

06 12 25 TIMBER CONSTRUCTION

1. GENERAL
 1. SUBMITTALS
 1. PRODUCT DATA:
 1. SUBMIT PRODUCT DATA FOR PROPRIETARY TIMBER CONNECTORS.
 2. SHOP DRAWINGS:
 1. SUBMIT DETAILED SHOP DRAWINGS OF THE TIMBER FRAME INCLUDING TIMBER SIZES, DIMENSIONS, GRADES, EDGE TREATMENT, SURFACE TREATMENT, FINISHES, AND CONNECTION JOINERY DETAILS.
 2. SHOP DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION AND DIRECTION OF A PROFESSIONAL ENGINEER LICENSED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED. DRAWINGS SUBMITTED FOR APPROVAL SHALL BE SIGNED AND SEALED BY THE ENGINEER.
 3. SUBMIT ERECTION DRAWINGS IN ACCORDANCE WITH CSA 086
 4. SHOP DRAWINGS FOR MEMBERS: INDICATE GRADE, FINISHES, CAMBER, CUTS, LEDGERS, HOLES AND CONNECTION DETAILS.
 3. SAMPLES:
 1. SUBMIT SAMPLES AND MOCK-UPS OF TIMBER MATERIALS FOR REVIEW AND ACCEPTANCE, INCLUDING SURFACE TREATMENT AND FINISHES.
 2. QUALITY ASSURANCE
 1. THE TIMBER FRAME CONTRACTOR SHALL BE A COMPANY MEMBER OF THE TIMBER FRAMERS GUILD.
 2. WORK SHALL BE IN CONFORMANCE WITH THE TFCF 2-2018 CODE OF STANDARD PRACTICE FOR TIMBER FRAME STRUCTURES
 3. ALL TIMBERS SHALL BE GRADED BY A GRADER CERTIFIED BY AN APPROVED LUMBER GRADING AGENCY OR A QUALIFIED INDIVIDUAL WHO HAS COMPLETED A TIMBER GRADING TRAINING COURSE. TIMBERS SHALL BEAR A GRADE STAMP OR A CERTIFICATE OF GRADE FROM THE LUMBER GRADER.
 3. DELIVERY, STORAGE, AND HANDLING
 1. KEEP TIMBERS DRY DURING DELIVERY AND STORAGE. STORE TIMBERS OFF OF THE GROUND AND COVERED.
 2. CUT AND STACK TIMBERS SO AS NOT TO ENCOURAGE THE GROWTH OF SAP-STAIN FUNGI, MOLD OR MILDEW. STACK TIMBERS WITH STICKERS AND SPACERS BETWEEN BUNDLES TO ALLOW AIR CIRCULATION.
 3. PROVIDE REASONABLE PROTECTION DURING TRANSPORTATION, STORAGE, HANDLING AND ERECTION OF THE TIMBERS TO AVOID MARRING, STAINING, OR THE ACCUMULATION OF EXCESS MOISTURE, DIRT AND FOREIGN MATTER.
2. PRODUCTS
 1. TIMBER
 1. TIMBER SPECIES: DOUGLAS FIR.
 2. TIMBER GRADE:
 1. ALL HEAVY TIMBER TO BE GRADED BY A QUALIFIED GRADING AGENCY ACCORDING TO CSA 0141, SOFTWOOD LUMBER. GRADING CERTIFICATE TO BE SUBMITTED TO THE ENGINEER PRIOR TO ERECTION.
 2. NO.
 3. MOISTURE CONTENT: TIMBERS SHALL BE DRIED IN A RADIO FREQUENCY KILN TO A MAXIMUM MOISTURE CONTENT OF 19% IN CENTER OF TIMBER. SUBMIT CERTIFICATE STATING MOISTURE CONTENT PRIOR TO ERECTION.
 4. TIMBERS 8X12 AND SMALLER SHALL BE FREE OF HEART CENTER (FOHC). TIMBERS LARGER THAN 8X12 SHALL BE BOXED HEART CENTER.
 5. DRESSING: TIMBERS SHALL BE SURFACED FOUR SIDES (S4S) U.N.O.
 6. APPEARANCE:
 1. ALL EXPOSED TIMBERS TO MEET THE FOLLOWING REQUIREMENTS:
 1. WOOD SURFACE TO BE FREE OF LARGE KNOTS, CRACKS, CHIPS, MARKS, ETC.
 1. TO AVOID STAINING, DO NOT USE STEEL STRAPPING.
 2. ALL TIMBERS TO BE OF UNIFORM COLOUR, SURFACE TEXTURE AND MOISTURE CONTENT.
 3. ALL TIMBERS TO BE FREE OF ROUNDED EDGES AND BARK I.E. NO WANE.
 2. TIMBER CONNECTIONS
 1. WOOD PEGS: STRAIGHT GRAINED WHITE OAK CONFORMING TO ASTM D8023. IF TAPERED PEGS ARE USED, PEGS SHALL BE TAPERED FOR AT LEAST 1/3 OF THEIR LENGTH AND AT LEAST FOUR INCHES LONGER THAN THE THICKNESS OF THE TIMBER IN WHICH THEY ARE DRIVEN SO THAT THE TAPERED SECTION PROTRUDES FROM THE TIMBER.
 2. BOLTS AND LAG SCREWS: ASTM A307 HOT-DIP GALVANIZED.
 3. SCREWS: AS INDICATED.
 4. POST BASE ANCHORS: AS INDICATED.
 5. STEEL CONNECTION PLATES, STRAPS, AND BARS: ASTM A36, HOT DIP GALVANIZED.
 3. FINISHES
 1. PENETRATING SEALER: HERITAGE NATURAL FINISHES.
 4. FABRICATION
 1. TIMBERS SHALL BE FABRICATED IN STRICT CONFORMANCE TO APPROVED SHOP DRAWINGS.
 2. FABRICATION PRIOR TO ERECTION OF SHOP DRAWINGS SHALL BE AT THE CONTRACTOR'S RISK.
 3. CONNECTION JOINERY: TIMBERS SHALL BE FABRICATED TO JOIN TIGHTLY AND IN PROPER ALIGNMENT AT THE TIME OF ASSEMBLY. SMALL (1/8" OR LESS) VARIATIONS WHERE THE FACES OF JOINTS COME TOGETHER (IN ALIGNMENT OR SEPARATION) ARE ACCEPTABLE. PROVISIONS SHALL BE MADE IN THE DETAILING OF JOINERY TO ALLOW FOR DIMENSIONAL CHANGES (JOINT SEPARATION AND ALIGNMENT) ASSOCIATED WITH TIMBER DRYING SHRINKAGE.
 4. CHAMFERS: EXPOSED EDGES OF POSTS AND BEAMS SHALL BE CHAMFERED WITH SKI TIP STOPS.
 3. EXECUTION
 1. ERECTION
 1. FIELD MEASURE AND VERIFYING THAT THE FOUNDATIONS AND ANY STRUCTURAL FRAMING THAT SUPPORTS THE TIMBER FRAMING ARE IN THE CORRECT LOCATION, ALIGNMENT, AND AT THE PROPER ELEVATION. THE CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN AN ACCEPTABLE MANNER. COMMENCEMENT OF ERECTION IMPLIES ACCEPTANCE OF CONDITIONS.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING NECESSARY TO MAINTAIN THE STABILITY OF THE TIMBER FRAME DURING ERECTION.
 3. TIMBERS SHALL BE STORED OFF OF THE GROUND AND PROTECTED PRIOR TO ERECTION.
 4. PROTRUDING PEGS SHALL BE SAWN OFF FLUSH.
 2. FINAL CLEAN UP
 1. REPAIR ANY MARRED OR DAMAGED SURFACES. CLEAN SOILED OR STAINED TIMBERS, AND APPLY ONE COAT OF PENETRATING SEALER TO ALL EXPOSED SURFACES.

06 17 53 SHOP FABRICATED WOOD TRUSSES

1. GENERAL
 1. REFERENCE STANDARDS
 1. CSA GROUP
 1. CSA 086, ENGINEERING DESIGN IN WOOD.
 2. CSA 0141, SOFTWOOD LUMBER.
 2. TRUSS PLATE INSTITUTE OF CANADA (TPIC)
 1. TPIC, TRUSS DESIGN PROCEDURES AND SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES (LIMIT STATES DESIGN).
 2. ACTION AND INFORMATIONAL SUBMITTALS
 1. PRODUCT DATA:
 1. SUBMIT MANUFACTURER'S INSTRUCTIONS, PRINTED PRODUCT LITERATURE AND DATA SHEETS FOR WOOD TRUSSES AND INCLUDE PRODUCT CHARACTERISTICS, PERFORMANCE CRITERIA, PHYSICAL SIZE, FINISH AND LIMITATIONS.
 2. SHOP DRAWINGS:
 1. SUBMIT DRAWINGS STAMPED AND SIGNED BY PROFESSIONAL ENGINEER REGISTERED IN JURISDICTION OF PROJECT SITE.
 2. INCLUDE ON DRAWINGS:
 1. CONNECTION AND HARDWARE DETAILS.
 2. INDICATE TPIC TRUSS DESIGN PROCEDURE AND CSA 086 SPECIFIC PRODUCT REGISTRY NUMBER OF THE TRUSS PLATES.
 3. INDICATE SPECIES, SIZES, AND STRESS GRADES OF LUMBER USED AS TRUSS MEMBERS. SHOW PITCH, SPAN, CAMBER, CONFIGURATION AND SPACING OF TRUSSES. INDICATE CONNECTOR TYPES, THICKNESSES, SIZES, LOCATIONS AND DESIGN VALUE. SHOW BEARING DETAILS. INDICATE DESIGN LOAD FOR MEMBERS.
 4. INDICATING DESIGN LOADS AND ALLOWABLE LOADS FOR TRUSS MEMBERS.
 5. INDICATE ARRANGEMENT OF WEBS OR OTHER MEMBERS TO ACCOMMODATE DUCTS AND OTHER SPECIALTIES.
 6. SHOW LOCATION OF LATERAL BRACING FOR COMPRESSION MEMBERS.
 7. CERTIFICATES: SUBMIT CERTIFICATES SIGNED BY MANUFACTURER CERTIFYING THAT MATERIALS COMPLY WITH SPECIFIED PERFORMANCE CHARACTERISTICS AND PHYSICAL PROPERTIES.
 8. INSTRUCTIONS: SUBMIT MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 3. QUALITY ASSURANCE
 1. QUALIFICATIONS:
 1. FABRICATOR OF TRUSSES TO SHOW EVIDENCE OF QUALITY CONTROL PROGRAM SUCH AS PROVIDED BY REGIONAL WOOD TRUSS ASSOCIATIONS, OR EQUIVALENT.
 2. STORAGE AND HANDLING
 1. STORE MATERIALS OFF GROUND AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 2. REPLACE DEFECTIVE OR DAMAGED MATERIALS WITH NEW.
 3. PROVIDE BEARING SUPPORTS AND BRACINGS. PREVENT BENDING, WARPING AND OVERTURNING OF TRUSSES.

