

GENERAL

- THIS IS A METRIC PROJECT. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS AND ALL FORCES ARE IN METRIC UNITS (PER TG-ABBR-02). HOWEVER, ALL FORCES ARE IN METRIC UNITS (PER TG-ABBR-02).
- "WSP-S" REFERS TO WSP CANADA STRUCTURAL CONSULTANT.
- PROVIDE ALL MATERIAL AND LABOUR REQUIRED FOR COMPLETION OF THE WORK.
- PRIOR TO CONSTRUCTION, REVIEW STRUCTURAL DRAWINGS IN CONJUNCTION WITH DRAWINGS PROVIDED BY ALL OTHER CONSULTANTS, AND WITH EXISTING CONDITIONS.
- REPORT DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
- VERIFY EXISTING DIMENSIONS AND CONDITIONS ON SITE PRIOR TO CONSTRUCTION.
- USE THESE DRAWINGS ONLY FOR THE PURPOSE IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION".
- DO NOT USE INFORMATION ON THESE DRAWINGS FOR ANY OTHER PROJECT OR WORKS.
- DO NOT SCALE THESE DRAWINGS.
- ALL SECTIONS, DETAILS, AND STATEMENTS NOTED AS "TYPICAL" APPLY TO LIKE/SIMILAR CONDITIONS IN THE STRUCTURE.
- SEE ARCHITECTURAL DRAWINGS FOR FIRE RATING AND FIREPROOFING REQUIREMENTS.
- STRUCTURAL DESIGN ASSUMES NON-LOAD RESTRICTED ULC FIRE RATED ASSEMBLIES, AND APPROPRIATE MATERIALS MUST BE USED.
- DRAWINGS SHOW COMPLETED STRUCTURE ONLY. THEY DO NOT SHOW TEMPORARY WORKS FOR WHICH THE CONTRACTOR IS RESPONSIBLE AND WHICH MAY BE REQUIRED FOR EXECUTION OF THE PROJECT. THE CONTRACTOR TO ESTABLISH CONSTRUCTION PROCEDURE AND SEQUENCE TO ENSURE SAFETY OF THE WHOLE STRUCTURE AND ALL ITS COMPONENTS DURING ERECTION.
- MAKE ADEQUATE PROVISIONS FOR ALL LOADS ACTING ON THE STRUCTURE DURING ERECTION. PROVIDE TEMPORARY SHORING AND BRACING TO KEEP THE STRUCTURE PLUMB AND IN TRUE ALIGNMENT DURING CONSTRUCTION.
- DESIGN AND CONSTRUCTION REVIEW OF ALL TEMPORARY WORKS TO BE CARRIED OUT BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED.
- DESIGN OF NON-STRUCTURAL AND SECONDARY STRUCTURAL ELEMENTS (SUCH AS MISCELLANEOUS STEEL, STAIRS, RAILINGS AND GUARDRAILS, PARTITIONS, CLADDING, BULKHEADS, ETC.) IS THE RESPONSIBILITY OF SPECIALTY PROFESSIONAL ENGINEERS ENGAGED BY THE CONTRACTOR OR THE SUPPLIERS. IT IS NOT WITHIN THE SCOPE OF SERVICES PROVIDED BY WSP-S AND WILL NOT BE REVIEWED BY WSP-S.
- CONSTRUCTION LOADS ON COMPLETED STRUCTURE NOT TO EXCEED DESIGN LOADS INDICATED ON DRAWINGS. FULL DESIGN LOADS MAY ONLY BE APPLIED AFTER THE CONCRETE REACHES ITS DESIGN STRENGTH.

DESIGN CRITERIA

- STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2024 ONTARIO BUILDING CODE (OBC) COMPENDIUM, SUPPLEMENTED BY THE USER'S GUIDE – NBC 2020 STRUCTURAL COMMENTARIES.
- ALL REFERENCED STANDARDS SHALL BE THE CURRENT EDITION UNLESS DIFFERENT EDITION IS REFERENCED BY THE APPLICABLE BUILDING CODE NOTED ABOVE.
- THE VALUES FOR CLIMATIC DATA USED IN THE DETERMINATION OF DESIGN LOADS HAVE BEEN OBTAINED FROM THE 2012 OBC FOR THE SPECIFIC LOCATION OF RICHMOND HILL, ONTARIO.
- BASED ON THE USE AND OCCUPANCY, THE BUILDING IS DESIGNED TO THE REQUIREMENTS OF A NORMAL IMPORTANCE CATEGORY.
- SELF WEIGHT (SWT) IS DUE TO THE WEIGHT OF THE STRUCTURE ITSELF. IT VARIES WITH THE STRUCTURAL SYSTEM AND INCLUDES CONCRETE TOPPINGS ON STEEL DECK.
- SUPERIMPOSED DEAD LOADS (SDL) ARE NON-STRUCTURAL DEAD LOADS DUE TO NON-STRUCTURAL TOPPINGS, FINISHES, PARTITIONS, ROOFING MATERIALS, SUSPENDED EQUIPMENT, PAVERS, SOIL, ETC.
- DEAD LOAD (DL) IS THE SELF WEIGHT OF THE STRUCTURE PLUS THE SUPERIMPOSED DEAD LOAD.
- UNLESS OTHERWISE NOTED, DESIGN LOADS SHOWN ON DRAWINGS ARE SPECIFIED (UNFACTORED) LOADS. TO BE USED FOR ULS DESIGN. FOR SLS DESIGN, THESE LOADS CAN BE REDUCED BY MULTIPLYING WITH THE RATIO OF APPROPRIATE IMPORTANCE FACTORS (k(SLS) / k(ULS)) GIVEN BELOW.
- IF ONLY ONE VALUE IS GIVEN FOR A LOAD, CONSIDER IT LIVE LOAD.
- FOR CONNECTION LOADS, "+" SIGN INDICATES TENSION AND "-" SIGN INDICATES COMPRESSION, EXCEPT FOR COLUMN LOADS WHERE "+" SIGN INDICATES COMPRESSION AND "-" SIGN INDICATES TENSION.
- SNOW: $S_s = 1.5 \text{ kPa}$; $S_r = 0.4 \text{ kPa}$; $I_s \text{ (ULS)} = 1.0$; $I_s \text{ (SLS)} = 0.9$
MINIMUM UNFACTORED SNOW LOAD = $1.64 \text{ kPa} \times I_s$
- RAIN: 24 HOUR RAINFALL = 97 mm
- LATERAL LOADS IN THIS STRUCTURE ARE RESISTED BY SHEAR WALLS AND ARE DETERMINED BASED ON THE WIND AND SEISMIC DATA BELOW.
- WIND : $q_{50} = 0.44 \text{ kPa}$; $I_w \text{ (ULS)} = 1.0$; $I_w \text{ (SLS)} = 0.75$
TERRAIN TYPE: OPEN
INTERNAL PRESSURE CATEGORY: 3
- SEISMIC
 $S_a \text{ (0.2, XD)} = 0.316$ $P_{GA} \text{ (XD)} = 0.191$ $I_e f_a S_a \text{ (0.2)} = 0.316$
 $S_a \text{ (0.5, XD)} = 0.293$ $P_{GV} \text{ (XD)} = 0.188$
 $S_a \text{ (1.0, XD)} = 0.173$ $R_d = 1.5$
 $S_a \text{ (2.0, XD)} = 0.0824$ $R_o = 1.5$
 $S_a \text{ (5.0, XD)} = 0.0217$ $I_e = 1.0$
 $S_a \text{ (10.0, XD)} = 0.00678$ SITE CLASSIFICATION = D
SEISMIC FORCE RESISTING SYSTEM (SFRS): CONVENTIONAL CONSTRUCTION (SHEAR WALLS)

SHOP DRAWINGS

- SUBMIT 4 HARD COPIES OR PDF'S OF SHOP DRAWINGS FOR REVIEW BEFORE START OF WORK. PACKAGES TO BE SUBMITTED ARE NOTED IN THE RELEVANT SECTIONS BELOW.
- ALL SHOP DRAWINGS ARE TO BE REVIEWED AND STAMPED BY THE CONTRACTOR PRIOR TO DISTRIBUTION TO CONSULTANTS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- REVIEW OF SHOP DRAWINGS BY WSP-S IS ON A SAMPLING BASIS, FOR GENERAL CONFORMITY WITH STRUCTURAL CONTRACT DOCUMENTS. IT IS NOT A DETAILED CHECK AND MUST NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF THE CONTRACTOR'S RESPONSIBILITY TO MAKE THE WORK ACCURATE AND IN CONFORMITY WITH ALL THE CONTRACT DOCUMENTS. TO REVIEW SHOP DRAWINGS AND TO COORDINATE WORK OF INTERFACING TRADES AND MANUFACTURE OF INTERFACING PRODUCTS.
- REVIEW OF SHOP DRAWINGS DOES NOT IMPLY ANY CHANGE IN ANY OTHER CONSULTANTS' OR PROFESSIONALS' RESPONSIBILITIES RELATED TO DESIGN OF SPECIFIC ITEMS AS OUTLINED BY THESE DRAWINGS.
- ALLOW A MINIMUM OF 10 WORKING DAYS FOR REVIEW OF EACH SUBMISSION OF SHOP DRAWINGS IN THE WSP-S OFFICE. ALLOW MORE TIME WHEN LARGE QUANTITIES OF SHOP DRAWINGS ARE SUBMITTED. SUBMIT IN GENERAL CONFORMITY WITH THE SEQUENCE OF CONSTRUCTION INTENDED.
- AFTER REVIEW, SHOP DRAWINGS WILL BE STAMPED AND RETURNED. DO NOT COMMENCE FABRICATION UNTIL RETURNED SHOP DRAWINGS HAVE BEEN EXAMINED. IF FABRICATION BEGINS PRIOR TO EXAMINATION OF RETURNED SHOP DRAWINGS, THE COST ASSOCIATED WITH ANY REQUIRED REPLACEMENT OR REWORK OF FABRICATED ELEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- SHOP DRAWINGS MARKED "REVIEWED" CAN BE USED FOR FABRICATION. DO NOT MAKE ANY CHANGES OR ADDITIONS TO THESE DRAWINGS WITHOUT NOTIFYING THE CONSULTANT.
- SHOP DRAWINGS MARKED "REVIEWED AS NOTED" CAN BE USED FOR FABRICATION AFTER THE REVISIONS NOTED ARE IMPLEMENTED. DO NOT IMPLEMENT ANY FURTHER CHANGES OR ADDITIONS TO THESE DRAWINGS WITHOUT NOTIFYING THE CONSULTANT.

