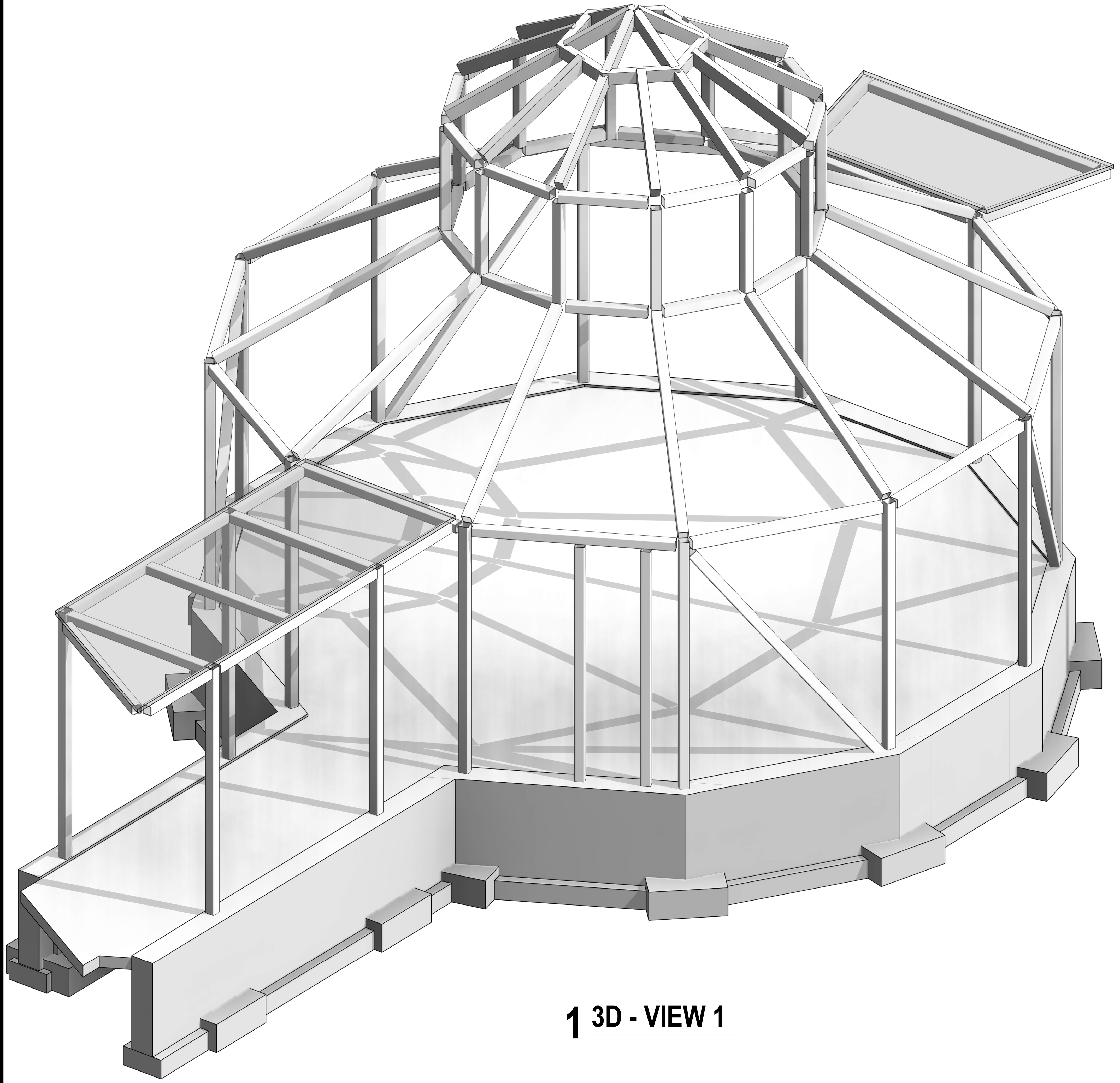
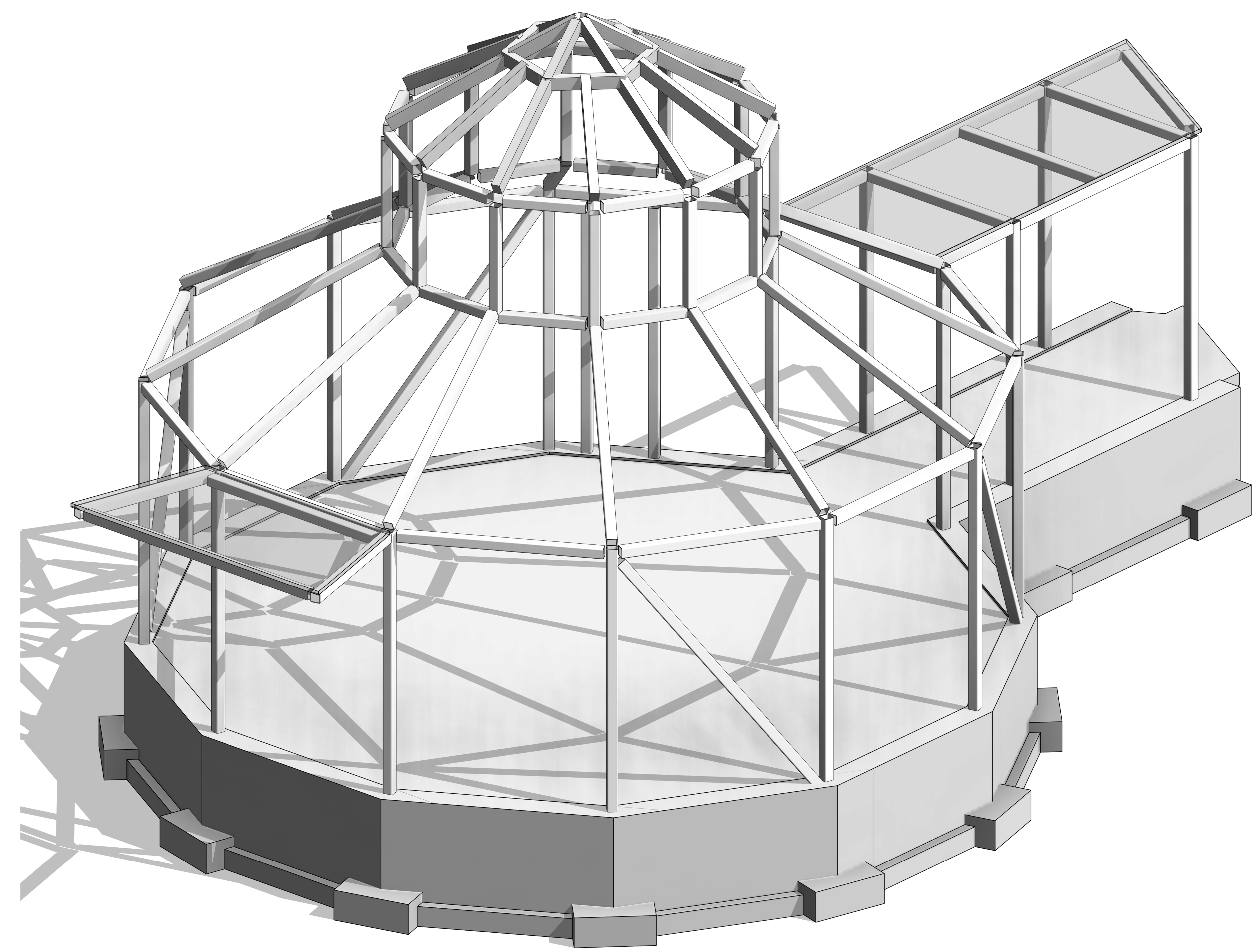


1 3D - VIEW 1

NOTE:
ISOMETRIC VIEWS PRODUCED FOR CONCEPT ONLY. ARCHITECTURAL ELEMENTS NOT SHOWN FOR CLARITY. SEE ARCH. DWGS. FOR EXTENT AND DETAILS. THESE 3D VIEWS ARE NOT PART OF THE CONTRACT DOCUMENT. NEITHER USE IT TO PRICE THE PROJECT NOR TO CONSTRUCT ANY STRUCTURAL ELEMENTS

LIST OF DRAWINGS



2 3D - VIEW 2

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No.	Revision	Date
5	ISSUED FOR PERMIT	01OCT2025
4	ISSUED FOR TENDER	01OCT2025
3	ISSUED FOR 99% REVIEW	26AUG2025
2	ISSUED FOR 99% REVIEW	26JUN2025
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Drawn By:	REV.
Checked By:	T.Y. / G.W.
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File Name:	

Project Title

OCI INDIGENOUS YARD
109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. Title

ISOMETRIC VIEWS

Project No.

ALL-24012754-A0

Dwg. No.	Rev. No.
S100	5

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GENERAL NOTES — GN-001CS

1 **GENERAL**

1.1 CHECK DIMENSIONS ON STRUCTURAL DRAWINGS AGAINST ARCHITECTURAL DRAWINGS AND EXISTING SITE CONDITIONS. REPORT INCONSISTENCIES TO CONSULTANT BEFORE PROCEEDING WITH THE WORK.
1.2 READ DRAWINGS IN CONJUNCTION WITH SPECIFICATIONS.
1.3 DO NOT EXCEED DURING CONSTRUCTION DESIGN LOADS SHOWN ON PLANS REDUCED AS NECESSARY UNTIL MATERIALS REACH DESIGN STRENGTH.
1.4 DO NOT SCALE DRAWINGS.
1.5 DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.ELEVATIONS ARE IN METRES UNLESS NOTED OTHERWISE.

2 **DESIGN**

2.1 ALL REFERENCED STANDARDS LISTED SHALL BE THE CURRENT PUBLISHED EDITION OR THE EDITION REFERENCED BY THE APPLICABLE BUILDING CODE IN FORCE AT THE DATE NOTED ON THE STRUCTURAL DRAWINGS FOR THE BUILDING PERMIT APPLICATION.
2.2 DESIGN IS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2024.
2.3 DESIGN STANDARDS
2.3.1 CONCRETE MEMBERS ARE DESIGNED IN ACCORDANCE WITH CSA STANDARD A23.3.
2.3.2 STRUCTURAL STEEL IS DESIGNED IN ACCORDANCE WITH CSA STANDARD S16.
2.3.3 MASONRY IS DESIGNED IN ACCORDANCE WITH CSA STANDARD S304.
2.3.4 TIMBER IS DESIGNED IN ACCORDANCE WITH CSA STANDARD CAN/CSA O86.

3 **MATERIALS**

3.1 CONCRETE: SEE SCHEDULE OF CONCRETE PROPERTIES AND SPECIFICATION.
3.2 STRUCTURAL STEEL: UNLESS NOTED OTHERWISE TO CSA G40.20/G40.21 OR ASTM STANDARD A992/A992M OR ASTM A572.
W AND S SHAPES: ASTM A992 OR ASTM A572 GRADE 50, FY=345 MPa
PLATES: CSA G40.21 GRADE 350 W
CHANNELS AND ANGLES: CSA G40.21 GRADE 300W
HOLLOW STRUCTURAL SECTIONS: CSA G40.21 GRADE 350W CLASS C OR ASTM STANDARD A1085
ANCHOR RODS: ASTM F1554 GRADE 36, 55, 105 (SELECT GRADE)
3.3 REINFORCING STEEL: TO CONFORM TO CSA G30.18 GRADE 400W UNLESS NOTED OTHERWISE
3.3.1 REINFORCING BAR AREAS ARE 100, 200, 300, 500, 700, 1000, 1500 AND 2500 SQ. MM FOR BAR DESIGNATIONS 10M, 15M, 20M, 25M, 30M, 35M, 45M AND 55M RESPECTIVELY.
3.3.2 STRENGTH:
DEFORMED REINFORCING BARS: 400 MPa.
WELDED WIRE FABRIC: 440 MPa

DESIGN LOAD — GN-002CS

1. UNIT FLOOR AND ROOF LOADINGS, SOIL BEARING PRESSURES AND FOUNDATION LOADS GIVEN ON PLANS ARE UNFACTORED. MEMBER FORCES GIVEN ON DRAWINGS ARE FACTORED.

2. GRAVITY LOADS: SUPERIMPOSED DEAD LOADS AND LIVE LOADS ARE GIVEN ON PLANS.

3. SNOW LOAD PARAMETERS, OBC 2024 – BRAMPTON, ONTARIO
Ss = 1.3
Sr = 0.4
Is ULS = 1.0
Is SLS = 0.9

4. RAIN LOAD PARAMETER, OBC 2024 – BRAMPTON, ONTARIO
ONE DAY RAINFALL = 119 mm

5. WIND LOAD PARAMETERS, OBC 2024 – BRAMPTON, ONTARIO
q (1/10) = 0.34 kPa
q (1/50) = 0.44 kPa
Iw ULS = 1.0
Iw SLS = 0.75

6. SEISMIC LOAD PARAMETERS, OBC – CITY, ONTARIO
Sa (0.2) = 0.320 Sa (5.0) = 0.0209
Sa (0.5) = 0.289 Sa (10.0) = 0.00652
Sa (1.0) = 0.169 PGA = 0.197
Sa (2.0) = 0.0799 PGV = 0.185
SITE CLASSIFICATION = D
Ie = 1.0
IeFaSa(0.2)=0.324
SEISMIC CATEGORY = SC2
Rd= 1.5, Ro=1.3

EXCAVATION AND BACKFILL — GN-004CS

1 **GENERAL**

1.1 THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION:
1.1.1 OPSS 1010, MATERIAL SPECIFICATION FOR AGGREGATES – BASE, SUBBASE, SELECT SUBGRADE AND BACKFILL MATERIALS

2 **PRODUCTS:**

2.1 MATERIAL
2.1.1 BACKFILL AROUND FOOTINGS, FOUNDATION WALLS, RETAINING WALLS
.1 TO OPSS GRANULAR B TYPE II
2.1.2 GRANULAR UNDERBED FOR SLABS-ON-GRADE or
.1 20 mm CLEAR LIMESTONE.
.2 20 mm CRUSHER RUN LIMESTONE TO OPSS 1010 GRANULAR A, BUT WITH 100% PASSING 19 mm SIEVE.

3 **EXECUTION**

3.1 EXCAVATE TO FOOTING ELEVATIONS INDICATED ON DRAWINGS AND OBTAIN VERIFICATION FROM INSPECTION AND TESTING COMPANY THAT BEARING MATERIAL IS AS ANTICIPATED. REMOVE UNSUITABLE MATERIAL AS INSTRUCTED.
3.2 BACKFILL
3.2.1 PLACE GRANULAR MATERIAL SPECIFIED IN 2.1.1.1
3.2.2 EXCAVATED MATERIAL MAY BE USED AS BACKFILL PROVIDED THAT IT IS TESTED TO VERIFY THAT IT MEETS THE REQUIREMENTS FOR GRADING AND CLEANLINESS ACCORDING TO THE GEOTECHNICAL REPORT.
3.2.3 PLACE BACKFILL IN 150 mm (6”) LAYERS AND COMPACT TO 95% SPMDD.
3.3 GRANULAR UNDERBED FOR SLAB-ON-GRADE
3.3.1 OBTAIN GEOTECHNICAL CONSULTANT’S WRITTEN CONFIRMATION THAT PREPARED SUBGRADE IS ACCEPTABLE FOR PLACEMENT OF GRANULAR UNDERBED.
3.3.2 PLACE GRANULAR MATERIAL SPECIFIED IN PER 2.1.2.1
3.3.3 PLACE 150 mm (6”) THICK UNDERBED AND COMPACT TO 100% SPMDD.

4 **FIELD QUALITY CONTROL**

4.1 INSPECTION AND TESTING COMPANY SHALL PERFORM:
4.1.1 VERIFICATION OF FOUNDATION BEARING MATERIAL;
4.1.2 TESTING OF GRANULAR MATERIALS TO CONFIRM THEY MEET GRADING AND COMPACTION REQUIREMENTS.

DESIGN LOAD — GN-005CS

THE FOLLOWING NOTES ARE IN ADDITION TO THE GENERAL NOTES, THE SPECIFICATION AND PLAN NOTES.

1. SEE FOUNDATION PLAN NOTES FOR ASSUMED BEARING CONDITIONS. IF ACTUAL SITE OR SOIL CONDITIONS VARY FROM THOSE ASSUMED, OBTAIN WRITTEN INSTRUCTIONS FROM THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
2. CARRY EXTERIOR FOOTINGS DOWN MINIMUM 1200 mm (4’) BELOW FINISHED GRADE. PROTECT FOOTINGS EXPOSED TO FROST DURING CONSTRUCTION WITH 1200 mm (4’) OF EARTH OR ITS EQUIVALENT TO PREVENT FREEZING OF SOIL UNDER FOOTINGS. DO NOT PLACE FOOTINGS ON FROZEN SOIL.
3. KEEP EXCAVATIONS CONTINUOUSLY DRY BEFORE CONCRETE IS PLACED. IF SOIL IS SOFTENED BY WATER, EXTEND EXCAVATION BELOW SOFTENED MATERIAL AND LOWER FOOTINGS TO SUIT.
4. DO NOT EXCEED A RISE OF 7 IN RUN OF 10 IN THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS. MAXIMUM STEP 600 mm (24”) APPROXIMATELY.
5. FOUND NEW FOOTINGS WHICH ARE LOCATED IMMEDIATELY ADJACENT TO EXISTING FOOTINGS AT THE SAME ELEVATION AS THE EXISTING FOOTING UNLESS NOTED OTHERWISE. AT LOCATIONS WHERE MECHANICAL SERVICES INTERFERE WITH FOOTINGS ESTABLISH TOP OF FOOTING A MINIMUM 200 mm (8”) BELOW INVERT ELEVATION. REFER TO MECHANICAL DRAWINGS FOR LOCATION OF SERVICES.
6. CAP DEPTHS GIVEN ARE FOR ASSUMED SUBSOIL CONDITIONS. RAISE OR LOWER FOOTING BASES AND ADJUST CAP DEPTHS IF ACTUAL CONDITIONS VARY, IN ACCORDANCE WITH THE FOLLOWING:
   a. MINIMUM CAP DEPTH IS 300 mm (12”), BUT NOT LESS THAN:
      .1 UNDER STEEL COLUMN: TWICE THE HORIZONTAL PROJECTION OF THE CAP BEYOND THE COLUMN BASE PLATE.
      .2 UNDER CONCRETE COLUMN, THE GREATER OF
         a) TWICE THE GREATER HORIZONTAL PROJECTION OF THE CAP BEYOND THE COLUMN;
         b) COMPRESSION DEVELOPMENT LENGTH OF COLUMN DOWEL PLUS 75 mm MINUS DEPTH OF FOOTING BASE.
7. WHERE FOUNDATION CONDITIONS REQUIRE LOWERING FOOTING BASES TO THE EXTENT THAT THE CAP DEPTH EXCEEDS 3 TIMES ITS LEAST DIMENSION, OBTAIN CAP REINFORCEMENT FROM THE CONSULTANT.
8. PLACE BASEMENT AND GROUND (FIRST) FLOOR SLABS AND WAIT UNTIL CONCRETE HAS REACHED 100% OF DESIGN STRENGTH BEFORE BACKFILLING AGAINST WALLS. PROVIDE SUPPORT AT TOP AND BOTTOM OF WALLS WHERE SLABS CANNOT BE POURED UNTIL BACKFILL HAS BEEN PLACED. WHERE BACKFILL IS PLACED ON EACH SIDE OF FOUNDATION WALLS, DO NOT EXCEED A GRADE DIFFERENCE OF 600 mm (24”).