2. PRODUCTS
 1. DESIGN REQUIREMENTS
 1. DESIGN LIGHT METAL PLATE CONNECTED WOOD TRUSSES IN ACCORDANCE WITH TPIC AND CSA 086.
 2. DESIGN TRUSSES FOR LOADS INDICATED AND MIN. UNIFORM AND CONCENTRATED LOADINGS STATED IN THE BCBC.
 3. LIMIT LIVE LOAD DEFLECTION TO 1/360TH OF SPAN SUPPORTING GYPSUM BOARD CEILINGS.
 4. LIMIT LIVE LOAD DEFLECTIONS TO 1/300TH OF SPAN U.N.O.
 5. PROVIDE CAMBER FOR TRUSSES AS INDICATED.
 2. FABRICATION
 1. FABRICATE WOOD TRUSSES IN ACCORDANCE WITH REVIEWED SHOP DRAWINGS.
 3. SOURCE QUALITY CONTROL
 1. IDENTIFY LUMBER BY GRADE STAMP OF CERTIFIED AGENCY
 3. EXECUTION
 1. EXAMINATION
 1. SITE VERIFICATION OF CONDITIONS IS REQUIRED FOR MODIFICATIONS TO EXISTING TRUSS SYSTEMS.
 2. MANUFACTURER'S INSTRUCTIONS
 1. COMPLIANCE: COMPLY WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS OR SPECIFICATIONS, INCLUDING PRODUCT TECHNICAL BULLETINS, HANDLING, STORAGE AND INSTALLATION INSTRUCTIONS, AND DATASHEET.
 2. ERECTION
 1. ERECT WOOD TRUSSES IN ACCORDANCE WITH REVIEWED SHOP DRAWINGS.
 2. HANDLING, INSTALLATION, ERECTION, BRACING AND LIFTING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 3. MAKE ADEQUATE PROVISIONS FOR HANDLING AND ERECTION STRESSES.
 4. EXERCISE CARE TO PREVENT OUT-OF-PLANE BENDING OF TRUSSES
 5. INSTALL TEMPORARY HORIZONTAL AND CROSS BRACING TO HOLD TRUSSES PLUMB AND IN SAFE CONDITION UNTIL PERMANENT BRACING AND DECKING ARE INSTALLED.
 6. INSTALL PERMANENT BRACING IN ACCORDANCE WITH DESIGN, **WWTIBC BRACING GUIDELINES**, AND REVIEWED SHOP DRAWINGS, PRIOR TO APPLICATION OF LOADS TO TRUSSES.
 7. DO NOT CUT OR REMOVE ANY TRUSS MATERIAL WITHOUT APPROVAL OF SPECIALTY ENGINEER.
 8. WHERE CANTILEVERED TRUSSES ARE BOTTOM CHORD BEARING, ADD 2"x4" DIAGONAL BRACING CONTINUOUS OVER BEARING LINE.
 4. FIELD QUALITY CONTROL
 1. MANUFACTURER'S FIELD SERVICES:
 1. MANUFACTURER TO REVIEW WORK INVOLVED IN HANDLING AND INSTALLATION, COMPLETE FIELD REVIEW AND SUBMIT REPORT, IN ACCEPTABLE FORMAT, TO VERIFY CONFORMANCE WITH DESIGN.
 2. PROVIDE REPORTS TO EOR WITHIN 3 DAYS OF REVIEW.

31 23 33 EXCAVATING AND BACKFILLING

1. GENERAL
 1. ACTION AND INFORMATIONAL SUBMITTALS
 1. PRECONSTRUCTION SUBMITTALS
 1. SUBMIT RECORDS OF UNDERGROUND UTILITIES, INCLUDING LOCATION PLAN OF EXISTING UTILITIES.
 2. QUALITY ASSURANCE
 1. SUBMIT DESIGN AND SUPPORTING DATA AT LEAST 3 DAYS PRIOR TO BEGINNING WORK.
 2. ENGAGE SERVICES OF QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN JURISDICTION OF PROJECT SITE TO CARRY OUT TO DESIGN AND FIELD REVIEW OF SHORING, BRACING AND UNDERPINNING REQUIRED.
 3. DESIGN AND SUPPORTING DATA SUBMITTED TO BEAR SEAL AND SIGNATURE OF PROFESSIONAL ENGINEER.
 4. KEEP DESIGN AND SUPPORTING DATA ON SITE.
 5. DO NOT USE SOIL MATERIAL UNTIL WRITTEN REPORT OF SOIL TEST RESULTS ARE REVIEWED AND APPROVED BY THE APPROPRIATE CONSULTANT.
 3. EXISTING CONDITIONS
 1. REVIEW GEOTECHNICAL INVESTIGATION REPORT CONDUCTED BY [CONSULTANT], ENTITLED [NAME OF REPORT] DATED [DATE OF PUBLISH].
 2. EXISTING BUILDINGS AND SURFACE FEATURES:
 1. CONDUCT CONDITION SURVEY OF EXISTING BUILDINGS, TREES AND OTHER PLANTS, LAWNS, FENCING, SERVICE POLES, WIRES, RAIL TRACKS, PAVEMENT, SURVEY BENCHMARKS AND MONUMENTS WHICH MAY BE AFFECTED BY WORK.
 2. PROTECT EXISTING BUILDINGS AND SURFACE FEATURES FROM DAMAGE WHILE WORK IS IN PROGRESS.
2. PRODUCTS
 1. MATERIALS
 1. TYPE 1 AND TYPE 2 FILL:
 1. CRUSHED, PIT RUN OR SCREENED STONE, GRAVEL, OR SAND.
 2. GRADATIONS TO BE WITHIN LIMITS SPECIFIED.
 2. TYPE 3 FILL: SELECTED MATERIAL FROM EXCAVATION OR OTHER SOURCES, APPROVED BY GEOTECHNICAL EOR FOR USE INTENDED, UNFROZEN AND FREE FROM ROCKS LARGER THAN [75] MM, CINDERS, ASHES, SODS, REFUSE OR OTHER DELETERIOUS MATERIALS.
 3. UNSHRINKABLE FILL: PROPORTIONED AND MIXED TO APPROVAL OF GEOTECHNICAL ENGINEER.
 3. EXECUTION
 1. STRIP TOPSOIL
 1. DO NOT MIX TOPSOIL WITH SUBSOIL.
 2. PREPARATION/PROTECTION
 1. KEEP EXCAVATIONS CLEAN, FREE OF STANDING WATER, AND LOOSE SOIL.
 2. WHERE SOIL IS SUBJECT TO SIGNIFICANT VOLUME CHANGE DUE TO CHANGE IN MOISTURE CONTENT, COVER AND PROTECT.
 3. SHORING, BRACING AND UNDERPINNING
 1. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN SAFE CONDITION BY APPROPRIATE METHODS AND IN ACCORDANCE WITH HEALTH AND SAFETY REQUIREMENTS.
 1. SHORING, CONSTRUCTION BRACING AND UNDERPINNING DESIGN TO BE COMPLETED BY CONTRACTOR'S ENGINEER AND APPROVED BY APPLICABLE ENGINEERS-OF-RECORD.
 4. DEWATERING AND HEAVE PREVENTION
 1. KEEP EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS.
 2. AVOID EXCAVATION BELOW GROUNDWATER TABLE.
 1. PREVENT PIPING OR BOTTOM HEAVE OF EXCAVATIONS BY GROUNDWATER LOWERING, SHEET PILE CUT-OFFS, OR OTHER MEANS.
 3. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF.
 5. EXCAVATION
 1. EXCAVATION MUST NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
 2. EARTH BOTTOMS OF EXCAVATIONS TO BE UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE, SOFT OR ORGANIC MATTER.
 3. NOTIFY GEOTECHNICAL ENGINEER WHEN BOTTOM OF EXCAVATION IS REACHED.
 4. OBTAIN GEOTECHNICAL ENGINEER'S APPROVAL OF COMPLETED EXCAVATION.
 5. REMOVE UNSUITABLE MATERIAL FROM TRENCH BOTTOM INCLUDING THOSE THAT EXTEND BELOW REQUIRED ELEVATIONS TO EXTENT AND DEPTH AS DIRECTED BY GEOTECHNICAL ENGINEER.
 6. CORRECT UNAUTHORIZED OVER-EXCAVATION AS FOLLOWS:
 1. FILL UNDER BEARING SURFACES AND FOOTINGS WITH CONCRETE OR TYPE 2 FILL COMPACTED TO DENSITY.
 7. HAND TRIM, MAKE FIRM AND REMOVE LOOSE MATERIAL AND DEBRIS FROM EXCAVATIONS.
 1. WHERE MATERIAL AT BOTTOM OF EXCAVATION IS DISTURBED, COMPACT FOUNDATION SOIL TO DENSITY AT LEAST EQUAL TO UNDISTURBED SOIL.
 6. FILL TYPES AND COMPACTION
 1. USE TYPES OF FILL AS INDICATED OR SPECIFIED BELOW.

Sieve Designation	% Passing	
	Type 1	Type 2
75 mm	-	[100]
50 mm	-	-
37.5 mm	-	-
25 mm	[100]	-
19 mm	[75-100]	-
12.5 mm	-	-
9.5 mm	[50-100]	-
4.75 mm	[30-70]	[22-85]
2.00 mm	[20-45]	-
0.425 mm	[10-25]	[5-30]
0.180 mm	-	-
0.075 mm	[3-8]	[0-10]