- SHOP DRAWINGS MARKED "REVISE AND RESUBMIT" REQUIRE SUBSTANTIAL REVISIONS AND MUST BE RESUBMITTED FOR ADDITIONAL REVIEW PRIOR TO FABRICATION. ALL CHANGES AND ADDITIONS TO THE PREVIOUS SUBMISSION TO BE CLEARLY IDENTIFIED ON THE RESUBMITTED DRAWINGS. ONLY THE IDENTIFIED CHANGES WILL BE REVIEWED ON RE-SUBMISSION.
- SHOP DRAWINGS MARKED "REVIEWED FOR IMPACT ON BASE STRUCTURE ONLY" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES BUT AFFECT BEHAVIOUR OF THE BASE STRUCTURE. WSP-S WILL NOT REVIEW THESE WORKS AND ASSUMES THAT THE INDICATED WEIGHTS AND ALL OTHER LOADS IMPOSED ON THE BASE STRUCTURE ARE CORRECTLY IDENTIFIED BY THE DESIGNER/ SUPPLIER OF THESE ELEMENTS.
- DRAWINGS MARKED "NOT REVIEWED" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES.
- DO NOT USE SHOP DRAWINGS AS A MEANS TO PROPOSE SUBSTITUTIONS OR ALTERNATIVES TO THE MATERIALS, PRODUCTS OR DETAILS INDICATED IN CONTRACT DOCUMENTS. SUCH SHOP DRAWINGS WILL BE MARKED "REVISE AND RESUBMIT".
- PROVIDE FINAL RECORD DRAWINGS AFTER ALL CORRECTIONS ARE MADE.

FIELD REVIEW

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

EXISTING STRUCTURE

- EXISTING STRUCTURAL INFORMATION IS BASED UPON DRAWINGS PREPARED BY ABS ARCHITECTS, DATED 27 NOVEMBER 1974 AND ALLEN & SHERRIFF ARCHITECTS, DATED 9 AUGUST 1990.
- DESIGN OF STRUCTURAL WORKS RELATED TO THE EXISTING BUILDING HAS BEEN CARRIED OUT AS FAR AS PRACTICAL, GIVEN LIMITED AVAILABILITY OF THE EXISTING DRAWINGS AND LIMITED RECORDS OF THE STRUCTURAL MODIFICATIONS LIKELY TO HAVE BEEN MADE THROUGH THE LIFE OF THE BUILDING. MODIFICATIONS TO THE PROPOSED STRUCTURAL FRAMING AND / OR DETAILS MAY BE REQUIRED IF EXISTING CONDITIONS ARE FOUND TO BE DIFFERENT FROM THOSE ASSUMED AND SHOWN ON DRAWINGS.
- EXISTING CONDITIONS ARE ASSUMED. SURVEY THE EXISTING STRUCTURE AFTER REMOVING FINISHES AND REPORT ANY VARIATIONS TO WSP-S BEFORE PROCEEDING WITH THE WORK.
- TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE EXISTING STRUCTURE DURING CONSTRUCTION.
- SCHEDULE WORK TO MINIMIZE EFFECT ON THE EXISTING BUILDING OPERATION. USE EQUIPMENT AND PROCEDURES TO MINIMIZE NOISE, DUST AND VIBRATIONS. SUBMIT PROPOSED SCHEDULE FOR REVIEW BY THE CONSULTANT AND THE OWNER.
- DO NOT PERMIT LOADS FROM CONCRETE FORMWORK TO BE TRANSMITTED TO ADJACENT EXISTING STRUCTURES.
- ALL DEMOLITION, SHORING, AND OTHER TEMPORARY WORKS TO BE DESIGNED BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED. PREPARE DRAWINGS SIGNED AND SEALED BY THAT ENGINEER SHOWING DEMOLITION PROCEDURE AND SEQUENCE AND ALL THE NECESSARY SHORING.
- UNDERTAKE CHIPPING, CUTTING, CORING, REPAIRS, PATCHING, AND REMOVAL OF DEBRIS. MAKE CUTS WITH THE PROPER SAWS AND BITS WHEN A CLEAN LINE IS REQUIRED.
- DO NOT ALTER MATERIAL PROPERTIES OF THE STRUCTURAL STEEL WHICH IS TO REMAIN BY CUTTING AND DEMOLITION PROCEDURE.
- MAKE GOOD ALL EXISTING WORK DISTURBED BY SHORING OPERATIONS, EXCAVATION AND OTHER CONSTRUCTION PROCEDURES.

FOUNDATIONS

- STRUCTURAL DESIGN IS BASED ON THE GEOTECHNICAL REPORT PREPARED BY SOIL ENGINEERS LTD. REPORT NUMBER 2207-S017, DATED MAY 2023. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL FOUNDATION AND EARTHWORK INFORMATION.
- SET FOUNDATIONS ON HORIZONTAL UNDISTURBED SOIL CAPABLE OF SUPPORTING BEARING PRESSURE OF 250 kPa AT ULS AND 150 kPa AT SLS.
- PRIOR TO PLACING FOOTINGS, BEARING CAPACITY OF EACH FOOTING TO BE CONFIRMED IN WRITTEN REPORTS BY A GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR. GEOTECHNICAL ENGINEER TO CARRY MINIMUM \$1,000,000 IN LIABILITY INSURANCE. SUBMIT EACH REPORT IMMEDIATELY TO WSP-S.
- IF THE ASSUMED BEARING RESISTANCE IS NOT OBTAINED AT THE UNDERSIDE OF FOOTING ELEVATION INDICATED ON DRAWINGS, EXTEND EXCAVATION UNTIL COMPETENT SOIL IS REACHED, AND PROVIDE LEAN CONCRETE FILL OR CONCRETE SAME AS SPECIFIED FOR THE FOOTING) TO UNDERSIDE OF FOOTING. DO NOT DROP DOWELS; MAINTAIN THE SPECIFIED PROJECTION REQUIRED FOR LAPS.
- FOR FROST PROTECTION, MINIMUM DISTANCE FROM FINISHED GRADE TO UNDERSIDE OF FOUNDATIONS TO BE NOT LESS THAN 1200 MM OR PROVIDE EQUIVALENT INSULATION.
- UNLESS OTHERWISE NOTED, CENTRE FOOTINGS AND PIERS UNDER CENTROID OF COLUMNS, WHERE THERE ARE NO COLUMNS ABOVE, CENTRE UNDER WALLS.
- PLACE ANCHOR RODS AND DOWELS BEFORE CONCRETE IS CAST. USE TEMPLATES TO KEEP IN POSITION.
- LOCATE ALL EXISTING UNDERGROUND SERVICES PRIOR TO EXCAVATION AND/OR PILE INSTALLATION.
- THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR TRENCHES NOT TO EXCEED A RISE OF 7 IN A RUN OF 10.
- KEEP EXCAVATION DRAINED AND FREE OF WATER AT ALL TIMES.
- PROTECT FOOTINGS, PIERS, FOUNDATION WALLS, SLABS-ON-GRADE AND ADJACENT SOIL AGAINST FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION. DO NOT POUR CONCRETE AGAINST FROZEN EARTH.
- DO NOT PLACE CONCRETE IN WATER OR ON FROZEN SOIL.
- UNLESS NOTED OTHERWISE, PROVIDE DRAINAGE WITH WEEPING TILES TIED INTO MECHANICAL DRAINAGE SYSTEM AT ALL WALLS RETAINING EARTH. IF WEEPING TILE IS NOT LOCATED ON THE SIDE OF THE WALL RETAINING EARTH, PROVIDE MIN. 50 (2") DIA. WEEPERS AT MAX 2000 (6'-8") O/C THROUGH THE WALL. LOCATE JUST ABOVE TOP OF FOOTING.
- IF A RETAINING WALL DOES NOT HAVE A WEEPING TILE BEHIND IT, PROVIDE MIN. 50 (2") DIA. WEEPERS AT MAX 2000 (6'-8") O/C THROUGH THE WALL LOCATE 200 (8") ABOVE THE LOWER GRADE LEVEL.
- DO NOT BACKFILL AGAINST WALLS RETAINING EARTH UNTIL ELEMENTS PROVIDING LATERAL SUPPORT, INCLUDING SLABS ON GRADE AND SUSPENDED LEVELS, ARE COMPLETED AND CONCRETE HAS REACHED 75% OF ITS DESIGN STRENGTH.
- WHERE SLAB ON GRADE IS USED TO THE TOP OF A WALL RETAINING EARTH, PROVIDE TEMPORARY SHORING OF THE WALL FROM START OF BACKFILLING UNTIL THE SLAB ON GRADE REACHES 75% OF ITS DESIGN STRENGTH.
- FOR ELEMENTS THAT ARE TO BE BACKFILLED ON BOTH SIDES, PLACE BACKFILL SIMULTANEOUSLY ON BOTH SIDES SUCH THAT HEIGHTS DO NOT VARY BY MORE THAN 600 (2') FROM ONE SIDE TO THE OTHER.