ABBREVIATIONS — GN-010CS

AB	ANCHOR BOLT	F’c	COMPRESSIVE STRENGTH	Pf;Cf;Tf,Mf.Vf,Rf	FACTORED LOADS
ADD	ADDITIONAL		OF CONCRETE	P,T,C,V,M,R	UNFACTORED LOADS
AESS	ARCHITECTURALLY	FF	FAR FACE	PC	PRECAST
	EXPOSED STRUCTURAL			PL	PLATE
	STEEL	GALV	GALVANIZED	PSL	PARALLEL STRAND
AIFB	ASPHALT IMPREGNATED				LUMBER
	FIBREBOARD	HB	HIGH BEAM	PVC	POLYVINYL CHLORIDE
ALT	ALTERNATIVE	HD	HANGER DOWN		
AR	ANCHOR ROD	HEF	HORIZONTAL EACH FACE	REINF	REINFORCEMENT
ARCH	ARCHITECTURAL	HH	HOOK-HOOK	RE	RIGHT END
			(HOOK EACH END)	RTU	ROOF TOP UNIT
B, BOTT	BOTTOM	HIF	HORIZONTAL INSIDE FACE		
BC	BOTTOM ELEVATION OF	HL	HIGH LINE	S	STANDARD BEAM
	CAISSON	HOF	HORIZONTAL OUTSIDE	SECT	SECTION
BEW	BOTTOM EACH WAY	FACE		SF	SPRAY FIRE PROOFED
BLL	BOTTOM LOWER LAYER	HOR	HORIZONTAL	SFD	STEP FOOTING DOWN
BM	BEAM	HP	HIGH POINT	SFU	STEP FOOTING UP
BMB	BENDING MOMENT BAR	HSC	HORIZONTALLY SLOTTED	SIM	SIMILAR
BPL	BEARING/BASE PLATE		CONNECTION	SJ	STEEL JOIST
BRG	BEARING	HSS	HOLLOW STRUCTURAL	SL	SLAB
BSMT	BASEMENT		SECTION	SOG	SLAB ON GRADE
BUL	BOTTOM UPPER LAYER	HU	HANGER UP	SP	SPANDREL, SPRUCE
				SPF	SPRUCE PINE FIR
C	STANDARD CHANNEL	ID	INSIDE DIAMETER	ST	STRAIGHT
C/C	CENTRE TO CENTRE	IF	INSIDE FACE	STIRR	STIRRUP
C/W	COMPLETE WITH			STRUCT	STRUCTURAL
CA	COLUMN ABOVE	KB	KNEE BRACE		
CB	COLUMN BELOW	kN	KILOWNEWTON	t	THICKNESS
CANT/CANTIL	CANTILEVER	kPa	KILOPASCAL	T	TOP
CF	CONCRETE			TC	TOP ELEVATION OF
	FIREPROOFED	L	SINGLE ANGLE		CAISSON
CJ	CONTROL JOINT	2L	DOUBLE ANGLES	TCAP	TOP ELEVATION OF CAP
CL	CLEAR	LB	LOWER BEAM	TEW	TOP EACH WAY
C.L.	CENTRE LINE	LE	LEFT END	T&J	TONGUE AND GROOVE
COMP	COMPOSITE	LG	LONG/LENGTH	TJ	TIE JOIST
COL	COLUMN	LL	LIVE LOAD	TLE	TOP LEFT END
CONC	CONCRETE	LL	LOW LINE	TLL	TOP LOWER LAYER
CONN	CONNECTION	LLV	LONG LEG VERTICAL	TOC	TOP OF CONCRETE
CONST JT	CONSTRUCTION JOINT	LLH	LONG LEG HORIZONTAL	TOS	TOP OF STEEL
CONT	CONTINUOUS	LP	LOW POINT	TRE	TOP RIGHT END
		LSSJ	LONG SPAN STEEL JOIST	TUL	TOP UPPER LAYER
DET	DETAIL	LVL	LAMINATED VENEER	TYP	TYPICAL
D FIR	DOUGLAS FIR		LUMBER		
DIA	DIAMETER			UB	UPPER BEAM
DIM	DIMENSION	MAX	MAXIMUM	U/S	UNDERSIDE
DL	DEAD LOAD	MC	MOMENT CONNECTION	USD	UNDERSIDE OF DECK
DP	DEEP	MC	MISCELLANEOUS CHANNEL	UL	UPPER LAYER
DWG	DRAWING	MIN	MINIMUM	U/N	UNLESS NOTED
DWL	DOWEL	m	METRE	UNO	UNLESS NOTED
		m2	SQUARE METRE		OTHERWISE
EA	EACH	mm	MILLIMETRE	UPT	UPTURNED
ECR	EPOXY COATED	mm2	SQUARE MILLIMETRE		
	REINFORCEMENT	MECH	MECHANICAL	VERT	VERTICAL
EE	EACH END	MPa	MEGAPASCAL	VBF	VERTICAL BRACED
EF	EACH FACE			FRAME	
EJ, EXP. JT	EXPANSION JOINT	NBCC	NATIONAL BUILDING CODE	VEF	VERTICAL EACH FACE
EL, ELEV	ELEVATION		OF CANADA	VIF	VERTICAL INSIDE FACE
ELECT	ELECTRICAL	NCB	NO COLUMN BELOW	VOF	VERTICAL OUTSIDE FACE
EMBED	EMBEDMENT	NF	NEAR FACE	VSC	VERTICAL SLOTTED
EQ	EQUAL	NIC	NOT IN CONTRACT		CONNECTION
EW	EACH WAY	No	NUMBER		
EX, EXIST	EXISTING	NTS	NOT TO SCALE	W	WIDE FLANGE BEAM
				WP	WALL PLATE
FIN	FINISHED	OBC	ONTARIO BUILDING CODE	WT	STRUCTURAL TEE
FL	FLOOR	OC	ON CENTRE	WWF	WELDED WIRE FABRIC
FTG	FOOTING	OD	OUTSIDE DIAMETER	WWF	WELDED WIDE FLANGE
FMC	FULL MOMENT	OF	OUTSIDE FACE		
	CONNECTION	OPNG	OPENING		
Fy	YIELD STRENGTH	OWSJ	OPEN WEB STEEL JOIST		

NON-STRUCTURAL ELEMENTS — GN-011CS

1. "NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT PART OF THE STRUCTURAL DESIGN SHOWN ON THESE

   DRAWINGS. SUCH ELEMENTS ARE DESIGNED, DETAILED AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THESE STRUCTURAL DRAWINGS BY exp. WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS REQUIRED FOR THESE ELEMENTS, THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL ALSO PROVIDE ANY DOCUMENTATION REQUIRED BY BUILDING PERMIT AUTHORITIES.

2. EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
   a. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, MISCELLANEOUS STEEL STAIRS, FLAG POLES, CANOPIES, CEILINGS, MILLWORK, ETC.
   b. LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
   c. CLADDING, GLAZING, WINDOW MULLIONS, INTERIOR STUD WALLS AND EXTERIOR STUD WALLS.
   d. ARCHITECTURAL PRECAST, PRECAST CLADDING.
   e. SKYLIGHTS.
   f. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS. CONNECTIONS DESIGNED SEISMIC RESTRAINT ACCORDING TO OBC 2012 CLAUSE 4.1.8.18 OR NBC 2015 CLAUSE 4.1.8.18.
   g. WINDOW WASHING EQUIPMENT, FALL ARREST ANCHORS AND THEIR ATTACHMENTS.
   h. ESCALATORS, ELEVATORS, AND CONVEYING SYSTEMS.
   i. GLASS BLOCK AND ITS ATTACHMENTS.
   j. BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
   k. NON-LOAD BEARING MASONRY.
   l. NON-STRUCTURAL CONCRETE TOPPINGS.

3. SUBMIT SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM TO exp. THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE LOAD EFFECT OF THE ELEMENT ON THE PRIMARY STRUCTURAL SYSTEM.

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Oct. 01, 2025
PROVINCE OF ONTARIO

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Project Title
OCI INDIGENOUS YARD
109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. Title
GENERAL NOTES

Project No.
ALL-24012754-A0

Dwg. No. S101
Rev. No. 5

STRUCTURAL STEEL NOTES — GN-006CS

1 GENERAL

1.1 THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION:
- 1.1.1 ASTM A108, SPECIFICATION FOR STEEL BAR, CARBON AND ALLOY, COLD FINISHED
- 1.1.2 CSA S16, DESIGN OF STEEL STRUCTURES
- 1.1.3 CSA S136, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
- 1.1.4 CSA W47.1, CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL
- 1.1.5 CSA W59, WELDED STEEL CONSTRUCTION
- 1.1.6 CSA W178.1, CERTIFICATION OF WELDING INSPECTION ORGANIZATIONS
- 1.1.7 CSA W178.2, CERTIFICATION OF WELDING INSPECTORS

1.2 DESIGN OF CONNECTIONS SHALL BE BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.

1.3 DESIGN CRITERIA
- 1.3.1 AXIAL LOADED MEMBERS THAT MEET AT A JOINT SHALL HAVE THEIR CENTROIDAL AXES INTERSECT AT A COMMON POINT UNLESS SHOWN OTHERWISE.
- 1.3.2 DESIGN AND DETAIL ALL CONNECTIONS AS FLEXIBLE EXCEPT WHERE NOTED OTHERWISE ON THE DRAWINGS. CONNECTIONS MAY BE WELDED OR BOLTED.
- 1.3.3 PROVIDE CONNECTIONS ADEQUATE TO RESIST REACTION OF BEAM, WHEN IT IS LOADED TO MAXIMUM FLEXURAL CAPACITY UNDER UNIFORMLY DISTRIBUTED LOAD, UNLESS REACTION OR CONNECTION DETAIL IS SHOWN ON DRAWINGS. FOR COMPOSITE BEAM CONSTRUCTION, USE FLEXURAL CAPACITY OF COMPOSITE SECTION BASED ON 100 PERCENT SHEAR CONNECTION OF BEAM TO SLAB.
- 1.3.4 WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT DESIGN FORCES ARE NOT INDICATED, DESIGN MOMENT CONNECTION FOR THE FULL MOMENT CAPACITY OF THE WEAKER MEMBER JOINED.
- 1.3.5 FOR BOLTED CONNECTIONS USE SNUG TIGHT HIGH STRENGTH BOLTS, ASTM F3125/F3125M (A325 OR A490) EXCEPT USE PRETENSIONED HIGH STRENGTH BOLTS IN LOCATIONS SPECIFIED IN CSA-S16 CLAUSE 22.2.2
  - .1 SLIP-CRITICAL CONNECTIONS WHERE SLIPPAGE CANNOT BE TOLERATED;
  - .2 SHEAR CONNECTIONS PROPORTIONED IN ACCORDANCE WITH SEISMIC REQUIREMENTS;
  - .3 ALL ELEMENTS RESISTING CRANE LOADS;
  - .4 CONNECTIONS SUBJECT TO IMPACT OR CYCLIC LOADING;
  - .5 CONNECTIONS WHERE THE BOLTS ARE SUBJECT TO TENSILE LOADING;
  - .6 CONNECTIONS USING OVERSIZE OR LONG SLOTTED HOLES (UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE MOVEMENT).
- 1.3.6 PROVIDE CONNECTIONS FOR MEMBERS THAT ARE PART OF THE LATERAL LOAD RESISTING SYSTEM ADEQUATE TO RESIST FORCES SHOWN ON DRAWINGS. WHERE SEISMIC DESIGN GOVERNS, THE FORCES HAVE BEEN ADJUST TO MEET THE REQUIREMENTS OF CLAUSE 27.

1.4 SUBMITTALS
- 1.4.1 SUBMIT STRUCTURAL SHOP DRAWINGS.
  - .1 EACH SHOP DRAWING SUBMITTED SHALL BEAR THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN.

2 PRODUCTS

2.1 MATERIAL
- 2.1.1 PROVIDE NEW MATERIALS IN ACCORDANCE WITH REFERENCE STANDARDS, OF STRENGTH AND QUALITY NOTED IN GENERAL NOTES.
- 2.1.2 STUDS: ASTM A108
- 2.1.3 GALVANIZING: ASTM A123/A123M, STANDARD SPECIFICATION FOR ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS.
- 2.1.4 GALVANIZING: HOT-DIP TO ASTM A153 / A153M-16 STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.
- 2.1.5 PAINT:
  - .1 INTERIOR: SHOP COAT FOR STEEL THAT WILL NOT RECEIVE A FINISH COAT: TO CISC/CPMA STANDARD 1-73A, A QUICK-DRYING ONE-COAT PAINT FOR USE ON STRUCTURAL STEEL.
  - .2 INTERIOR: PRIME PAINT: TO MEET THE REQUIREMENTS OF CISC/CPMA STANDARD 2-75, A QUICK DRYING PRIMER FOR USE ON STRUCTURAL STEEL
  - .3 EXTERIOR: ZINC-RICH PAINT READY MIX TO SPCC-PAINT 20 STANDARD

3 EXECUTION

3.1 PROVIDE WELDED STIFFENER PLATES MINIMUM 10 mm THICK ON BOTH SIDES OF WEB OF BEAMS AT POINTS OF CONCENTRATED LOADS INCLUDING BEAMS SUPPORTING COLUMNS OR BEAMS SUPPORTED ON TOP OF COLUMNS.

3.2 ALL EXPOSED WELDS SHALL BE CONTINUOUS AND GROUND SMOOTH.

3.3 PROVIDE STRUCTURAL STEEL FOR LATERAL SUPPORT OF MASONRY WALLS.

3.4 CLEAN STEEL, IN ACCORDANCE WITH PAINT SYSTEM SPECIFIED. ZINC-RICH PAINT REQUIRES CLEANING TO SSPC-SP6, COMMERCIAL BLAST CLEANING.

3.5 PAINTING:
- 3.5.1 PAINT INTERIOR STEEL SURFACES WITH INTERIOR PAINT SPECIFIED
- 3.5.2 PAINT EXTERIOR STEEL SURFACES WITH EXTERIOR PAINT SPECIFIED.
- 3.5.3 DO NOT PAINT:
  - .1 SURFACES AND EDGES WITHIN 50 mm OF FIELD WELDS
  - .2 SURFACES ENCASED IN OR IN CONTACT WITH CONCRETE
  - .3 SURFACES TO BE SPRAY FIREPROOFED.
- 3.5.4 AFTER ERECTION IS COMPLETE GIVE ONE COAT TOUCH-UP PAINT TO FIELD BOLTS, FIELD CONNECTIONS, BURNT AREAS AND DAMAGED AREAS. USE SAME PAINT AS SHOP PAINT.

3.6 GALVANIZE LINTELS, BRICK SUPPORT ANGLES, ARCHITECTURAL BLOCK SUPPORT ANGLES AND OTHER MEMBERS INDICATED AS GALVANIZED ON DRAWINGS AFTER SHOP WELDING IS COMPLETE.

3.7 COMPLY WITH THE REQUIREMENTS OF REFERENCE STANDARDS AND REQUIREMENTS OF REGULATORY AUTHORITIES IN ERECTION OF STRUCTURAL STEEL.

3.8 PROVIDE MINIMUM BEARING FOR ALL STEEL BEAMS:
- 3.8.1 200 mm (8”) ON CONCRETE AND MASONRY
- 3.8.2 100 mm (4”) ON STEEL

4 FIELD QUALITY CONTROL

4.1 INSPECTION AND TESTING COMPANY SHALL PERFORM:
- 4.1.1 INSPECTION OF ERECTION AND FIT-UP INCLUDING PLACING, PLUMBING AND LEVELLING;
- 4.1.2 INSPECTION OF BOLTED CONNECTIONS INCLUDING VERIFICATION OF BOLT GRADE AND IF SNUG TIGHT AND PRETENSIONED BOLTS HAVE BEEN USED APPROPRIATELY;
- 4.1.3 INSPECTION OF WELDED JOINTS;
- 4.1.4 GENERAL INSPECTION OF FIELD CUTTING AND ALTERATIONS;
- 4.1.5 GENERAL INSPECTION OF COATING TOUCH-UP.

STEEL DECK NOTES — GN-008CS

1 GENERAL

1.1 THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION:
- 1.1.1 CSA S136 PACKAGE, COLD-FORMED STEEL STRUCTURAL MEMBERS
- 1.1.2 CSSBI 10M, STANDARD FOR STEEL ROOF DECK
- 1.1.3 CSSBI 12M, STANDARD FOR COMPOSITE STEEL DECK
- 1.1.4 ASTM A108, SPECIFICATION FOR STEEL BAR, CARBON AND ALLOY, COLD FINISHED
- 1.1.5 ASTM A653/A653M, STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON COATED (GALVANNEALED) BY HOT-DIP PROCESS
- 1.1.6 CSA W47.1, CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL
- 1.1.7 CSA W59, WELDED STEEL CONSTRUCTION
- 1.1.8 CSA W178.1, CERTIFICATION OF WELDING INSPECTION ORGANIZATIONS
- 1.1.9 CSA W178.2, CERTIFICATION OF WELDING INSPECTORS

1.2 DESIGN OF STEEL DECK SHALL BE BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO EXPERIENCED IN THE DESIGN OF METAL DECK.

1.3 DESIGN CRITERIA:
- 1.3.1 WHEREVER STRUCTURAL FRAMING PERMITS, DESIGN AND FABRICATE DECK TO SPAN OVER AT LEAST 4 SUPPORTS (3 SPANS).
- 1.3.2 ROOF DECK
  - .1 DESIGN ROOF DECK IN ACCORDANCE WITH CSSBI 10M FOR GRAVITY LOADS NOTED ON PLANS, CONCENTRATED LOADS NOTED IN OBC AND WIND UPLIFT. MINIMUM FACTORED UNIFORM GRAVITY LOAD FOR STRENGTH IS 3.5 kPa (75 psf).
  - .2 MAXIMUM DEFLECTION SHALL NOT EXCEED OF 1/240 OF SPAN UNDER UNIFORM LIVE OR SNOW LOAD BUT NOT LESS THAN 1.9 kPa (40 psf).
  - .3 DESIGN DECK AND FASTENING TO RESIST DIAPHRAGM SHEARS NOTED ON DRAWINGS.
- 1.3.3 FLOOR DECK
  - .1 DESIGN FLOOR DECK IN ACCORDANCE WITH CSSBI 12M FOR LOADING INDICATED ON DRAWINGS INCLUDING CONCENTRATED LOADS NOTED IN OBC.
  - .2 MAXIMUM DEFLECTION OF COMPOSITE FLOOR SHALL NOT EXCEED 1/360 OF SPAN UNDER LIVE LOAD.
- 1.3.4 DO NOT SUSPEND CEILINGS, LIGHTS, DUCTS, PIPES OR ANY OTHER ITEMS FROM STEEL DECK.

1.4 SUBMITALS
- 1.4.1 SUBMIT STEEL DECK SHOP DRAWINGS.
  - .1 EACH SHOP DRAWING SUBMITTED SHALL BEAR THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR DECK DESIGN.
  - .2 INDICATE DESIGN LOADING, DECK PROFILE, THICKNESS, STEEL GRADE, ZINC COATING, LAYOUT OF UNITS, SIZE AND SPACING OF FASTENING TO MEET UPLIFT AND DIAPHRAGM REQUIREMENTS.

2 PRODUCTS

2.1 MATERIAL: ASTM A653/A653M, GRADE 230 MIN, MINIMUM ZINC COATING ZF75, MINIMUM THICKNESS 0.76 mm.

2.2 SHEET STEEL ANGLES, COVER PLATES, CLOSURES, FLASHINGS, AND REINFORCING SHALL BE OF SIMILAR MATERIAL AND ZINC COATING AS DECK.

2.3 PRIME PAINT FOR TOUCH-UP: ZINC-RICH PAINT READY MIX TO SPCC-PAINT 20 STANDARD

2.4 STUDS: ASTM108.

2.5 REINFORCEMENT FOR OPENINGS:
- 2.5.1 REINFORCE OPENINGS 150 mm TO 300 mm (6” TO 12”) (IF FLOOR) 450 mm (18”) (IF ROOF) ACROSS FLUTES, WITH 51 X 51 X 6.4 (2 X 2 X ¼) STRUCTURAL STEEL ANGLES IN DIRECTION PERPENDICULAR TO FLUTES EXTENDING 450 mm (18”) PAST OPENING. WELD TO DECK WITH 25 mm (1”) LONG WELDS AT 150 mm (6”) CENTRES.

3 EXECUTION

3.1 PLACEMENT:
- 3.1.1 MINIMUM BEARING ON STRUCTURAL STEEL SUPPORTS: 45 mm (1 ¾”).
- 3.1.2 LAP ENDS OF PANELS NOT LESS THAN 45 mm (1 ¾”).

3.2 FASTENING:
- 3.2.1 WELD FLUTES TO STEEL SUPPORTS WITH 20 mm (3/4”) DIAMETER WELD AT MAXIMUM 300 mm (12”) CENTRES.
- 3.2.2 PROVIDE WELD AT END LAPS AT 400 mm (16”) CENTRES MAXIMUM.
- 3.2.3 SECURE PANELS TO EACH OTHER BY BUTTON PUNCHING AT 600 mm (24”) CENTRES MAXIMUM.
- 3.2.4 WELD STUD SHEAR CONNECTORS THROUGH DECK WHERE INDICATED ON DRAWINGS.
- 3.2.5 INSTALL SHEET STEEL COVER PLATES AS MAY BE REQUIRED TO SUPPORT CANTS, INSULATION AND OTHER ROOFING COMPONENTS. SECURE WITH WELDS OR CORROSION RESISTANT SHEET METAL SCREWS.
- 3.2.6 CLEAN AND WIRE BRUSH WELDS, SCRATCHES AND OTHER DAMAGED AREAS AND APPLY TWO COATS OF PRIME PAINT.