2. TYPE 3 FILL: SELECTED MATERIAL FROM EXCAVATION OR OTHER SOURCES, APPROVED BY GEOTECHNICAL EOR FOR USE INTENDED, UNFROZEN AND FREE FROM ROCKS LARGER THAN [75] MM, CINDERS, ASHES, SODS, REFUSE OR OTHER DELETERIOUS MATERIALS.
3. UNSHRINKABLE FILL: PROPORTIONED AND MIXED TO APPROVAL OF GEOTECHNICAL ENGINEER.
3. EXECUTION
 1. STRIP TOPSOIL
 1. DO NOT MIX TOPSOIL WITH SUBSOIL.
 2. PREPARATION/PROTECTION
 1. KEEP EXCAVATIONS CLEAN, FREE OF STANDING WATER, AND LOOSE SOIL.
 2. WHERE SOIL IS SUBJECT TO SIGNIFICANT VOLUME CHANGE DUE TO CHANGE IN MOISTURE CONTENT, COVER AND PROTECT.
 3. SHORING, BRACING AND UNDERPINNING
 1. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN SAFE CONDITION BY APPROPRIATE METHODS AND IN ACCORDANCE WITH HEALTH AND SAFETY REQUIREMENTS.
 1. SHORING, CONSTRUCTION BRACING AND UNDERPINNING DESIGN TO BE COMPLETED BY CONTRACTOR'S ENGINEER AND APPROVED BY APPLICABLE ENGINEERS-OF-RECORD.
 4. DEWATERING AND HEAVE PREVENTION
 1. KEEP EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS.
 2. AVOID EXCAVATION BELOW GROUNDWATER TABLE.
 1. PREVENT PIPING OR BOTTOM HEAVE OF EXCAVATIONS BY GROUNDWATER LOWERING, SHEET PILE CUT-OFFS, OR OTHER MEANS.
 3. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF.
 5. EXCAVATION
 1. EXCAVATION MUST NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
 2. EARTH BOTTOMS OF EXCAVATIONS TO BE UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE, SOFT OR ORGANIC MATTER.
 3. NOTIFY GEOTECHNICAL ENGINEER WHEN BOTTOM OF EXCAVATION IS REACHED.
 4. OBTAIN GEOTECHNICAL ENGINEER'S APPROVAL OF COMPLETED EXCAVATION.
 5. REMOVE UNSUITABLE MATERIAL FROM TRENCH BOTTOM INCLUDING THOSE THAT EXTEND BELOW REQUIRED ELEVATIONS TO EXTENT AND DEPTH AS DIRECTED BY GEOTECHNICAL ENGINEER.
 6. CORRECT UNAUTHORIZED OVER-EXCAVATION AS FOLLOWS:
 1. FILL UNDER BEARING SURFACES AND FOOTINGS WITH CONCRETE OR TYPE 2 FILL COMPACTED TO DENSITY.
 7. HAND TRIM, MAKE FIRM AND REMOVE LOOSE MATERIAL AND DEBRIS FROM EXCAVATIONS.
 1. WHERE MATERIAL AT BOTTOM OF EXCAVATION IS DISTURBED, COMPACT FOUNDATION SOIL TO DENSITY AT LEAST EQUAL TO UNDISTURBED SOIL.
 6. FILL TYPES AND COMPACTION
 1. USE TYPES OF FILL AS INDICATED OR SPECIFIED BELOW.

Location	Fill Material	Max. Lift Thickness	Minimum Compaction %
UNDER INTERIOR SLABS ON GRADE	300mm type 2 subbase; 150mm type 1 base	150 MM	by geotech
EXTERIOR SLABS ON GRADE	300mm type 2 subbase; 150mm type 1 base	150 MM	by geotech
Against exterior side of foundations under paved areas	type 3 to subgrade level; 300mm type 2 subbase; 150mm type 1 base	150 MM	by geotech

7. BACKFILLING
 1. AREAS TO BE BACKFILLED TO BE FREE FROM DEBRIS, SNOW, ICE, WATER AND FROZEN GROUND.
 2. DO NOT USE BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
 3. PLACE BACKFILL MATERIAL IN UNIFORM LAYERS NOT EXCEEDING SPECIFIED COMPACTED THICKNESS UP TO GRADES INDICATED. COMPACT EACH LAYER BEFORE PLACING SUCCEEDING LAYER.
 4. BACKFILLING AROUND INSTALLATIONS:
 1. DO NOT BACKFILL AROUND OR OVER CAST-IN-PLACE CONCRETE WITHIN 24 HOURS AFTER PLACING OF CONCRETE.
 5. WHERE TEMPORARY UNBALANCED EARTH PRESSURES ARE LIABLE TO DEVELOP ON WALLS OR OTHER STRUCTURES:
 1. PERMIT CONCRETE TO CURE FOR MIN. 14 DAYS OR UNTIL IT HAS SUFFICIENT STRENGTH TO WITHSTAND EARTH AND COMPACTION PRESSURE.
 2. IF APPROVED BY CONSULTANT, ERECT BRACING OR SHORING TO COUNTERACT UNBALANCE, AND LEAVE IN PLACE UNTIL REMOVAL IS APPROVED BY CONSULTANT.

ACRONYMS/DEFINITIONS
NOT ALL OF THESE DEFINITIONS MAY APPLY TO THIS PROJECT

1. GENERAL:

ARCH	= ARCHITECT	MAX.	= MAXIMUM
BL	= BAYLINE	MIN.	= MINIMUM
BIU	= BUILT-UP	C/C	= CENTER TO CENTER
€	= CENTERLINE	PLF	= POUNDS PER LINEAR FOOT
CLR	= CLEAR	PSF	= POUNDS PER SQUARE FOOT
CONT.	= CONTINUOUS	SBU	= SNOW BUILD UP
CW	= COMPLETE WITH	Ø	= DIAMETER
DET.	= DETAIL	EOR	=ENGINEER-OF-RECORD
TYP.	= TYPICAL	DL	= DEAD LOAD
DWG.	= DRAWING	GL	= GRIDLINE
HOR.	= HORIZONTAL	UIS	= UNDERSIDE
VERT.	= VERTICAL	LG	= LONG
LBS	= POUNDS	PLF	= POUNDS PER LINEAL FOOT
kPa	= KILOPASCAL	KN	= KILONEWTON
m	= METRE	KN/m	= KILONEWTON PER METRE
mm	= MILLIMETRE	W/	= WITH
T.O.C.	= TOP OF CONCRETE	T.O.S.	= TOP OF STEEL
T.O.G.	= TOP OF GRATING	LLV	= LONG LEG VERTICAL
LLH	= LONG LEG HORIZONTAL	(E)	= EXISTING
EXT.	= EXTERIOR	SL	= SNOW LOAD
WL	= WIND LOAD	LL	= LIVE LOAD
VF	= FACTORED SHEAR FORCE	U.N.O.	= UNLESS NOTED OTHERWISE
TBC	= TO BE CONFIRMED	BCBC	= BC BUILDING CODE
UDL	= UNIFORMLY DISTRIBUTED LOAD	C	= FACTORED COMPRESSION FORCE
Tr	= FACTORED TENSION FORCE	M	= FACTORED MOMENT
2. TIMBER:

CR	= CRIPPLE (2"x6" U.N.O)	G.T.	= GIRDER TRUSS
I	= "I" JOIST (EWP)	LVL	= LAMINATED VENEER LUMBER
OSB	= ORIENTED STRANBOARD	PLY	= PLYWOOD
ST	= STUD	T & G	= TONGUE & GROOVE
TS	= TIMBERSTRAND	EWP	= ENGINEERED WOOD PRODUCT
3. CONCRETE:

BOT	= BOTTOM LAYER	BLL	= BOTTOM LOWER LAYER
BUL	= BOTTOM UPPER LAYER	CJ	= CONTROL JOINT
CONC.	= CONCRETE	EW	= EACH WAY
H1E	= HOOK ONE END	H2E	= HOOK TWO END
NS	= NELSON STUD	P/C	= PRE-CAST CONCRETE - BY OTHERS
REINF.	= REINFORCED	R/W	= REINFORCED WITH
TOP	= TOP LAYER	TLL	= TOP LOWER LAYER
TUL	= TOP UPPER LAYER		
VOID FORM	= A COMPRESSIBL FORM TO ACCOMMODATE GROUND MOVEMENT		



E admin@accesspg.ca T 250.562.9345
787 Vancouver St., Prince George BC V2L 0E7
www.accesspg.ca

ISSUED FOR TENDER

PROFESSIONAL SEAL

This drawing and the copyright are the property of the ENGINEER. Discrepancies, errors and omissions shall be referred to the Consultant for correction, interpretation or revision.
Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions shown on the drawings. Shop drawings shall be submitted to the Consultant for approval before proceeding with fabrication.

REVISIONS

NO.	DATE	EXPLANATION
A	22/06/17	ISSUED FOR TENDER

CLIENT

ECLIPSE PROJECTS

PROJECT

Q-KIDS DAYCARE CENTER

420 WEBSTER AVENUE, QUESNEL, BC

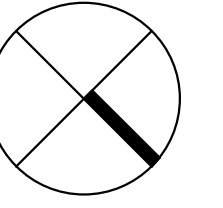
DRAWING TITLE

GENERAL NOTES

DESIGNER TANNER BRAATEN, P.ENG
REVIEWER FERGIUS FOLEY, P.ENG
DRAWN BY K.T.
DATE 22/06/17 SCALE 12" = 1'-0"
SHEET NO.

S003

PROJ. NO. **21173** REV. NO. **A**



ISSUED FOR TENDER

PROFESSIONAL SEAL

This drawing and the copyright are the property of the ENGINEER. Discrepancies, errors and omissions shall be referred to the Consultant for correction, interpretation or revision.
Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions shown on the drawings. Shop drawings shall be submitted to the Consultant for approval before proceeding with fabrication.

REVISIONS

NO.	DATE	EXPLANATION
A	22/06/17	ISSUED FOR TENDER

CLIENT

ECLIPSE PROJECTS

PROJECT

Q-KIDS DAYCARE CENTER

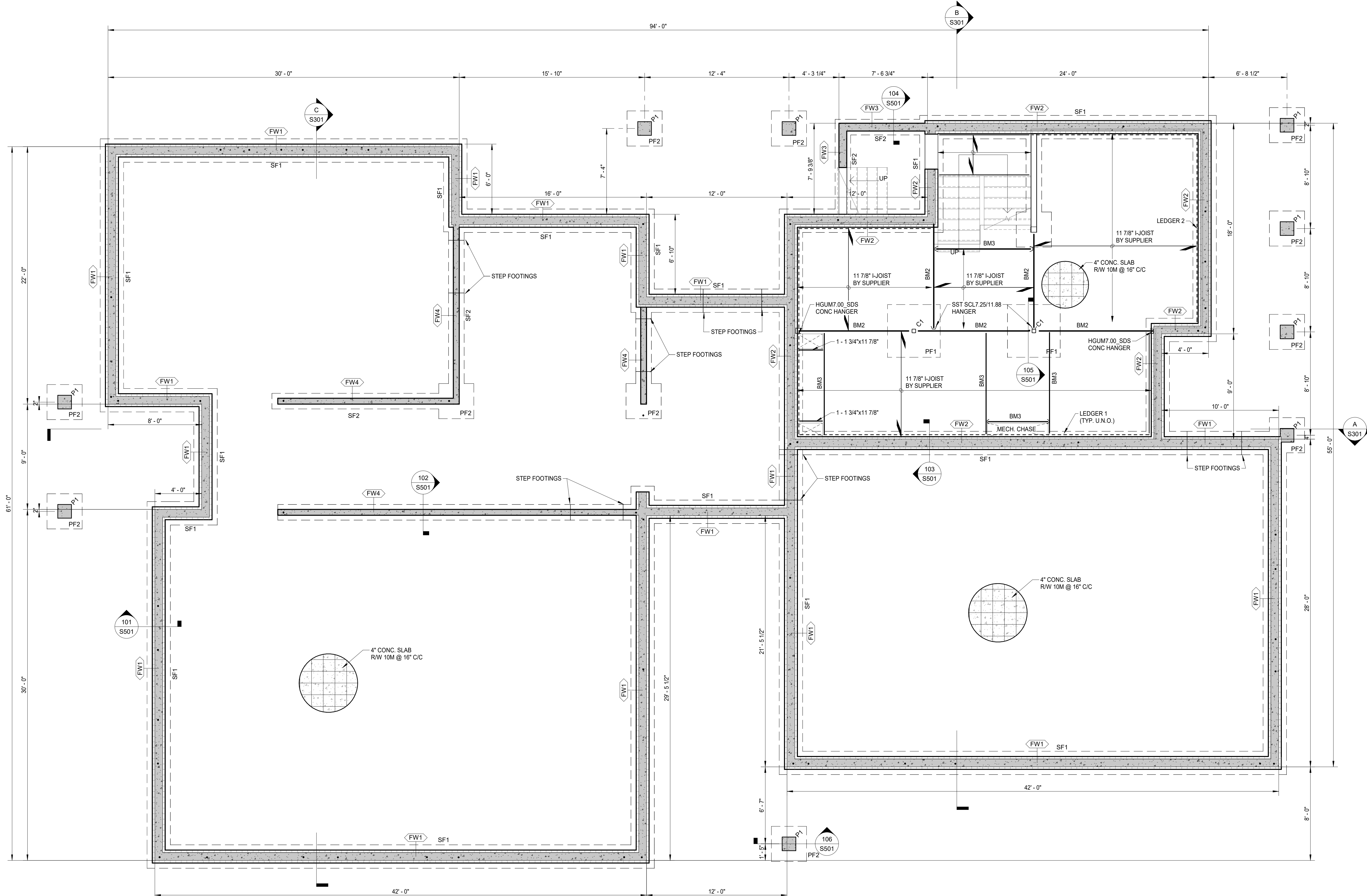
420 WEBSTER AVENUE, QUESNEL, BC
DRAWING TITLE

FOUNDATION PLAN

DESIGNER: TANNER BRAATEN, P.ENG
REVIEWER: FERGIUS FOLEY, P.ENG
DRAWN BY: K.T.
DATE: 22/06/17 SCALE: As indicated
SHEET NO.