CONCRETE

- CONFORM TO CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION".
- CONCRETE IS SPECIFIED PER ALTERNATIVE 1 - PERFORMANCE SPECIFICATION, AS OUTLINED IN CAN/CSA A23.1, THE CONTRACTOR AND THE CONCRETE SUPPLIER TO MEET ALL CERTIFICATION, DOCUMENTATION, AND QUALITY CONTROL REQUIREMENTS.
- THE CONCRETE SUPPLIER TO BE CERTIFIED BY THE READY MIXED CONCRETE ASSOCIATION OF ONTARIO.
- CONCRETE TO BE NORMAL DENSITY (MIN. 2300 kg/m³) UNLESS NOTED OTHERWISE.
- CEMENT TO BE PORTLAND CEMENT TYPE GU OR GUL, UNLESS NOTED OTHERWISE OR REQUIRED BY EXPOSURE CLASS. CEMENT TO CONFORM TO CSA A3001.
- AGGREGATE TO CONFORM TO CSA A23.1 / A23.2. DO NOT USE RECYCLED CONCRETE AS AGGREGATE.
- CONCRETE ADMIXTURES SHALL NOT CONTAIN CHLORIDES.
- INTERIOR APPLICATIONS:
 - EXPOSURE CLASS: N
 - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 25 MPa
 - NOMINAL SIZE OF COARSE AGGREGATE: 20 (3/4")
- SLAB ON GRADE IN NEW GARAGE OR EXPOSED TO WEATHER:
 - EXPOSURE CLASS: C1
 - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35 MPa
 - NOMINAL SIZE OF COARSE AGGREGATE: 20 (3/4")
 - AIR ENTRAINMENT: REQUIRED
 - ADD CALCIUM NITRITE CORROSION INHIBITOR AT MINIMUM DOSAGE OF 10 L/m³ OF 30% SOLUTION.
- PERIMETER AND EXTERIOR FOUNDATION WALLS AND FOOTINGS FOR ENCLOSED AREAS:
 - EXPOSURE CLASS: F1
 - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 30 MPa
 - NOMINAL SIZE OF COARSE AGGREGATE: 20 (3/4")
- ALL OTHER EXTERIOR APPLICATIONS AND FOR FOUNDATION WALLS AND FOOTINGS IN OPEN AREAS:
 - EXPOSURE CLASS: C1
 - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35 MPa
 - NOMINAL SIZE OF COARSE AGGREGATE: 20 (3/4")
 - AIR ENTRAINMENT: REQUIRED
- PROTECT CONCRETE FROM EXCESSIVE HEAT AND DRYING. USE HOT WEATHER CONCRETING METHODS IN ACCORDANCE WITH CAN/CSA-A23.1 WHENEVER THE OUTDOOR TEMPERATURE IS GREATER THAN 27°C.
- PROTECT CONCRETE FROM FREEZING. USE COLD WEATHER CONCRETING METHODS IN ACCORDANCE WITH CAN/CSA-A23.1 WHENEVER OUTDOOR TEMPERATURE IS LESS THAN +5°C. ALL INSULATED COVERS, HEATERS, AND OTHER MATERIALS NEEDED TO PROTECT CONCRETE TO BE ON HAND PRIOR TO POUR. DELIVER CONCRETE AT A TEMPERATURE BETWEEN +15°C AND +27°C. ENSURE A MINIMUM CONCRETE TEMPERATURE OF 10° IS MAINTAINED THROUGHOUT THE CURING PERIOD (MINIMUM 3 DAYS).
- MAXIMUM OUTSIDE DIAMETER OF ANY CONDUIT OR PIPE EMBEDDED IN SLAB NOT TO EXCEED ONE THIRD OF THE SLAB THICKNESS.
- FORMWORK DESIGN, MATERIAL, FABRICATION, AND ERECTION TO CONFORM TO CSA S269.1.
- FORMWORK MATERIAL TO BE NEW EXTERIOR PLYWOOD CONFORMING TO CSA 0121, EXCEPT FOR ROUGH CONCRETE IN UNEXPPOSED LOCATIONS (SUCH AS FOUNDATIONS) WHERE USED MATERIAL IS ACCEPTABLE.
- USE REMOVABLE INTERNAL FORM TIES OR ADJUSTABLE METAL TIES DESIGNED TO ACT AS SPREADERS, WHICH WILL, WHEN REMOVED, LEAVE NO METAL CLOSER THAN 25 (1") TO CONCRETE SURFACE.
- DO NOT SUPPORT FORMWORK SHORING ON FROZEN SOILS.
- PROVIDE 25 (1") CHAMFER STRIPS ON EXTERNAL CORNERS AND 25 (1") FILLETS AT INTERIOR CORNERS.
- RIGID INSULATION TO BE EXTRUDED POLYSTYRENE BOARD CONFORMING TO ASTM C578, STRUCTURAL GRADE, WITH A COMPRESSIVE STRENGTH OF 275 kPa (40 psi).
- PVC WATERSTOPS TO BE FLEXIBLE, EXTRUDED, HEAT WELDABLE, RIBBED TO CGSB 41-GP-35M. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
- SWELLABLE WATERSTOPS TO BE TRAPEZOIDAL SHAPE, FLEXIBLE, NON-BENTONITE SYNTHETIC RUBBER. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
- CONVEY CONCRETE FROM TRUCK TO FINAL LOCATION BY METHODS WHICH WILL PREVENT SEPARATION OR LOSS OF MATERIAL. MAXIMUM FREE FALL NOT TO EXCEED 1.5m (5'-0"). CONSOLIDATE CONCRETE USING MECHANICAL VIBRATORS.
- UNLESS OTHERWISE NOTED, PROVIDE STANDARD CONTINUOUS 38 x 89 (2x4) FORMED KEYS AT ALL CONSTRUCTION JOINTS. CENTER AT JOINTS AND CHAMFER SIDES.
- PROVIDE SLAB-ON-GRADE CONSTRUCTION JOINTS AT MAXIMUM 30m (100 ft) ON CENTER IN BOTH DIRECTIONS. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT 75 TIMES THE SLAB THICKNESS, BUT NOT MORE THAN 4.5m (15ft) MAXIMUM ON CENTER EACH WAY, 6 TO 18 HOURS AFTER PLACING CONCRETE. SAW CUT DEPTH TO BE EQUAL TO ON QUARTER OF THE CONCRETE THICKNESS. FILL JOINTS WITH SEM-RIGID TWO COMPONENT EPOXY FILLER AFTER SLAB IS 120 DAYS OLD.
- PROVIDE VERTICAL FOUNDATION WALL CONSTRUCTION JOINTS AT 30m (100ft) MAXIMUM. LOCATE JOINTS IN FOUNDATION WALLS ACTING AS BEAMS (SPANNING BETWEEN FOOTINGS OR PILES) WITHIN THE MIDDLE THIRD OF THEIR SPAN.
- WALLS IN HEATED AREAS: PROVIDE VERTICAL INTERIOR WALL CONSTRUCTION JOINTS AT 30m (100ft) ON CENTRE. PROVIDE EVENLY SPACED CONTROL JOINTS IN WALLS AT MAXIMUM 7.5m (25ft) ON CENTER.
- RETAINING WALLS: PROVIDE VERTICAL CONTROL JOINTS AT 5m (16ft) MAXIMUM, WITH KEYPED EXPANSION JOINTS AT 15m (50ft) MAXIMUM.
- OTHER WALLS IN UNHEATED AREAS: PROVIDE VERTICAL CONSTRUCTION JOINTS AT 30m (100ft) MAXIMUM, AND CONTROL JOINTS AT 5m (16ft) MAXIMUM. LOCATE CONTROL JOINTS NOT MORE THAN 2.5m (8ft) FROM EACH SIDE OF CONSTRUCTION JOINTS AND ANY WALL CORNER.
- CURE CONCRETE SURFACES NOT IN CONTACT WITH FORMS IN ACCORDANCE WITH A23.1 / A23.2, BY APPLICATION OF A CURING-SEALING COMPOUND CONFORMING TO ASTM C309 IMMEDIATELY AFTER DISAPPEARANCE OF SURFACE WATER SHEEN. ENSURE CURING-SEALING COMPOUND IS COMPATIBLE WITH APPLIED FINISHES.
- ENSURE THAT SLEEVES AND OPENINGS DO NOT IMPAIR THE REQUIRED STRENGTH OF THE MEMBER, AND UNLESS SHOWN ON THE STRUCTURAL DRAWINGS, ARE ACCEPTED BY THE CONSULTANT FOR SIZE, LOCATION, AND REINFORCEMENT BEFORE CONCRETE IS CAST. NO TRADE SHALL CUT HOLES THROUGH EXISTING CONCRETE UNLESS ACCEPTABLE TO THE CONSULTANT.

CONCRETE REINFORCEMENT

- CONFORM TO CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION".
- REINFORCEMENT — DEFORMED BAR REINFORCEMENT CONFORMING TO CSA G30.18 GRADE 400R OR 400W. USE 400W WHERE BARS ARE SHOWN TO BE WELDED.
- EPOXY-COATED BARS — CONFORM TO ASTM A775/A775M AND ASTM D3963/D3963M. PROVIDE EPOXY-COATED CHAIR-BARS AND BOLSTERS AND PLASTIC-COATED TIE WIRES FOR EPOXY-COATED REINFORCEMENT.
- WELDED WIRE FABRIC — CONFORM TO ASTM A1064/A1064M, YIELD STRENGTH 450 MPa, SUPPLIED IN FLAT SHEETS ONLY.
- LAP WELDED WIRE FABRIC SHEETS BY ONE SPACING OF CROSS WIRES + 50 (2"), MEASURED BETWEEN THE OUTERMOST CROSS WIRES IN EACH SHEET. IN SLABS, PLACE AT 1/3 SLAB THICKNESS BELOW TOP OF SLAB.
- ACCESSORIES, BAR SUPPORTS, AND TIES TO CONFORM TO REINFORCING STEEL INSTITUTE OF CANADA (RSIC) MANUAL OF STANDARD PRACTICE AND CSA A23.1 / A23.2.
- ALL REINFORCING BAR SIZES ARE METRIC; "M" IS NOT NECESSARILY MARKED AFTER A BAR SIZE. FOR EXAMPLE, 10-15B NOTED ON PLAN INDICATES 10 BARS OF 15M DIAMETER, PLACED AT BOTTOM.
- SUBMIT SHOP DRAWINGS FOR REINFORCEMENT DETAILED IN ACCORDANCE WITH THE RSIC MANUAL OF STANDARD PRACTICE, SUBMIT PLANS AND DETAILS NECESSARY TO FABRICATE, PLACE, AND REVIEW REINFORCEMENT.
- ALL REBAR HOOKS TO BE STANDARD LENGTH 90° OR 180° HOOKS. REBAR LENGTHS LISTED ON DRAWINGS DO NOT INCLUDE THE HOOK LENGTH. BARS MARKED CONTINUOUS TO BE TERMINATED IN STANDARD HOOKS AT ENDS AND SPLICED USING CLASS B LAPS.
- FIELD BENDING OF BARS IS NOT PERMITTED UNLESS INDICATED OR APPROVED BY WSP-S. APPROVED FIELD BENDING TO BE DONE WITHOUT THE USE OF HEAT, THROUGH APPLICATION OF SLOW AND STEADY PRESSURE. REPLACE BARS WITH CRACKS OR SPLITS.
- ALL REINFORCING TO BE CLEAN, FREE OF LOOSE SCALE, OIL, DIRT, RUST, AND ANY OTHER FOREIGN COATING THAT AFFECT BONDING CAPACITY.
- UNLESS OTHERWISE NOTED, LAP ALL HORIZONTAL GRADE BEAM REINFORCING WITH CLASS B LAPS. CARRY CONTINUOUSLY THROUGH PIERS AND PILE CAPS WHERE APPLICABLE.