3.3 WHERE MECHANICAL EQUIPMENT IS SUPPORTED ON TIMBER SLEEPERS OR CURBS DIRECTLY ON ROOF DECK, PROVIDE WEDGES IN FLUTES OF DECK UNDER SLEEPER AT STRUCTURAL SUPPORT (BEAMS, JOISTS, WALLS).

4 FIELD QUALITY CONTROL

4.1 INSPECTION AND TESTING COMPANY SHALL PERFORM:
- 4.1.1 VERIFICATION OF MATERIAL THICKNESS, DEPTH, PROFILE AND ZINC COATING;
- 4.1.2 VERIFICATION OF ERECTION AND FASTENING;
- 4.1.3 GENERAL INSPECTION OF COATING TOUCH-UP.

CONCRETE ANCHORS, INSERTS, BOLTS — GN-012CS

1 GENERAL

1.1 THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION:
- 1.1.1 CSA A23.3, DESIGN OF CONCRETE STRUCTURES

2 PRODUCTS

2.1 TORQUE CONTROLLED EXPANSION ANCHORS
- 2.1.1 EXPANSION ANCHOR: PROVIDE EXPANSION ANCHORS OF SIZE SHOWN ON DRAWINGS, INCLUDING MATCHING NUTS AND WASHERS:
  - .1 FOR DRY LOCATIONS: :KWIK BOLT TZ CARBON STEEL ZINC PLATED, BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO
  - .2 FOR WET OR HIGH HUMIDITY LOCATIONS OR LOCATIONS EXTERIOR TO THE CONDITIONED BUILDING ENVELOPE: :KWIK BOLT TZ TYPE 304 STAINLESS STEEL, BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO
  - .3 FOR LOCATIONS EXPOSED TO CHLORIDES OR OTHER CORROSIVE MATERIALS: :KWIK BOLT TZ TYPE 316 STAINLESS STEEL, BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO
- 2.1.2 SLEEVE ANCHOR: PROVIDE SLEEVE ANCHORS OF SIZE SHOWN ON DRAWINGS, INCLUDING MATCHING NUTS AND WASHERS:
  - .1 FOR DRY LOCATIONS: :HSL3 CARBON STEEL BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO
  - .2 FOR WET OR HIGH HUMIDITY LOCATIONS OR LOCATIONS EXTERIOR TO THE CONDITIONED BUILDING ENVELOPE::HSL3 STAINLESS STEEL BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO

2.2 ADHESIVE ANCHORS IN DRILLED HOLE:
- 2.2.1 ANCHOR ROD: PROVIDE ANCHOR RODS OF SIZE, TYPE AND EMBEDMENT LENGTH SHOWN ON DRAWINGS INCLUDING MATCHING NUTS AND MATCHING WASHERS.
- 2.2.2 REINFORCING BAR: PROVIDE REINFORCING BAR AS ANCHOR ROD WHERE SPECIFIED ON DRAWING.
- 2.2.3 CORROSION PROTECTION: PROVIDE CORROSION PROTECTION SPECIFIED ON DRAWINGS
- 2.2.4 ADHESIVE: PROVIDE THE ADHESIVE SPECIFIED ON THE DRAWINGS.

3 EXECUTION

3.1 DRILLED-IN ANCHORS
- 3.1.1 ARRANGE FOR MANUFACTURER’S TECHNICAL REPRESENTATIVE TO BE PRESENT DURING INSTALLATION OF FIRST FEW ANCHORS OF EACH TYPE. SUBMIT SITE REPORTS BY MANUFACTURER TO CONSULTANT WITHIN ONE WEEK OF EACH VISIT. INDICATE IN REPORTS ANCHOR SIZES AND TYPES INSTALLED, LOCATIONS, AND WHETHER INSTALLATION PROCEDURES WERE IN ACCORDANCE WITH MANUFACTURER’S PRINTED INSTRUCTIONS.
- 3.1.2 INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER’S PRINTED INSTRUCTIONS.
- 3.1.3 INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER.
- 3.1.4 DO NOT DRILL HOLES LARGER IN DIAMETER THAN INDICATED IN MANUFACTURER’S PRINTED INSTRUCTIONS.
- 3.1.5 PROVIDE MANUFACTURER’S STANDARD EMBEDMENT LENGTH INTO SOLID CONCRETE, UNLESS OTHERWISE NOTED ON DRAWINGS.
- 3.1.6 DO NOT CUT REINFORCEMENT TO ACCOMMODATE ANCHORS.
- 3.1.7 RELOCATE ANCHORS, AT NO ADDITIONAL COST TO CONTRACT, WHEN OBSTRUCTIONS PREVENT DRILLING HOLES TO REQUIRED DEPTH IN LOCATIONS INDICATED ON DRAWINGS.
- 3.1.8 OBTAIN CONSULTANT’S APPROVAL OF NEW LOCATION BEFORE DRILLING HOLE. FILL ABANDONED HOLES WITH SPECIFIED GROUT.
- 3.1.9 TIGHTEN EXPANSION ANCHORS USING TORQUE WRENCH. IF FINGER-TIGHT IS REQUIRED, NUT SHOULD BE BACKED OFF AFTER TORQUING.

4 FIELD QUALITY CONTROL

4.1 ARRANGE FOR INSPECTION AND TESTING COMPANY TO RANDOMLY SELECT AND PULL TEST ANCHORS AS FOLLOWS:
- 4.1.1 5% OF EACH TYPE AND SIZE OF ANCHOR INSTALLED ON A WEEKLY BASIS, BUT NOT LESS THAN ONE ANCHOR OF EACH TYPE AND SIZE.
- 4.1.2 PULL TEST TO TWICE THE ALLOWABLE DESIGN TENSION CAPACITY OF THE ANCHOR GIVEN BY THE MANUFACTURER.
- 4.1.3 SUBMIT REPORTS OF PULL TESTS TO CONSULTANT ON WEEKLY BASIS. INDICATE ON REPORT EACH ANCHOR LOCATION, TEST LOAD AND MODE OF FAILURE, IF APPLICABLE. NOTIFY CONSULTANT IMMEDIATELY IF ANCHOR FAILS PULL TEST.

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OCI INDIGENOUS YARD

109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. Title

GENERAL NOTES

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LIGHTWEIGHT METAL FRAMING NOTES — GN-014CS

1 GENERAL

1.1 THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION:
- 1.1.1 CSA S16, DESIGN OF STEEL STRUCTURES
- 1.1.2 CSA S136, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
- 1.1.3 CANADIAN SHEET STEEL BUILDING INSTITUTE, CSSBI 51, LIGHTWEIGHT STEEL FRAMING DESIGN MANUAL
- 1.1.4 ASTM A653/A653M, STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON ALLOY COATED (GALVANNEALED) BY HOT-DIP PROCESS.

1.2 DESIGN OF LIGHTWEIGHT METAL FRAMING INCLUDING ALL COMPONENTS SHALL BE BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO EXPERIENCED IN THIS TYPE OF WORKS.

1.3 DESIGN CRITERIA
- 1.3.1 DESIGN LIGHTWEIGHT STEEL FRAMING FOR GRAVITY LOADS NOTED ON PLANS, CONCENTRATED LOADS NOTED IN OBC AND WIND LOADS.
- 1.3.2 DESIGN LIGHTWEIGHT STEEL FRAMING FOR DEFLECTIONS NOT TO EXCEED:
  - .1 FLOOR JOISTS LIVE LOAD: SPAN/360
  - .2 FLOOR JOISTS TOTAL LOAD: SPAN/240
  - .3 EXTERIOR WALL STUDS BACKING UP MASONRY: SPAN/720
  - .4 EXTERIOR WALL STUDS NOT BACKING UP MASONRY: SPAN/360
  - .5 INTERIOR WALL STUDS (MINIMUM DIFFERENTIAL AIR PRESSURE = 0.5 kPa): SPAN/360
- 1.3.3 AXIAL LOADED MEMBERS THAT MEET AT A JOINT SHALL HAVE THEIR CENTROIDAL AXES INTERSECT AT A COMMON POINT UNLESS SHOWN OTHERWISE.

1.4 SUBMITTALS
- 1.4.1 SUBMIT STRUCTURAL SHOP DRAWINGS.
  - .1 EACH SHOP DRAWING SUBMITTED SHALL BEAR THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN.
  - .2 INDICATE ALL DESIGN LOADS.
  - .3 PROVIDE ALL NECESSARY INFORMATION FOR FABRICATION AND ERECTION. INDICATE MEMBER SIZES, LOCATIONS, THICKNESS EXCLUSIVE OF COATINGS AND COATINGS, STEEL GRADE.
  - .4 PROVIDE CONNECTION DETAILS FOR LIGHTWEIGHT FRAMING MEMBERS TO EACH OTHER AND TO THE PRIMARY STRUCTURE.

2 PRODUCTS

2.1 MATERIAL
- 2.1.1 PROVIDE NEW MATERIALS IN ACCORDANCE WITH REFERENCE STANDARDS, OF STRENGTH AND QUALITY NOTED IN GENERAL NOTES. ACCEPTABLE MANUFACTURERS INCLUDE BAILEY METAL PRODUCTS OR APPROVED EQUIVALENT.
- 2.1.2 GALVANIZED SHEET STEEL: ASTM A653/A653M
  - .1 GRADE A, 228 MPa [33 ksi] MINIMUM YIELD FOR 1.21 mm [0.048"] MATERIAL AND THINNER
  - .2 GRADE D, 345 MPa [50 ksi] MINIMUM YIELD FOR 1.52 mm [0.060"] MATERIAL AND THICKER
  - .3 METALLIC COATING: MINIMUM ZINC COATING Z275
- 2.1.3 PAINT:
  - .1 TOUCH-UP PAINT: ZINC-RICH PAINT READY MIX TO SPCC-PAINT 20 STANDARD
- 2.1.4 SHEET METAL SCREWS: SELF-TAPPING, MINIMUM COATING THICKNESS 0.008 mm ZINC OR CADMIUM.
- 2.1.5 STEEL STUDS, JOISTS: FABRICATED FROM GALVANIZED SHEET STEEL FORMED TO CHANNEL SHAPE, DEPTH AS INDICATED, MIMIMUM THICKNESS 1.21 mm [0.048"].
- 2.1.6 STUD TRACKS: FABRICATED FROM SAME MATERIAL AND FINISH AS STUDS, MINIMUM THICKNESS TO MEET DESIGN REQUIREMENTS BUT NOT LESS THAN METAL STUDS.
- 2.1.7 BRIDGING: FABRICATED FROM SAME MATERIAL AND FINISH AS STUDS.

3 EXECUTION

3.1 VERIFY AT SITE THAT THE WORK TO RECEIVE THE WORK OF THIS SECTION IS FREE OF IRREGULARITIES DETRIMENTAL TO THE INSTALLATION AND PERFORMANCE OF THE WORK AND THAT IS LOCATED CORRECTLY AND AT PROPER LEVELS BEFORE DELIVERY AND INSTALLATION. INSTALL COMPONENTS IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

3.2 METHODS OF CONSTRUCTION MAY BE EITHER PIECE BY PIECE (STICK-BUILT), OR BY FABRICATION INTO PANELS (PANELIZED), EITHER ON OR OFF SITE. HANDLING AND LIFTING OF PREFABRICATED PANELS SHALL NOT CAUSE PERMANENT DISTORTION TO ANY MEMBER OR COLLATERAL MATERIAL.

3.3 PROVIDE CUT-OUTS CENTRED ON WEBS OF MEMBERS TO ACCOMMODATE SERVICES. REINFORCE CUT-OUTS AS REQUIRED TO MAINTAIN STRENGTH AND STIFFNESS OF MEMBERS.

3.4 STORE AND PROTECT ALL PRODUCTS FROM CONDITIONS THAT MY CAUSE PHYSICAL DAMAGE OR CORROSION.

3.5 JOIST AND RAFTERS OR THEIR END STIFFENERS SHALL BE LOCATED DIRECTLY OVER LOAD BEARING STUDS. ALTERNATELY, A LOAD DISTRIBUTION MEMBER SHALL BE PROVIDED TO TRANSFER LOADS. THE USE OF THE TRACK AS A LOAD DISTRIBUTION MEMBER IS NOT PERMITTED.

3.6 COLD-FORMED STEEL FRAMING SHALL BE ERECTED TRUE AND PLUMB WITHIN THE TOLERANCES SPECIFIED HEREIN. TEMPORARY BRACING SHALL BE EMPLOYED WHEREVER NECESSARY TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECT DURING ERECTION AND SUBSEQUENT CONSTRUCTION. TEMPORARY BRACING SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR THE SAFETY AND INTEGRITY OF THE STRUCTURE. CONTRACTOR SHALL ENSURE THAT DURING ERECTION A MARGIN OF SAFETY CONSISTENT WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, THE NATIONAL BUILDING CODE AND CSA S136 EXISTS IN THE UNCOMPLETED STRUCTURE.

3.7 ERECTION TOLERANCES:
- 3.7.1 FOR THE PURPOSES OF ERECTION TOLERANCES, "CAMBER" IS DEFINED AS THE DEVIATION FROM STRAIGHTNESS OF A MEMBER OR ANY PORTION OF A MEMBER WITH RESPECT TO ITS MAJOR AXIS AND "SWEEP" IS DEFINED AS THE DEVIATION FROM STRAIGHTNESS OF A MEMBER OR ANY PORTION OF A MEMBER WITH RESPECT TO ITS MINOR AXIS.
- 3.7.2 FOR WIND BEARING STUDS, OUT OF PLUMBNESS SHALL NOT EXCEED 1/500TH OF THE MEMBER LENGTH. OUT OF STRAIGHTNESS (CAMBER AND SWEEP) SHALL NOT EXCEED 1/1000TH OF THE MEMBER LENGTH.
- 3.7.3 FOR RUNNERS / TRACKS, CAMBER SHALL NOT EXCEED 1/1000TH OF THE MEMBER LENGTH.
- 3.7.4 SEAT STUDS INTO BOTTOM TRACK AND TWO PIECE TELESCOPING TOP TRACK FOR WIND BEARING STUDS. SEAT STUDS INTO BOTTOM TRACK AND TOP TRACK FOR GRAVITY LOAD BEARING STUDS.
- 3.7.5 WHERE COLD-FORMED METAL FRAMING IS MADE IN PREFABRICATED PANELS, ALIGN ADJACENT PREFABRICATED PANELS TO PROVIDE SURFACE CONTINUITY AT THE INTERFACE.
- 3.7.6 SPACING OF STUDS SHALL NOT BE MORE THAN 3 mm FROM THE DESIGN SPACING. THE CUMULATIVE ERROR IN SPACING SHALL NOT EXCEED THE REQUIREMENTS OF THE FINISHING MATERIALS.

3.8 ALIGN FLOOR AND CEILING RUNNERS / TRACKS, LOCATE TO WALL OR PARTITION LAYOUT. SECURE IN PLACE WITH SCREWS AT MAXIMUM 600 mm O.C. COORDINATE INSTALLATION OF SEALANT WITH FLOOR AND CEILING TRACK.

3.9 PROVIDE DRILLED ANCHORS AT BOTTOM TRACK AT TYPICALLY 760 mm MAXIMUM SPACING.

3.10 PLACE STUDS TO MEET DESIGN REQUIREMENTS AS INDICATED ON APPROVED SHOP DRAWINGS, AND NOT MORE THAN 50 mm [2"] FROM ABUTTING WALLS, AND AT EACH SIDE OF OPENINGS. CONNECT STUDS TO TRACKS USING CLIPS AND TIES, AND SCREWS. DIAMETER OF SCREWS SHALL BE EQUAL TO, OR EXCEED THE MINIMUM DIAMETER INDICATED ON THE REVIEWED SHOP DRAWINGS.
- 3.10.1 PENETRATION OF SCREWS BEYOND JOINED MATERIALS SHALL BE NOT LESS THAN 3 EXPOSED THREADS. THREAD TYPES AND DRILLING CAPABILITY OF SCREWS SHALL CONFORM TO THE MANUFACTURER'S WRITTEN RECOMMENDATIONS TO SUIT DESIGN REQUIREMENTS AND CONDITIONS. SCREWS TO BE COVERED BY SHEATHING MATERIALS SHALL HAVE "LOW PROFILE" TYPE HEADS.

3.11 FIELD CUTTING OF COLD-FORMED STEEL FRAMING MEMBERS SHALL BE BY "POWER SAW" OR "SHEAR" METHODS. CUTTING BY "TORCH" METHOD SHALL NOT BE PERMITTED.

3.12 HOLES THAT ARE FIELD CUT INTO COLD-FORMED STEEL FRAMING MEMBERS SHALL NOT BE CUT WITHOUT APPROVAL AND SHALL CONFORM TO THE DIMENSIONAL REQUIREMENTS OF TABLE 1, IN THE CSSBI 51-06. MANUAL.

3.13 BRACE STRUCTURAL METAL STUDS AS REQUIRED TO MEET DESIGN REQUIREMENTS AND AS INDICATED ON REVIEWED SHOP DRAWINGS.

3.14 CONSTRUCT CORNERS USING MINIMUM OF THREE STUDS. DOUBLE STUDS AT DOOR, WINDOW JAMBS AND WALL OPENINGS.

3.15 ERECT STUDS ONE PIECE FULL LENGTH. SPLICING OF STUDS IS NOT PERMITTED.

3.16 ERECT LOAD BEARING STUDS, BRACE AND REINFORCE TO DEVELOP FULL STRENGTH TO MEET DESIGN REQUIREMENTS.

3.17 TOUCH-UP DAMAGED GALVANIZED SURFACES WITH TWO COATS OF ZINC-RICH PAINT.

4 INSPECTION AND TESTING

4.1 INSPECTION AND TESTING COMPANY SHALL PERFORM:
- 4.1.1 INSPECTION OF ERECTION AND FIT-UP INCLUDING PLACING, PLUMBING AND LEVELLING;
- 4.1.2 GENERAL INSPECTION OF FIELD CUTTING AND ALTERATIONS;
- 4.1.3 GENERAL INSPECTION OF COATING TOUCH-UP.

CONCRETE & REINFORCING STEEL & FORMWORK — GN-003CS

1 GENERAL

1.1 THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION:
- 1.1.1 CSA A23.1, CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION
- 1.1.2 CSA A23.2, METHODS OF TEST FOR CONCRETE
- 1.1.3 CSA A3000, CEMENTITIOUS MATERIALS COMPENDIUM
- 1.1.4 ASTM A1064/A1064M STANDARD SPECIFICATION FOR CARBON-STEEL WIRE AND WELDED WIRE REINFORCEMENT, PLAIN AND DEFORMED, FOR CONCRETE.
- 1.1.5 CSA G30.18, CARBON STEEL BARS FOR CONCRETE REINFORCEMENT
- 1.1.6 CSA W186, WELDING OF REINFORCING BARS IN REINFORCED CONCRETE CONSTRUCTION
- 1.1.7 ASTM D3963/D3963M, STANDARD SPECIFICATION FOR FABRICATION AND JOBSITE HANDLING OF EPOXY-COATED STEEL REINFORCEMENT BARS
- 1.1.8 ACI 315, MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES
- 1.1.9 RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE, 2006.
- 1.1.10 ACI 117, STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS AND COMMENTARY
- 1.1.11 CSA S269.1, FALSEWORK AND FORMWORK

1.2 SUBMITTALS
- 1.2.1 SUBMIT CONCRETE MIX DESIGNS
- 1.2.2 SUBMIT REINFORCING STEEL SHOP DRAWINGS
  - .1 PREPARE PLACING DRAWINGS AND BAR LISTS INDICATING REINFORCING, DOWELS, CONCRETE COVER, CONSTRUCTION JOINTS

2 PRODUCTS

2.1 PLYWOOD: DOUGLAS FIR, MINIMUM THICKNESS17 mm TO CSA O121, FINISHED ONE SIDE, FABRICATED SPECIALLY FOR USE AS CONCRETE FORM PANELS WITH SEALED EDGES.

