

DESIGN LOADS

- DEAD LOAD: STRUCTURAL SELF WEIGHT
- GROUND SNOW LOAD (1/50 YEAR): $S_s = 2.4 \text{ kPa}$
 $S_r = 0.3 \text{ kPa}$
IMPORTANCE FACTOR = NORMAL ($I_s = 1.0$)
- WIND EFFECTS (1/50 YEAR): $q = 0.43 \text{ kPa}$
IMPORTANCE FACTOR = NORMAL ($I_w = 1.0$)
- SEISMIC DATA: $S_a(0.2) = 0.644$
 $S_a(0.5) = 0.550$
 $S_a(1.0) = 0.327$
 $S_a(2.0) = 0.204$
 $PGA = 0.283g$
 $PGV = 0.419 \text{ m/s}$
IMPORTANCE FACTOR = NORMAL ($I_e = 1.0$)
SITE CLASS = C (ASSUMED)

- PROVIDE BOLT HOLES IN STRUCTURAL STEEL MEMBERS WHERE SHOWN AND WHERE REQUIRED FOR THE ATTACHMENT OF BOLTED BLOCKING OR FASTENINGS BY OTHER TRADES.
- PROVIDE SEAL WELDED CLOSURE PLATES AT ALL OPEN ENDS OF HSS MEMBERS. PLATE THICKNESS TO BE EQUAL TO THE WALL THICKNESS OF THE HSS MEMBER.
- FRAME ALL OPENINGS IN ROOF AND FLOOR DECK THAT ARE LARGER THAN 400 mm AS DETAILED ON THE DRAWINGS. IF FRAMING IS NOT SPECIFICALLY DETAILED, DESIGN FRAMES TO SUPPORT SPECIFIED LOADS INCLUDING EQUIPMENT WHERE APPLICABLE.
- CLEAN ALL STEEL PRIOR TO PAINTING TO SSPC SURFACE PREPARATION SPECIFICATION NO. 7 "BRUSH-OFF BLAST CLEANING" EXCEPT STRUCTURAL MEMBERS WHICH WILL BE EXPOSED IN THE COMPLETED STRUCTURE IN WHICH CASE CLEANING SHALL CONFORM TO SSPC NO. 6 "COMMERCIAL BLAST CLEANING".
- ALL STEEL SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- APPLY TWO COATS OF APPROVED ASPHALT BASED PAINT TO ALL STEEL SURFACES TO BE EXPOSED TO SOIL.
- ALL EXPOSED EXTERIOR STEEL TO BE UNPAINTED, GALVANIZED.

GENERAL

- THE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA, 2015 EDITION, AND THE BRITISH COLUMBIA BUILDING CODE, 2018 EDITION, AND REFERENCED STANDARDS WITHIN. THE DESIGN OF NON-STRUCTURAL ELEMENTS SHALL BE IN ACCORDANCE WITH CAN/CSA S832 SEISMIC RISK REDUCTION OF OPERATIONAL AND FUNCTIONAL COMPONENTS OF BUILDINGS.
- READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER PERTINENT CONTRACT DOCUMENTS. COORDINATE STRUCTURAL WORK WITH ARCHITECTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILED DIMENSIONS, ELEVATIONS, LOCATIONS OF DOOR AND WINDOW OPENINGS, SLOPES, CURBS, DRAINAGE AND WATERPROOFING, DUCT OPENINGS, RECESSES, INSERTS AND OTHER ITEMS.
- DO NOT INSTALL OPENINGS, SET INSERTS, DRILL OR ATTACH TO THE STRUCTURAL BUILDING COMPONENTS, EXCEPT AS NOTED ON THE STRUCTURAL DRAWINGS, WITHOUT WRITTEN CONSENT OF THE DEPARTMENTAL REPRESENTATIVE.
- NOTIFY DEPARTMENTAL REPRESENTATIVE 72 HOURS IN ADVANCE FOR INSPECTION OF THE STRUCTURAL STEEL.
- DRAWINGS SHOW COMPLETED STRUCTURES ONLY. PROVIDE TEMPORARY BRACING AND SHORING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS INCLUDING OPERATING EQUIPMENT AND PERSONNEL MAY EXCEED DESIGN LOAD. USE ADDITIONAL SUPPORT WHERE REQUIRED.
- CONSTRUCTION METHODS REQUIRING TEMPORARY SHORING, OR BRACING, SHALL BE SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA TO PERFORM AND TAKE RESPONSIBILITY FOR ANY SHORING OR OTHER DESIGNS TO COMPLETE THE CONSTRUCTION. PROVIDE SIGNED AND SEALED DRAWINGS.
- VERIFY LOCATION OF EXISTING PIPING, DUCT WORK, PLUMBING SERVICES AND BE RESPONSIBLE FOR DISRUPTIONS.
- ALL VERTICAL ELEVATIONS ARE IN METERS AND PLAN DIMENSIONS ARE IN MILLIMETERS. UNLESS NOTED OTHERWISE, THE TRADE CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO CONSTRUCTION START AND REPORT ALL DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE DRAWINGS.