- WHERE CONCRETE IS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH, MINIMUM CONCRETE COVER TO REINFORCING BARS CLOSEST TO THE CONCRETE SURFACE TO BE 75 (3").
- FOR CLASS N CONCRETE, MINIMUM CONCRETE COVER TO REINFORCING BARS CLOSEST TO THE CONCRETE SURFACE TO BE 40 (1 1/2") FOR BEAMS AND COLUMNS AND 25 (1") FOR SLABS AND WALLS.
- FOR CLASS C-1 CONCRETE, MINIMUM COVER TO BE 60 (2 1/2") EXCEPT FOR SLABS PROTECTED BY AN MEMBRANE WHERE THE COVER SHALL BE 40 (1 1/2") TO THE TOP BARS AND 30 (1 1/4") TO THE BOTTOM BARS.
- FOR CLASS F-1 AND F-2 CONCRETE, MINIMUM COVER TO BE 40 (1 1/2").
- INCREASE COVER WHERE REQUIRED TO MAINTAIN MINIMUM RATIO OF COVER TO NOMINAL BAR DIAMETER OF 1 FOR CLASS N, 1.5 FOR CLASSES F1 AND C1 (FOR MEMBRANE PROTECTED SLABS ONLY), AND 2 FOR CLASS C1 (ALL OTHER STRUCTURES).
- ENSURE COVER TO REINFORCEMENT IS MAINTAINED DURING CONCRETE POUR.

CONCRETE FINISHING

- ARCHITECTURAL CONCRETE: EXPOSED CONCRETE TO MATCH APPEARANCE OF NEARBY EXISTING EXPOSED ARCHITECTURAL CONCRETE. REFER TO ARCHITECTURAL DRAWINGS FOR AREAS OF EXPOSED CONCRETE.
- POWER STEEL-TROWEL FINISH FLOORS WITH INTERIOR EXPOSED SLABS, AND FLOORS WHICH RECEIVE RESILIENT FLOORING, CARPET, EPOXY BASED FINISHES OR THIN SET TILES. DO NOT USE STEEL TROWEL TO FINISH AIR-ENTRAINED CONCRETE.
- WOOD FLOAT AND BROOM FINISH EXTERIOR SLABS.
- SCREED AND BULL FLOAT FINISH OTHER SLABS AND FOOTINGS.
- FOR SLABS TO RECEIVE RESILIENT FLOORING AND OTHER MOISTURE SENSITIVE FLOOR FINISHES, MONITOR SLAB MOISTURE CONTENT AND DO NOT APPLY FINISHES BEFORE THE MOISTURE CONTENT IS FOUND TO BE WITHIN AN ACCEPTABLE RANGE.
- CONCRETE SURFACE TOLERANCE TO CSA A23.1, F-NUMBER METHOD. CONFORM TO FINISH TOLERANCE CLASS A.

POST-INSTALLED ANCHORS AND DOWELS

- WHERE DRILLED CONCRETE ANCHORS (DCA) OR DRILLED MASONRY ANCHORS (DMA) ARE NOTED ON DRAWINGS, PROVIDE HILTI KWIK BOLT — T22 EXPANSION ANCHORS OR APPROVED EQUIVALENT. LOCATE DMA MIN 35 (1-3/8") FROM ANY VERTICAL MORTAR JOINT. DO NOT INSTALL DMA INTO HOLLOW MASONRY. ADVISE WSP-S IF HOLLOW MASONRY IS FOUND ON SITE WHERE DMA HAVE BEEN SPECIFIED. EFFECTIVE EMBEDMENT LENGTHS AS FOLLOWS:
10 (3/8") DIAMETER — 64 (4-1/2") EMBEDMENT
12 (1/2") DIAMETER — 83 (3-1/4") EMBEDMENT
16 (5/8") DIAMETER — 102 (4") EMBEDMENT
19 (3/4") DIAMETER — 121 (4-3/4") EMBEDMENT
- WHERE ADHESIVE CONCRETE ANCHORS (ACA) ARE NOTED ON DRAWINGS, PROVIDE HILTI HIT-HY200 ADHESIVE ANCHORING SYSTEM WITH HILTI HIT-Z ANCHOR RODS OR APPROVED EQUIVALENT. EFFECTIVE EMBEDMENT LENGTHS AS FOLLOWS:
10 (3/8") DIAMETER — 86 (3-3/8") EMBEDMENT
12 (1/2") DIAMETER — 114 (4-1/2") EMBEDMENT
16 (5/8") DIAMETER — 143 (5-5/8") EMBEDMENT
19 (3/4") DIAMETER — 171 (6-3/4") EMBEDMENT
- WHERE ADHESIVE MASONRY ANCHORS (AMA) ARE NOTED ON DRAWINGS, PROVIDE HILTI HIT-HY 270 ADHESIVE ANCHORING SYSTEM WITH HAS-V RODS OR APPROVED EQUIVALENT. EFFECTIVE EMBEDMENT LENGTHS AS FOLLOWS:
10 (3/8") DIAMETER — 86 (3-3/8") EMBEDMENT
12 (1/2") DIAMETER — 114 (4-1/2") EMBEDMENT
16 (5/8") DIAMETER — 143 (5-5/8") EMBEDMENT
19 (3/4") DIAMETER — 171 (6-3/4") EMBEDMENT
- WHERE REBAR DOWEL ANCHORS (RDA) ARE NOTED ON DRAWINGS, PROVIDE HILTI HIT-RE 500 V3 (FOR ANCHORAGE TO CONCRETE) OR HILTI HIT-HY 270 (FOR ANCHORAGE TO SOLID OR GROUTED MASONRY) ADHESIVE ANCHORING SYSTEM INSTALLED USING HILTI SAFESST HOLLOW DRILL BIT TECHNOLOGY OR APPROVED EQUIVALENT. SEE DRAWINGS FOR EMBEDMENT LENGTHS.
- WHERE HOLLOW MASONRY ANCHORS (HMA) ARE NOTED ON DRAWINGS, PROVIDE HILTI HIT—HY 270 ADHESIVE ANCHORING SYSTEM WITH HIT-SC MESH SLEEVE AND HAS-V RODS OR APPROVED EQUIVALENT. PROVIDE 12 (1/2") DIAMETER ANCHORS WITH 50 (2") EMBEDMENT.
- FOR HOLLOW BRICK MASONRY, PROVIDE HILTI HIT—HY 270 ADHESIVE ANCHORING SYSTEM WITH HIT-SC MESH SLEEVE AND HAS-V THREADED RODS. PROVIDE 12 (1/2") DIAMETER ANCHORS WITH 80 (3-1/8") EMBEDMENT.
- IF ANCHORS OTHER THAN THE HILTI PRODUCTS SPECIFIED ABOVE ARE APPROVED TO BE USED, ANCHOR SUPPLIER TO ESTABLISH THE EMBEDMENT LENGTHS REQUIRED TO ACHIEVE PERFORMANCE EQUIVALENT TO THE HILTI PRODUCTS EMBEDDED AS INDICATED IN THESE NOTES.
- ANCHOR AND DOWEL CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND THEIR PROXIMITY TO CONCRETE AND MASONRY EDGES; THEREFORE, ALL ANCHORS MUST BE INSTALLED WITH CLEARANCES AND EDGE DISTANCES INDICATED ON DRAWINGS.
- ANCHORS LOCATED OUTSIDE THE BUILDING ENVELOPE'S VAPOUR BARRIER TO BE *** [HOT DIP GALVANIZED]
- CONCRETE TO BE MINIMUM 28 DAYS OLD AT THE TIME OF ANCHOR INSTALLATION.
- USE DRILLING AND INSTALLATION TOOLS AND PROCEDURES PER MANUFACTURERS' RECOMMENDATIONS. DO NOT CORE DRILL UNLESS SPECIFICALLY NOTED ON DRAWINGS. HOLE DIAMETERS NOT TO EXCEED THOSE REQUIRED BY MANUFACTURER.
- WHERE CORE DRILLING IS SPECIFIED, CLEAN AND ROUGHEN HOLES PER MANUFACTURER'S RECOMMENDATION.
- DO NOT CUT REINFORCEMENT TO ACCOMMODATE DRILLED ANCHORS AND DOWELS.
- ARRANGE FOR THE ANCHOR MANUFACTURER TO CONDUCT TRAINING FOR INSTALLATION OF ALL THE PRODUCTS SPECIFIED, AND FOR ALL CONDITIONS ENCOUNTERED (E.G. HORIZONTAL, INCLINED, OVERHEAD) PER CSA A23.1-19 ANNEX D. ALL INSTALLERS MUST COMPLETE THE SUPPLIER CERTIFIED INSTALLER TRAINING PROGRAM. SUBMIT COPIES OF COMPLETION CERTIFICATES FOR WSP-S RECORD.
- WHEN OBSTRUCTIONS PREVENT DRILLING HOLES IN SPECIFIED LOCATIONS TO THE REQUIRED DEPTH, RELOCATE AT NO EXTRA COST TO THE CONTRACT. OBTAIN WSP-S APPROVAL OF NEW LOCATIONS BEFORE DRILLING. MODIFICATIONS TO CONNECTED MEMBERS AND ADDITIONAL ANCHORS / DOWELS MAY BE REQUIRED. FILL ABANDONED HOLES WHICH ARE CLOSER THAN 3 TIMES THE HOLE DIAMETER FROM THE RELOCATED ANCHORS WITH HILTI HIT-RE 100 ADHESIVE OR WITH 30MPa NON-SHRINK GROUT. DO NOT TIGHTEN ANCHORS UNTIL THE FILLER HAS FULLY CURED.
- DO NOT BEND POST INSTALLED DOWELS AND RODS AFTER INSTALLATION.