2.2 ROUND COLUMN FIBRE FORMS: TO PRODUCE SMOOTH SURFACE WITHOUT FINS

2.3 VOIDFORM: HONEYCOMB CELLULAR CORE STRUCTURE MANUFACTURED FROM KRAFT FIBRE.

2.4 REINFORCING BARS: TO CAN/CSA-G30.18, GRADE 400W

2.5 WELDED WIRE FABRIC: TO ASTM A1064/A1064M AND IN FLAT SHEETS NOT ROLLS

2.6 EPOXY COATED REINFORCEMENT: FROM MINISTRY OF TRANSPORTATION APPROVED SOURCES TO ASTM D3963/D3963M

2.7 CEMENTING MATERIALS
- 2.7.1 PORTLAND CEMENT: TO CSA A3000 TYPE GU OR GUL
- 2.7.2 CEMENTITIOUS HYDRAULIC SLAG AND FLY ASH: TO CSA A3000

2.8 AGGREGATE
- 2.8.1 FINE AGGREGATE FOR SLABS ON GRADE: FINENESS MODULUS BETWEEN 2.6 AND 3.1
- 2.8.2 COARSE AGGREGATE: 20 mm TO 5 mm UNLESS OTHERWISE SPECIFIED

2.9 CORROSION INHIBITOR: CALCIUM NITRITE MEETING THE REQUIREMENTS OF CSA S413, APPENDIX C

2.10 VAPOUR BARRIER FOR SLABS ON GRADE: POLYETHYLENE MEMBRANE, 0.25 MM THICK TO ASTM E1745

2.11 CONTROL JOINT FILLER: SEMI-RIGID JOINT FILLER
: QWIKJOINT UVR, BY EUCLID CANADA INC., TORONTO, ON.
: LOADFLEX, BY SIKA CANADA INC., MISSISSAUGA, ON.
: PLANIBOND JF, BY MAPEI INC., BRAMPTON, ON.

2.12 PREMIXED GROUT: DRYPACK NON-SHRINK NON-METALLIC

3 EXECUTION

3.1 CONCRETE TO BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

LOCATION	CLASS OF EXPOSURE	MIN. 28 DAY STRENGTH (MPa)	CEMENT SYMBOL	MAX. AGGREGATE SIZE (mm)	SLUMP (mm)	% AIR ENTRAINMENT
FOOTINGS	N	25	GU or GUL	20	80	N/A
FOUNDATION WALLS/ GRADE BEAMS	F2	25	GU or GUL	20	80	4-7
SLAB -ON-GRADE	N	25	GU or GUL	20	80	N/A
EXTERIOR SIDEWALKS	C2 (NOTE 1)	32	GU or GUL	20	80	5-8
EXTERIOR MECHANICAL PADS / GARDEN SHED	C1 (NOTE 2)	35	GU or GUL	20	80	5-8

Note 1: FOR CLASS C2, UP TO 25% PORTLAND CEMENT MAY BE REPLACED WITH CEMENTITIOUS HYDRAULIC SLAG. REDUCE PERCENTAGE REPLACEMENT IN COLD WEATHER

Note 2: FOR CLASS C1, REPLACE A PORTION OF PORTLAND CEMENT WITH CEMENTITIOUS HYDRAULIC SLAG TO ACHIEVE 1500 COULOMB RATING AND INCORPORATE CALCIUM NITRITE CORROSION INHIBITOR, 15 LITRES/CUBIC METRE.

3.2 ALL REINFORCEMENT SHALL BE SECURELY HELD IN PROPER POSITION WHILE PLACING CONCRETE. PROVIDE CHAIRS, TIES, SPACERS, ADDITIONAL SUPPORT BARS AND STIRRUPS AS MAY BE REQUIRED.

3.3 PROVIDE OPENINGS IN SLABS AND WALLS AS SHOWN ON STRUCTURAL DRAWINGS OR OTHERWISE REQUIRED BY VARIOUS TRADES. OBTAIN CONSULTANT'S APPROVAL FOR LOCATIONS AND SIZES OF OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS. FORM ALL OPENINGS BEFORE CONCRETE IS PLACED; DO NOT CUT OR CORE ANY OPENINGS AFTER CONCRETING UNLESS APPROVED BY THE CONSULTANT.

3.4 PROVIDE SLEEVES IN SLABS AND WALLS FOR MECHANICAL PIPING WHEREVER POSSIBLE; AVOID CREATING OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS. OBTAIN CONSULTANT'S APPROVAL FOR ALL SLEEVES. SUBMIT SLEEVING DRAWINGS FOR APPROVAL A MINIMUM TWO WEEKS PRIOR TO PLACING CONCRETE.

3.5 ELECTRICAL CONDUIT IN SLABS, BEAMS, WALLS AND COLUMNS SHALL BE APPROVED BY THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. REFER TO TYPICAL DETAILS FOR GUIDELINES.

3.6 CONSTRUCTION JOINTS FOR SLABS, BEAMS AND WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE CONSULTANT BEFORE CONSTRUCTION. REFER TO TYPICAL DETAILS.

3.7 COORDINATE AND INSTALL ALL REQUIRED EMBEDDED ITEMS, SLEEVES, INSERTS, FASTENING DEVICES ETC, BEFORE PLACING CONCRETE. INSTALL THESE ITEMS IN A MANNER THAT DOES NOT IMPAIR THE STRUCTURAL STRENGTH OF THE SYSTEM. DO NOT CUT OR BEND OR DISPLACE REINFORCEMENT OTHER THAN SHOWN ON THE STRUCTURAL DRAWINGS.

3.8 CONCRETE WALLS
- 3.8.1 REINFORCEMENT OF CONCRETE WALLS NOT SHOWN BY SECTION, PLAN OR SCHEDULE SHALL BE AS FOLLOWS:

EXTERIOR WALLS OUTSIDE THE BUILDING ENVELOPE AND BASEMENT WALLS

WALL THICKNESS	HORIZONTAL	VERTICAL	LOCATION
100 TO 150 (4" TO 6")	15M@300 (12")	10M@000 (12")	CENTRE
200 (8")	10M@225 (9")	10M@450 (18")	EACH FACE
250 (10")	15M@350 (14")	10M@450 (18")	EACH FACE
300 (12")	15M@325 (13")	10M@400 (16")	EACH FACE
>300 (12")	15M@300 (12")	15M@400 (16")	EACH FACE

ADD 2-15M HORIZONTAL TOP AND BOTTOM CONTINUOUS FOR 200 (8") WALLS
ADD 2-20M HORIZONTAL TOP AND BOTTOM CONTINUOUS FOR 250 (10") WALLS OR THICKER

INTERIOR WALLS

WALL THICKNESS	HORIZONTAL	VERTICAL	LOCATION
100 TO 150 (4" TO 6")	10M@300 (12")	10M@300 (12")	CENTRE
200 (8")	10M@450 (18")	10M@450 (18")	EACH FACE
250 (10")	10M@350 (14")	10M@450 (18")	EACH FACE
300 (12")	10M@330 (13")	10M@400 (16")	EACH FACE
>300 (12")	15M@300 (12")	15M@400 (16")	EACH FACE

ADD 2-15 HORIZONTAL TOP AND BOTTOM CONTINUOUS FOR 200 (8") WALLS OR THICKER

- 3.8.2 UNLESS SHOWN OTHERWISE BY SECTION, PLAN OR SCHEDULE, ADD 2-15M HORIZONTAL BARS ABOVE AND BELOW OPENINGS IN HEAD AND SILL. EXTEND BARS 600 mm (24") PAST OPENING. ADD "U" BARS SAME SIZE AND SPACING AS VERTICAL BARS.
- 3.8.3 UNLESS SHOWN OTHERWISE BY SECTION, PLAN OR SCHEDULE, ADD 2 -15M VERTICAL BARS IN JAMBS OF OPENING AND EDGE TIES SAME SIZE AND SPACING OF HORIZONTAL BARS.
- 3.8.4 WALL DOWELS INTO SLAB NOT SHOWN BY SECTION, PLAN OR SCHEDULE SHALL BE SAME SIZE AND SPACING AS VERTICAL BARS.
- 3.8.5 DO NOT LOCATE HORIZONTAL JOINTS BETWEEN FLOORS UNLESS SHOWN ON DRAWINGS.
- 3.8.6 LEAVE CHASES IN WALLS FOR SLABS, BEAMS AND CONCRETE STAIRS.

3.9 MINIMUM REINFORCING FOR ANY SUSPENDED SLAB SHALL BE TEMPERATURE BARS BOTTOM EACH WAY AS SHOWN IN TYPICAL DETAIL C-003 ONE-WAY-SLABS.

3.10 SLAB-ON-GRADE
- 3.10.1 SEE FOUNDATION PLAN NOTES FOR BEARING CONDITIONS.
- 3.10.2 WHERE FLOOR DEPRESSIONS OCCUR MAINTAIN SLAB THICKNESS SPECIFIED ON THE FOUNDATION PLANS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND AREAS.
- 3.10.3 EACH POUR SHALL BE CONTAINED BY A VERTICAL BULKHEAD OR ABUTTING CONSTRUCTION JOINT. REFER TO TYPICAL DETAILS FOR CONSTRUCTION JOINTS AND CONTROL JOINTS.
- 3.10.4 DO NOT PLACE CONCRETE ON FROZEN SUBGRADE OR ON SUBGRADE CONTAINING FROZEN MATERIAL. ASCERTAIN THAT FORMS, REINFORCING STEEL AND ADJACENT CONCRETE SURFACES ARE ENTIRELY FREE OF FROST, SNOW AND ICE BEFORE PLACING CONCRETE.
- 3.10.5 BEFORE PLACING SLAB-ON-GRADE VERIFY THAT:
  - .1 SUBGRADE HAS BEEN COMPACTED TO THE REQUIREMENTS OF THE GEOTECHNICAL REPORT;
  - .2 TRENCHES, HOLES ETC. THAT WERE DUG AFTER THE PREPARATION OF THE SUBGRADE HAVE BEEN FILLED WITH NEW GRANULAR MATERIAL AND COMPACTED TO THE REQUIREMENTS OF THE GEOTECHNICAL REPORT;
  - .3 REINFORCING STEEL IS PROPERLY CHAIRED AND HELD SECURELY IN PLACE;
  - .4 ALL EQUIPMENT FOR THE FINISHING OF CONCRETE AND THE SAW CUTTING OF CONTROL JOINTS IS ON SITE AND WORKING PROPERLY;
  - .5 USE EARLY ENTRY SAW (SOFF-CUT, BY HUSQVARNA). COMMENCE SAWCUTTING AS SOON AS CONCRETE CAN SUPPORT WEIGHT OF SAW AND OPERATOR WITHOUT MARRING CONCRETE SURFACE AND WITHIN 2 HOURS OF COMPLETION OF FINAL FINISHING;

3.11 FLOOR FINISH: HARD, SMOOTH, DENSE TROWELED SURFACE FREE FROM BLEMISHES.

4 FIELD QUALITY CONTROL

4.1 INSPECTION AND TESTING COMPANY SHALL PERFORM:
- 4.1.1 SAMPLING, INSPECTION AND TESTING IN ACCORDANCE WITH CSA A23.2 AND TO INCLUDE:
  - .1 MAKING STANDARD SLUMP TESTS;
  - .2 OBTAINING OF THREE STANDARD SPECIMENS FOR STRENGTH TESTS FROM EACH 100 CUBIC METRES OF CONCRETE, OR FRACTION THEREOF, OF EACH MIX DESIGN OF CONCRETE PLACED IN ANY ONE DAY;
  - .3 MAKING COMPRESSION TESTS OF EACH SET OF THREE SPECIMENS, ONE AT 7 DAYS AND TWO AT 28 DAYS;
  - .4 VERIFICATION OF AIR CONTENT OF AIR-ENTRAINED CONCRETE;
  - .5 VERIFICATION THAT CONCRETE CONTAINS CORROSION INHIBITOR WHERE SPECIFIED.
  - .6 DETERMINE CHLORIDE ION CONTENT IN ACCORDANCE WITH CSA STANDARDA23.2 TEST METHOD 4B.
  - .7 INSPECTION OF TOLERANCES.

TIMBER FRAMING NOTES — GN-015CS

1 GENERAL

1.1 THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION:
- 1.1.1 ASTM 153/153M-16a, STANDARD SPECIFICATION FOR ZINC COATING (HOT DIP) ON IRON AND STEEL HARDWARE.
- 1.1.2 CSA B111-1974(R1998), WIRE NAILS, SPIKES AND STAPLES.
- 1.1.3 CSA O80 SERIES-15, WOOD PRESERVATION.
- 1.1.4 CSA O86-14, ENGINEERING DESIGN IN WOOD.
- 1.1.5 CSA O112 .9-10(R2014) EVALUATION OF ADHESIVES FOR STRUCTURAL WOOD PRODUCTS (EXTERIOR EXPOSURE)
  CSA O112 .10-08(R2013) EVALUATION OF ADHESIVES FOR STRUCTURAL WOOD PRODUCTS (LIMITED MOISTURE EXPOSURE)
- 1.1.6 CSA O121-08(R2013), DOUGLAS FIR PLYWOOD.
- 1.1.7 CSA O122-16, STRUCTURAL GLUED-LAMINATED TIMBER.
- 1.1.8 CSA O141-05(R2014), SOFTWOOD LUMBER.
- 1.1.9 CSA O151-09(R2014), CANADIAN SOFTWOOD PLYWOOD.
- 1.1.10 CSA O177-06(R2015), QUALIFICATION CODE FOR MANUFACTURERS OF STRUCTURAL GLUED-LAMINATED TIMBER.
- 1.1.11 CSA S16-14, DESIGN OF STEEL STRUCTURES.
- 1.1.12 ONTARIO BUILDING CODE, 2012 EDITION (R2019)

1.2 DESIGN OF ROOF TRUSSES, CONNECTIONS SHALL BE BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.

1.3 DESIGN CRITERIA
- 1.3.1 CONFORM TO CSA-086 AND APPROPRIATE REQUIREMENTS OF THE ONTARIO BUILDING CODE.
- 1.3.2 DESIGN TRUSSES, GLUED LAMINATED MEMBERS AND SOLID WOOD HEAVY TIMBER MEMBER AS APPROPRIATE TO CARRY LOADS INDICATED ON THE DRAWINGS AND TO RESIST UPLIFT.
- 1.3.3 DESIGN AND ANALYZE TRUSSES AS RIGIDLY CONNECTED LINEAR ELASTIC FRAMEWORKS, INCLUDING ALL JOINT ECCENTRICITIES IN ANALYSIS.
- 1.3.4 DESIGN GLUED-LAMINATED OR SOLID WOOD MEMBERS FOR COMBINED AXIAL LOAD AND BENDING MOMENT.
- 1.3.5 LIMIT LIVE LOAD DEFLECTION OF ROOF TRUSSES TO 1/300 OF SPAN AND FLOOR MEMBERS TO 1/360 OF SPAN FOR SPANS UP TO 4570mm, 12mm MAX DEFLECTION FOR SPANS UP TO 6000mm, AND 1/480 OF SPAN FOR SPANS EXCEEDING 6000mm, UNLESS OTHERWISE SPECIFIED.
- 1.3.6 CONNECTIONS DESIGNED BY CONSULTANT:
  - .1 SUBMISSION OF SHOP DRAWINGS FOR CONNECTIONS WHICH HAVE BEEN DETAILED ON DRAWINGS BY CONSULTANT SHALL REPRESENT ACCEPTANCE BY CONTRACTOR THAT CONNECTION CAN BE EXECUTED SUCCESSFULLY.
- 1.3.7 CONNECTIONS:
  - .1 DESIGN OF CONNECTIONS SHALL BE BY A PROFESSIONAL ENGINEER, LICENSED IN THE PROVINCE OF ONTARIO, EXPERIENCED IN CONNECTION DESIGN.
  - .2 CONSULTANT WILL REVIEW CONNECTION ARRANGEMENT TO VERIFY GENERAL CONFORMANCE WITH OVERALL DESIGN CONCEPT OF STRUCTURE.
  - .3 DESIGN CONNECTIONS, BRACKETS AND HARDWARE TO RESIST BEAM REACTIONS PRODUCED BY FRAMING OR LOAD CONDITIONS.
  - .4 PROVIDE BEAM TO COLUMN CONNECTIONS THAT APPLY VERTICAL REACTION WITH MINIMUM ECCENTRICITY AT CONNECTING FACE OF COLUMN.
  - .5 DESIGN CONNECTIONS THAT WILL BE EXPOSED TO VIEW IN FINISHED STRUCTURE, WITH RECESSED FASTENERS AND CONCEALED STEEL HARDWARE.

1.4 SUBMITTALS
- 1.4.1 SUBMIT ERECTION DIAGRAMS AND SHOP DETAILS, FULLY DETAILED AND DIMENSIONED, WITH COMPLETE INFORMATION NECESSARY FOR FABRICATION AND ERECTION, WITHOUT REFERENCE TO DRAWINGS.
- 1.4.2 EACH SHOP DRAWING SUBMITTED SHALL BEAR SIGNATURE AND SEAL OF PROFESSIONAL ENGINEER RESPONSIBLE FOR DESIGN.

2 PRODUCTS

2.1 MATERIAL
- 2.1.1 **SAWN TIMBER**
  PROVIDE GRADE NO. 2 DOUGLAS FIR OR GRADE NO. 2 SPRUCE LUMBER OR BETTER UNLESS OTHERWISE SHOWN ON DRAWINGS, CONFORMING TO CSA O141 WITH MAXIMUM MOISTUR CONTENT OF 19% AT THE TIME OF INSTALLATION AND NLGA STANDARD GRADING RULES FOR CANADIAN LUMBER. SAWN LUMBER SHALL BEAR THE GRADING STAMP OF AN AGENCY APPROVED BY THE CANADIAN LUMBER STANDARDS ADMINISTRATION BOARD.
  : DRESS BEAMS AND COLUMNS 4 SIDES (S4S)
  : DRESS JOISTS, STUDS AND PLANKS 2 SIDES (S2S).
- 2.1.2 **PLYWOOD**
  - .1 USE DOUGLAS FIR (DF) PLYWOOD, TO CSA O121, OR CANADIAN SOFTWOOD (CS) PLYWOOD, TO CSA O151.
  - .2 USE PANELS 2400 MM X 1200 MM [8'-0" X 4'-0"] IN SIZE AND OF THICKNESS SHOWN ON DRAWINGS.
  - .3 FOR ROOF SHEATHING USE DF PLYWOOD, SHEATHING GRADE, T&G EDGE.
  - .4 FOR EXTERIOR WALL SHEATHING USE EITHER DF OR CS PLYWOOD SHEATHING GRADE, T&G EDGE.
  - .5 FOR SUBFLOORING USE DF PLYWOOD GOOD ONE SIDE GRADE OR CS PLYWOOD SOLID ONE SIDE GRADE, BOTH T&G EDGE.
- 2.1.3 **FASTENINGS AND HARDWARE**
  - .1 NAILS, SPIKES AND STAPLES: TO CSA B111. HOT GALVANIZED FINISH STEEL FOR EXTERIOR WORK, INTERIOR HIGHLY HUMID AREAS SUCH AS SWIMMING POOLS AND FOR TREATED LUMBER.
  - .2 SPLIT RING CONNECTORS:
    MANUFACTURED FROM HOT-ROLLED CARBON STEEL, SAE 1010, TO REQUIREMENTS OF SAE HANDBOOK.
  - .3 SHEAR PLATE CONNECTORS: MALLEABLE IRON TYPE: TO ASTM A47, (GRADE 35018).
  - .4 BOLTS AND LAG SCREWS: TO ASTM A307.
  - .5 GLULAM RIVETS: STEEL TO CSA G40.21; DIMENSIONS TO CSA-O86, FIGURE 11.
  - .6 TRUSS PLATES: GALVANIZED SHEET STEEL TO ASTM A653/A653M STRUCTURAL QUALITY GRADE 37 (255 MPa).
  - .7 JOISTS HANGERS: MINIMUM 1 MM [0.040 INCHES] THICK SHEET STEEL, GALVANIZED G90 COATING DESIGNATION, 700 KG. [1500 POUNDS] BEARING STRENGTH.
- 2.1.4 **STEEL FOR CONNECTIONS, BRACKETS AND PLATES**: to CSA G40.21.
- 2.1.5 **GALVANIZING:** HOT DIP TO ASTM153/153M.
- 2.1.6 **WOOD PRESERVATIVE FOR PRESSURE TREATMENT:** CHROMATED COPPER ARSENATE (CCA) TO CSA O81.1, SECTION 5.
- 2.1.7 **WOOD PRESERVATIVE FOR SURFACE-APPLIED TREATMENT OF CUT SURFACES:** COPPER NAPHTHENATE, PENTOX

2.2 FABRICATION
- 2.2.1 **HARDWARE AND FASTENINGS**
  - .1 FABRICATE STEEL HARDWARE IN ACCORDANCE WITH CSA-S16. PERFORM WELDING IN ACCORDANCE WITH CSA W59, AND BY WELDERS FULLY APPROVED TO CSA W47.1.
  - .2 DRILL HOLES IN WOOD 1.5 MM [1/16"] LARGER THAN BOLT DIAMETER FOR BOLTS 12 MM [1/2"] OR MORE AND 1 MM [1/32"] FOR SMALLER BOLTS.
  - .3 DRILL HOLES FOR LAG SCREWS SO THAT LEAD HOLE IN MAIN MEMBER FOR SHANK IS SAME SIZE AND DEPTH AS SHANK, AND FOR THREADED PORTION 3/4 OF SHANK DIAMETER.
  - .4 DRILL HOLES IN WOOD TO MATCH HOLES IN HARDWARE.
  - .5 PROVIDE 3 MM [1/8"] CLEARANCE BETWEEN MEMBER AND STEEL SHOES OR HANGER.
  - .6 PROVIDE WASHERS UNDER HEAD AND NUT OF EACH BOLT.
- 2.2.2 **WOOD PRESERVATION**
  PRESSURE TREAT WOOD FOR EXTERIOR WORK, IN ACCORDANCE WITH CSA O80, IN THE FOLLOWING MANNER:
  - .1 TREAT PLYWOOD IN ACCORDANCE WITH CSA-O80.9, USING CHROMATED COPPER ARSENATE (CCA) TO OBTAIN MINIMUM NET RETENTION OF 6.4 KG. PER CU.M. [0.40 POUNDS PER CUBIC FOOT].
  - .2 TREAT SAWN TIMBER TO CSA-O80.2 USING CHROMATED COPPER ARSENATE (CCA) TO OBTAIN MINIMUM NET RETENTION OF 6.4 KG. PER CU.M. [0.40 POUNDS PER CUBIC FOOT].
  - .3 BURY PRESSURE TREATED WASTE MATERIAL. DO NOT BURN.