ABBREVIATIONS			
ARCH	ARCHITECTURAL	MAX	MAXIMUM
BOT	BOTTOM	MECH	MECHANICAL
BS	BOTH SIDES	MIN	MINIMUM
CL	CENTRE LINE	NTS	NOT TO SCALE
CLR	CLEAR	OC	ON CENTRE
COL	COLUMN	PL	PLATE
CONC	CONCRETE	REF	REFERENCE
C/W	COMPLETE WITH	REINF	REINFORCE, REINFORCEMENT
DET	DETAIL	REQD	REQUIRED
DIM	DIMENSION	R/W	REINFORCE WITH
DWG	DRAWING	T & B	TOP AND BOTTOM
EL	ELEVATION	TOS	TOP OF STEEL
ELECT	ELECTRICAL	TYP	TYPICAL
ES	EACH SIDE	T	TENSION
EQ	EQUAL	UNO	UNLESS NOTED OTHERWISE
EXIST	EXISTING	UIS	UNDERSIDE
INFO	INFORMATION	I/W	WITH

STRUCTURAL DRAWING LIST:			
DWG. NO.	NAME	DESCRIPTION	SCALE
1 OF 2	S001	STRUCTURAL GENERAL NOTES	N.T.S.
2 OF 2	S100	STRUCTURAL PARTIAL ROOF PLAN AND SECTIONS	AS NOTED

STRUCTURAL STEEL

- FABRICATE AND ERECT STRUCTURAL STEEL TO MEET THE REQUIREMENTS OF CSA STANDARD CAN3-S16-14(R2019).
- PROVIDE STRUCTURAL STEEL TO MEET THE REQUIREMENTS OF CSA STANDARD G40.21-13 WITH THE FOLLOWING GRADES:

WIDE FLANGE SECTIONS	350W
CHANNELS AND ANGLES	300W
HSS SECTIONS (CLASS 'C')	350W
STRUCTURAL BARS AND PLATES	300W
MISCELLANEOUS STEEL	300W
PIPE SECTIONS	ASTM A53-241 MPa MIN. YIELD STRENGTH
STRUCTURAL BOLTS	ASTM A325
ANCHOR RODS	ASTM A307
- FABRICATOR TO BE CERTIFIED AS A DIVISION 2 COMPANY IN ACCORDANCE WITH CSA STANDARD W47.1: 2019.
- DIMENSIONS SHOWN ARE TO CENTRELINES OF SECTIONS AND TO BACK OF CHANNELS AND ANGLES. ELEVATIONS SHOWN ARE TO UNDERSIDE OF METAL DECK UNLESS NOTED OTHERWISE.
- PROVIDE ERECTION BOLTS TO MEET ASTM A325, MINIMUM 19mm DIAMETER. DESIGN BOLTED CONNECTIONS AS A325 FOR THREADS EXCLUDED FROM SHEAR PLANE. BOLTS TO BE TIGHTENED BY THE "TURN OF NUT" METHOD AS DETAILED IN CSA S16.
- WELDING TO MEET THE REQUIREMENTS OF CSA STANDARD W59-18 BY FABRICATORS QUALIFIED TO CSA STANDARD W47.1.
- FIELD WELDING AND FIELD MODIFICATION OF STRUCTURAL STEEL WILL NOT BE ALLOWED WITHOUT PRIOR REVIEW AND WRITTEN APPROVAL BY THE DEPARTMENTAL REPRESENTATIVE.
- TEMPORARY BRACING DURING CONSTRUCTION TO BE DESIGNED, INSTALLED AND MAINTAINED BY THE CONTRACTOR. ERECTION BRACING TO BE REMOVED BY THE CONTRACTOR ONLY AFTER PERMANENT FLOOR DIAPHRAGMS, ROOF DIAPHRAGMS, SHEAR WALLS AND BRACING ARE COMPLETE.
- WHERE SHOWN ON THE DRAWING, PERIMETER ANGLES ARE REQUIRED TO BE CONTINUOUS AND SHALL BE MAINTAINED THROUGH THE USE OF APPROVED SPLICES.
- CONNECTIONS
 - UNLESS OTHERWISE NOTED, ALL SHOP CONNECTIONS SHALL BE WELDED AND ALL FIELD CONNECTIONS SHALL BE BOLTED. ALL FORCES THROUGH ANY CONNECTION SHALL PASS THROUGH A COMMON WORK POINT WHICH SHALL BE THE INTERSECTION OF THE PRINCIPLE AXES OF THE CONNECTED MEMBERS, UNLESS OTHERWISE APPROVED BY THE DEPARTMENTAL REPRESENTATIVE. BRACING SHALL BE CONNECTED TO THE MAIN MEMBERS USING GUSSET PLATES WELDED OR BOLTED TO THE MAIN MEMBERS. ALL STRUCTURAL TEES SHALL BE FLANGE CONNECTED.
 - ALL COLUMNS SHALL BE MILLED AT SPLICES AND AT THE BASE PLATES, AND THE BASE PLATES SHALL BE MILLED AT THE COLUMN FAYING SURFACE. THE MILLING TOLERANCE SHALL BE WITHIN 0.100mm (0.004").
 - BOLTS ARE TO BE ASTM A325 WITH A MINIMUM DIAMETER OF 19mm. UNLESS NOTED OTHERWISE, BOLTED CONNECTIONS SHALL BE BEARING TYPE.
 - MINIMUM WELDS FOR CONNECTIONS SHALL BE 5mm FILLET WELDS. WELDS EXPOSED IN THE FINISHED STRUCTURE SHALL BE GROUND SMOOTH.



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Revision/Revisions	Description/Description	Date/Date
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Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
**MISSION MEDIUM INSTITUTION
MISSION, BC**

BUILDINGS A-M, A-W, A-P (ADMINISTRATION) HVAC REVITALIZATION

Consultant Signature Box Only

Designed by/Concept par
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Drawn by/Dessine par
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Paul Rithaler

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Preetpal Paul

Drawing title/Titre du dessin

STRUCTURAL GENERAL NOTES

Project No./No. du projet R.082622.001	Sheet/Feuille S001 1 OF 2	Revision no./ La Révision no. 0
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STRUCTURAL PARTIAL ROOF PLAN AND SECTIONS

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