CUTTING AND CORING

- DO NOT CUT OR CORE CONCRETE WITHOUT WSP-S APPROVAL.
- CARRY A PRICE TO RETAIN AN INDEPENDENT TESTING COMPANY TO LOCATE AND MARK EXISTING REINFORCEMENT AND CONDUIT IN THE AREAS OF PROPOSED OPENINGS USING A NON-DESTRUCTIVE METHOD. IF LOCATIONS ARE NOT ACCEPTABLE TO WSP-S, RELOCATE PROPOSED OPENINGS AND REPEAT PROCESS AT NO EXTRA COST TO THE CONTRACT.
- CORING HOLES: DO NOT CUT EXISTING REINFORCEMENT OR CONDUIT WHEN CORING EXISTING CONCRETE UNLESS APPROVED IN ADVANCE BY WSP-S. SAVE COMPLETE LENGTH OF ALL CORES AND LABEL WITH LOCATION TAKEN. MAKE ALL CORES AVAILABLE FOR REVIEW, DO NOT DISPOSE OF CORES WITHOUT WSP-S APPROVAL.
- CUTTING OPENINGS: DO NOT CUT EXISTING REINFORCEMENT AND CONDUIT UNLESS APPROVED IN ADVANCE BY WSP-S. DO NOT OVERCUT OPENINGS. CORE FOUR CORNERS AND EDGES OF INTERMEDIATE SAWCUTS OF ALL OPENINGS PRIOR TO CUTTING SIDES AND INTERMEDIATE LINES. CHIP CORNERS SQUARE AFTER SAWCUTTING IF NECESSARY. IF NEW REINFORCEMENT REQUIRED AT AN OPENING, INSTALL IT BEFORE CUTTING OR SHORE THE STRUCTURE UNTIL THE NEW REINFORCEMENT IS INSTALLED.

DRAWING LIST	
S100	GENERAL NOTES PART1
S101	GENERAL NOTES PART2
S105	TYPICAL DETAILS
S106	TYPICAL DETAILS
S107	TYPICAL DETAILS
S108	TYPICAL DETAILS
S200	FOUNDATION AND GROUND FLOOR PLAN
S201	SECOND FLOOR FRAMING PLAN
S202	ROOF FRAMING PLAN
S400	SECTIONS AND DETAILS

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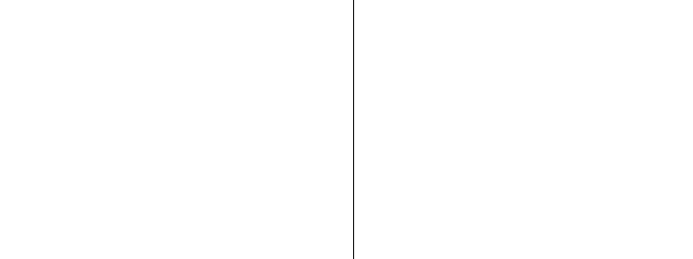
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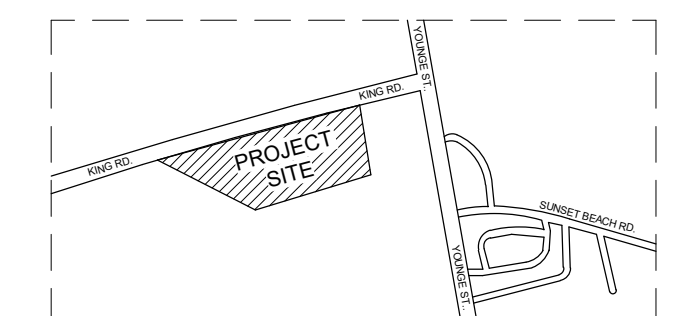
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NORTH ARROW: DIGITAL REFERENCE:



PROJECT NO.: CAD011757 0343 CONTRACT NO.
DRAWN BY: SN CHECKED BY: SN APPROVED BY: KKZ

KEY PLAN:



PROJECT

4	20-03-2025	ISSUED FOR TENDER
3	04-03-2025	ISSUED FOR CLIENT REVIEW - TENDER STAGE
2	17-01-2025	ISSUED FOR PERMIT
1	01-03-2024	ISSUED FOR SITE PLAN APPROVAL
MD	DATE	ISSUED
PROJECT		

S100	GENERAL NOTES PART1
S101	GENERAL NOTES PART2
S105	TYPICAL DETAILS
S106	TYPICAL DETAILS
S107	TYPICAL DETAILS
S108	TYPICAL DETAILS
S200	FOUNDATION AND GROUND FLOOR PLAN
S201	SECOND FLOOR FRAMING PLAN
S202	ROOF FRAMING PLAN
S400	SECTIONS AND DETAILS