3 EXECUTION

3.1 GENERAL TIMBER CONSTRUCTION:
- 3.1.1 ALL TIMBER CONSTRUCTION SHALL CONFORM TO CSA STANDARD CAN3-O86 AND OBC PART 4.
- 3.1.2 PROVIDE TEMPORARY BRACING DURING CONSTRUCTION UNTIL ALL SHEATHING INSTALLED.
- 3.1.3 ALL TIMBER CONSTRUCTION SHALL ALSO CONFORM TO PART 9 OF ONTARIO BUILDING CODE.

3.2 EXAMINATION
- 3.2.1 VERIFY, BEFORE DELIVERY OF STRUCTURAL TIMBER, THAT WORK OF OTHER SECTIONS ON WHICH WORK OF THIS SECTION IS DEPENDENT IS CORRECTLY INSTALLED AND LOCATED.

3.4 ERECTION
- 3.4.1 **SUB-FLOORING AND ROOF SHEATHING:**
  - .1 PLYWOOD OF TYPE AND THICKNESSES SHOWN ON THE DRAWINGS SHALL CONFORM TO CSA STANDARDS 0121, 0151 OR 0153
  - .2 INSTALL ROOF SHEATHING WITH AT LEAST A 2 mm GAP BETWEEN SHEETS;
  - .3 FASTENERS SHALL BE SPIRAL OR RING THREAD NAILS, 75 mm LONG MINIMUM AT 300 mm C/C MAXIMUM (150 mm ALONG BUTT EDGES). MAKE BUTT JOINTS ON SOLID MATERIAL.
  - .4 AT EDGES OF PANELS, PROVIDE NOT LESS THAN 38 mm X 38 mm BLOCKING SECURELY NAILED BETWEEN FRAMING MEMBERS, UNLESS OTHERWISE APPROVED.
  - .5 INSTALL PLYWOOD SHEATHING:
    - WITH THE SURFACE GRAIN AT RIGHT ANGLES TO THE FRAMING AND WITH END JOINTS STAGGERED;
    - LAYOUT PLYWOOD STAGGERED JOINT PATTERN SUCH THAT PLYWOOD SHEET IS AT LEAST TWO SPAN CONTINUOUS WHERE POSSIBLE;
    - ALL END JOINTS MUST BE POSITIONED ALONG CENTRE LINE OF SUPPORT;

4 FIELD QUALITY CONTROL

4.1 INSPECTION AND TESTING COMPANY SHALL PERFORM:
- 4.1.1 INSPECTION OF ERECTION AND FIT-UP INCLUDING PLACING, PLUMBING, LEVELING AND TEMPORARY BRACING
- 4.1.2 INSPECTION OF BOLTED CONNECTIONS
- 4.1.3 GENERAL INSPECTION OF FIELD CUTTING AND ALTERATIONS;
- 4.1.4 GENERAL INSPECTION OF FIELD SURFACE-APPLIED PRESERVATIVE.

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Oct. 01, 2025
PROVINCE OF ONTARIO

No.	Revision	Date
5	ISSUED FOR PERMIT	01OCT2025
4	ISSUED FOR TENDER	01OCT2025
3	ISSUED FOR 99% REVIEW	26AUG2025
2	ISSUED FOR 99% REVIEW	26JUN2025
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Project Title
OCI INDIGENOUS YARD
109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. Title
GENERAL NOTES

Project No.
ALL-24012754-A0

Dwg. No.
S103

Rev. No.
5

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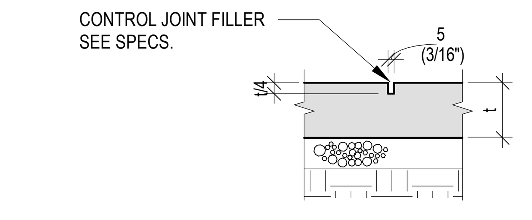
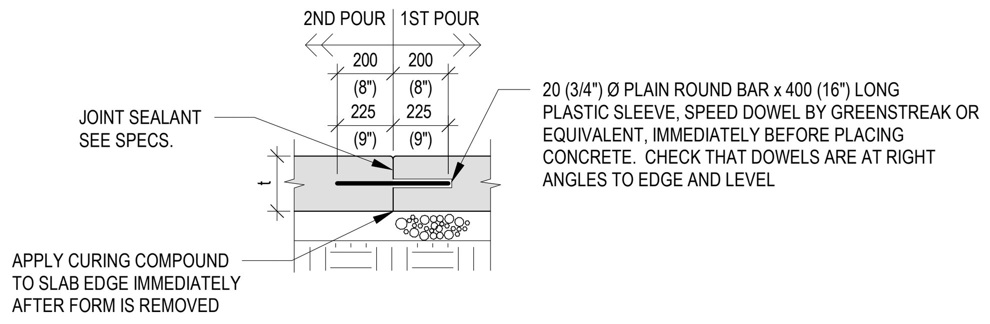
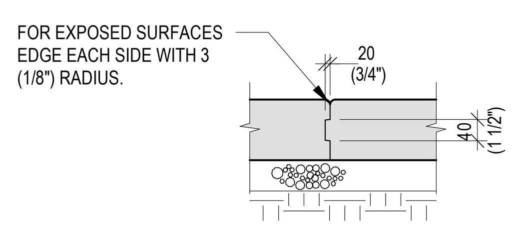
SLAB ON GRADE - JOINT DETAILS — SG-003



SAWCUT CONTROL JOINT

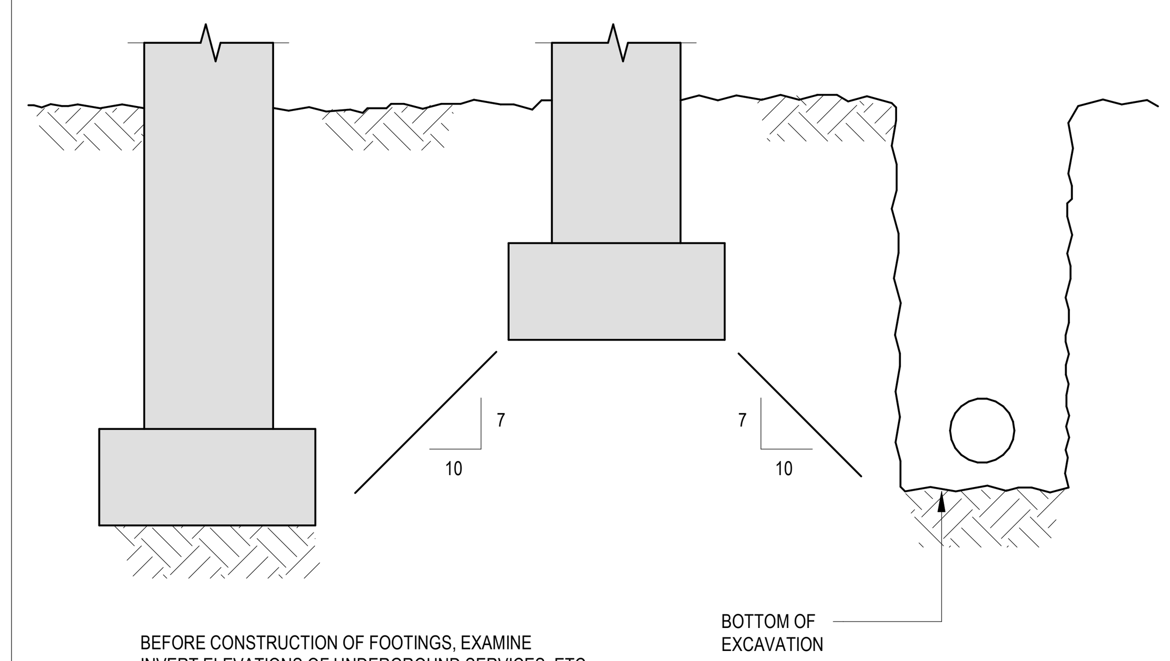


DOWELED CONSTRUCTION JOINT
FOR SLAB GREATER THAN 100 (4")



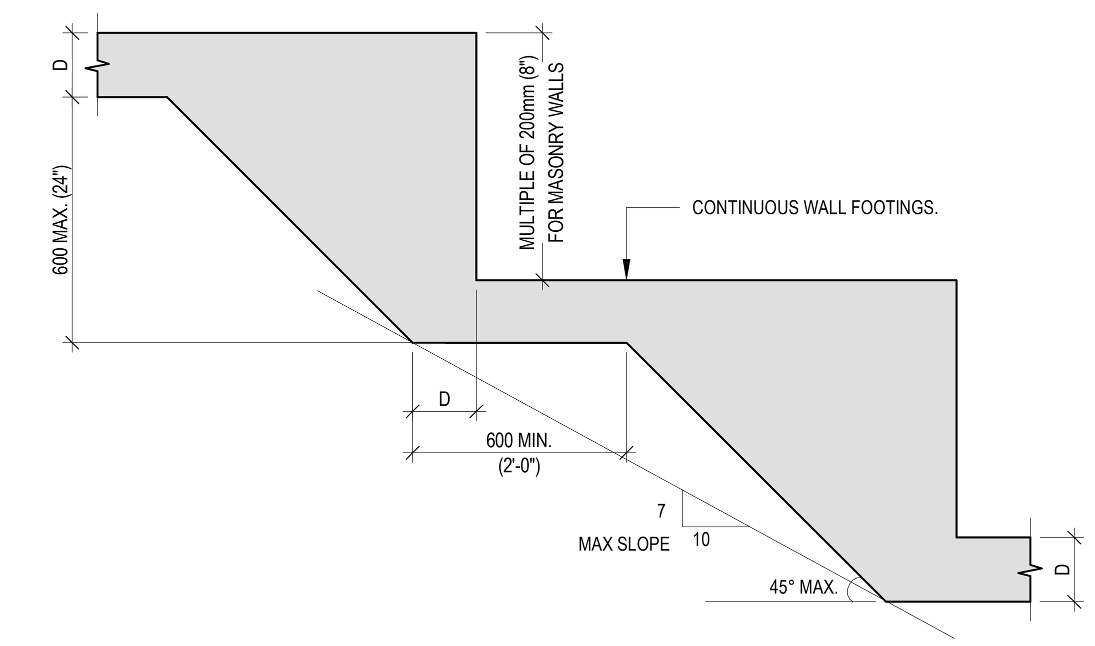
KEYED CONSTRUCTION JOINT FOR
SLAB GREATER THAN 100 (4") (OMIT
KEY FOR 100 (4") SLABS)

TYPICAL WALL FOOTING ADJACENT TO EXCAVATIONS — F-011

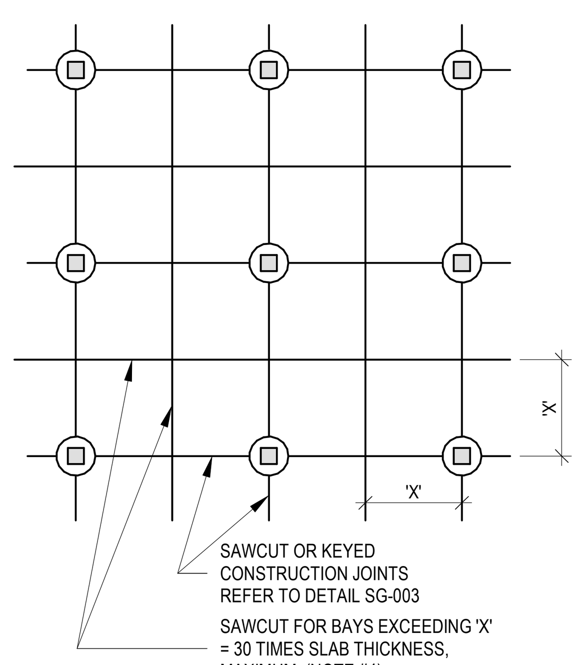


BEFORE CONSTRUCTION OF FOOTINGS, EXAMINE
INVERT ELEVATIONS OF UNDERGROUND SERVICES, ETC.
FOOTINGS IN THE VICINITY SHALL BE LOWERED TO
SATISFY THE MAX. SLOPE OF 7 TO 10

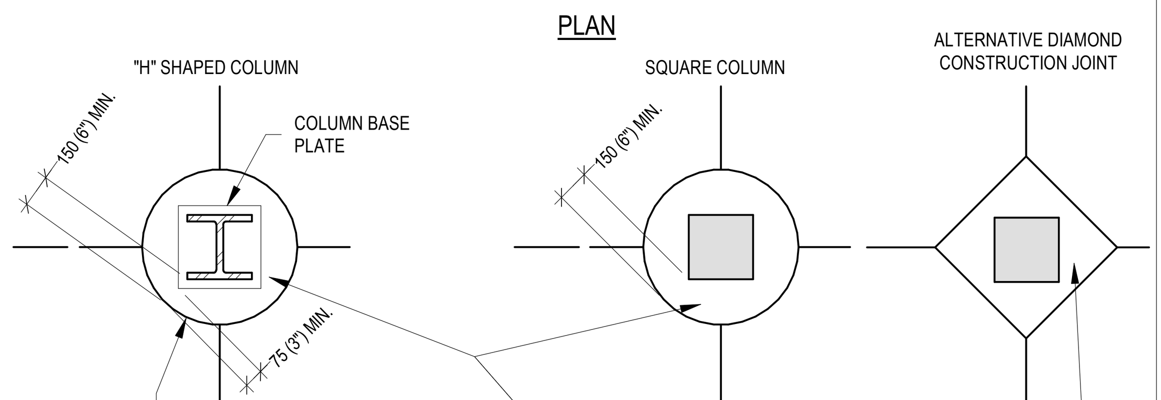
TYPICAL STEPPED FOOTING DETAIL — F-009



SLAB ON GRADE - AREA PLACEMENT — SG-001



PLAN



FORM CIRCULAR CONSTRUCTION
JOINT. REMOVE FORM BEFORE
PLACING INFILL.

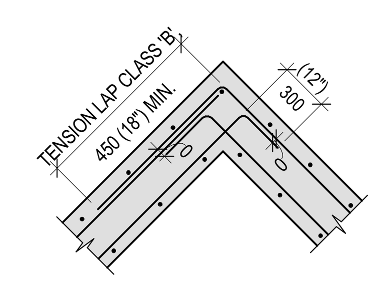
JOINT AT COLUMNS

DO NOT PLACE INFILL CONCRETE AT COLUMN UNTIL AT
LEAST 21 DAYS AFTER PLACING ADJACENT SLABS.
POUR INFILL DOWN TO TOP OF CAP OR PIER.

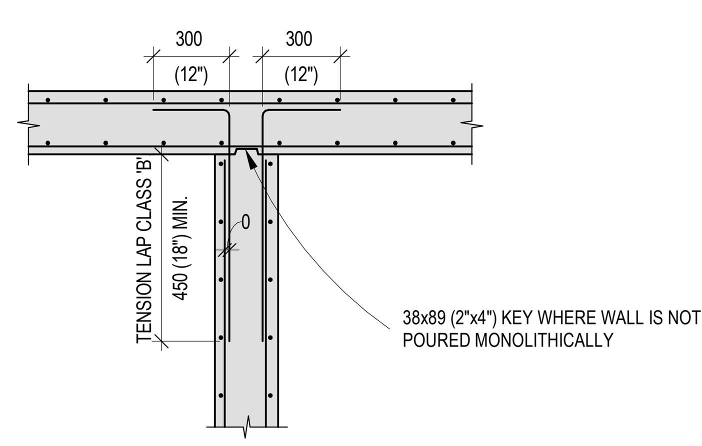
NOTES

1. FORM AROUND COLUMNS. (NOT REQUIRED AT CIRCULAR COLUMNS).
2. PLACE SLAB AREA NO LARGER THAN CAN BE FINISHED IN ONE DAY.
3. SAWCUTCONTROL JOINTS AS SOON AS CONCRETE HAS SET SUFFICIENTLY TO AVOID RAVELING EDGES. USE EARLY ENTRY SAW (SOFF-CUT, BY HUSQVARNA). COMMENCE SAWCUTTING AS SOON AS CONCRETE CAN SUPPORT WEIGHT OF SAW AND OPERATOR WITHOUT MARRING CONCRETE SURFACE AND WITH 2 HOURS COMPLETION OF FINAL FINISHING.
4. SAWCUT AT COLUMN CENTRELINES. FOR BAYS EXCEEDING 'X' SAWCUT ALSO INTO PANELS NOT EXCEEDING 'X,' UNLESS OTHERWISE NOTED ON PLANS.
5. LIMIT RATIO OF LENGTH TO WIDTH OF ANY SAWCUT PANEL TO 1.5 MAXIMUM.
6. FILL SAWCUT JOINTS WITH SEMI-RIGID EPOXY, IN ACCORDANCE WITH SPECIFICATION.
7. DIMENSIONS ARE mm, EXCEPT DIMENSIONS IN BRACKETS ARE INCHES.
8. SUBMIT PROPOSED CONTROL AND SAWCUT JOINT LOCATIONS IN DRAWING FORMAT FOR REVIEW PRIOR TO CONSTRUCTION.

TYPICAL REINFORCED CONCRETE WALL PLAN DETAILS — C-022



WALLS GREATER THAN OR EQUAL TO
200 (8") THICK



WALLS GREATER THAN OR EQUAL TO
200 (8") THICK

NOTES:

1. PROVIDE CLASS 'A' LAP SPLICE, BUT NOT LESS THAN 450 (18"), WHERE CONTINUOUS HORIZONTAL BARS ARE NOT POSSIBLE.
2. DIMENSIONS ARE MILLIMETRES, EXCEPT DIMENSIONS IN BRACKET ARE INCHES.