S101

PROJ. NO. **21173** REV. NO. **A**



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

DIMENSIONS ARE TO CONCRETE CORE, NOT TO FACE OF ICF INSULATION.
EXTERIOR FACE OF CONCRETE CORE ALIGNS WITH EXTERIOR FACE OF SHEATHING

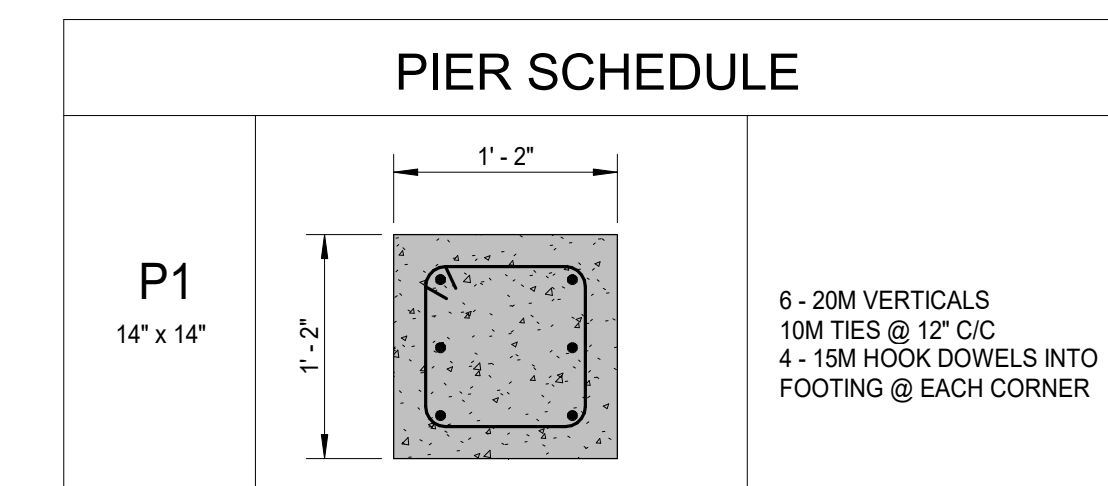
STRIP FOOTING SCHEDULE		
TYPE	SIZE	REINFORCING
SF1	24" x 10"	2 - 15M LONG, 15M TRANS x 1'-8" @ 48" C/C
SF2	16" x 10"	2 - 15M LONG, 15M TRANS x 1'-8" @ 48" C/C

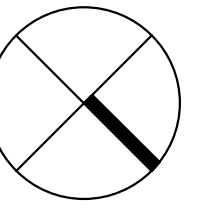
PAD FOOTING SCHEDULE		
TYPE	SIZE	REINFORCING
PF1	54" x 54" x 10"	5 - 15M x 50" LONG E/W
PF2	36" x 36" x 10"	3 - 15M x 32" LONG E/W

FOUNDATION WALL		
TYPE	SIZE	REINFORCING
FW1	8" ICF	15M VERT @ 18" C/C, 15M HORIZ @ 16" C/C, MID.
FW2	8" ICF	15M VERT @ 18" C/C, 15M HORIZ @ 16" C/C, INSIDE FACE
FW3	8" CONC	15M VERT @ 18" C/C, 15M HORIZ @ 16" C/C, EXTERIOR FACE
FW4	6" CURB	1 - 15M LONG, 15M HOOKED DOWELS @ 48" C/C

COLUMN SCHEDULE		
TYPE	SIZE	MATERIAL
C1	HSS 4x4x1/4"	STEEL
C2	4" x 8"	P.T. H.FIR

BEAM SCHEDULE		
MARK	SIZE	MATERIAL
BM1	4 - 1 3/4" x 11 7/8"	2900Fb 2.0E LVL
BM2	3 - 1 3/4" x 11 7/8"	2900Fb 2.0E LVL
BM3	2 - 1 3/4" x 11 7/8"	2900Fb 2.0E LVL
BM4	2 - 1 3/4" x 9 1/4"	2900Fb 2.0E LVL





ISSUED FOR TENDER

PROFESSIONAL SEAL

This drawing and the copyright are the property of the ENGINEER. Discrepancies, errors and omissions shall be referred to the Consultant for correction, interpretation or revision.
Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions shown on the drawings. Shop drawings shall be submitted to the Consultant for approval before proceeding with fabrication.

REVISIONS

NO.	DATE	EXPLANATION
A	22/06/17	ISSUED FOR TENDER

CLIENT

ECLIPSE PROJECTS

PROJECT

Q-KIDS DAYCARE CENTER

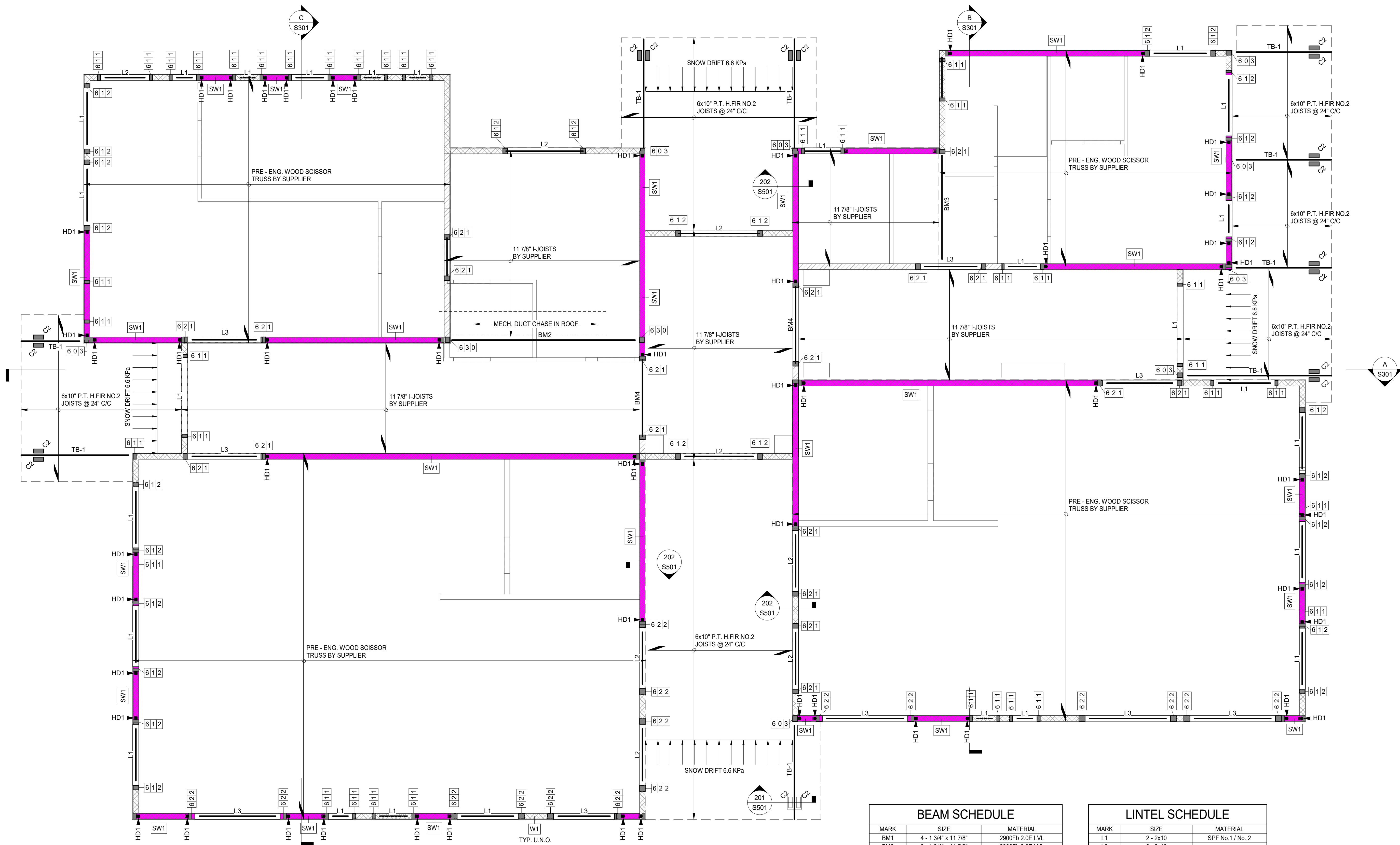
420 WEBSTER AVENUE, QUESNEL, BC
DRAWING TITLE

FRAMING PLANS

DESIGNER TANNER BRAATEN, P.ENG
REVIEWER FERGIUS FOLEY, P.ENG
DRAWN BY K.T.
DATE 22/06/17 SCALE As indicated
SHEET NO.