DRAWING TITLE

GENERAL NOTES PART1

STRUCTURAL STEEL

1. CONFORM TO CSA S16 'DESIGN OF STEEL STRUCTURES'.
2. FABRICATOR TO BE CERTIFIED BY THE CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF CSA W47.1, DIVISION 1 OR 2, AND/OR CSA W55.3.
3. WELDERS TO BE CWB CERTIFIED. WELDING TO BE IN ACCORDANCE WITH CSA W59.
4. MATERIALS (TO CSA 440.21 UNLESS NOTED OTHERWISE):
 - WIDE FLANGE SECTIONS, CHANNELS AND ANGLES: GRADE 350W
 - PLATES, BARS: GRADE 300W
 - STEEL JOISTS: CSA 440.21, ASTM A1085, OR ASTM A500
 - HOLLOW STRUCTURAL SECTIONS (HSS): 350W CLASS "C" OR "1"; OR ASTM A500 GRADE C; OR ASTM A1085 GRADE 50 (345 MPa)
 - GALVANIZED HSS: 350W CLASS H; OTHER GRADES TO BE STRESS RELIEVED PRIOR TO GALVANIZING
 - PIPE: ASTM A53, 240W
 - BOLTS, NUTS AND WASHERS: ASTM F3125, GRADE A325
 - ANCHOR RODS: GRADE 300W, OR ASTM F1554 GRADE 36
 - HEADED STUDS: CSA W56, TYPE B, MIN Fy = 350MPa. LENGTHS OF STUDS GIVEN ON DRAWINGS ARE THE LENGTHS AFTER WELDING.
 - WELDING MATERIALS: CSA W48 AND CSA W59
 - SHOP PAINT: CISC/CPMA 1-73A
 - SHOP PRIMER PAINT: CISC/CPMA 2-75
 - ZINC-RICH PAINT (ZRP) COATING: SSPC PAINT SPECIFICATION NO. 20
 - HOT DIP GALVANIZING: ASTM A123/A123M
5. SHOP DRAWINGS FOR STRUCTURAL STEEL, STEEL CONNECTIONS, AND STEEL JOISTS TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR DESIGN, RETAINED BY THE CONTRACTOR AND REGISTERED IN THE PLACE THE PROJECT IS LOCATED. ENGINEER TO CARRY MINIMUM \$1,000,000 IN LIABILITY INSURANCE.
6. CONNECT BEAMS FOR THE FORCES SHOWN ON DRAWINGS USING THE CISC "HANDBOOK OF STEEL CONSTRUCTION". IF NO FORCE IS INDICATED, CONNECT NON-COMPOSITE BEAMS FOR THE REACTION DUE TO MAXIMUM UNIFORMLY DISTRIBUTED LOAD CAPACITY OF THE BEAM IN BENDING, AND CONNECT COMPOSITE BEAMS FOR ONE AND A HALF TIMES THE REACTION DUE TO MAXIMUM UNIFORMLY DISTRIBUTED LOAD CAPACITY OF THE NON COMPOSITE SECTION IN BENDING.
7. WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN FOR MOMENT CAPACITY OF THE SMALLER MEMBER IN THE CONNECTION.
8. WHERE SLOTTED CONNECTIONS ARE SHOWN ON STRUCTURAL DRAWINGS, FINGER TIGHTEN BOLTS TO A SNUG FIT AND BURR THREADS TO PREVENT NUTS FROM WORKING LOOSE.
9. DO NOT SPLICE SECTIONS WITHOUT PRIOR ACCEPTANCE BY THE CONSULTANT AND SUBMISSION OF PERTINENT SHOP DRAWINGS. ACCEPTED SPLICES TO DEVELOP THE FULL MOMENT CAPACITY OF THE SECTION. EACH SPLICE TO BE GIVEN A NON-DESTRUCTIVE TEST BY AN INDEPENDENT INSPECTION COMPANY ACCEPTABLE TO WSP-S. TESTING TO BE AT THE CONTRACTOR'S EXPENSE. EVALUATE RESULTS IN ACCORDANCE WITH CSA W59 AND REPORT TO WSP-S.
10. DO NOT CUT HOLES OR OTHERWISE MODIFY STRUCTURAL MEMBERS ON SITE.
11. DO NOT OVERSIZE ANCHOR ROD HOLES FOR SITE TOLERANCES. USE HOLE SIZES SUGGESTED IN THE CISC "HANDBOOK OF STEEL CONSTRUCTION".
12. PROTECT COMBUSTIBLE MATERIALS AND FINISHES DURING WELDING OPERATIONS.
13. DO NOT WELD IN AMBIENT TEMPERATURES BELOW -18°C. PREHEAT MATERIAL ADJACENT TO WELDING AREAS WHEN WELDING TEMPERATURE IS BETWEEN -18°C AND 0°C.
14. STEEL JOISTS: CONFORM TO CSA S16 AND CSA S136. DESIGN STEEL JOISTS FOR THE LOADS AND JOIST DEPTHS DESCRIBED ON THE STRUCTURAL DRAWINGS. IN ADDITION, DESIGN TOP AND BOTTOM JOIST CHORDS FOR 1.5 kN POINT LOAD APPLIED ANYWHERE ALONG THEIR LENGTH UNLESS HIGHER LOAD IS INDICATED ON DRAWINGS). TOTAL LOAD DEFLECTION NOT TO EXCEED 1/240 OF SPAN, AND LIVE LOAD DEFLECTION 1/360 OF SPAN. JOIST SHOES TO HAVE SOLID WEBS. PROVIDE THE JOISTS AT COLUMNS FOR JOIST ERECTION STABILITY. THE JOIST BOTTOM CHORD ATTACHMENT MUST NOT INDUCE AXIAL LOAD IN JOIST.
15. UNLESS OTHERWISE NOTED, CLEAN STEEL TO SSPC SP1 (SOLVENT CLEANING) AND APPLY ONE COAT OF SHOP PAINT.
16. CLEAN STEEL WHICH WILL RECEIVE A FINISHED COAT OF PAINT ON SITE TO SSPC SP7 (BRUSH OFF BLAST CLEANING) AND APPLY SHOP PRIMER.
17. CLEAN STEEL WHICH WILL RECEIVE ZRP TO SSPC SP10 (NEAR WHITE BLAST CLEANING), AND APPLY ZINC RICH PRIMER.
18. ALL STEEL LOCATED OUTSIDE THE BUILDING ENVELOPE'S VAPOUR BARRIER TO BE ""[HOT DIPPED GALVANIZED] [PROTECTED BY A PAINT SYSTEM SPECIFIED BY THE ARCHITECT]"".
19. CLEAN SURFACES DOWN TO BARE METAL AND APPLY TWO COATS OF TOUCH-UP ZRP TO ANY GALVANIZED OR ZRP SURFACE THAT HAS BEEN DAMAGED OR FIELD WELDED.
20. IF STRUCTURAL STEEL IS IN DIRECT CONTACT WITH GROUND (E.I. COLUMN BASE IS NOT ENCASED IN CONCRETE), PROTECT WITH EPOXY PAINT.
21. PROVIDE VENT HOLES IN HSS SECTIONS WHERE REQUIRED FOR GALVANIZING PROCESS. MAXIMUM SIZE 16 (5/8") DIAMETER. FILL WITH VENT HOLE PLUGS AFTER GALVANIZING.
22. PROVIDE ALL ERECTION BRACING REQUIRED TO KEEP THE STRUCTURE STABLE AND IN ALIGNMENT DURING CONSTRUCTION.
23. DISTRIBUTE HANGER LOADS FROM MECHANICAL AND HEAVY ELECTRICAL SERVICES UNIFORMLY ALONG STEEL MEMBERS. ALTERNATE HANGER POSITION ON EITHER SIDE OF MEMBERS. DO NOT INSTALL IN A MANNER THAT WILL CAUSE TWISTING OF STEEL MEMBERS OR EXCESSIVE BENDING OF FLANGES OR CHORDS. WHEN HANGERS ARE CONNECTED TO JOISTS AND THE APPLIED LOAD IS GREATER THAN 1.5kN, LOCATE SUSPENSION POINT NOT MORE THAN 100 (4") FROM JOIST PANEL POINT.
24. PREMIXED GROUT: NON-SHRINK, MINIMUM STRENGTH 40 MPa AT 28 DAYS.
25. INSTALL GROUT UNDER BASE PLATES AS SOON AS STEEL WORK IS COMPLETE, IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. PROVIDE 100% CONTACT OVER GROUTED AREA. DO NOT APPLY ANY LOADS TO THE STEELWORK BEFORE GROUT ACHIEVES SUFFICIENT STRENGTH.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)

1. REFER TO CISC CODE OF STANDARD PRACTICE, APPENDIX I, "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL", FOR APPLICABLE AESS CATEGORY.
2. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF AESS MEMBERS.
3. SHOP DRAWINGS TO INDICATE MEMBERS CONSIDERED AESS, THEIR CATEGORY, AND CONNECTION DETAILS INCLUDING SHOP AND FIELD BOLTING, WELDING, AND GRINDING.
4. FABRICATE AESS WITH TOLERANCES AND SURFACE QUALITY CONSISTENT WITH THE AESS CATEGORY.
5. ERECT USING SOFTENED SLINGS OR OTHER METHODS SUCH THAT THEY ARE NOT DAMAGED. PROVIDE PADDING AS REQUIRED TO PROTECT WHILE RIGGING AND ALIGNING. WELD TABS FOR TEMPORARY BRACINGS AND SAFETY CABLING ONLY AT POINTS CONCEALED FROM VIEW IN THE COMPLETE STRUCTURE OR WHERE APPROVED BY WSP-S.

STEEL DECK

1. CONFORM TO CSA S136, CSSBI 10M AND CSSBI 12M.
2. MATERIALS:
 - DECK: ASTM A653/A653M (WITH ZF75 OR Z275 COATING), OR ASTM A792/A792A (WITH AZ150 COATING), GRADE 230.
 - ZINC-RICH PAINT (ZRP): PER SSPC PAINT SPECIFICATION NO.20.
3. DECK WITH CONCRETE TOPPING TO BE A COMPOSITE PROFILE UNLESS NOTED OTHERWISE. COMPOSITE DECK TO HAVE EMBOSSEMENTS, WHICH ENSURE COMPOSITE ACTION OF STEEL AND CONCRETE. SUBMIT SUBSTANTIATING DATA IF REQUESTED. TOTAL SLAB THICKNESS IS EQUAL TO COVER SLAB THICKNESS NOTED ON DRAWINGS PLUS DECK THICKNESS.
4. SHOP DRAWINGS FOR STEEL DECK TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR DESIGN, RETAINED BY THE CONTRACTOR AND REGISTERED IN THE PLACE THE PROJECT IS LOCATED. ENGINEER TO CARRY MINIMUM \$1,000,000 IN LIABILITY INSURANCE.
5. DESIGN LOADS, SECTION DEPTHS AND STEEL THICKNESSES ARE GIVEN ON DRAWINGS. CHOOSE DECK PROFILE AND DETAIL IN ACCORDANCE WITH CSA S136, CSSBI 10M AND CSSBI 12M.

6. CHOOSE DECK TO CARRY WEIGHT OF WET CONCRETE AND APPROPRIATE CONSTRUCTION LOAD ALLOWANCE WITHOUT SHORING.
7. LIMIT LIVE LOAD DEFLECTION TO 1/360 OF SPAN. LIMIT TOTAL ROOF LOAD DEFLECTION TO 1/240. LIMIT SDL+ LL INCREMENTAL LONG TERM FLOOR DEFLECTION TO 1/480.
8. UNLESS NOTED OTHERWISE, PROVIDE BUTTION PUNCHED OR SCREWED SIDE LAP CONNECTIONS AT 600 (24") CENTRES MAXIMUM. CONNECT DECK TO TRANSVERSE SUPPORTS AT EVERY OTHER FLUTE OR MAX. 400 (16") (WHICHEVER IS LESS) WITH 19 (3/4") DIAMETER FUSION WELDS OR HILTI DIRECT FASTENERS. CONNECT TO LONGITUDINAL (PERIMETER) SUPPORTS WITH FASTENERS TO MATCH TRANSVERSE FASTENERS SPACED AT 450 (18") ON CENTRE. DO NOT DAMAGE SUPPORTING MEMBERS THROUGH DECK FASTENING PROCESS.
9. DECK SUPPLIER TO DESIGN AND PROVIDE REINFORCING FOR ALL ROOF DECK OPENINGS BETWEEN 150 AND 450 WIDE. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS. CLEAR SPACING BETWEEN ADJACENT OPENINGS TO BE MIN. 3 TIMES THE WIDTH OF THE LARGER OPENING. FRAME ALL OTHER OPENINGS.
10. PROVIDE REQUIRED FLASHING, POUR STOPS AND CLOSURE STRIPS WHERE NEEDED. SHEET STEEL MATERIAL TO BE 0.91 (20 GAUGE) MINIMUM, AND SAME COATING AS DECK MATERIAL.
11. TOUCH-UP WITH ZRP WHEREVER PROTECTIVE COATING HAS BEEN DAMAGED DURING ERECTION.
12. LAP DECK 50 TO 100 (2" TO 4") OVER SUPPORTS.
13. REINFORCE SLAB ON DECK SUPPORTED BY NON-COMPOSITE BEAMS AS FOLLOWS: 89 (3 1/2") SLAB OR LESS: WWF 152x152 - MW18.7 x MW18.7 MORE THAN 89 (3 1/2") SLAB: 10 @ 400 (16") TEW (PROVIDE CLASS B LAPS) ADD 2-10 x 1200 (48") AT ALL RE-ENTRANT CORNERS AT DECK PERIMETER AND OPENINGS; CENTER ON CORNERS.
14. DO NOT HANG CONCENTRATED LOADS FROM STEEL ROOF DECK UNLESS APPROVED BY THE ENGINEER RESPONSIBLE FOR DESIGN OF THE DECK.
15. PRIOR TO CONCRETE PLACEMENT, STEEL DECK TO BE FREE OF SOIL, DEBRIS, STANDING WATER, LOSE MIL SCALE, AND OTHER FOREIGN MATTER.