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File Name:	

Project Title

OCI INDIGENOUS YARD
109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. Title

TYPICAL DETAILS

Project No.
ALL-24012754-A0

Dwg. No. **S104**
Rev. No. **5**

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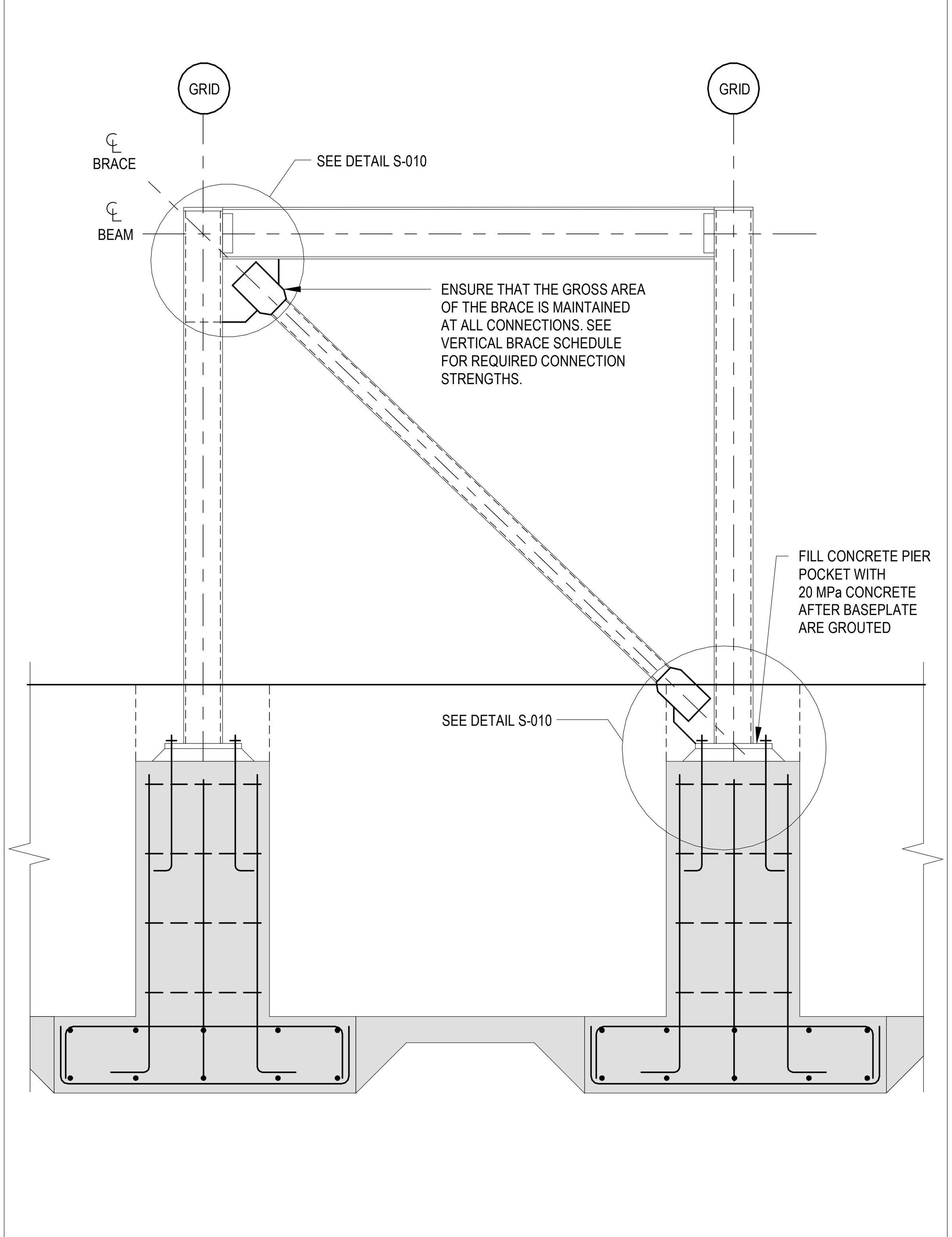
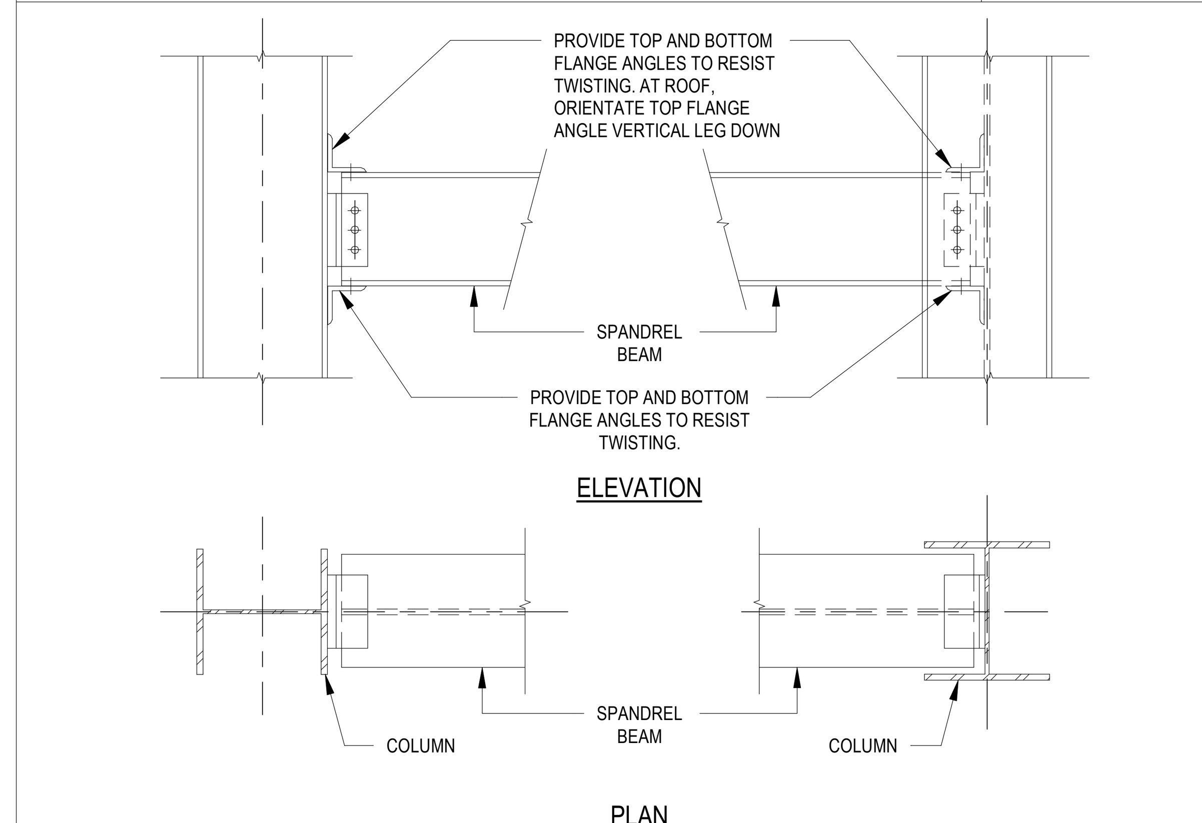
VERTICAL BRACE ELEVATION DETAIL — S-009



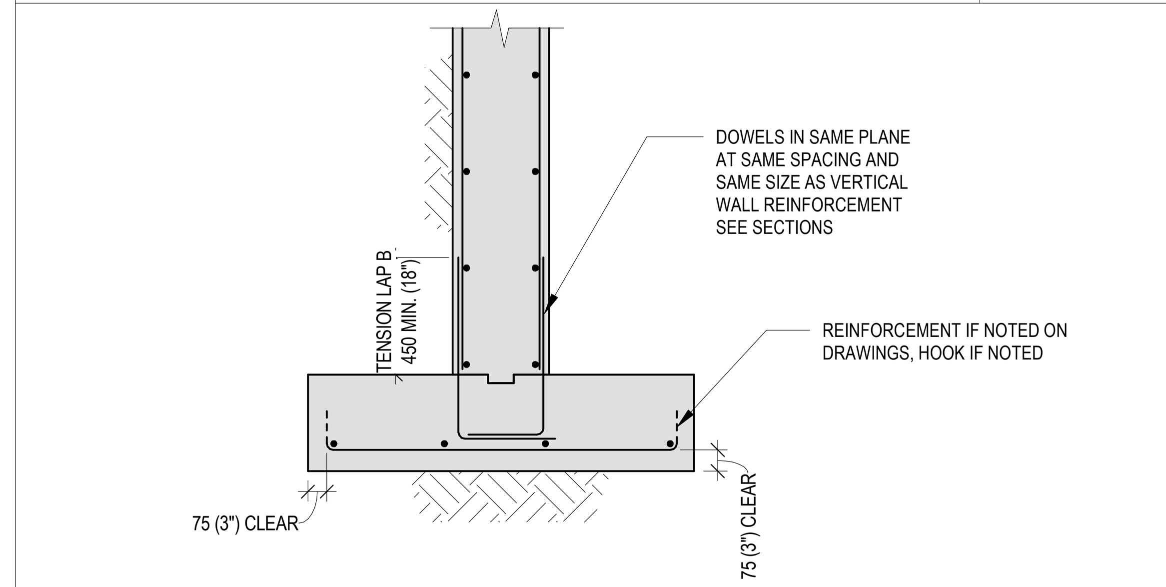
SPANDREL BEAM CONNECTION — S-016

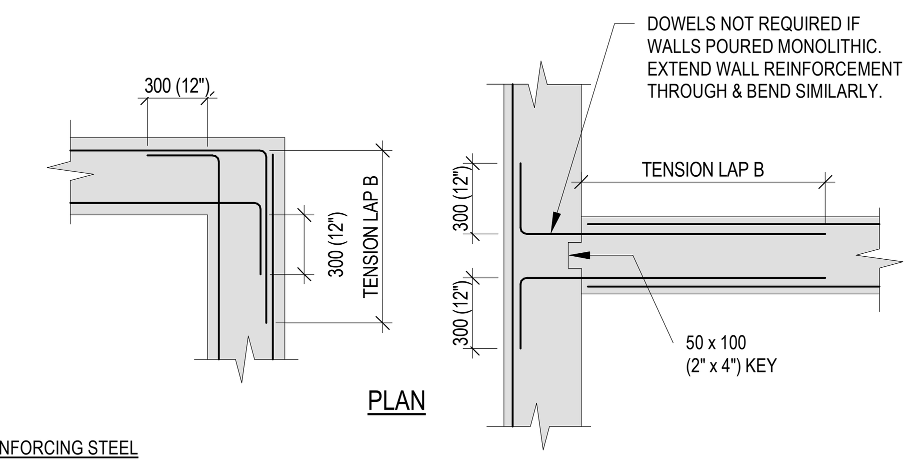


NOTES:

1. SPANDREL BEAM IS DEFINED AS AN EXTERIOR PERIMETER BEAM.
2. SUPPORT SHOWN IS A "W" COLUMN. PROVIDE SIMILAR CONNECTION AT OTHER TYPES OF SUPPORT, SUCH AS "HSS" COLUMN, OR GIRDER SUPPORT.
3. WHEN BEAM IS TOO WIDE TO ENTER BETWEEN COLUMN FLANGES, CONNECT TOP AND BOTTOM ANGLES TO COLUMN FLANGES.

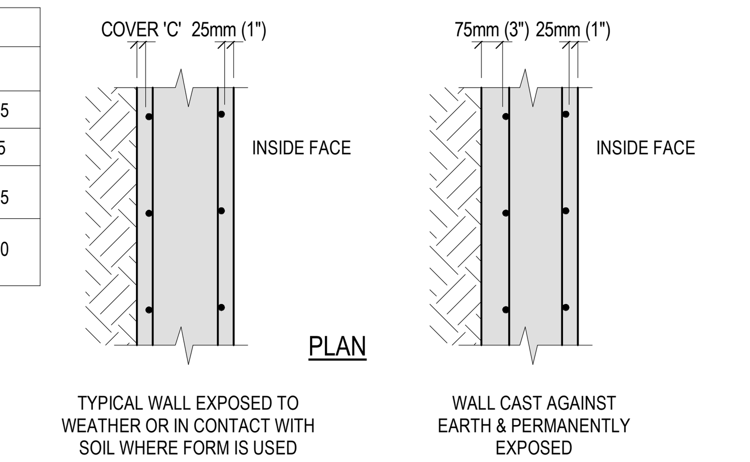
WALL FOOTING — F-005



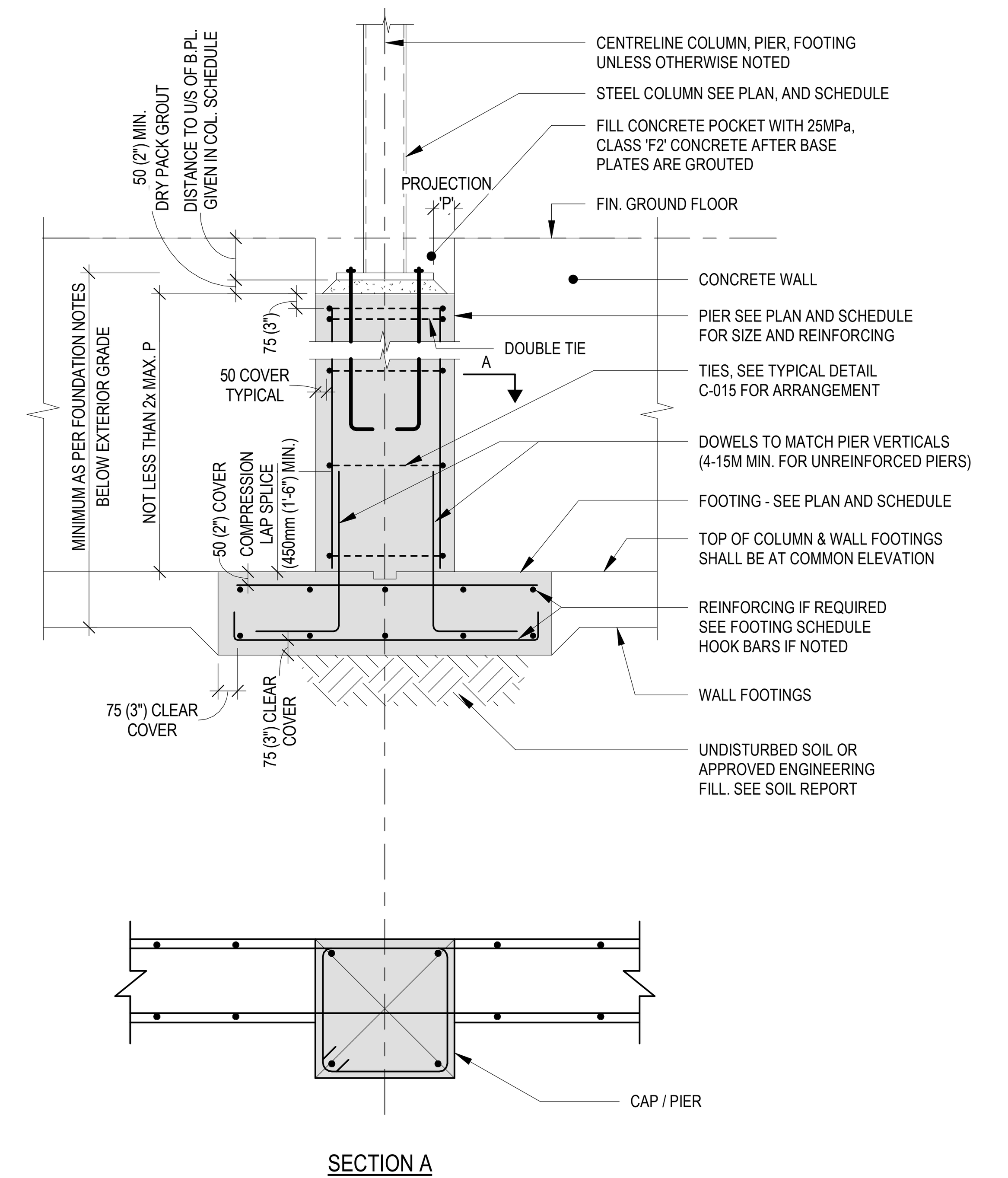


MINIMUM COVER TO REINFORCING STEEL

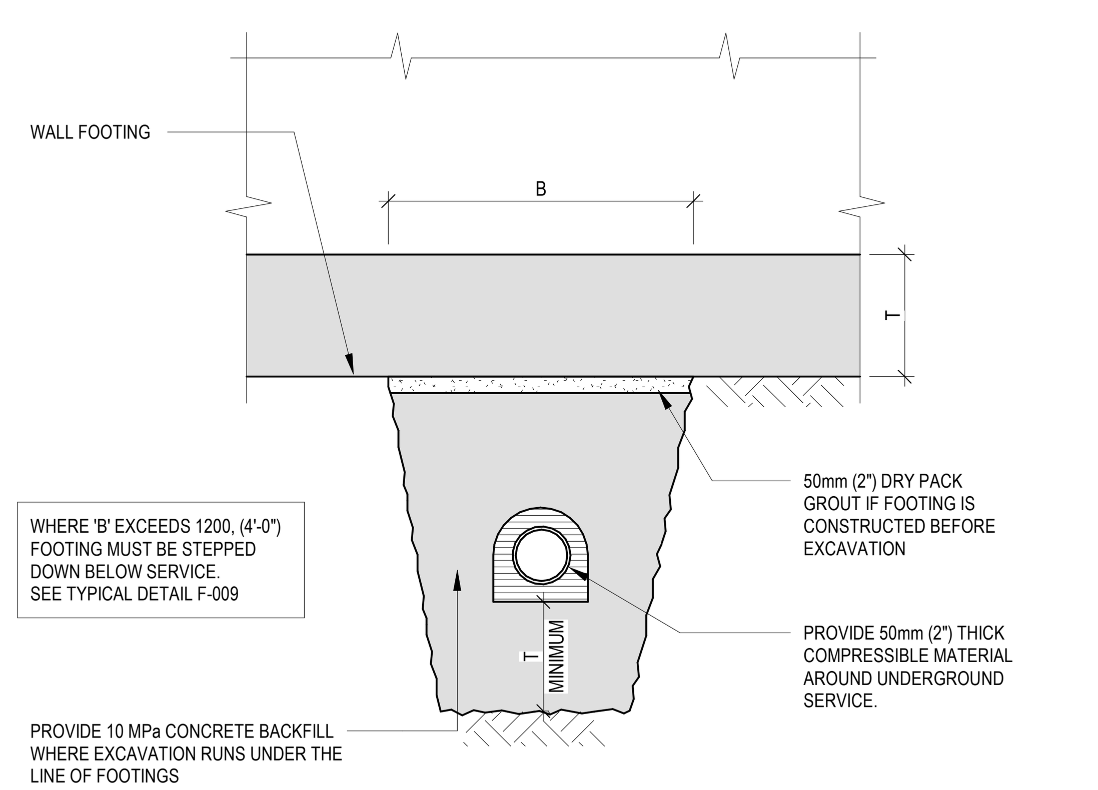
EXPOSURE CLASS	COVER 'C' BAR SIZE ≤ 25	30	35
N	25	30	35
F-1, F-2, S-1, S-2	40	45	55
C-xL, C-1, C-3, A-1, A-2, A-3	60	60	70



TYPICAL EXTERIOR COLUMN FOUNDATION DETAIL, STEEL COLUMN — F-003



STRIP FOOTING OVER BURIED SERVICE — F-010



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Drawn By:	REV.
Checked By:	G.W. / A.K.
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Project Title

OCI INDIGENOUS YARD

109 McLAUGHLIN ROAD SOUTH BRAMPTON, ONTARIO

Dwg. Title

TYPICAL DETAILS

Project No.

ALL-24012754-A0

Dwg. No. **S105** Rev. No. **5**

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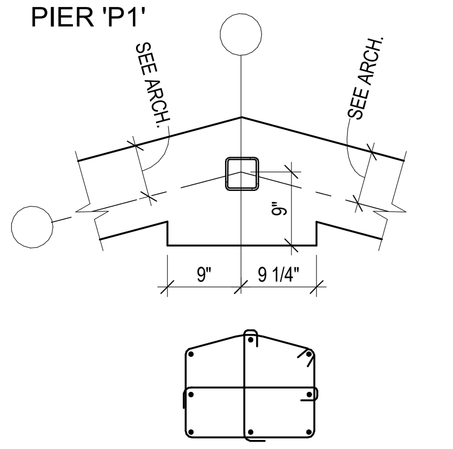
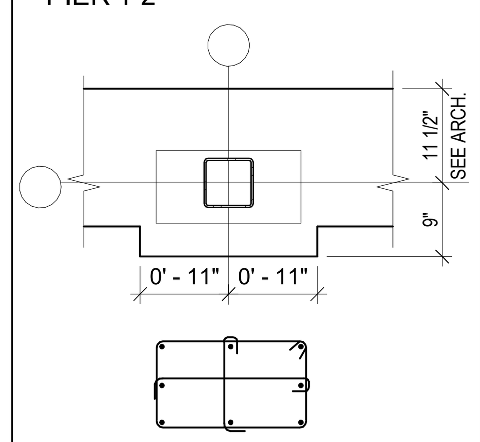
PIER SCHEDULE	COLUMNS AND BASE PLATES ARE FOR ILLUSTRATIVE PURPOSES ONLY. FOR ACTUAL SIZES AND SHAPES SEE PLAN AND COLUMN SCHEDULE

PIER 'P1'



PIER 'P2'

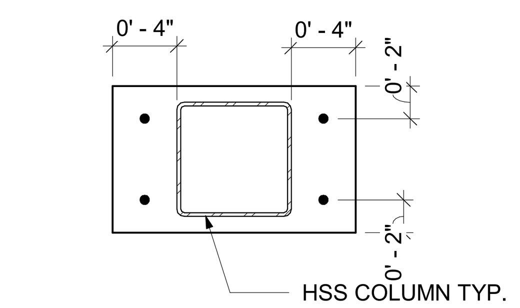


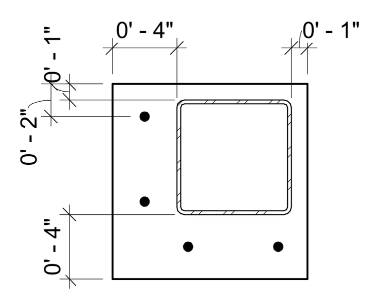
PIER 'P1'	PIER 'P2'	
REINF: 8-15M VERTICALS 10M@12" TIES (2/SET)	REINF: 8-15M VERTICALS 10M@12" TIES (3/SET)	

NOTE:
COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT SHAPE AND DIMENSIONS OF PIERS.

