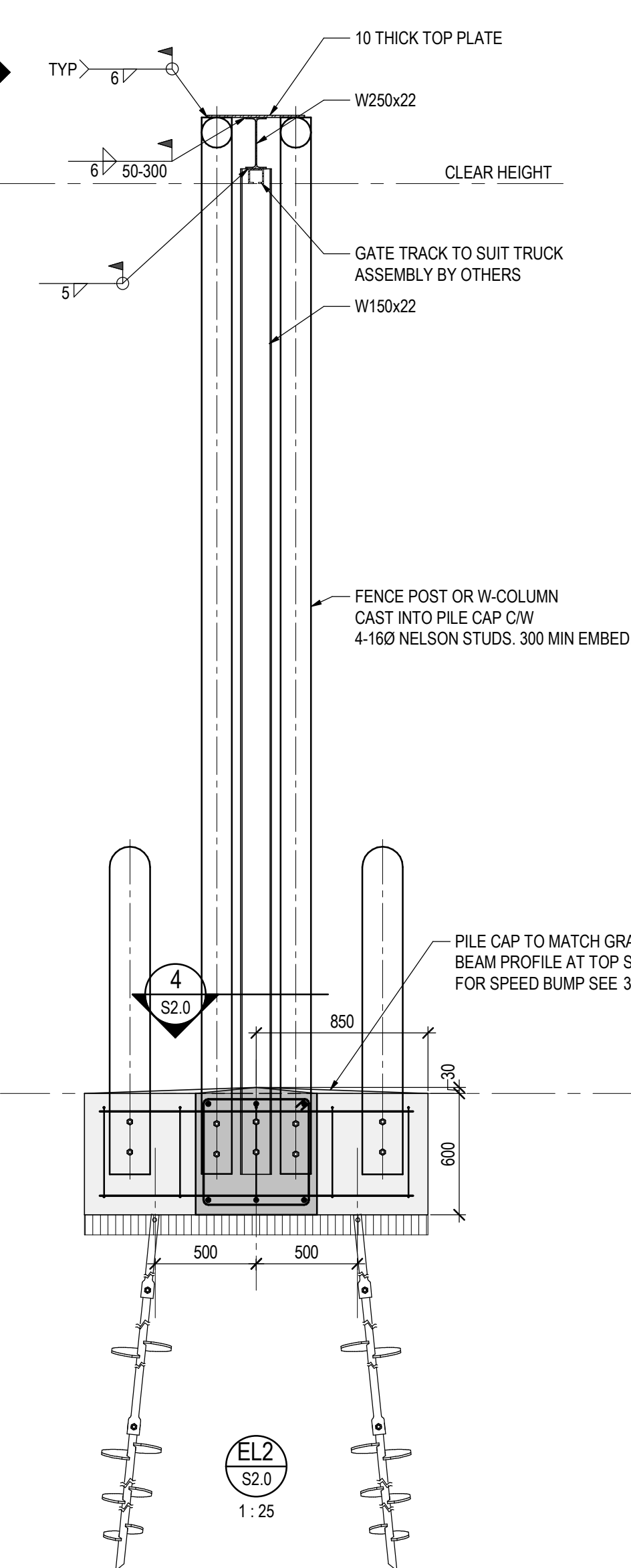
**2 FOUNDATION PLAN**  
S2.0 1 : 50



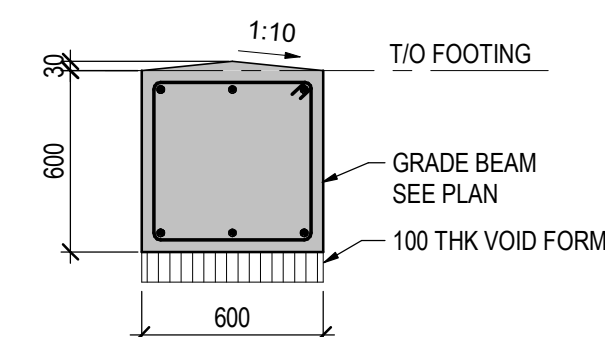
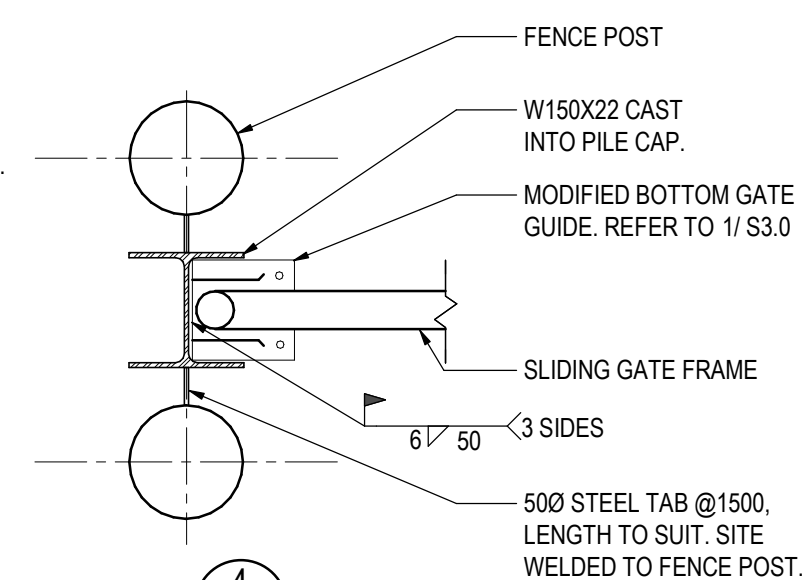
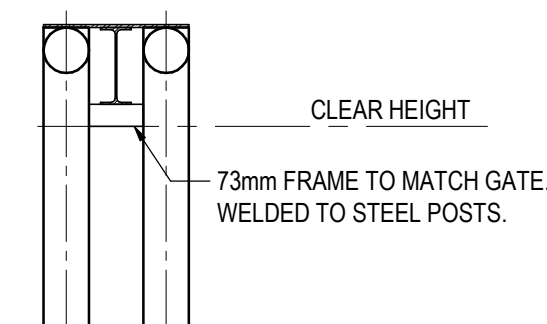
**1 SITE PLAN**  
S2.0 1 : 200



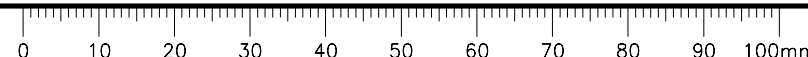
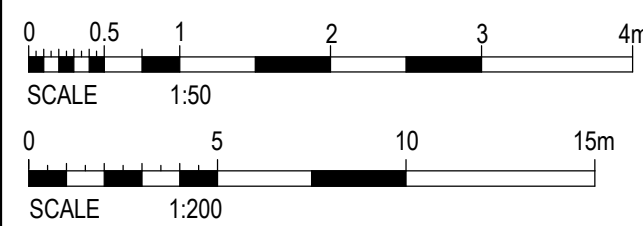
**EL1 S2.0**  
1 : 25



**EL2 S2.0**  
1 : 25



**3 S2.0**  
1 : 25



**PRELIMINARY**  
NOT FOR CONSTRUCTION



237 - 4 Avenue SW, Suite 3300  
Calgary, Alberta Canada T2P 4K3  
T: 403.243.8380 | wsp.com  
WSP PROJECT No.: 191-09179-00

**PERMIT TO PRACTICE**  
WSP CANADA INC.

RM SIGNATURE:

RM APEGA ID #: 71529

DATE: April 30 2020

**PERMIT NUMBER: P007641**  
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



April 30 2020

Revision	Description	Date
3	ISSUED FOR TENDER	2020.05.01
2	ISSUED FOR CLASS 'A' UPADTED COSTING	2020.02.20
1	ISSUED FOR INFORMATION	2019.11.12
0	ISSUED FOR CLASS A COSTING	2019.10.11