S110

PROJ. NO. 21173 REV. NO. A



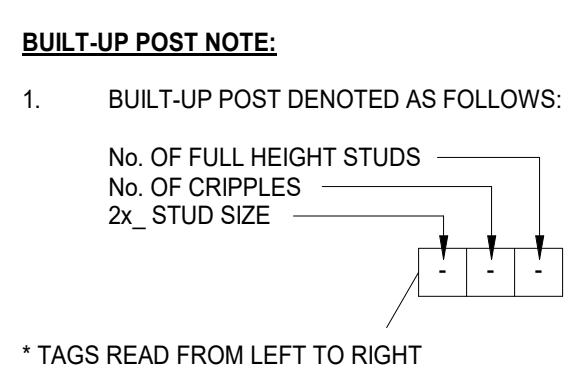
PLAN - WALL FRAMING / ROOF FRAMING
SCALE: 1/4" = 1'-0"

WALL SCHEDULE

TYPE	STUD SIZE	SPACING	BLOCKING
W1	2x6	16" C/C	48" C/C

SHEARWALL SCHEDULE

TYPE	SHEATHING	NAILING		FASTENING			BLOCKING
		EDGE	PANEL	SILL	RIM		
SW1	1/2" PLYWOOD	2 1/2" NAILS @ 4" C/C	2 1/2" NAILS @ 12" C/C	5/8"Ø x 8" A307 BOLTS @ 24" C/C	N/A		@ PANEL EDGES



BEAM SCHEDULE

MARK	SIZE	MATERIAL
BM1	4 - 1 3/4" x 11 7/8"	2900Fb 2.0E LVL
BM2	3 - 1 3/4" x 11 7/8"	2900Fb 2.0E LVL
BM3	2 - 1 3/4" x 11 7/8"	2900Fb 2.0E LVL
BM4	2 - 1 3/4" x 9 1/4"	2900Fb 2.0E LVL

TIMBER BEAM SCHEDULE

MARK	SIZE	MATERIAL
TB-1	6" x 12"	P.T. H.FIR No.2

COLUMN SCHEDULE

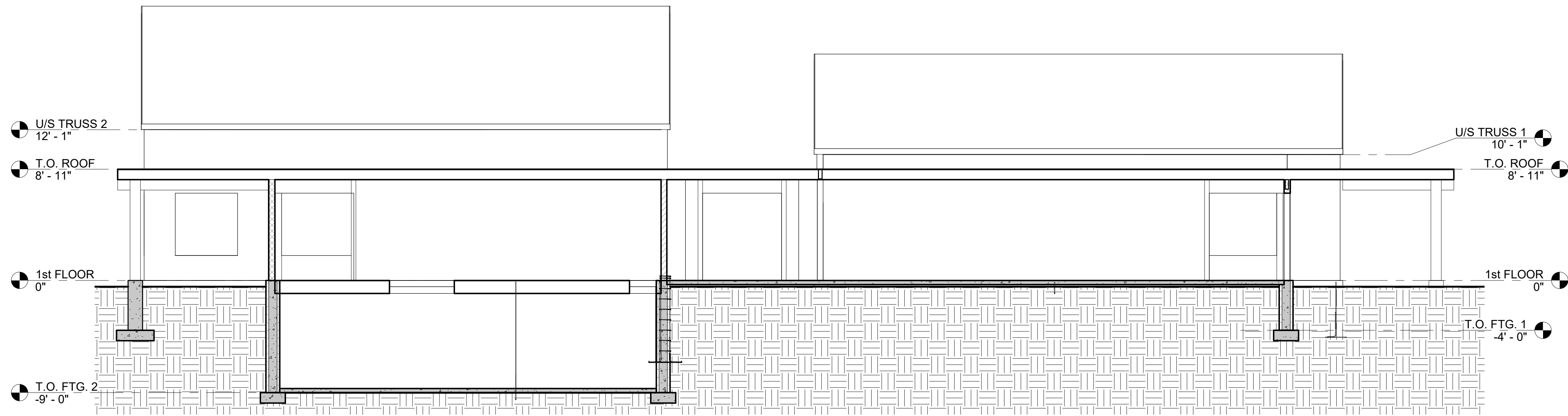
TYPE	SIZE	MATERIAL
C1	HSS 4x4x1/4"	STEEL
C2	4" x 8"	P.T. H.FIR

LINTEL SCHEDULE

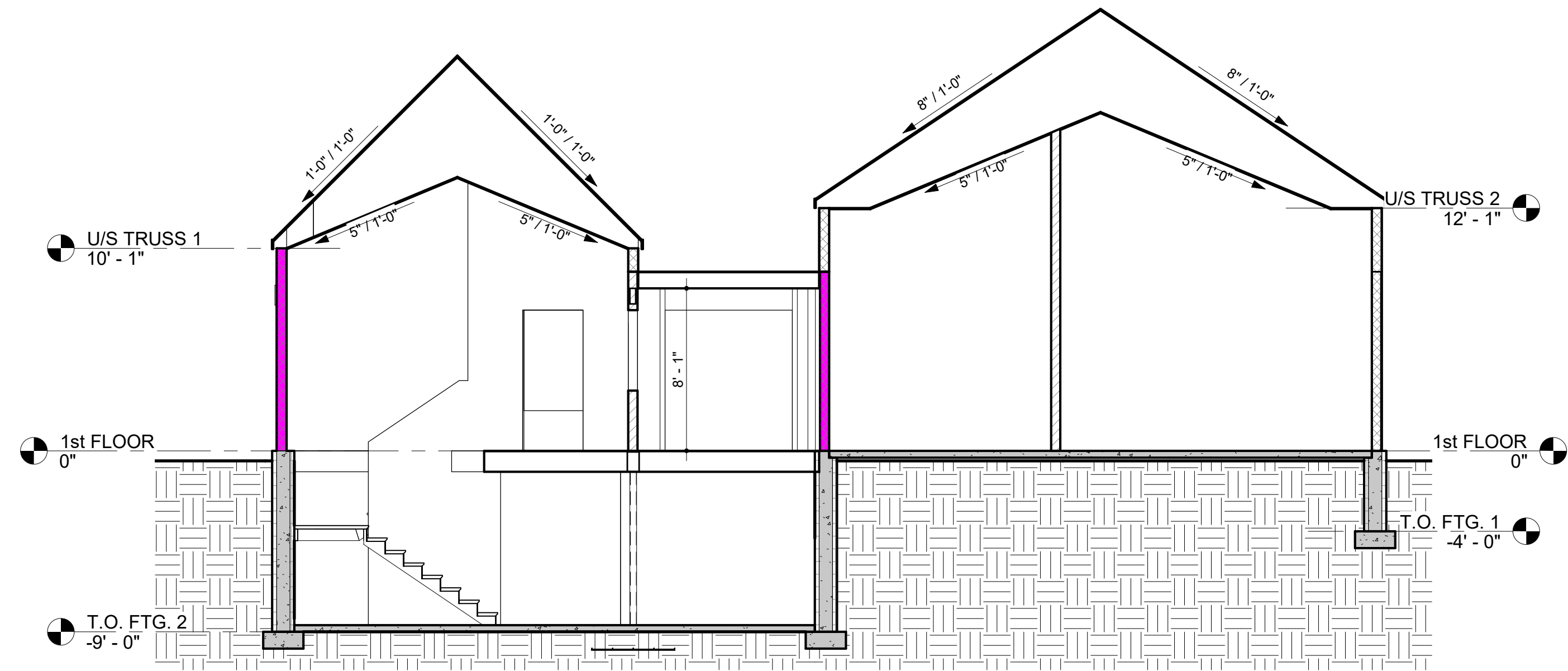
MARK	SIZE	MATERIAL
L1	2 - 2x10	SPF No.1 / No. 2
L2	3 - 2x10	
L3	2 - 1 3/4" x 9 1/4"	2900Fb 2.0E LVL

HOLD DOWN SCHEDULE

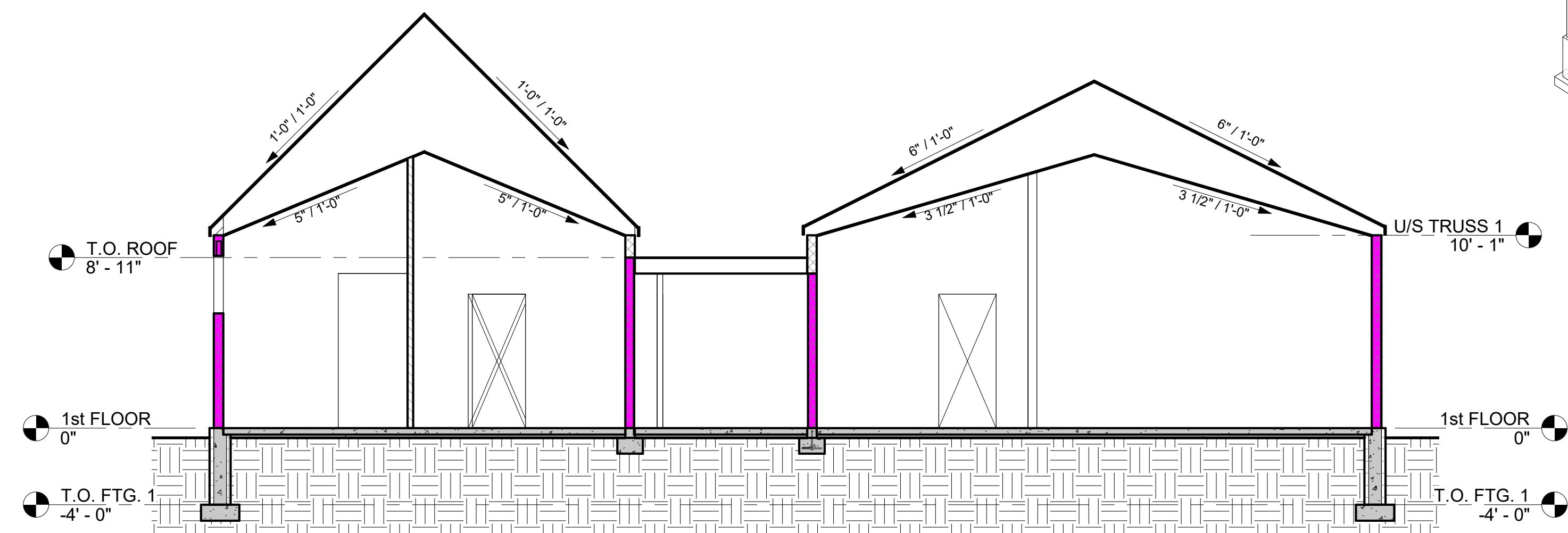
TYPE	MODEL	ANCHOR ROD	# OF STUDS
HD1	HDU8 - SDS2.5	5/8" THREAD HEADED ROD CIW 8" EMBED	2