TYPICAL BASE PLATE SIZES
UNLESS NOTED OTHERWISE

BASE PLATE WITH 4 ANCHOR BOLTS





FOOTING SCHEDULE						
	SIZE			REINFORCING		
MARK	L	W	H	EACH WAY BOTTOM, UNO	EACH WAY TOP, UNO	REMARKS
F1	2' - 6"	2' - 6"	1' - 0"	3-15M	3-15M	BOTTOM BARS HOOKED UP E.E.

Structural Column Schedule

Type Mark	Type	Base Plate
C1	HSS102x102x6.4	
C2	HSS102x102x9.5	

COLUMN NOTES:

1. PROVIDE 4-25 DIA. x 800(32") LONG ANCHOR BOLTS FOR BASE PLATES AT ALL COLUMN LOCATIONS. 650 150
2. UNDERSIDE OF BASE PLATES SHALL BE 6" BELOW TOP OF SLAB FOR ALL OTHER COLUMNS
3. LONG DIRECTION OF BASE PLATE SHALL BE PARALLEL TO EXTERIOR WALLS FOR ALL EXTERIOR COLUMNS.
4. ALL COLUMNS SHALL BE CLOSED OFF WITH MINIMUM 1/2" CAP PLATE
5. PROVIDE 50mm DRY-PACK GROUT AT U/S OF COLUMN BASE PLATES. MINIMUM STRENGTH TO BE 50 MPa AT 28 DAYS.
6. PROVIDE 1/4" THICK LEVELING PLATES AT UNDERSIDE OF COLUMN BASE PLATES. COLUMN BASE PLATES ARE NOT TO BE ALIGNED USING ANY KIND OF SHIM.
7. PROVIDE 10mm DRAIN HOLE AT BASE OF HSS COLUMNS.
8. SEE GENERAL NOTES AND TYPICAL DETAILS.

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Drawn By:	REV.
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Approved By:	A.K.
Date Printed:	OCT. 01, 2025
File Name:	

Project Title

OCI INDIGENOUS YARD
109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. Title

SCHEDULES AND DETAILS

Project No.
ALL-24012754-A0

Dwg. No. **S106**
Rev. No. **5**

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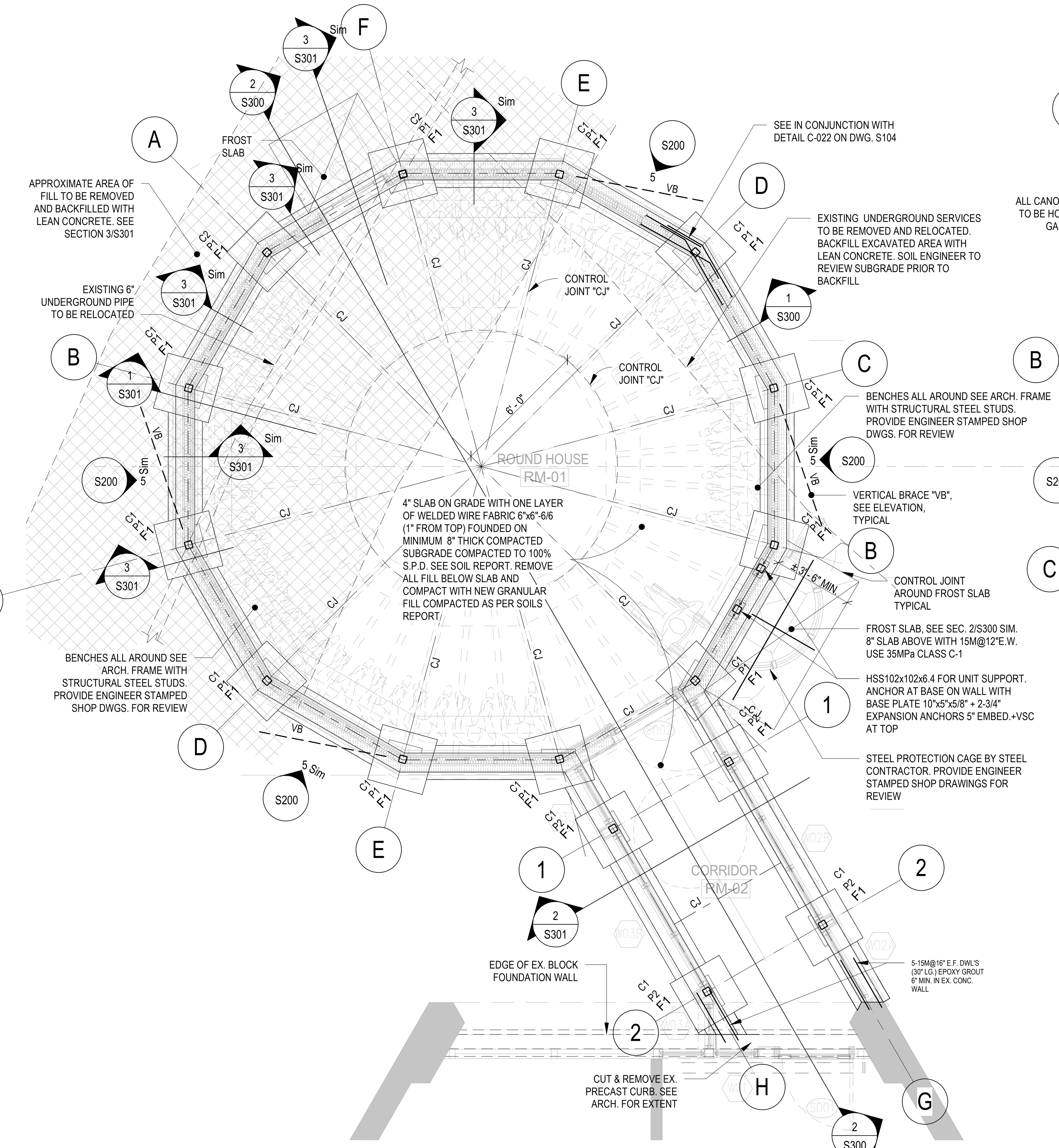
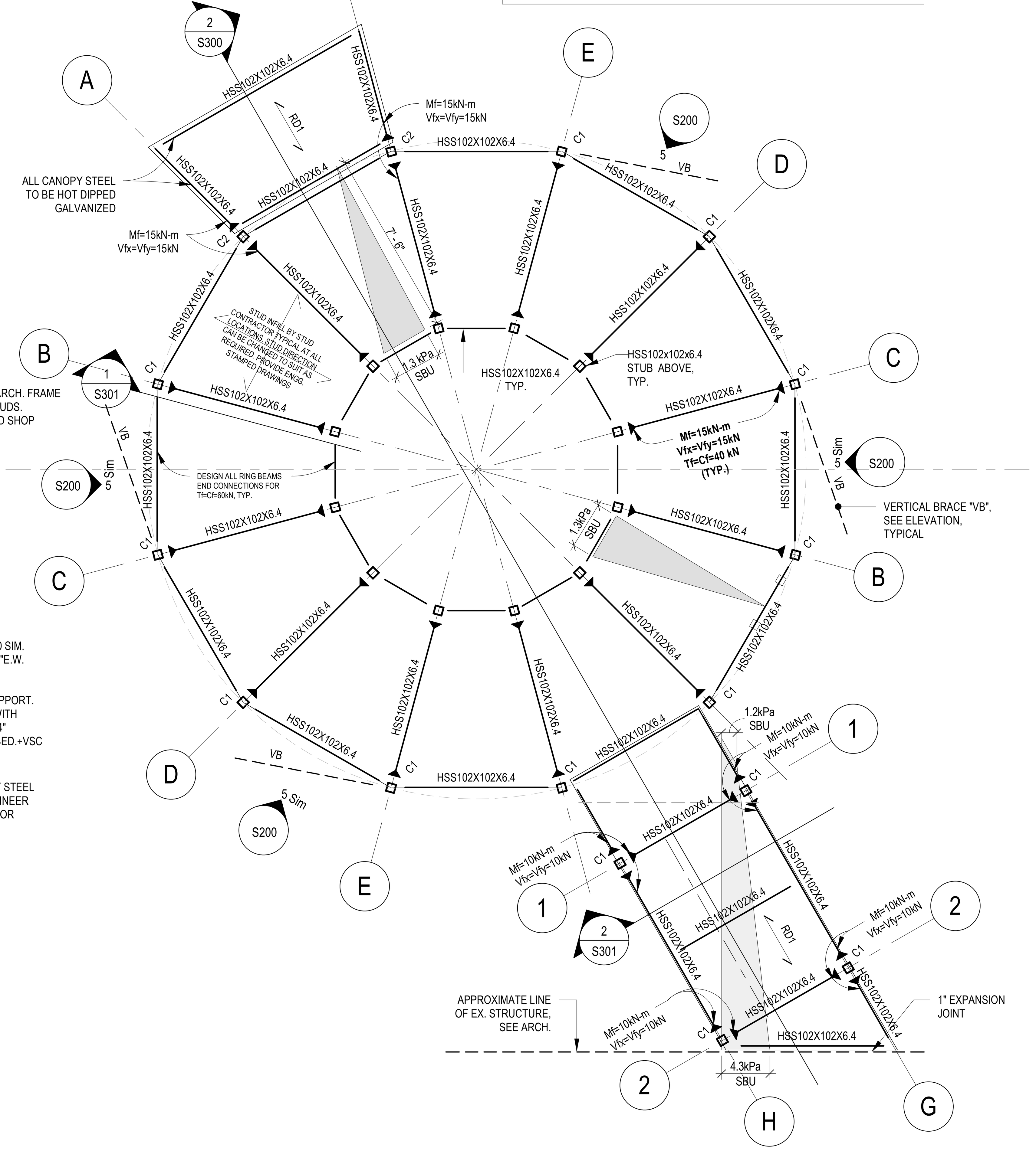


1 FOUNDATION PLAN

1/4" = 1'-0"

NOTE:
PROVIDE ENGINEER STAMPED STRUCTURAL STEEL AND STEEL STUD SHOP DRAWINGS FOR REVIEW PRIOR TO PROCEEDING WITH THE WORK



2 FRAMING PLAN AT LOWER RING BEAM

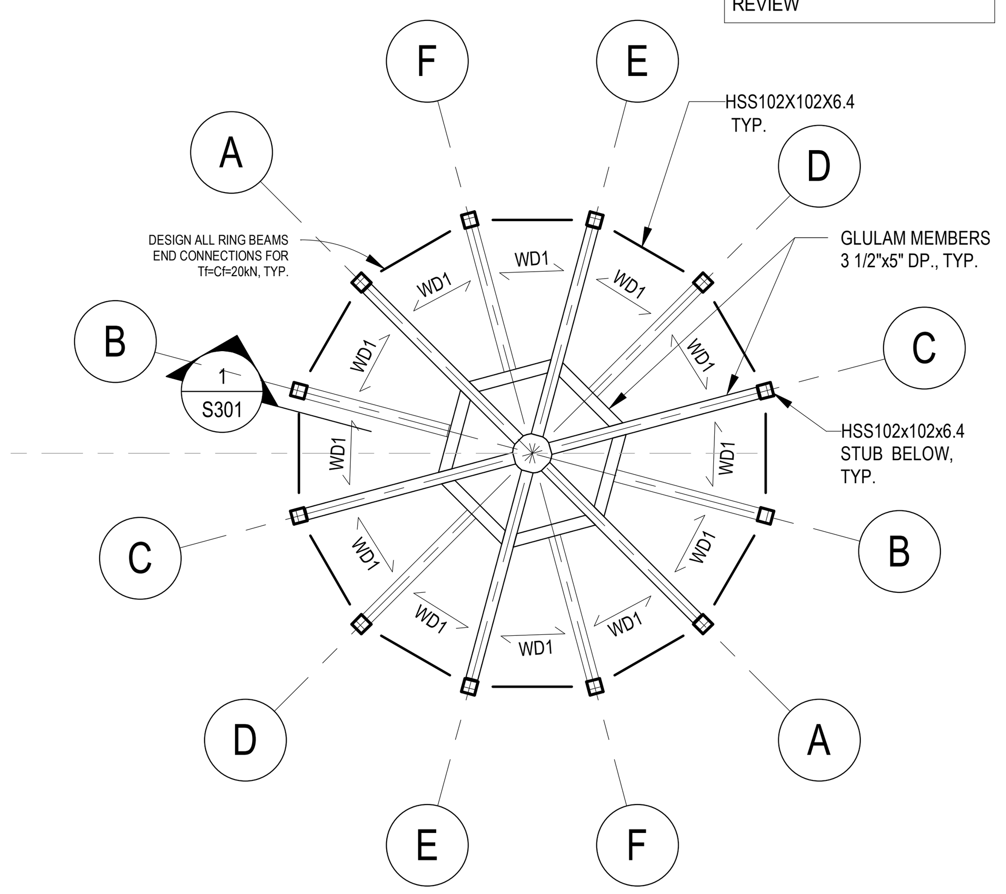
1/4" = 1'-0"

WOOD DECK NOTE

WD1

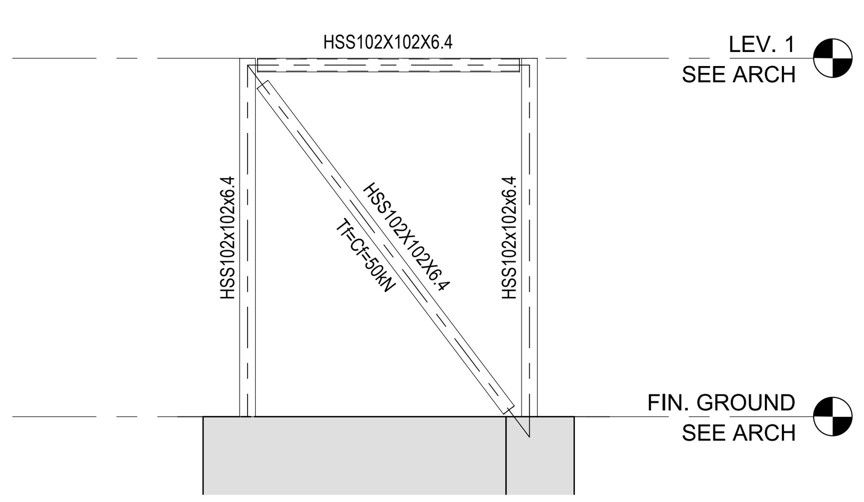
PROVIDE 1 1/2" THICK DOUGLAS FIR-LARCH KILN DRIED TO AN AVERAGE OF 15% MOISTURE CONTENT. WIDTH TO BE 5" OR 6 3/4", SINGLE TONGUE AND GROOVE. PROVIDE (2) 9/32" DIA.x6" LONG NAILS IN EACH PLANK AT EACH SUPPORT LOCATION. DOUGLAS FIR PLYWOOD 1/2" THICK NAILED ON TOP OF PLANK DECKING. PROVIDE 2 1/2"x1/8" DIA. COMMON NAILS WITH MIN. 1 1/2" PENETRATION AT 4" O/C ALONG PERIMETER AND 8" O/C IN THE MIDDLE.

NOTE:
GC TO PROVIDE DESIGN OF ALL GLULAM MEMBERS TO END CONNECTIONS FOR REVIEW



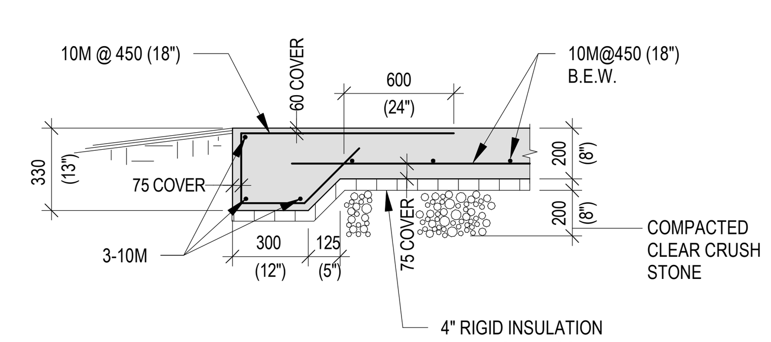
3 FRAMING PLAN AT HIGH RING BEAM LEVEL

1/4" = 1'-0"



5 TYPICAL BRACE ELEVATION

1/4" = 1'-0"



USE 35 MPa CLASS C1 CONCRETE WITH 5% AIR ENTRAINMENT. USE CORROSION INHIBITOR @ 15L/cu. m.

SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF GARDEN SHED PAD.

6 GARDEN SHED SLAB SECTION

12" = 1'-0"

FOUNDATION NOTES:

1. **TAKE ALL FOUNDATION DOWN TO UNDISTURBED SOIL CAPABLE OF SAFELY SUSTAINING A BEARING OF PRESSURE OF 200 kPa SLS AND 300 kPa ULS MINIMUM. FROST DEPTH AS SPECIFIED IN THE SOIL REPORT IS ATTAINED FOR ALL EXTERIOR AND BUILDING PERIMETER FOUNDATIONS, AND ALL INTERIOR FOUNDATION IN UNHEATED AREAS. SOIL ENGINEER TO CONFIRM BEARING CAPACITY.**
2. ALL WALL FOOTINGS TO HAVE 100mm (4") PROJECTIONS AND TO BE 200mm (8") THICK, UNREINFORCED UNLESS NOTED OTHERWISE
3. FOUNDATION WALLS ARE SHOWN THUS ON PLAN:
4. LOWER FOOTINGS BELOW ALL INCOMING SERVICES. ALSO SEE TYPICAL BACKFILL DETAIL UNDER FOUNDATIONS ON TYPICAL DETAIL DRAWING. SEE MECH./ARCH. FOR NUMBER AND LOCATIONS.
5. S.F.U. DENOTES STEP FOOTING UP. SEE DETAILS ON TYPICAL DETAILS DRAWING.
6. ALL FOOTING EXCAVATION SHALL BE INSPECTED AND APPROVED BY A COMPETENT SOIL ENGINEER BEFORE CONCRETE.
7. CENTRE ALL BASE PLATES, PIERS, AND FOOTINGS UNDER COLUMNS UNLESS NOTED OTHERWISE ON PLANS.
8. STRUCTURAL STEEL IN CONTACT WITH EARTH SHALL BE PROTECTED WITH MINIMUM 50mm CONCRETE OR EQUIVALENT WATERPROOFING.
9. PROVIDE SAWCUTS IN SLAB-ON-GRADE 3mm(1/8") WIDE x 25mm(1") DEEP ALONG COLUMN LINES AND AT MAXIMUM 36 TIMES THE SLAB THICKNESS. INSTALL IN ACCORDANCE WITH CSA A23.1 RECOMMENDATIONS. ALSO SEE C.J. ON PLAN.
10. PROVIDE SLAB THICKENING BELOW INTERIOR 140 (6") THICK CONCRETE BLOCK WALLS AND STAIRS TYPICAL. SEE TYPICAL DETAILSZE
11. WHERE FLOOR DEPRESSIONS OCCUR, MAINTAIN THE SLAB THICKNESS SPECIFIED ON FOUNDATION PLANS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND AREAS.
12. **FOR COLUMN, PIER, AND FOOTING SCHEDULES SEE SCHEDULE DRAWINGS.**
13. **FINISH GROUND FLOOR ELEVATION 100'-0" NOM. (SEE ARCH. DWGS).**

STEEL COLUMN SCHEDULE

Type Mark	Type	BP THICKNESS
C1	HSS102x102x6.4	3/4" THK.
C2	HSS102x102x9.5	3/4" THK.