Client

**CORRECTIONAL SERVICE CANADA (CSC)**

Project title

**BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB**

**CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT**

Designed by

**KV**

Drawn by

**RDP**

Approved by

**PTT**

PWGSC Project Manager

Drawing title

**GATE REPLACEMENT - PLAN  
SECTIONS AND DETAILS**

Project no/No du projet

**R.100664**

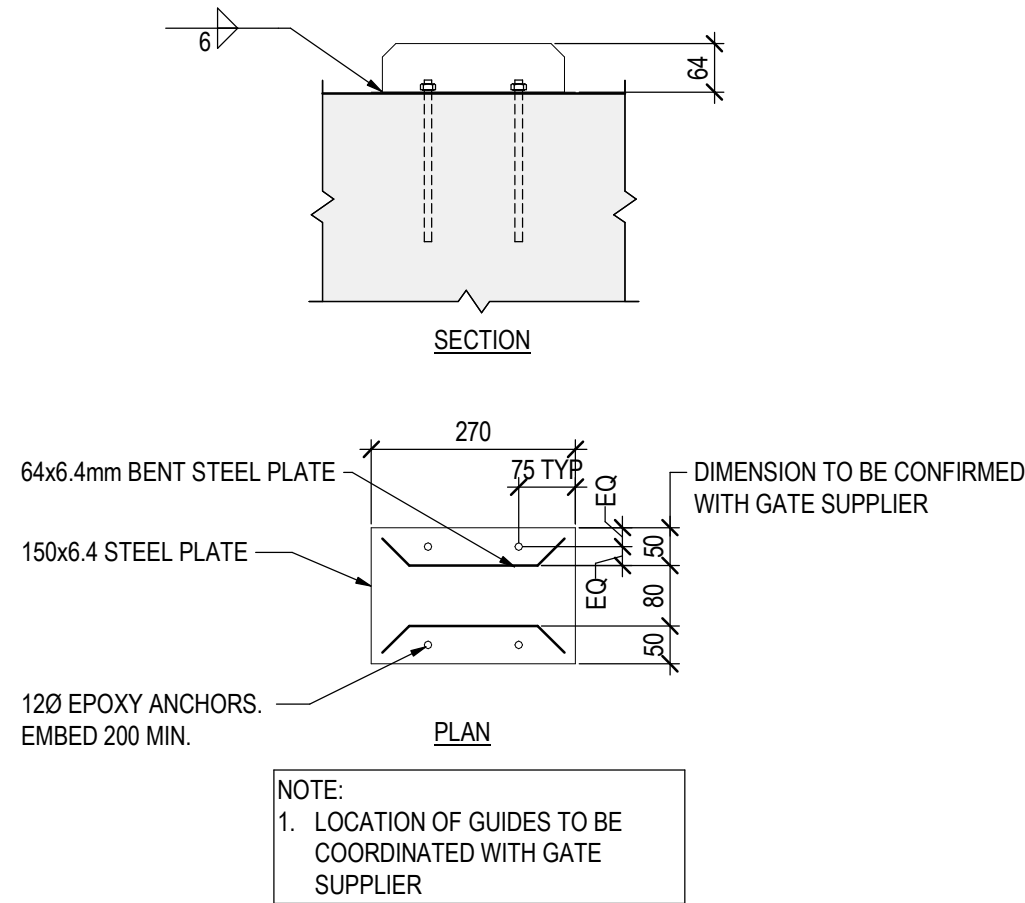
Drawing no/No du dessin

**S2.0**

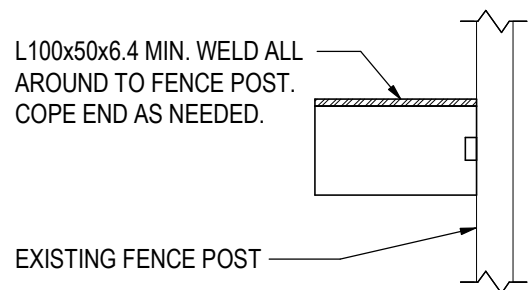
Revision no.