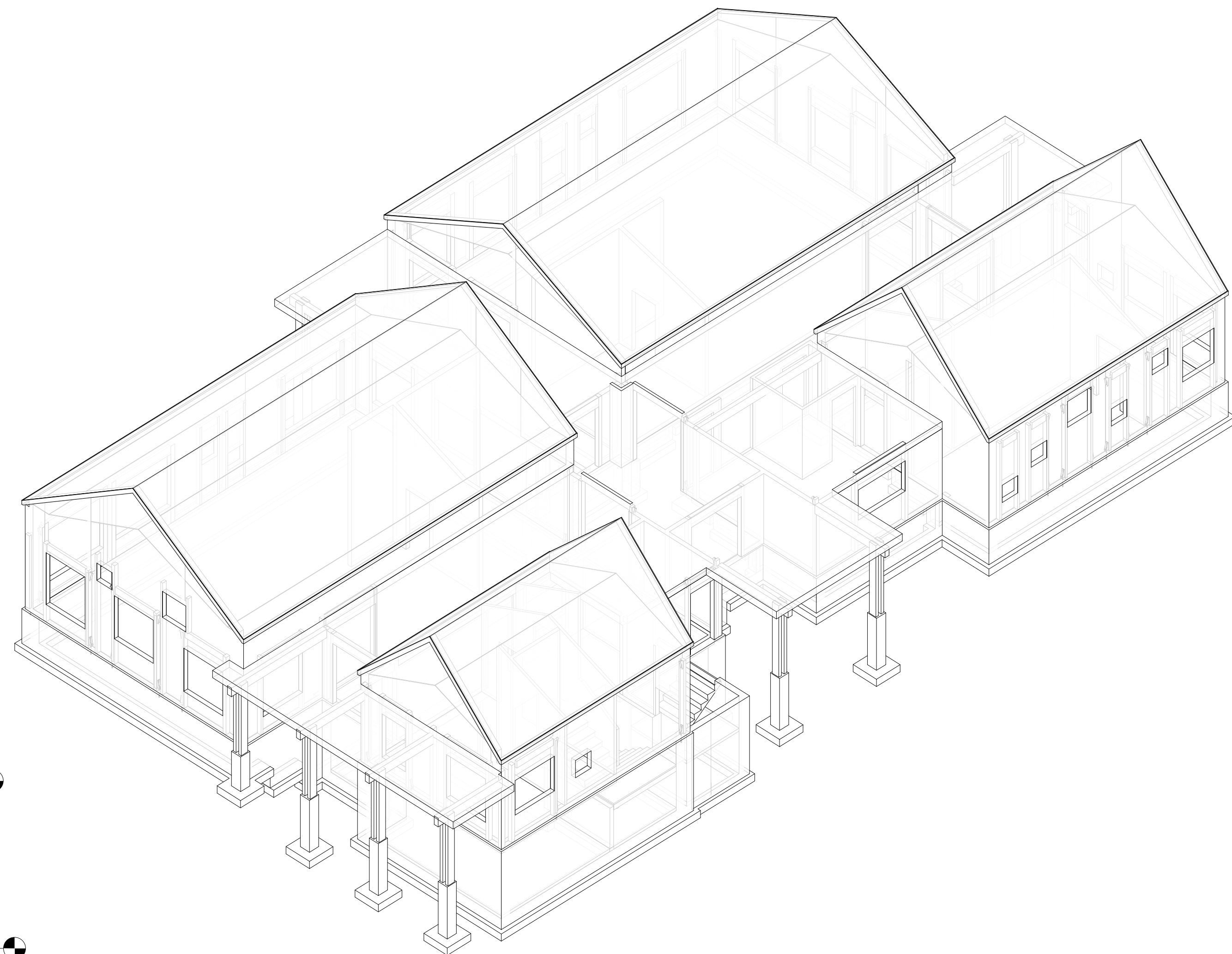
A BUILDING SECTION A
S101 SCALE: 3/16" = 1'-0"



B BUILDING SECTION B
S101 SCALE: 3/16" = 1'-0"



C BUILDING SECTION C
S101 SCALE: 3/16" = 1'-0"



3D STRUCTURAL MODEL
SCALE:

ISSUED FOR TENDER

PROFESSIONAL SEAL

This drawing and the copyright are the property of the ENGINEER. Discrepancies, errors and omissions shall be referred to the Consultant for correction, interpretation or revision.
Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions shown on the drawings. Shop drawings shall be submitted to the Consultant for approval before proceeding with fabrication.

REVISIONS

NO.	DATE	EXPLANATION
A	22/06/17	ISSUED FOR TENDER

CLIENT

ECLIPSE PROJECTS

PROJECT

Q-KIDS DAYCARE CENTER

420 WEBSTER AVENUE, QUESNEL, BC

DRAWING TITLE

BUILDING SECTIONS

DESIGNER	TANNER BRAATEN, P.ENG
REVIEWER	FERGUS FOLEY, P.ENG
DRAWN BY	K.T.
DATE	22/06/17
SCALE	3/16" = 1'-0"
SHEET NO.	

S301

PROJ. NO.
21173

REV. NO.
A

ISSUED FOR TENDER

PROFESSIONAL SEAL

This drawing and the copyright are the property of the ENGINEER. Discrepancies, errors and omissions shall be referred to the Consultant for correction, interpretation or revision.
Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions shown on the drawings. Shop drawings shall be submitted to the Consultant for approval before proceeding with fabrication.

REVISIONS

NO.	DATE	EXPLANATION
A	22/06/17	ISSUED FOR TENDER

CLIENT

ECLIPSE PROJECTS

PROJECT

Q-KIDS DAYCARE CENTER

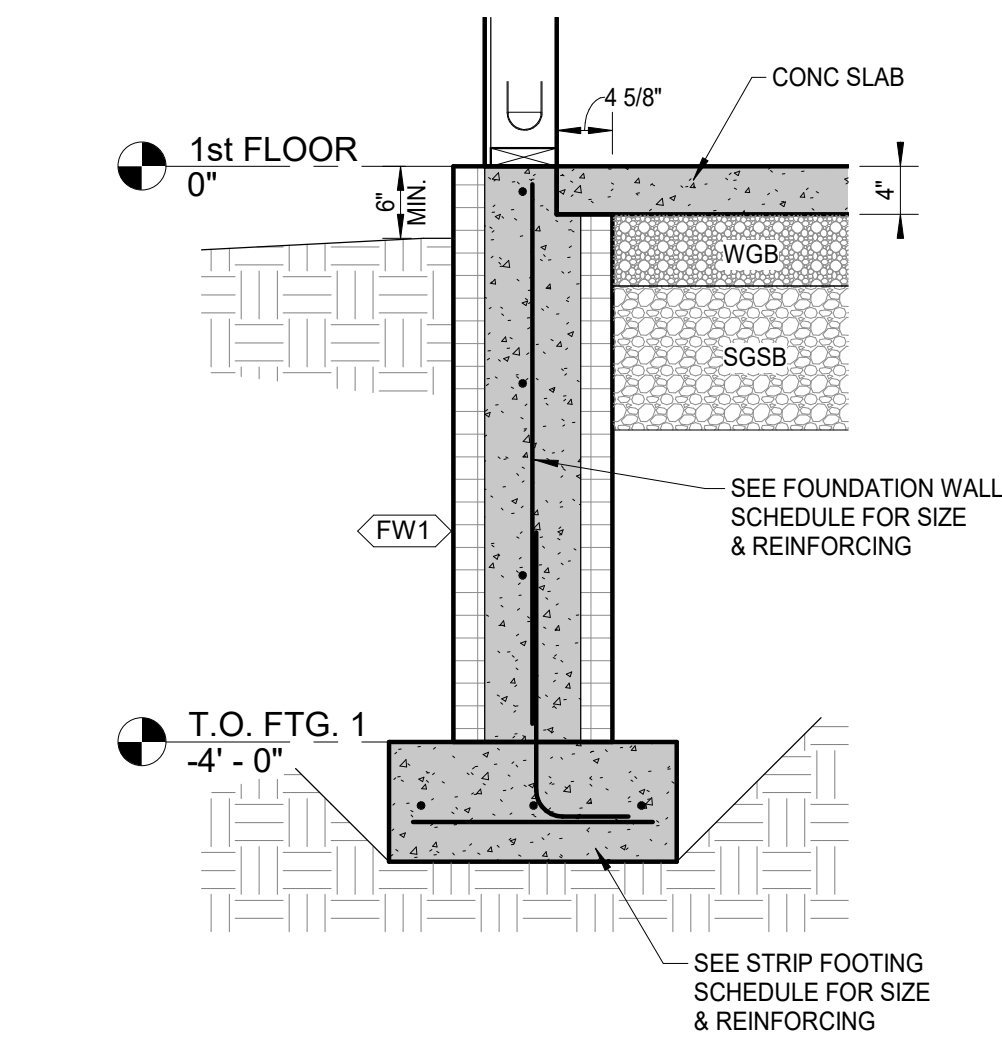
420 WEBSTER AVENUE, QUESNEL, BC
DRAWING TITLE

DETAILS

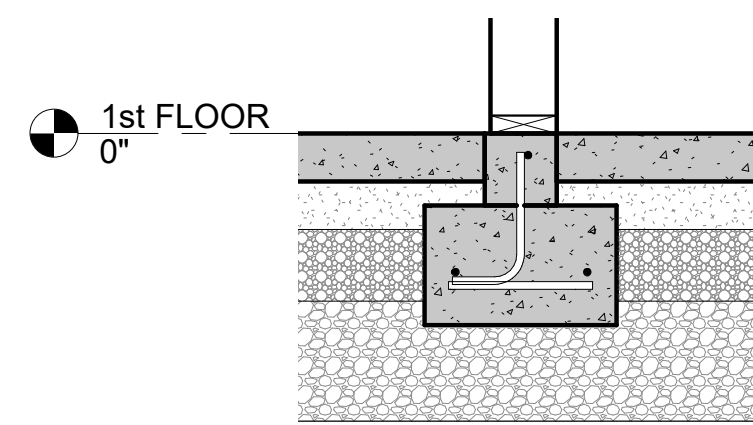
DESIGNER TANNER BRAATEN, P.ENG
REVIEWER FERGIUS FOLEY, P.ENG
DRAWN BY K.T.
DATE: 22/06/17 SCALE As indicated
SHEET NO.