ROOF FRAMING NOTES:

UNLESS NOTED OTHERWISE ON DRAWINGS, THE FOLLOWING NOTES SHALL GOVERN.

1. U/S OF STEEL DECK ELEVATION (SEE ARCH.)
2. RD1 1 1/2" (38mm) DEEP CONTINUOUS OVER MIN. 3 SPANS THICKNESS TO BE 20GA. (0.91mm).
3. SLOPE BEAMS TOP COLUMN CONNECTIONS TO ACHIEVE ROOF SLOPES.
4. WHERE ROOF DECK CHANGES DIRECTION OF SPAN, SLOPE, OR IS BEING CUT AT A SKEW, STRUCTURAL STEEL, CONTRACTOR SHALL PROVIDE SUITABLE ANGLE OR BENT PLATE TO SUPPORT EDGE OF DECK. SEE DETAIL ON TYPICAL DETAILS DRAWING.
5. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION, SIZE, AND NUMBER OF ROOF OPENINGS AND ROOF TOP UNITS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UP TO DATE INFORMATION REGARDING THE LOCATION AND SIZE OF ROOF TOP UNITS, OPENINGS, SPRINKLER LINES, AND WATER FILLED PIPES TO BE HUNG FROM JOISTS FOR DESIGN OF ROOF JOIST
7. PROVIDE LINTELS OVER ALL MASONRY WALL OPENINGS FOR LINTELS NOTE MARKED ON PLANS, FOLLOW LINTEL SCHEDULE ON SCHEDULE DRAWING. SE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR SIZES, AND LOCATIONS OF ALL OPENINGS.
8. BASIC SPECIFIED DESIGN LOADS FOR ROOF:
   LIVE LOADS:
   SNOW = 1.44kPa + SBU
   DEAD LOAD = 0.95kPa
9. FOR REMAINDER OF NOTES, SEE GENERAL NOTES SHEET.

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LICENSED PROFESSIONAL ENGINEER
A. KHALID
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Oct. 01, 2025
PROVINCE OF ONTARIO

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OCI INDIGENOUS YARD
109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. FRAMING PLANS, ELEVATION AND SECTIONS

Project No.
ALL-24012754-A0

Dwg. No. S200
Rev. No. 5

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NOTE:
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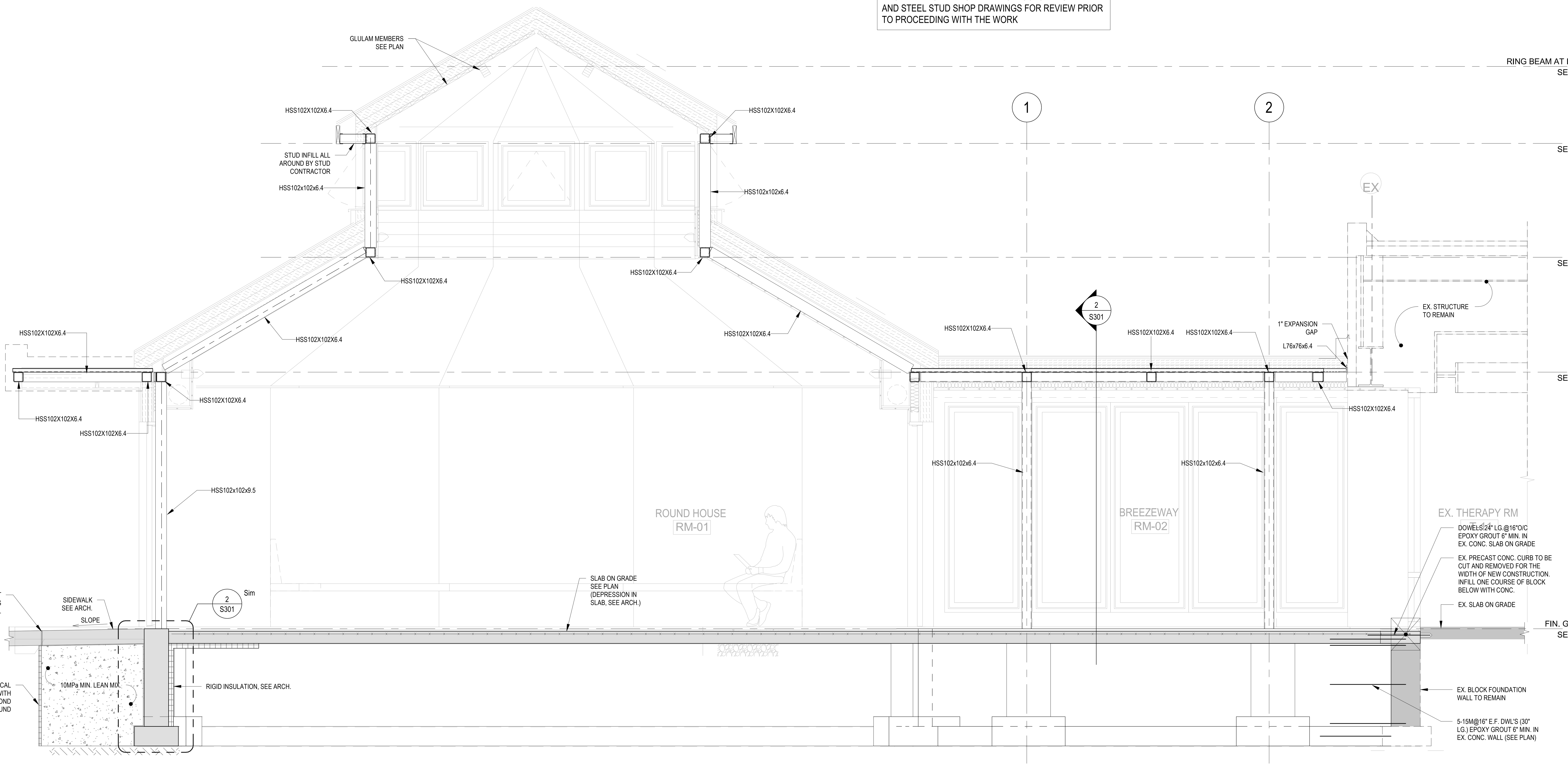
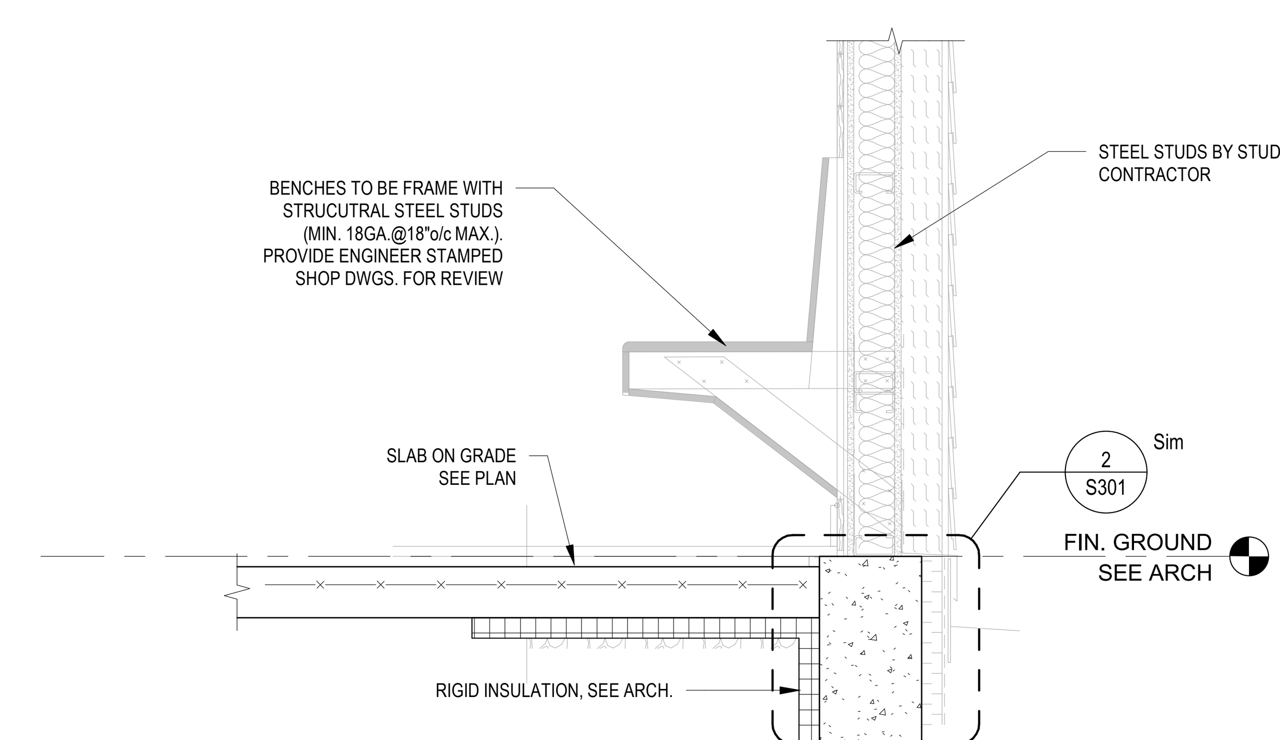


2 SECTION
1/2" = 1'-0"



1 TYPICAL SECTION AT BENCH
3/4" = 1'-0"

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109 McLAUGHLIN ROAD SOUTH
BRAMPTON, ONTARIO

Dwg. Title
SECTIONS

Project No.
ALL-24012754-A0

Dwg. No. S300
Rev. No. 5

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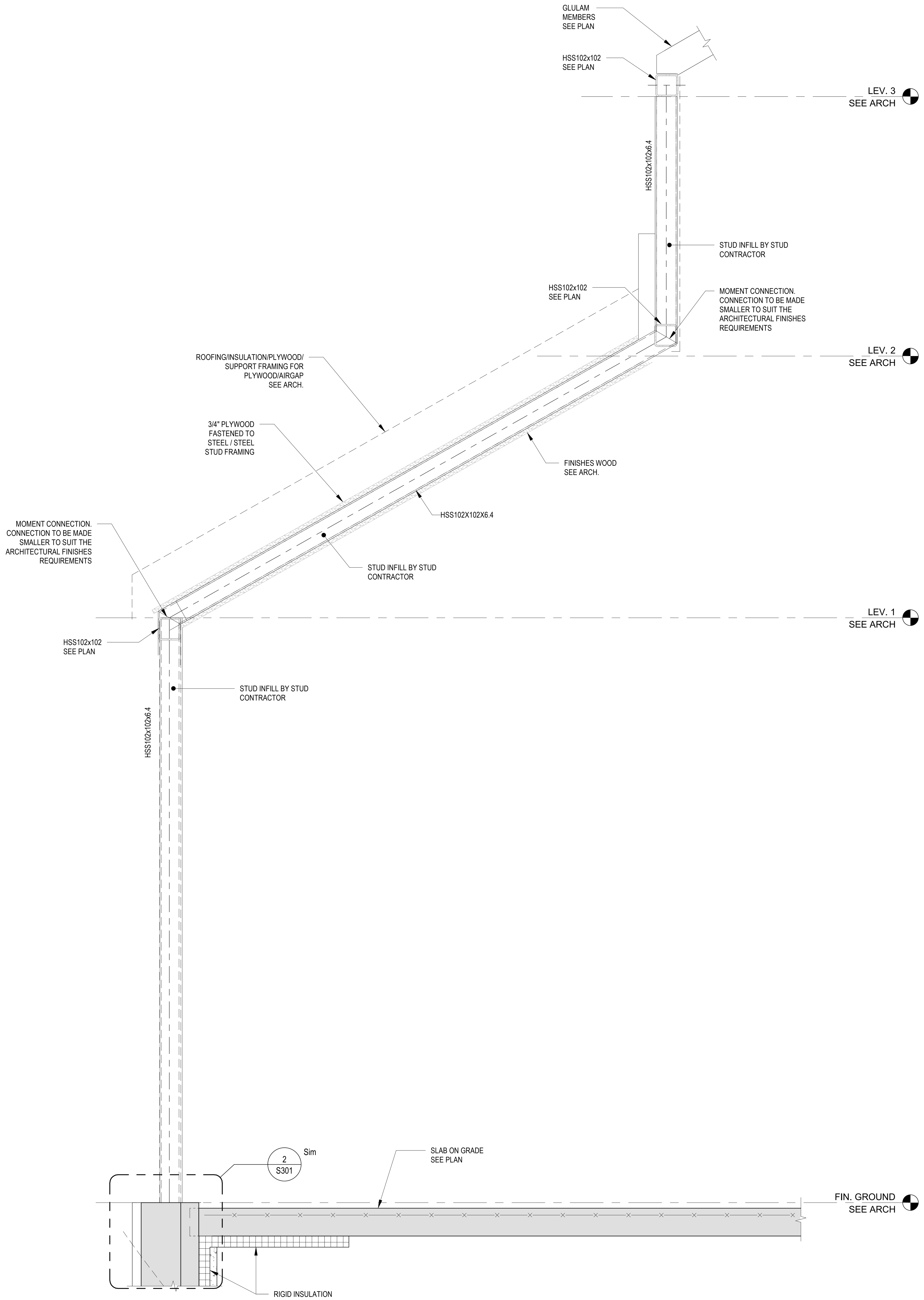
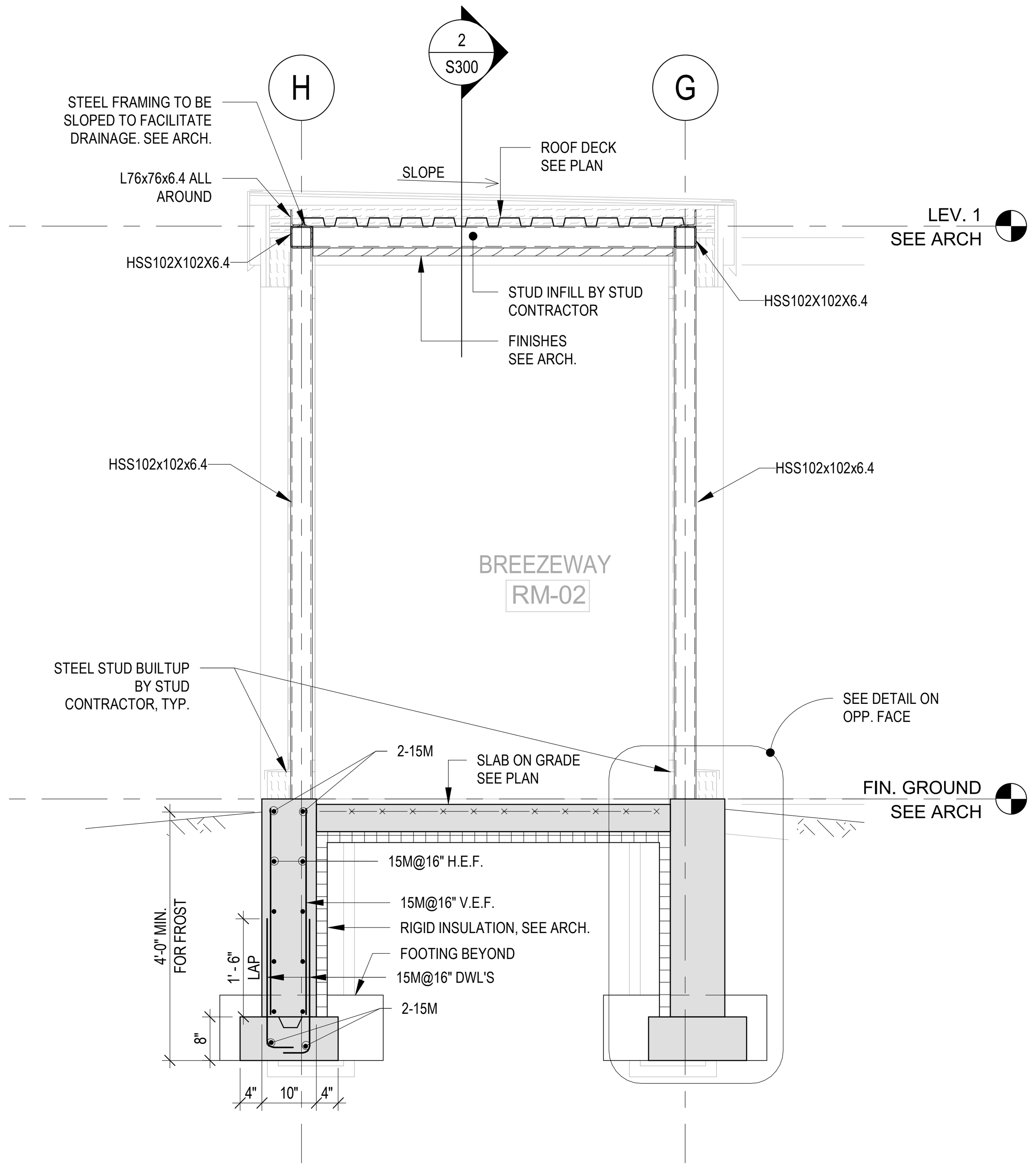
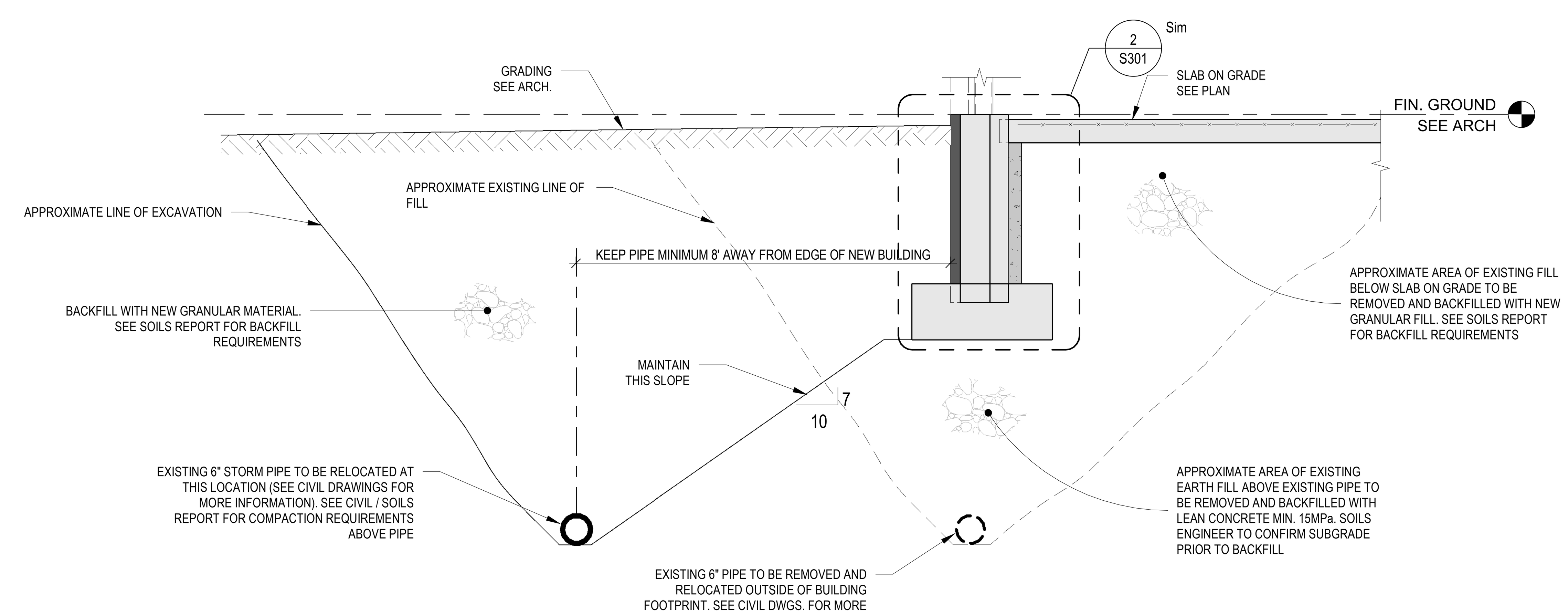


1 SECTION
1" = 1'-0"

NOTE:
PROVIDE ENGINEER STAMPED STRUCTURAL STEEL AND STEEL STUD SHOP DRAWINGS FOR REVIEW PRIOR TO PROCEEDING WITH THE WORK



2 SECTION
1/2" = 1'-0"



3 SECTION
1/2" = 1'-0"

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