**OF**

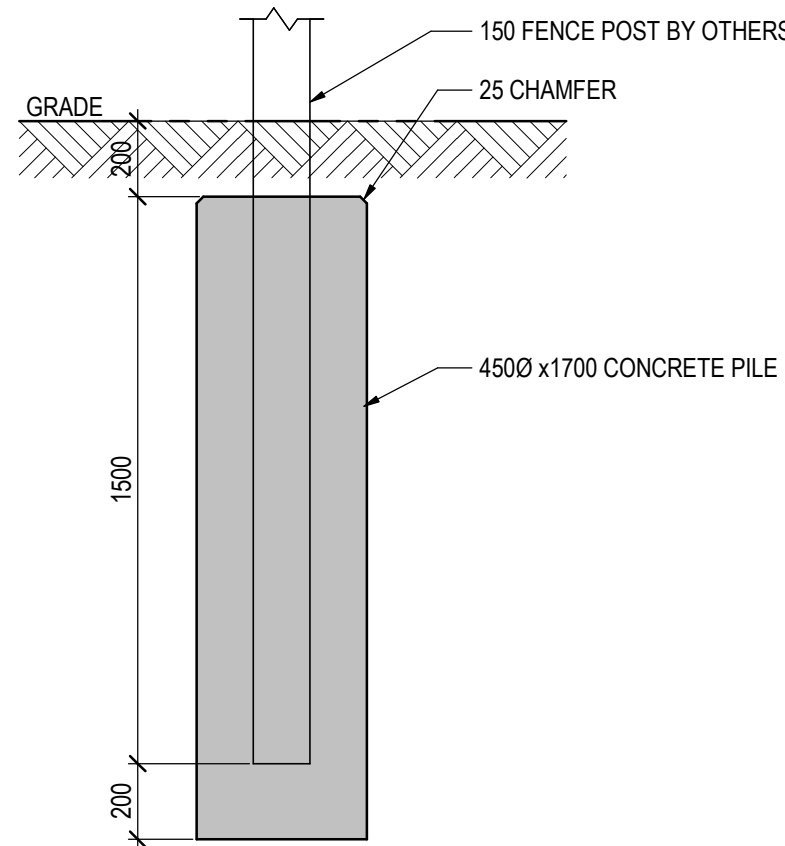




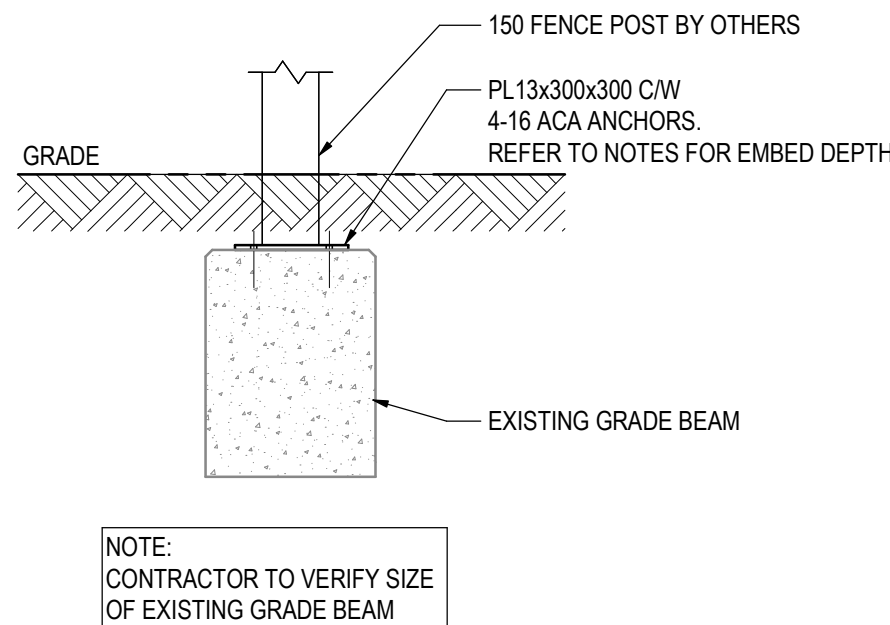
1  
S3.0  
1:10  
BOTTOM GATE GUIDE



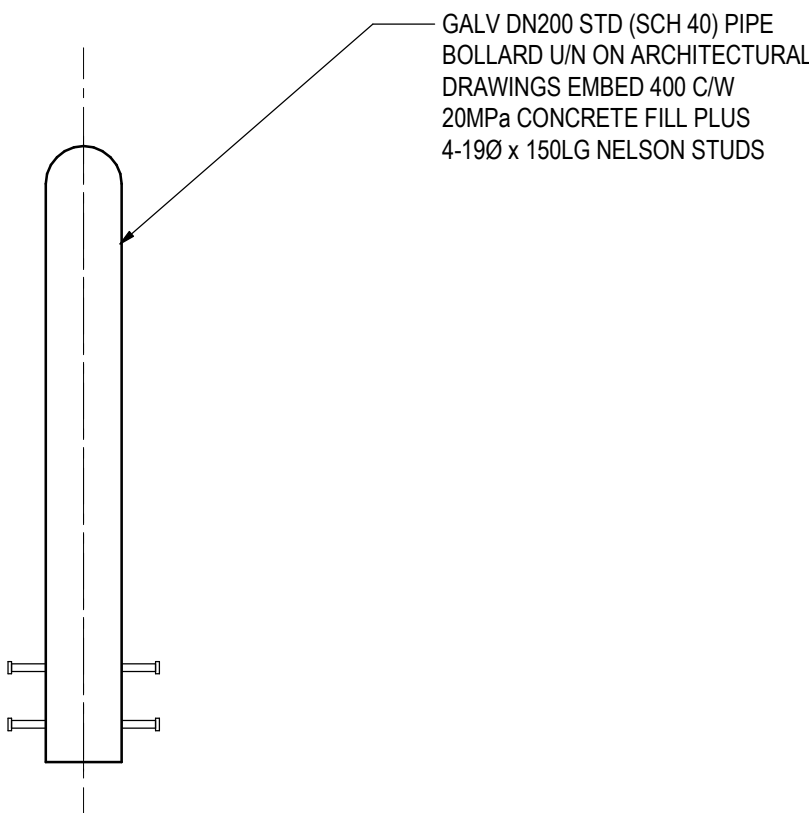
2  
S3.0  
1:10  
POLE MOUNTED L-BRACKET FOR CABLE TRAY SUPPORT



3  
S3.0  
1:20  
TYPICAL FENCE POST DETAIL (NOT CAST INTO GRADE BEAM)



4  
S3.0  
1:20  
TYPICAL FENCE POST DETAIL (CAST INTO GRADE BEAM)



5  
S3.0  
1:20  
TYPICAL BOLLARD POST DETAIL

## PRELIMINARY NOT FOR CONSTRUCTION



237 - 4 Avenue SW, Suite 3300  
Calgary, Alberta Canada T2P 4K3  
T: 403.243.8380 | wsp.com  
WSP PROJECT No.: 191-09179-00

<b>PERMIT TO PRACTICE WSP CANADA INC.</b>	
RM SIGNATURE:	
RM APEGA ID #:	71529
DATE:	April 30 2020
<b>PERMIT NUMBER: P007641</b> The Association of Professional Engineers and Geoscientists of Alberta (APEGA)	



April 30 2020

Revision	Description	Date
3	ISSUED FOR TENDER	2020.05.01
2	ISSUED FOR CLASS 'A' UPADTED COSTING	2020.02.20
1	ISSUED FOR INFORMATION	2019.11.12
0	ISSUED FOR CLASS A COSTING	2019.10.11

Client  
**CORRECTIONAL SERVICE  
CANADA (CSC)**

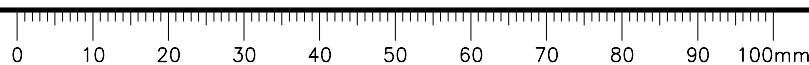
Project title  
**BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB**

**CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT**

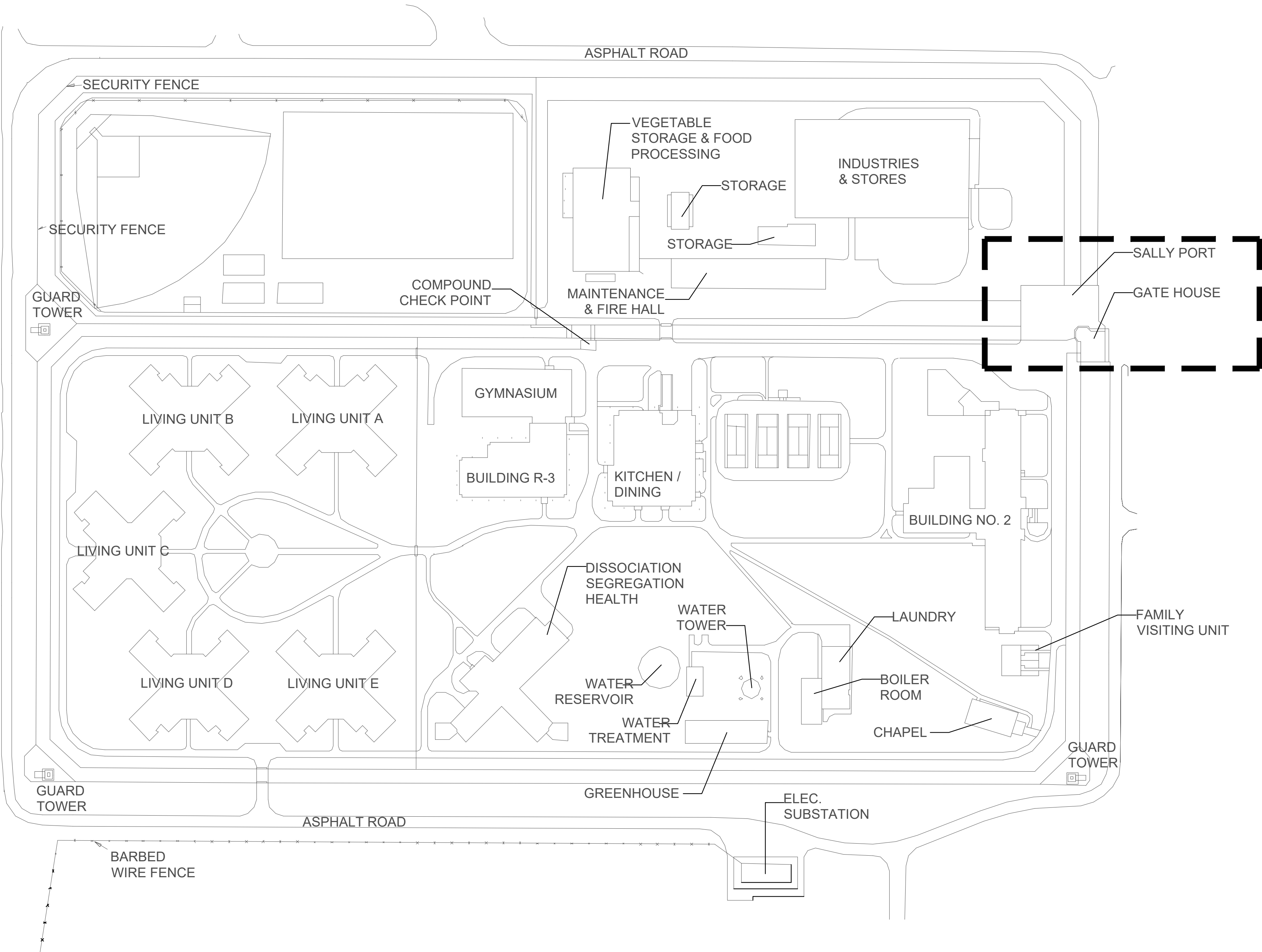
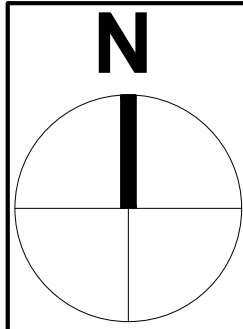
Designed by <b>KV</b>	Concu par
Drawn by <b>RDP</b>	Dessine par
Approved by <b>PTT</b>	Approuve par
PWSC Project Manager	Approuve par

Drawing title  
**SECTIONS AND DETAILS**

Project no/No du projet <b>R.100664</b>	Drawing no/No du dessin <b>S3.0</b>	Revision no. <b>OF</b>
--	--	---------------------------



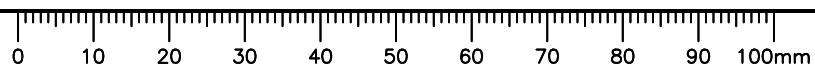




1 SITE PLAN  
E0.1 NTS


GENERAL NOTES:

1. PROJECT SCOPE OF WORK IS LOCATED WITHIN THE DASHED LINE AREA AS SHOWN IN SITE PLAN ABOVE.



SYMBOL LEGEND	
SYMBOL	DESCRIPTION
POWER AND SECURITY	
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE ABOVE COUNTER
	QUAD RECEPTACLE
	SPECIAL RECEPTACLE
	CEILING MOUNTED RECEPTACLE
	GATE SECURITY - PUSHBUTTON
MECHANICAL	
	MOTOR
	UNFUSED DISCONNECT
	THERMOSTAT
	EQUIPMENT DESIGNATION
PANELBOARDS AND DISTRIBUTION	
	PANELBOARD - SURFACE MOUNTED
	PLYWOOD BACKBOARD
	GROUND BUS
	WALL MOUNTED PROGRAMMABLE METER
CONDUIT AND JUNCTION BOXES	
	ALTERNATE JUNCTION BOX
	JUNCTION BOX - POST MOUNTED
	JUNCTION BOX - GROUND MOUNTED
	CONDUIT
	UNDERGROUND CONDUIT
NOTES, LINES, AND ABBREVIATIONS	
	DRAWING REVISION KEYNOTE
	DRAWING DESCRIPTION/INSTRUCTION KEYNOTE
	DRAWING EQUIPMENT/DEVICE KEYNOTE
	DRAWING KEYNOTE
	LINE TYPE AND WEIGHT INDICATE CONSTRUCTION
	LINE TYPE AND WEIGHT INDICATE EXISTING
	LINE TYPE AND WEIGHT INDICATE DEMOLITION
IG	ISOLATED GROUND
GFI	GROUND FAULT INTERRUPTING
HK	HOUSEKEEPING RECEPTACLE
ER	EXISTING TO REMAIN
R	TO BE REMOVED
RL	EXISTING TO BE RELOCATED

DRAWING LIST	
NUMBER	NAME
E0.1	SITE PLAN, SYMBOL LEGEND, & DWG. LIST
ED1.0	DEMOLITION ELECTRICAL LAYOUT
E1.0	ELECTRICAL LAYOUT
E2.0	ELECTRICAL DETAILS

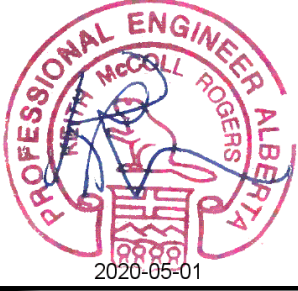


Public Works and  
Government Services  
Canada

Travaux publics et  
Services gouvernementaux  
Canada

REAL PROPERTY SERVICES  
Western Region  
SERVICES IMMOBILIERS  
Région de l'ouest

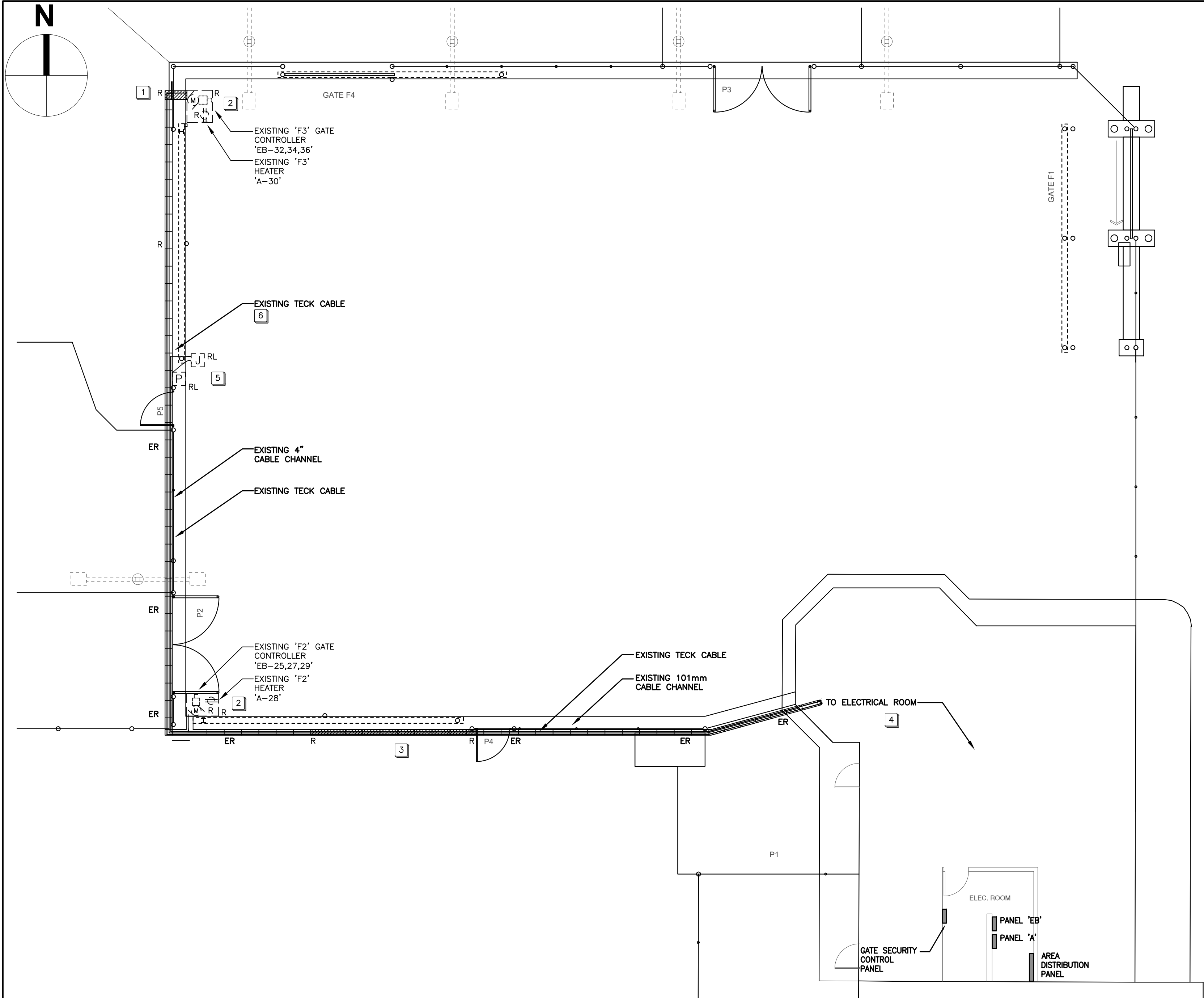
PRELIMINARY  
NOT FOR CONSTRUCTION



PERMIT TO PRACTICE  
WSP Canada Inc.  
PERMIT NUMBER: P07641  
The Association of Professional  
Engineers and Geoscientists of Alberta

5		
4		
3	ISSUED FOR TENDER	2020/05/01
2	ISSUED FOR CLASS A UPDATED COSTING	2020/02/20
1	ISSUED FOR INFORMATION	2019/11/12
0	ISSUED FOR CLASS A COSTING	2019/10/11
Revision	Description	Date
Client		client
CORRECTIONAL SERVICE CANADA (CSC)		
Project title BOWDEN INSTITUTION HIGHWAY #2, PO BOX 6000, INNISFAIL, AB		
Project CSC BOWDEN INSTITUTION SALLY PORT GATE REPLACEMENT		
Designed by DU		Conçu par
Drawn by DU		Dessiné par
Approved by KR		Approuvé par
PWSC Project Manager YOUSSEF BRAHIMI		Administrateur de Projets TPSGC
Drawing title		Titre du dessin
SITE PLAN, SYMBOL LEGEND & DWG LIST		
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	E0.1 OF	



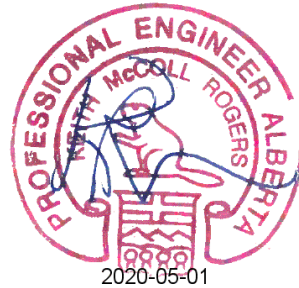


1 DEMO ELECTRICAL LAYOUT  
ED1.0 1:100

KEY NOTES:

- EXISTING VERTICAL CABLE TRAY IN THIS LOCATION WHICH CONTAINS TECK CABLE FEEDING GATE CONTROLLER AND HEATER IS TO BE REMOVED. ELECTRICAL CONTRACTOR IS TO CONFIRM THAT NO ADDITIONAL CABLES OTHER THAN THOSE FEEDING GATE CONTROLLER AND HEATER ARE LOCATED WITHIN CABLE TRAY PRIOR TO DEMOLITION. CABLES FEEDING GATE CONTROLLER AND HEATER ARE TO BE DISCONNECTED AND PULLED BACK TO NEW GATE CONTROLLER LOCATION AS INDICATED ON DRAWING E1.0. REFER TO DETAIL #1 ON DRAWING E2.0 FOR FURTHER DETAILS REGARDING CABLE TRAY DEMOLITION.
- EXISTING GATE CONTROLLER, MOTOR COMPONENTS, HEATER, AND ALL ASSOCIATED ELECTRICAL INFRASTRUCTURE IS TO BE REMOVED FROM THIS LOCATION. EXISTING CONDUITS SHALL BE CUT, CAPPED, AND ABANDONED. TECK CABLE FEEDING EXISTING GATE CONTROLLER IS TO BE DISCONNECTED AND PULLED BACK TO NEW GATE CONTROLLER LOCATION. ELECTRICAL CONTRACTOR IS TO COORDINATE WITH GENERAL CONTRACTOR AND DEPARTMENT REPRESENTATIVE REGARDING HOW LONG GATE DEMOLITION WILL TAKE SO THAT PRISON STAFF CAN BE MADE AWARE OF NON FUNCTIONAL GATE DURING THIS TIME. ELECTRICAL CONTRACTOR IS ALSO TO COORDINATE WITH DEPARTMENT REPRESENTATIVE REGARDING MANUAL GATE OPERATION PROCEDURES IN THE EVENT THAT THE GATE MUST BE OPENED DURING TIME OF CONSTRUCTION. REFER TO DETAIL #1 ON DRAWING E2.0 FOR FURTHER DETAILS ON WEST GATE CONTROLLER DEMOLITION, AND DETAIL #2 ON DRAWING E2.0 FOR FURTHER DETAILS ON SOUTH GATE CONTROLLER DEMOLITION.
- EXISTING 103mm CABLE TRAY THAT RUNS HORIZONTALLY ALONG EXTERIOR OF SOUTH FENCE IS TO BE REMOVED SO THAT IT CAN BE RELOCATED TO TOP OF METAL FRAME ABOVE EXISTING SOUTH GATE (F2) AREA. ELECTRICAL CONTRACTOR IS TO CONFIRM WHICH CABLES ARE RUN WITHIN EXISTING CABLE TRAY IN THIS LOCATION, AND ENSURE THAT THEY ARE TEMPORARILY SUPPORTED AS WELL AS PROTECTED FROM EXTERIOR WEATHER CONDITIONS UNTIL RELOCATION IS COMPLETE. REFER TO DETAIL # 3 ON DRAWING E2.0 FOR FURTHER DETAILS REGARDING CABLE TRAY DEMOLITION AND RELOCATION.
- EXISTING TECK CABLES WHICH FEED GATE CONTROLLERS HAVE BEEN RUN THROUGHOUT 101mm CABLE CHANNEL AND INTO JUNCTION BOXES LOCATED ON ROOFTOP AREA. ELECTRICAL PANELS FEEDING JUNCTION BOXES CAN BE FOUND IN GATE HOUSE ELECTRICAL ROOM LOCATION. ELECTRICAL CONTRACTOR IS TO CONFIRM ELECTRICAL ROOM LOCATION, AS WELL AS COORDINATE WITH FACILITIES STAFF REGARDING ELECTRICAL ROOM ACCESS PRIOR TO WORK ON PROJECT TAKING PLACE.
- GROUND MOUNTED ELECTRICAL ENCLOSURE, AND ASSOCIATED GATE SECURITY PUSHBUTTON IS TO BE REMOVED AND RELOCATED TO ALLOW FOR NEW GATE 'F3' INSTALLATION. ELECTRICAL CONTRACTOR IS TO CONFIRM FUNCTIONALITY OF GATE SECURITY PUSHBUTTON PRIOR TO REMOVAL AND RELOCATION. TECK CABLE FEEDING EXISTING ELECTRICAL ENCLOSURE AND SECURITY PUSHBUTTON IS TO BE DISCONNECTED AND PULLED BACK TO NEW POST MOUNTED JUNCTION BOX LOCATION AS SHOWN IN DETAIL #3 ON DRAWING E1.0. ELECTRICAL CONTRACTOR IS TO COORDINATE WITH GENERAL CONTRACTOR AND DEPARTMENT REPRESENTATIVE REGARDING HOW LONG GATE DEMOLITION WILL TAKE SO THAT PRISON STAFF CAN BE MADE AWARE OF NON FUNCTIONAL GATE DURING THIS TIME. ELECTRICAL CONTRACTOR IS ALSO TO COORDINATE WITH DEPARTMENT REPRESENTATIVE REGARDING MANUAL GATE OPERATION PROCEDURES IN THE EVENT THAT THE GATE MUST BE OPENED DURING TIME OF CONSTRUCTION. REFER TO DETAIL #6 ON DRAWING E2.0 FOR FURTHER DETAILS ON GROUND MOUNTED ELECTRICAL ENCLOSURE AND SECURITY PUSH BUTTON DEMOLITION.
- ELECTRICAL CONTRACTOR IS TO DETERMINE LOCATION OF CIRCUIT BREAKERS WHICH PROVIDE POWER TO TECK CABLE FEEDING GROUND MOUNTED ELECTRICAL ENCLOSURE. CIRCUIT BREAKERS ARE TO BE TURNED OFF AND LOCKED IN THIS POSITION PRIOR TO ANY REMOVAL AND RELOCATION OF THIS EQUIPMENT TAKING PLACE. ELECTRICAL CONTRACTOR IS ALSO TO DETERMINE WHAT IMPACT TURNING OFF THESE CIRCUITS MIGHT HAVE ON THE BUILDING SECURITY SYSTEM, AND REPORT FINDINGS TO DEPARTMENTAL REPRESENTATIVE AND ENGINEER OF RECORD PRIOR TO REMOVAL AND RELOCATION TAKING PLACE.

PRELIMINARY  
NOT FOR CONSTRUCTION



PERMIT TO PRACTICE  
WSP Canada Inc.  
PERMIT NUMBER: P07641  
The Association of Professional Engineers and Geoscientists of Alberta

5		
4		
3	ISSUED FOR TENDER	2020/05/01
2	ISSUED FOR CLASS A UPDATED COSTING	2020/02/20
1	ISSUED FOR INFORMATION	2019/11/12
0	ISSUED FOR CLASS A COSTING	2019/10/11
Revision	Description	Date
Client		client

CORRECTIONAL SERVICE  
CANADA (CSC)

Project title  
BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB

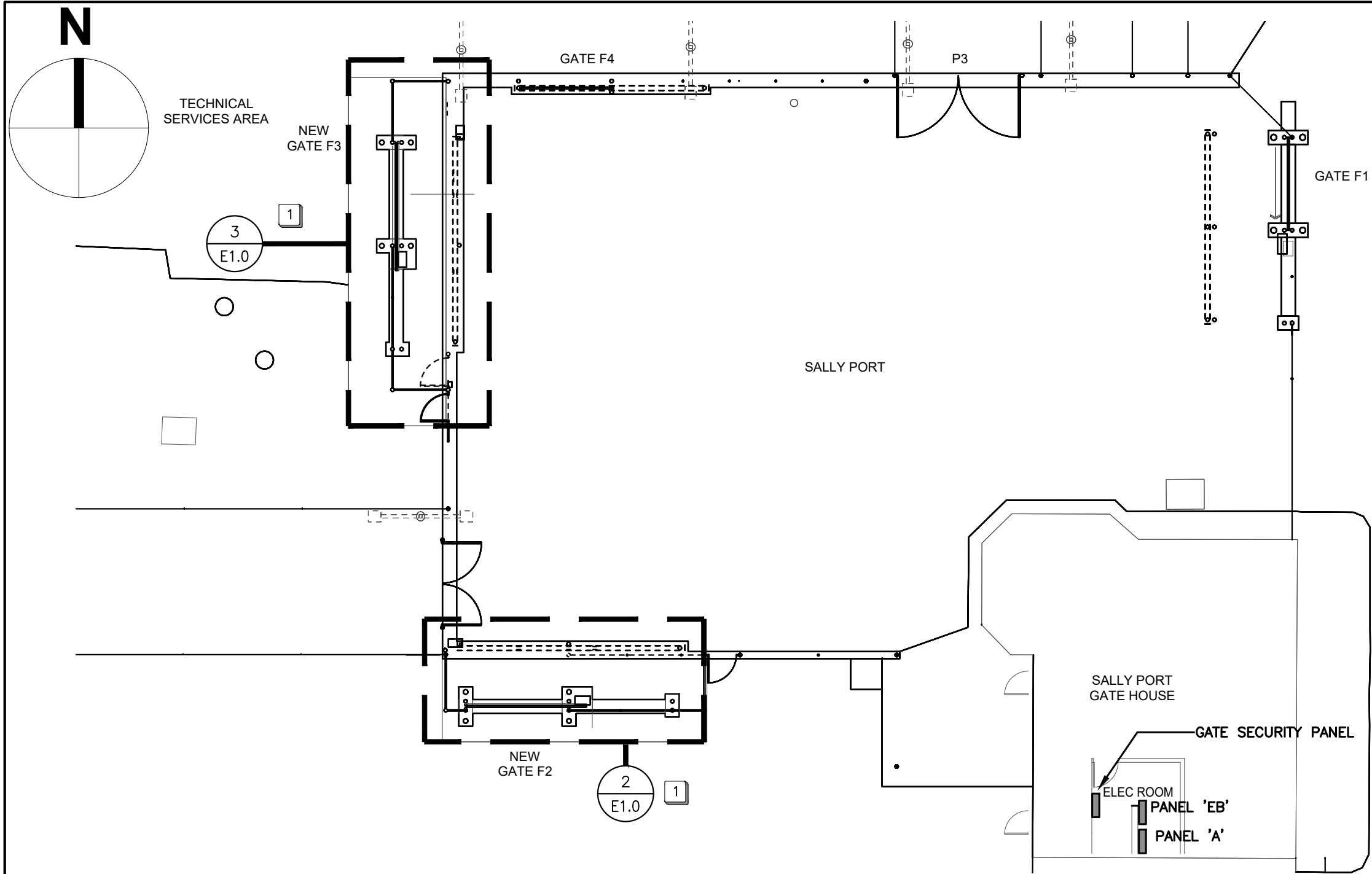
CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT

Designed by DU	Conçu par
Drawn by DU	Dessiné par
Approved by KR	Approuvé par
PWGSC Project Manager YOUSSEF BRAHIMI	Administrateur de Projets TPSSC

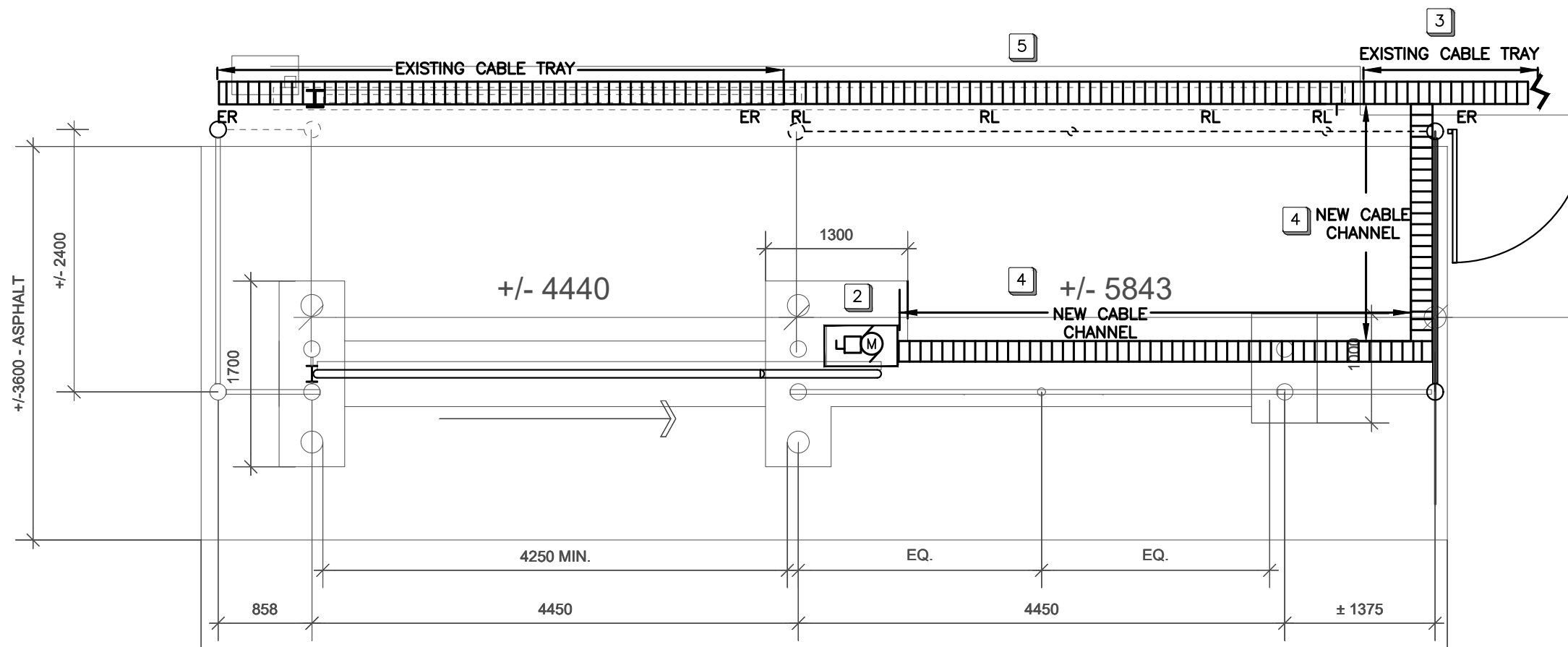
Drawing title  
DEMOLITION  
ELECTRICAL LAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	ED1.0 OF	





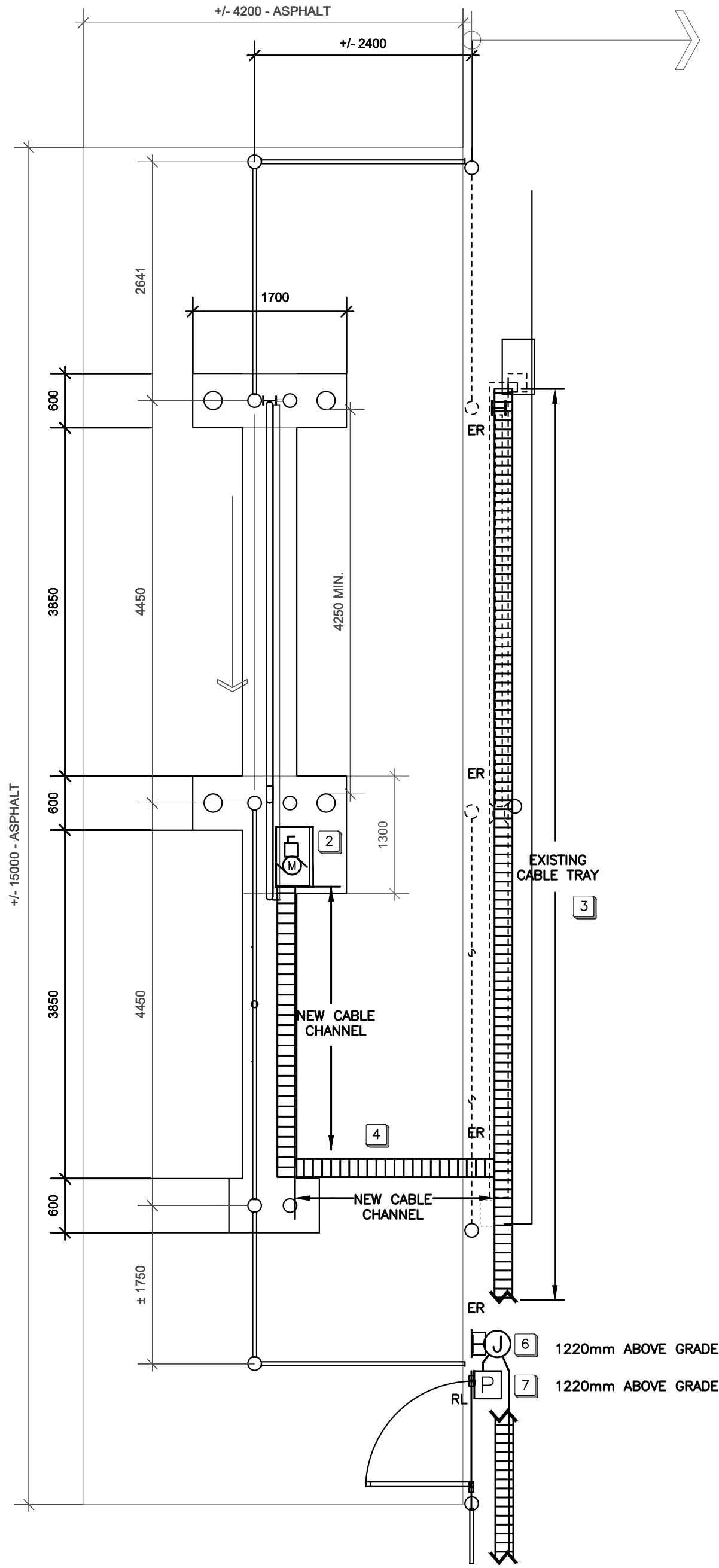
1 ELECTRICAL LAYOUT  
E1.0 1:50



2 NEW GATE 'F2' ELECTRICAL LAYOUT  
E1.0 1:50

KEY NOTES:

- PROJECT SCOPE OF WORK IS LOCATED WITHIN THE DASHED LINE AREAS AS SHOWN IN SITE PLAN ABOVE. ELECTRICAL CONTRACTOR IS TO COORDINATE WITH GENERAL CONTRACTOR AND DEPARTMENT REPRESENTATIVE REGARDING HOW LONG GATE INSTALLATION WILL TAKE PLACE SO THAT PRISON STAFF CAN BE MADE AWARE OF NON FUNCTIONAL GATE DURING THIS TIME. ELECTRICAL CONTRACTOR IS ALSO TO COORDINATE WITH DEPARTMENT REPRESENTATIVE REGARDING MANUAL GATE OPERATION PROCEDURES IN THE EVENT THAT THE GATE MUST BE OPENED DURING TIME OF CONSTRUCTION. REFER TO DRAWING ED1.0 FOR ADDITIONAL INFORMATION ON EXISTING CONDITIONS.
- NEW GATE CONTROLLER SUPPLIED BY ELECTRICAL CONTRACTOR IS TO BE INSTALLED IN THIS LOCATION (HYSECURITY MODEL SLIDE DRIVER 40-C - 222 CE ST, 208V, 3ø, 5.7A, C/W FACTORY INSTALLED HEATER & SOLENOID DEADBOLT LOCK). ELECTRICAL CONTRACTOR IS TO ENSURE THAT GATE CONTROLLER ORDERED MATCHES EXISTING GATE CONTROLLER INSTALLED ON EAST SIDE OF SALLY PORT AREA (GATE F-1). NEW GATE CONTROLLER IS TO BE PROVIDED WITH POWER USING EXISTING TECK CABLE WHICH WAS FEEDING OLD GATE CONTROLLER IN THIS AREA (SEE DRAWING ED1.0). ELECTRICAL CONTRACTOR IS TO USE TECK CONNECTORS AND FITTING AS PER CANADIAN ELECTRICAL CODE REQUIREMENTS. EXISTING CABLE IS TO BE VERIFIED ON-SITE TO BE ADEQUATE FOR NEW GATE CONTROLLER PRIOR TO INSTALLATION. CABLE FEEDING GATE CONTROLLERS IS TO BE SUPPORTED WITHIN 300mm OF EVERY JUNCTION BOX OR FITTING, AND MUST BE SUPPORTED AT INTERVALS OF NOT MORE THAN 1.5 METERS THROUGHOUT THE ENTIRE RUN AS PER CANADIAN ELECTRICAL CODE REQUIREMENTS (C.E.C 2018, RU12-2202).
- EXISTING CABLE TRAY, AND TECK CABLE WHICH WAS FEEDING EXISTING CONTROLLERS IS TO BE UTILIZED TO FEED POWER TO NEW GATE CONTROLLER UNITS. ELECTRICAL CONTRACTOR IS TO CONFIRM THAT EXISTING CABLING IS IN FUNCTIONAL CONDITION AND MEETS 2018 ELECTRICAL CODE REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK. FOR DETAILS ON EXISTING CABLE ROUTING AND ASSOCIATED ELECTRICAL PANEL LOCATIONS REFER TO DRAWING ED1.0.
- NEW 101mm ALUMINUM METALLIC CHANNEL TRAY (T&B CATALOGUE # ALT C 04 V-3) IS TO BE INSTALLED IN THIS LOCATION TO PROVIDE A RACEWAY FOR EXISTING TECK CABLE TO NEW GATE CONTROLLER UNIT. ELECTRICAL CONTRACTOR IS TO CONFIRM THAT EXISTING CABLING IS IN FUNCTIONAL CONDITION AND MEETS 2018 ELECTRICAL CODE REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK. NEW CABLE CHANNEL IS TO BE TIED INTO EXISTING CABLE TRAY USING MANUFACTURER APPROVED FITTINGS, AND RUN ALONG THE TOP OF NEW FENCE WHICH CONNECTS TO NEW GATE CONTROLLER LOCATION. CABLE CHANNEL IS TO BE FASTENED TO TOP OF NEW FENCE UTILIZING CANTRUSS AND "U-BOLTS" AS WAS DONE IN THE REST OF THE EXTERIOR GATE AREA FACILITY (SEE DETAIL #4 ON DRAWING E2.0). NEW CABLE CHANNEL IS TO BE BONDED AT INTERVALS NOT EXCEEDING 15 METERS AS REQUIRED BY CANADIAN ELECTRICAL CODE (C.E.C 2018 RULE 12-2208).
- EXISTING SECURITY CABLE TRAY IN THIS LOCATION IS TO BE REMOVED AND RELOCATED TO TOP OF EXISTING METAL FRAME ABOVE OLD GATE AREA. ELECTRICAL CONTRACTOR IS TO FASTEN RELOCATED CABLE TRAY TO TOP OF METAL FRAME ABOVE OLD GATE USING THE SAME METHOD THAT IS BEING USED FOR THE EXISTING CABLE TRAY IN THIS LOCATION. VERTICAL SECTION OF RELOCATED CABLE TRAY IS TO BE SUPPORTED TO EXISTING FENCE POST USING THE SAME METHOD OF SUPPORT THAT IS INSTALLED THROUGHOUT THE FACILITY (SEE DETAIL #5 ON DRAWING E2.0). REFER TO DETAIL #3 ON DRAWING E2.0 FOR DETAILS ON CABLE TRAY RELOCATION.
- NEW WEATHERPROOF POLE MOUNTED JUNCTION BOX (10X10X6, 254mm X 254mm X 152mm, HOFFMAN CAT. #A110106CHNF) IS TO BE INSTALLED IN LOCATION SHOWN. POLE MOUNTED JUNCTION BOX IS TO BE FASTENED TO A GALVANIZED STEEL PLATE (305mm X 305mm X 6mm) WHICH WILL BE TACK WELDED TO THE FENCE POST AT A HEIGHT OF 1220mm ABOVE GRADE (REFER TO NOTE 17, ON ARCHITECTURAL DRAWING A1.2). ELECTRICAL CONTRACTOR IS TO FEED POWER TO NEW WEATHERPROOF JUNCTION BOX AND ASSOCIATED PUSHBUTTON USING TECK CABLE WHICH WAS FED INTO EXISTING GROUND MOUNTED ELECTRICAL ENCLOSURE AS SHOWN IN DETAIL #6 ON DRAWING E2.0.
- RELOCATED SECURITY PUSHBUTTON IS TO BE INSTALLED AT A HEIGHT OF 1220mm ABOVE GRADE IN LOCATION SHOWN. ELECTRICAL CONTRACTOR IS TO CONFIRM FUNCTIONALITY OF PUSHBUTTON UPON COMPLETION OF INSTALLATION, AND ALSO VERIFY THAT IT IS OPERATING AS REQUIRED BY PRISON SECURITY STAFF AND DEPARTMENTAL REPRESENTATIVE AS REQUIRED.