S501

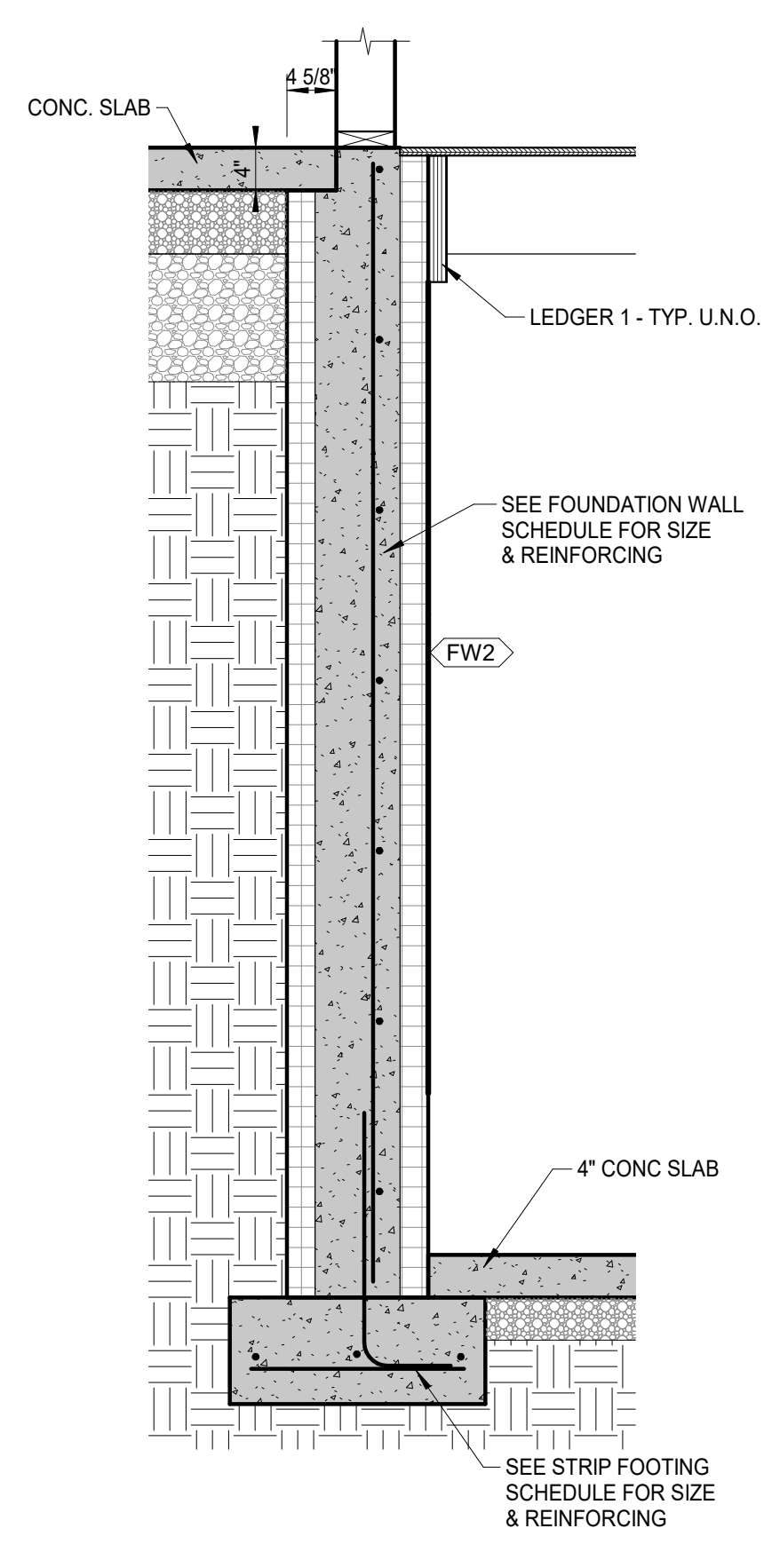
PROJ. NO. 21173 REV. NO. A



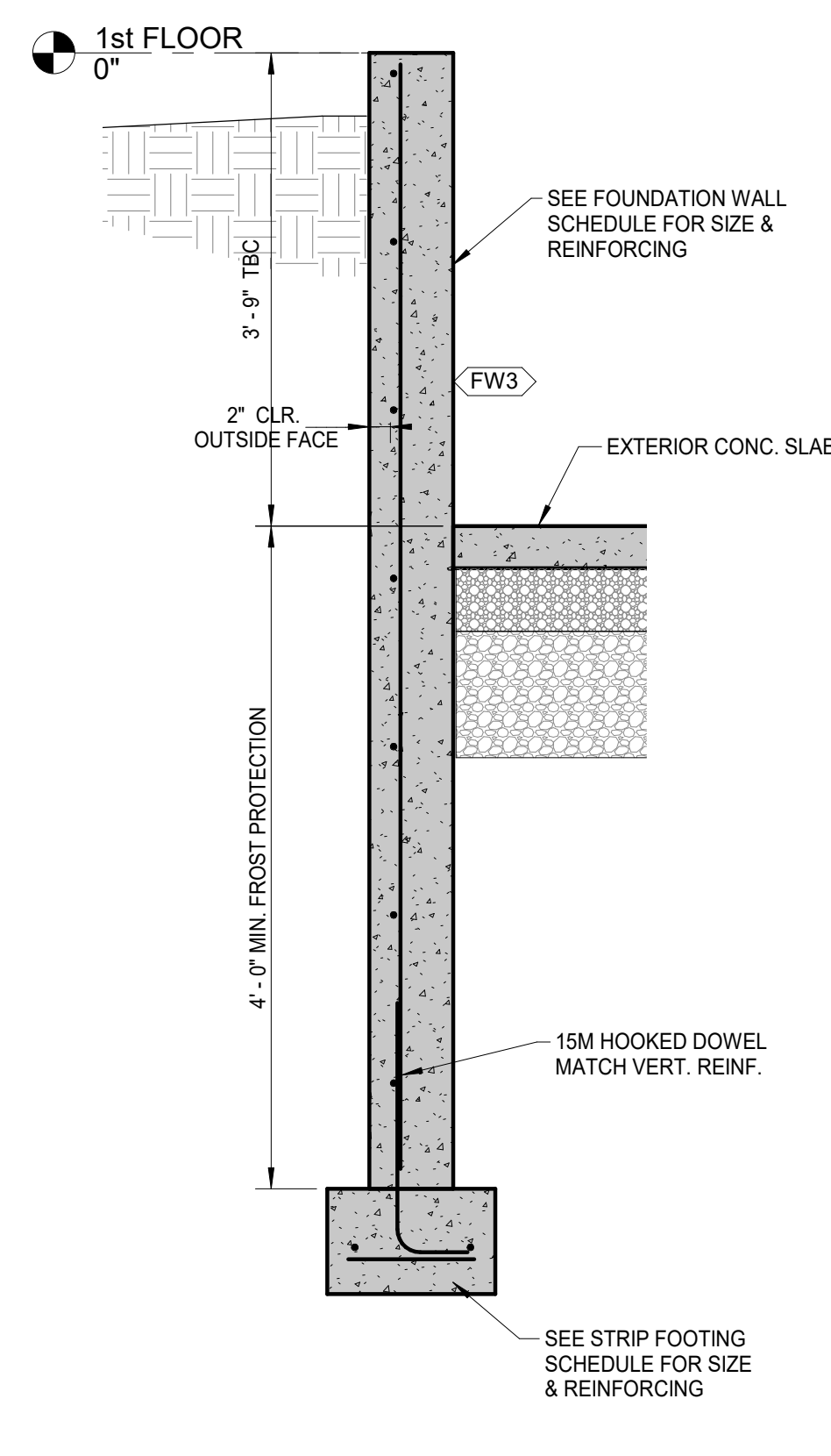
101 FOUNDATION WALL DETAIL - FW1
S101 SCALE: 3/4" = 1'-0"



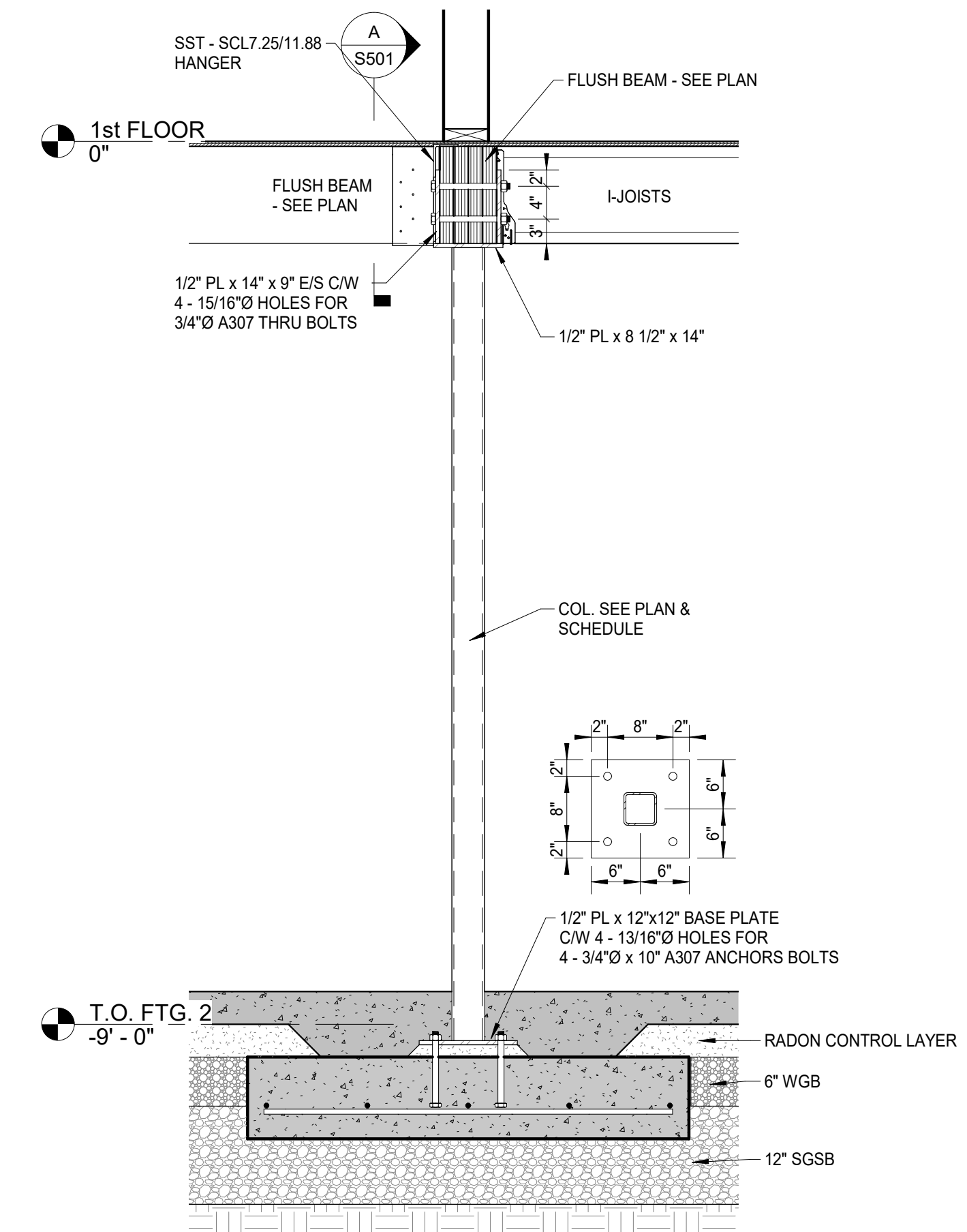
102 TYP. INTERIOR STRIP FTG
S101 SCALE: 3/4" = 1'-0"



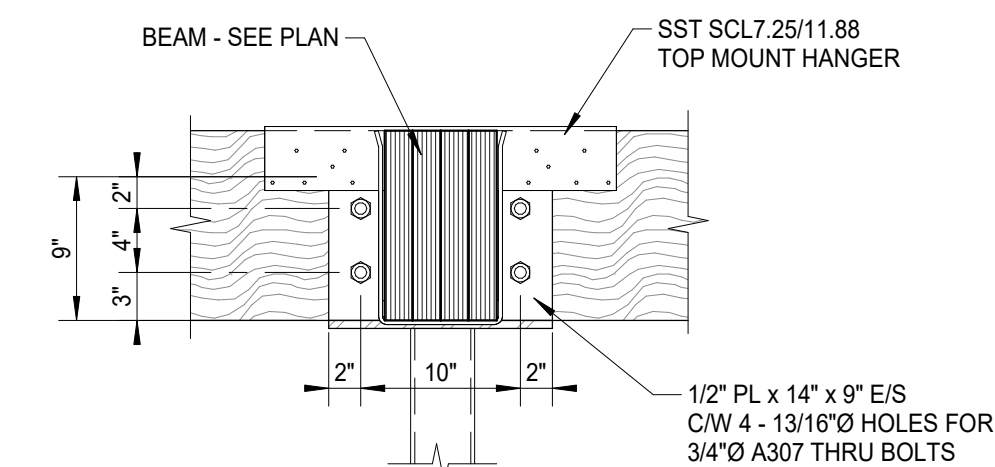
103 FOUNDATION WALL DETAIL - FW2
S101 SCALE: 3/4" = 1'-0"