MASONRY

1. CONFORM TO CSA A371 "MASONRY CONSTRUCTION FOR BUILDINGS", AND CSA S304 "DESIGN OF MASONRY STRUCTURES".
2. MATERIALS:
 - HOLLOW BLOCK: CSA A165 1-H/15/CM
 - SOLID BLOCK: CSA A165 1-S/15/SA/M
 - MORTAR: CSA A179 - TYPE S
 - MASONRY GROUT: CSA A179 - COARSE GROUT, 1:3:2 — CEMENT : SAND : PEA STONE BY VOLUME WITH 200 (8") SLUMP, OR APPROVED PRE-BAGGED MATERIAL
 - MASONRY TIES: TO BE HOT DIP GALVANIZED
3. MASONRY CONTRACTOR TO BE A MEMBER OF THE CANADIAN MASONRY CONTRACTORS ASSOCIATION.
4. NON-LOAD BEARING MASONRY WALLS ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS.
5. UNLESS NOTED OTHERWISE, LAY UNITS IN RUNNING BOND. ALL FACE SHELLS TO BE FULLY BEDDED. INTERLOCK MASONRY COURSES AS WALL CORNERS.
6. DO NOT USE MORTAR WHERE GROUT IS SPECIFIED.
7. PROVIDE HOT, COLD AND WET WEATHER PROTECTION AS REQUIRED BY CSA A371.
8. PROVIDE TEMPORARY BRACING FOR LOAD BEARING MASONRY WALLS UNTIL THE SUPPORTED STRUCTURE, WHICH PROVIDES PERMANENT BRACING, IS COMPLETED.
9. TOOL JOINTS IN ALL LOAD BEARING WALLS TO PROVIDE HARD, DENSE JOINTS.
10. PROVIDE LATERAL SUPPORT AT TOPS OF ALL WALLS. [REFER TO ARCHITECTURAL DRAWINGS] LOCATE MAX 300 (12") FROM WALL ENDS AND MOVEMENT JOINTS.
11. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM 25 (1") DEFLECTION GAP AT TOP OF ALL NON LOAD BEARING MASONRY WALLS.
12. UNLESS OTHERWISE NOTED ON DRAWINGS, PROVIDE 3.66 (9 GAUGE) DEFORMED STEEL HORIZONTAL LADDER-TYPE JOINT REINFORCEMENT EVERY SECOND BLOCK COURSE WITH 300 (12") LAPS (PROVIDE IN EVERY BLOCK COURSE FOR STACK BOND). STAGGER LAPS MIN 750 (2'-6") FROM COURSE TO COURSE. USE CORNER TYPE REINFORCEMENT AT WALL CORNERS AND INTERSECTIONS. PROVIDE JOINT REINFORCEMENT IN THE FIRST TWO COURSES ABOVE AND BELOW WALL OPENINGS, AND EXTEND 600 (2'-0") BEYOND EACH SIDE OF OPENING.
13. NON-LOAD BEARING WALLS: PROVIDE 12mm (1/2") VERTICAL MOVEMENT JOINTS (MJ) WHERE INDICATED ON ARCHITECTURAL DRAWINGS. AT MAX 6000 (20') O/C, AND WHERE MASONRY WALLS ABUT COLUMNS OR CONCRETE WALLS. FILL ALL MJ WITH COMPRESSIBLE MATERIAL. SEE ARCHITECTURAL DRAWINGS FOR FIRE STOPPING REQUIREMENTS.
14. LOAD BEARING WALLS: PROVIDE MJ AS REQUIRED FOR NON-LOAD BEARING WALLS. IN ADDITION, PROVIDE MJ WHERE INDICATED ON STRUCTURAL DRAWINGS. AND BETWEEN ALL LOAD BEARING AND NON-LOAD BEARING WALLS. CARRY HORIZONTAL REINFORCING IN BOND BEAMS LOCATED IMMEDIATELY BELOW FLOOR OR ROOF LEVELS CONTINUOUSLY THROUGH MOVEMENT JOINTS (WHERE APPLICABLE). DO NOT CARRY ANY OTHER WALL REINFORCING (INCLUDING HORIZONTAL JOINT REINFORCING) THROUGH MJ.
15. PROVIDE STANDARD LINTELS OVER ALL OPENINGS IN NON-LOAD BEARING MASONRY WALLS AS SHOWN ON TYPICAL DETAILS TM-WALL-11 TO TM-WALL-14. THE OPENINGS ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
16. UNLESS OTHERWISE NOTED, REINFORCE ALL 190 MASONRY WITH 1-15@400 VERTICAL + 2-4.8 DIAMETER WIRES LADDER-TYPE HORIZONTAL REINFORCING AT 400 CENTRES.
17. REINFORCED MASONRY: BUILD WITH NO OVER-HANGING MORTAR, DEBRIS, OR CONDUIT INSIDE REINFORCED CELLS. REINFORCEMENT TO BE SPLICED 450 (18") FOR 10M BARS, 650 (26") FOR 15M BARS AND 900 (36") FOR 20M BARS, CARRIED CONTINUOUSLY THROUGH BOND BEAMS AND LINTELS, AND EXTENDED TO WITHIN 50 (2-1/2") FROM TOP OF WALL. LOCATE REBAR ACCURATELY IN CELLS AS SHOWN ON DRAWINGS. HOLD IN POSITION TOP AND BOTTOM. PROVIDE VERTICAL DOWELS AT BASE OF WALLS TO MATCH VERTICAL REINFORCING.
18. AT REINFORCED MASONRY WALLS, REINFORCE SIDES OF ALL OPENINGS EXCEEDING 1000 (3'-6") IN WIDTH WITH ADDITIONAL 1-15 VERTICAL. CARRY FULL HEIGHT OF WALL. IN ADDITION, ADD 1-15 VERTICAL AT WALL ENDS, AND AT EACH SIDE OF MOVEMENT JOINTS.
19. ALL REINFORCED MASONRY WALLS TO HAVE MIN 190 (7-1/2") DEEP BOND BEAMS WHERE INDICATED ON PLAN. AT A MINIMUM, PROVIDE BOND BEAMS AT TOPS OF ALL WALLS AND AT A MAXIMUM VERTICAL SPACING OF 2400 (8'-0"). REINFORCE WITH 1-15 TOP AND BOTTOM CONTINUOUS, AND GROUT SOLID. BEND AND LAP REINFORCING AT MASONRY CORNERS AND INTERSECTIONS. TERMINATE HORIZONTAL REINFORCING WITH 90 HOOKS.
20. UNLESS MASONRY WALLS ARE NOTED AS "FULLY GROUTED" OR "GROUTED SOLID", GROUT ONLY CELLS CONTAINING VERTICAL OR HORIZONTAL REINFORCEMENT AND ANCHOR RODS OR STRAPS, AND OTHER AREAS SPECIFICALLY INDICATED ON DRAWINGS. CONSOLIDATE BY PULDING WHEN PLACING AND AGAIN RECONSOLIDATE BEFORE PLASTICITY IS LOST. GROUT USING LOW LIFT GROUTING METHODS AND MAXIMUM 1500 (5'-0") LIFTS. STOP EACH LIFT 40 (1 1/2") BELOW TOP OF MASONRY UNIT.
21. PREFILL VOIDS IN MASONRY UNITS RECEIVING POST INSTALLED ANCHORS WITH GROUT EXTENDING MIN. 200 AROUND EACH ANCHOR. PREFILL VOIDS IN MASONRY UNITS WITH GROUT FOR A MINIMUM DEPTH OF 190 (8") BELOW STEEL DECK SUPPORTS, AND 390 (16") FORMED SLAB SUPPORTS

INSPECTION AND TESTING

1. PROVIDE INSPECTION REPORTS PREPARED BY AN INDEPENDENT INSPECTION AND TESTING AGENCY FOR THE SCOPES LISTED BELOW. THE COST OF THE INSPECTION WILL BE BORNE BY THE CONTRACTOR.
2. MAKE ONE STANDARD TEST FOR EACH 100 CUBIC METRES OF CONCRETE, BUT NOT LESS THAN ONE TEST FOR CONCRETE CAST EACH DAY. PROVIDE A GROUP OF THREE CONCRETE CYLINDERS FOR EACH STANDARD CONCRETE TEST IN ACCORDANCE WITH CSA A23.1 AND 2.
3. PROVIDE AT LEAST 3 CYLINDERS TO BE TESTED FOR EACH 20 CUBIC METRES OF MASONRY GROUT, IN ACCORDANCE WITH CSA A179. MAKE AT LEAST ONE SET OF CYLINDERS EACH DAY THE GROUT IS PLACED.
4. STRUCTURAL STEEL INSPECTION REPORTS TO INCLUDE VERIFICATION OF SPECIFIED MEMBER SIZES AND TOLERANCES AND INSPECTION OF WELDING AND BOLTING. INSPECTOR TO REVIEW WELDERS' CWB CERTIFICATION.
5. STEEL DECK INSPECTION REPORTS TO INCLUDE VERIFICATION OF MATERIAL GRADE, DECK PROFILE, DECK BEARING, AND CONNECTIONS.

6. INSPECT POST INSTALLED ANCHORS INCLUDING DRILLED CONCRETE ANCHORS (DCA), DRILLED MASONRY ANCHORS (DMA), ADHESIVE CONCRETE ANCHORS (ACA), ADHESIVE MASONRY ANCHORS (AMA), AND REBAR DOWEL ANCHORS (RDA), RANDOMLY SELECT AND TEST 5% OF ALL OTHER TYPES / SIZES OF POST INSTALLED ANCHORS INSTALLED ON A WEEKLY BASIS, BUT NOT LESS THAN ONE ANCHOR OF EACH TYPE, SIZE, AND ORIENTATION. TEST LOADING AS FOLLOWS:
 - TORQUE TEST EXPANSION ANCHORS FOR COMPLIANCE WITH THE TORQUE SPECIFIED BY THE MANUFACTURER.
 - PULL TEST ADHESIVE ANCHORS IN CONFINED CONDITION IN ACCORDANCE WITH ASTM E3121 TO TWICE THE ALLOWABLE TENSILE LOAD OR 1.5 TIMES THE FACTORED RESISTANCE OF THE ANCHOR GIVEN BY THE MANUFACTURER.
 - PROVIDE FULL TIME INSPECTION DURING INSTALLATION OF ADHESIVE ANCHORS SUBJECT TO SUSTAINED TENSION LOADS INSTALLED IN A HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS.
7. POST INSTALLED ANCHOR INSPECTION REPORTS TO INDICATE EACH ANCHOR LOCATION, TEST LOAD, AND MODE OF FAILURE IF APPLICABLE. NOTIFY WSP-S IMMEDIATELY IF ANY ANCHOR FAILS THE FULL TEST.