3 NEW GATE 'F3' ELECTRICAL LAYOUT  
E1.0 1:50

PRELIMINARY  
NOT FOR CONSTRUCTION



PERMIT TO PRACTICE  
WSP Canada Inc.  
PERMIT NUMBER: P07641  
The Association of Professional Engineers and Geoscientists of Alberta

5		
4		
3	ISSUED FOR TENDER	2020/05/01
2	ISSUED FOR CLASS A UPDATED COSTING	2020/02/20
1	ISSUED FOR INFORMATION	2019/11/12
0	ISSUED FOR CLASS A COSTING	2019/10/11
Revision	Description	Date
Client		client

CORRECTIONAL SERVICE  
CANADA (CSC)

Project title  
**BOWDEN INSTITUTION  
HIGHWAY #2, PO BOX 6000, INNISFAIL, AB**

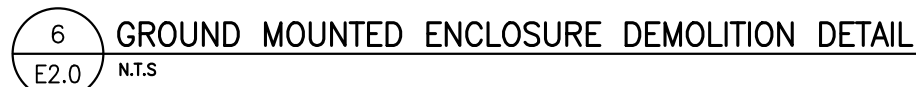
CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT

Designed by DU	Conçu par
Drawn by DU	Dessiné par
Approved by KR	Approuvé par
PWGSC Project Manager YOUSSEF BRAHIMI	Administrateur de Projets TPSSC
Drawing title	Titre du dessin

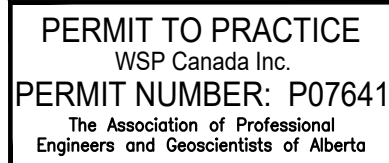
ELECTRICAL LAYOUT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	<b>E1.0</b> OF	





- 1 EXISTING GATE F3 (WEST GATE) CONTROLLER, ENCLOSURE, CABLE TRAY, AND ALL ASSOCIATED ELECTRICAL EQUIPMENT IS TO BE REMOVED FROM THIS LOCATION WITH TECK CABLE PULLED BACK TO NEW GATE LOCATION AS INDICATED ON DRAWING E1.0. ELECTRICAL CONTRACTOR IS TO CONFIRM IF EXISTING CABLE TRAY CONTAINS ANY CABLES SUPPLYING POWER TO OTHER EQUIPMENT PRIOR TO DEMOLITION AND REMOVAL.
- 2 EXISTING GATE F2 (SOUTH GATE) CONTROLLER, ENCLOSURE, CABLE TRAY, AND ALL ASSOCIATED ELECTRICAL EQUIPMENT IS TO BE REMOVED FROM THIS LOCATION WITH TECK CABLE PULLED BACK TO NEW GATE LOCATION AS INDICATED ON DRAWING E1.0. ELECTRICAL CONTRACTOR IS TO CONFIRM IF EXISTING CABLE TRAY CONTAINS ANY CABLES SUPPLYING POWER TO OTHER EQUIPMENT PRIOR TO DEMOLITION AND REMOVAL.
- 3 EXISTING SECURITY CABLE TRAY AS INDICATED IS TO BE REMOVED AND RELOCATED TO TOP OF METAL FRAME ABOVE EXISTING GATE LOCATION AS SHOWN BY HATCHED LINE ABOVE. RELOCATED CABLE TRAY IS TO BE FASTENED TO TOP OF METAL FRAME ABOVE OLD GATE LOCATION USING THE INSTALLATION METHOD THAT IS CURRENTLY BEING USED IN THIS AREA. CABLES WITHIN RELOCATED SECTION OF CABLE TRAY ARE TO BE ADEQUATELY SUPPORTED AS WELL AS PROTECTED UNTIL RELOCATION OF CABLE TRAY HAS TAKEN PLACE.
- 4 101mm OUTDOOR RATED ALUMINUM CABLE CHANNEL TO NEW GATE LOCATIONS IS TO BE INSTALLED USING THE METHOD SHOWN. FOR NEW CABLE CHANNEL AND GATE LOCATIONS REFER TO DRAWING E1.0.
- 5 VERTICAL SECTION OF RELOCATED SECURITY CABLE TRAY THAT RUNS ALONG SIDE EXISTING FENCE POST IS TO BE SUPPORTED USING A METAL BRACKET AS SHOWN.
- 6 RELOCATION OF FENCE MOUNTED PERIMETER SECURITY CABLEING IS TO BE COORDINATED WITH SECURITY SYSTEM CONTRACTOR. ELECTRICAL CONTRACTOR IS TO CARRY A CASH ALLOWANCE FOR SECURITY SYSTEM CONTRACTOR AS INDICATED IN COST ALLOWANCE SECTION OF ELECTRICAL SPECIFICATIONS.
- 7 GROUND MOUNTED ELECTRICAL ENCLOSURE, AND ASSOCIATED GATE SECURITY PUSHBUTTON IS TO BE REMOVED AND RELOCATED TO ALLOW FOR NEW GATE "F3" INSTALLATION. ELECTRICAL CONTRACTOR IS TO CONFIRM FUNCTIONALITY OF GATE SECURITY PUSHBUTTON PRIOR TO REMOVAL AND RELOCATION. TECK CABLE FEEDING EXISTING ELECTRICAL ENCLOSURE AND SECURITY PUSHBUTTON IS TO BE DISCONNECTED AND PULLED BACK TO NEW POST MOUNTED JUNCTION BOX LOCATION AS SHOWN IN DETAIL #3 ON DRAWING E1.0. ELECTRICAL CONTRACTOR IS TO COORDINATE WITH GENERAL CONTRACTOR AND DEPARTMENT REPRESENTATIVE REGARDING HOW LONG GATE DEMOLITION WILL TAKE SO THAT PRISON STAFF CAN BE MADE AWARE OF NON FUNCTIONAL GATE DURING THIS TIME. ELECTRICAL CONTRACTOR IS ALSO TO COORDINATE WITH DEPARTMENT REPRESENTATIVE REGARDING MANUAL GATE OPERATION PROCEDURES IN THE EVENT THAT THE GATE MUST BE OPENED DURING TIME OF CONSTRUCTION. REFER TO DETAIL #6 ON DRAWING E2.0 FOR FURTHER DETAILS ON GROUND MOUNTED ELECTRICAL ENCLOSURE AND SECURITY PUSH BUTTON DEMOLITION.



5		
4		
3	ISSUED FOR TENDER	2020/05/01
2	ISSUED FOR CLASS A UPDATED COSTING	2020/02/20
1	ISSUED FOR INFORMATION	2019/11/12
0	ISSUED FOR CLASS A COSTING	2019/10/11
Revision	Description	Date
Client		client

**CORRECTIONAL SERVICE  
CANADA (CSC)**

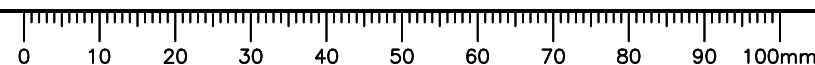
Project title	Project
<p align="center"><b>BOWDEN INSTITUTION</b>  <b>HIGHWAY #2, PO BOX 6000, INNISFAIL, AB</b></p>	

**CSC BOWDEN INSTITUTION  
SALLY PORT  
GATE REPLACEMENT**

Designed by DU	Conçu par
Drawn by DU	Dessiné par
Approved by KR	Approuvé par
PWGSC Project Manager YUCEF BRAHIMI	Administrateur de Projets TPSC
Drawing title	Titre du dessin

## ELECTRICAL DETAILS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	<b>E2.0</b> OF	





1x1 Architecture Inc.

LEGEND

- Anchor shown thus: .....
- Bollard shown thus: .....
- Borehole shown thus: .....
- Buried Powerline shown thus: .....
- Buried Pipe shown thus: .....
- Fences shown thus: .....
- Overhead Powerline shown thus: .....
- Gate Post shown thus: .....
- Light Standard shown thus: .....
- Man Hole shown thus: .....
- Elevation shown thus: .....

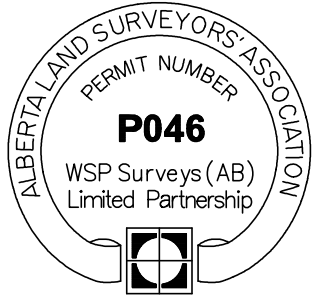
NOTES:


1. Distances and Elevations are shown in metres and decimals thereof.
2. Bearings and Coordinates are Grid (NAD83 Original UTM Z11), derived from differential GPS observations
3. All distances are horizontal ground. Combined Scale Factor = 0.999974
4. All utilities are underground unless noted otherwise.
5. Neither WSP Surveys (AB) Limited and/or its employees assume responsibility for the location of the underground facilities shown or omitted on this plan.
6. Field survey was conducted between September 19, 2019 and September 26, 2019

SKETCH PLAN  
Showing  
TOPOGRAPHIC SURVEY  
within  
S.E. 1/4 SEC. 1  
TWP. 35 RGE. 1 W.5M.  
TOWN OF BOWDEN  
ALBERTA, 2019

Note to Contractors:

Prior to construction you must contact **Alberta One Call**  
( **1-800-242-3447** ) for the exact location of all buried facilities  
( 48 Hrs. notice required )



Revision Table				
0	Original Drawing	10/01/19	JU	PY
No.	Revision	mm/dd/yy	BY	CKD.
		Edmonton (780) 466-6555 Calgary (403) 266-2800 Fort St. John (250) 787-0300 Grande Prairie (780) 539-3222 Regina (306) 586-0837		
		Job No: 191-09179-G0-000-00-SSDSI001-R00		
		Dwg No: 191-09179-G0-000-00-SSDSI001-R00		