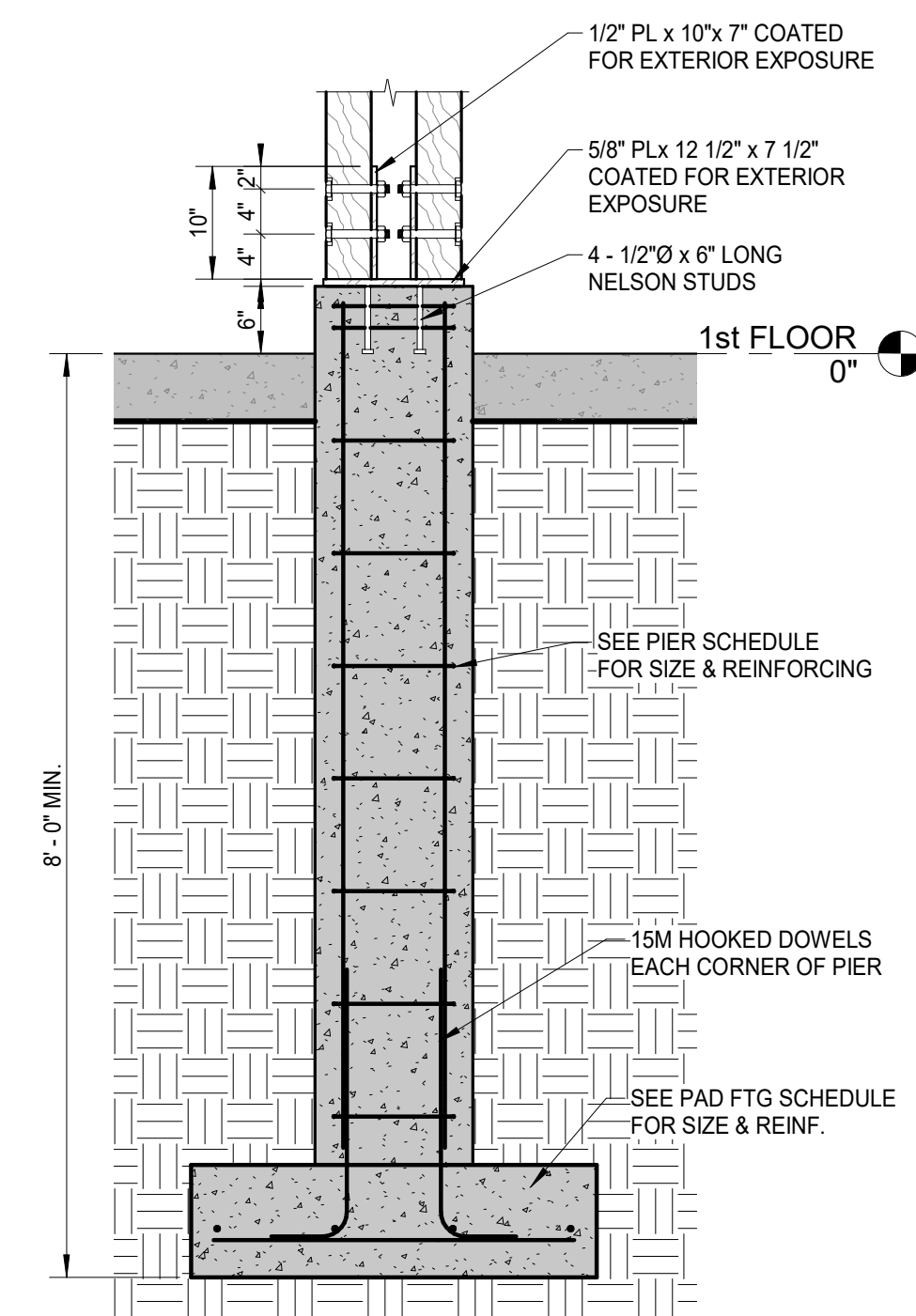
104 FOUNDATION WALL DETAIL - FW3
S101 SCALE: 3/4" = 1'-0"



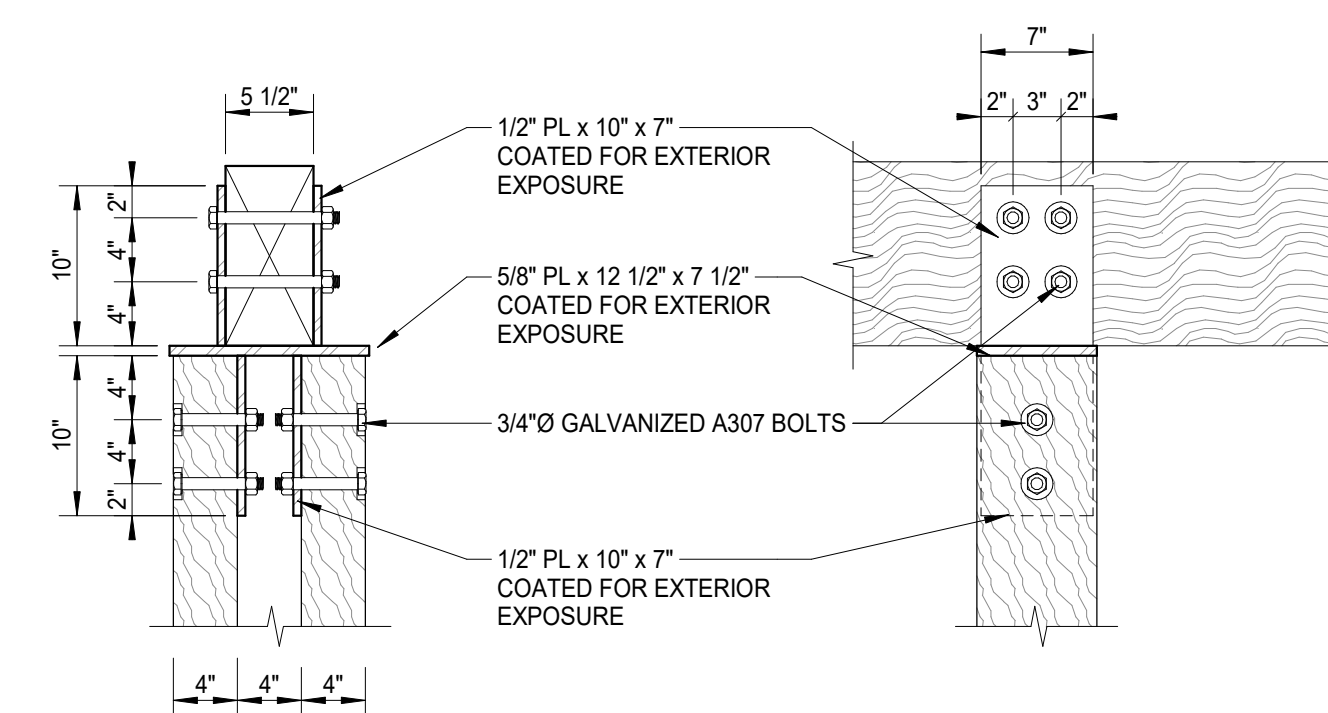
105 INTERIOR COL. & PAD DETAIL
S101 SCALE: 3/4" = 1'-0"



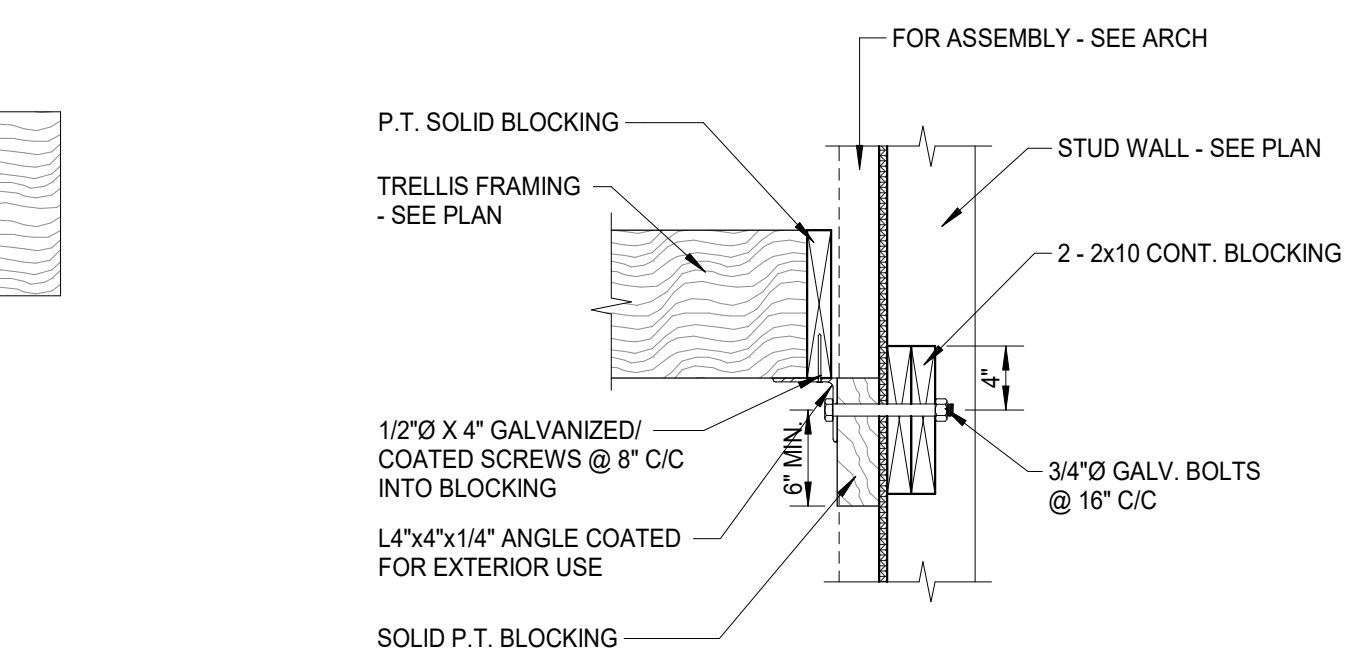
A BEAM HANGER DETAIL
S501 SCALE: 1" = 1'-0"



106 EXTERIOR PIER DETAIL
S101 SCALE: 3/4" = 1'-0"



201 TIMBER BEAM CONNECTION
S110 SCALE: 1" = 1'-0"



202 TRELLIS LEDGER DETAIL
S110 SCALE: 1" = 1'-0"