REJECTED WORK

1. DO NOT DELIVER MATERIALS WHICH ARE KNOWN NOT TO MEET THE REQUIREMENTS OF THE SPECIFICATIONS. IF REJECTED AFTER DELIVERY, REMOVE IMMEDIATELY FROM SITE.
2. ALL WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

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PROJECT


CONNOR BUILDING

DRAWING TITLE

GENERAL NOTES PART 2

DRAWING NO. S101

PRINT DATE: 2025-03-20 8:39:58 PM

DRAWING ABBREVIATIONS												TG-ABBR-01
ABUT	ABUTMENT	DP	DEEP	dL	TENSION DEVELOPMENT LENGTH OF REBAR	SPEC	SPECIFICATIONS					
ACA	ADHESIVE CONCRETE ANCHORS, SEE GENERAL NOTES	DWG	DRAWING	dLc	COMPRESSION DEVELOPMENT LENGTH OF REBAR	SPF	SPRUCE PINE FIR					
ADDL	ADDITIONAL	DWL	DOWEL	dLh	TENSION EMBEDMENT LENGTH WITH STANDARD HOOK	SR	STUD RAIL					
AEC	ARCHITECTURALLY EXPOSED CONCRETE	EA	EACH	LE	LEFT END	SS	STAINLESS STEEL					
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	ECR	EPOXY COATED REINFORCEMENT	LG	LONG	ST	STRAIGHT					
AFB	ASPHALT IMPREGNATED FIBERBOARD	EBF	ECCENTRICALLY BRACED FRAME	LL	LOWER LEVEL	STD	STANDARD					
ALT	ALTERNATE	EE	EACH END	LLH	LONG LEG HORIZONTAL	STE	SHEAR TRANSFER ELEMENTS					
AMA	ADHESIVE MASONRY ANCHORS, SEE GENERAL NOTES	EF	EACH FACE	LLV	LONG LEG VERTICAL	STG	STAGGERED					
ARCH	ARCHITECTURAL	EJ, EXP JT	EXPANSION JOINT	LONG	LONGITUDINAL	STR	STIRRUP					
AROD	ANCHOR ROD	ELECT	ELECTRICAL	LSH	LONG SIDE HORIZONTAL	STIFF	STIFFENER					
ASPH	ASPHALT	EL	ELEVATION	LP	LOW POINT	STL	STEEL					
AVG	AVERAGE	ELEV	ELEVATOR	LWT	LIGHT WEIGHT	STR	SEISMIC STRAP					
B, BOT	BOTTOM	EMBED	EMBEDMENT	MAX	MAXIMUM	STRUCT	STRUCTURAL					
BCE	BOTTOM CHORD EXTENSION	ENG	ENGINEER	MC	MOMENT CONNECTION ()	SWT	SELF WEIGHT					
BCP	BORED CONCRETE PILE	EOD	EDGE OF DECK	MECH	MECHANICAL	SYMM	SYMMETRICAL					
BEW	BOTTOM EACH WAY	EOS	EDGE OF SLAB	MEZZ	MEZZANINE	I	THICKNESS					
BH	BORHOLE	ES	EACH SIDE	MF	MOMENT FRAME	TB	TRANSFER BEAM					
BLL	BOTTOM LOWER LAYER	EQ	EQUAL	MIN	MINIMUM	TBB	TOP BASIC BARS					
BOF	BOTTOM OF FOOTING	EW	EACH WAY	MISC	MISCELLANEOUS	T	TOP					
BOF	BOTTOM OF PILE	EX, EXIST	EXISTING	MJ	MOVEMENT JOINT	TDL	TENSION DEVELOPMENT LENGTH					
BP	BASE PLATE	EXT	EXTERIOR	ML	MIDDLE LAYER	TEW	TOP EACH WAY					
BRG	BEARING	FC	FUTURE COLUMN	NF	NEAR FACE	T&G	TONGUE AND GROOVE					
BRP	BEARING PLATE	FD	FLOOR DRAIN	NIC	NOT IN CONTRACT	TJ	TIE JOIST					
BSMT	BASEMENT	FF	FAR FACE	NOM	NOMINAL	TLL	TOP LOWER LAYER					
BUL	BOTTOM UPPER LAYER	FIN	FINISHED	NTS	NOT TO SCALE	TIO	TOP OF					
BUP	BOTTOM OF UNDERPINNING	FL	FLOOR	O/C	ON CENTER	TOB	TOP OF (GRADE) BEAM					
C	CAMBER	FMC	FULL MOMENT CONNECTION (FOR FULL MOMENT CAPACITY)	OD	OUTSIDE DIAMETER	TOC	TOP OF CONCRETE					
CA	COLUMN ABOVE ONLY (NO COLUMN BELOW)	FND	FOUNDATION	OF	OUTSIDE FACE	TOF	TOP OF FOOTING					
CANT	CANTILEVER	FTG	FOOTING	OPP	OPPOSITE	TOS	TOP OF STEEL					
CAT	CATEGORY (FOR AESS)	GA	GAUGE	OWSJ	OPEN WEB STEEL JOIST	TOP	TOP OF PILE					
CB	COLUMN BELOW ONLY (NO COLUMN ABOVE)	GALV	GALVANIZED	PAF	POWDER ACTUATED FASTENERS	TOW	TOP OF WALL					
CDL	COMPRESSION DEVELOPMENT LENGTH	GB	GRADE BEAM	PO	PILE CAP	TRC	TOP OF PILE CAP					
CEL	CUT OFF ELEVATION FOR PILES	GEN	GENERAL	PL	PLATE	TRANS	TRANSVERSE					
CIP	CAST-IN PLACE	GL	GRIDLINE	PROJ	PROJECT, PROJECTION	TSA	TENSION SPLICE "A"					
CJ	CONTROL JOINT	GRD	GROUND	PS	PIPE SUPPORT	TSB	TENSION SPLICE "B"					
CLR	CLEAR	h	TOTAL THICKNESS, SLAB THICKNESS AWAY FROM DROP PANEL	PT	PIPE TENSIONED	TUL	TOP UPPER LAYER					
CL	CENTRELINE	hd	SLAB OVERLAP THICKNESS AT DROP PANEL	PTL	PRESSURE TREATED LUMBER	TYP	TYPICAL					
CMU	CONCRETE MASONRY UNITS	H, HORIZ	HORIZONTAL	R	RADIUS	U-BAR	"U" SHAPED BAR					
CNT	STEEL DECK CORE NOMINAL THICKNESS	(H)	HIGH BEAM	R	RADIUS	UDB	UNIFORMLY DISTRIBUTED BARS					
COMP	COMPOSITE	HC	HOLLOWCORE	RD	ROOF DRAIN	U/F	UNDERSIDE OF FOOTING					
COL	COLUMN	HD	HOLD DOWN	RDA	REBAR DOWEL ANCHORS, SEE GENERAL NOTES	UL	UPPER LEVEL					
CONC	CONCRETE	HDG	HOT DIPPED GALVANIZED	RE	RIGHT END	ULS	ULTIMATE LIMIT STATE					
CONT	CONTINUOUS	HEF	HORIZONTAL EACH FACE	RENF	REINFORCEMENT	UIS	UNDERSIDE					
CONT'D	CONTINUED	HIF	HORIZONTAL INSIDE FACE	REM	REMAINDER	UIN, UNO	UNLESS NOTED OTHERWISE					
CONST.	CONSTRUCTION JOINT	HH	HOOK EACH END	REQD	REQUIRED	UPT	UPTURNED					
CP	CONNECTION PLATE	HIC	HORIZONTAL IN CENTRE	REV	REVISION	V, VERT	VERTICAL, VERTICALS					
CPL	CAP PLATE	HMA	HOLLOW MASONRY ANCHORS, SEE GENERAL NOTES	RF	RIGID FRAME	VB	VERTICAL BRACING					
CS	COMPRESSION LAP SPLICE	HOF	HORIZONTAL OUTSIDE FACE	RL	REFERENCE LINE	VEF	VERTICAL EACH FACE					
COV	CLEAR COVER	HP	HIGH POINT	RSS	RETAINED SOIL SYSTEM	VIF	VERTICAL INSIDE FACE					
CW	COMPLETE WITH, CONNECT WITH	HSC	HORIZONTAL SLOTTED CONNECTION	RTU	ROOF TOP UNIT	VIC	VERTICAL IN CENTRE					
CWS	(SEE GENERAL NOTES)	IBI	INTEGRITY BARS INTERIOR	RET. WALL	RETAINING WALL	VOF	VERTICAL OUTSIDE FACE					
CLS	(SEE GENERAL NOTES)	IBE	INTEGRITY BARS EXTERIOR	RWF	REINFORCE WITH	VSC	VERTICALLY SLOTTED CONNECTION					
DCA	DRILLED CONCRETE ANCHOR, SEE GENERAL NOTES	IBA	INTEGRITY BARS ADDED	SDF	STEP DOWN FOOTING (IN DIRECTION OF ARROW)	WB	WALL BELOW					
DEMO	DEMOLITION	IBB	INTEGRITY BOTTOM BARS (THROUGHOUT)	SEC	SECTION	WC	WIND COLUMN					
DET	DETAIL	ID	INSIDE DIAMETER	SIM	SIMILAR	w/o	WITHOUT					
D.FIR.L	DOUGLAS FIR-LARCH	INT	INTERIOR	SJ	STEEL JOIST	WP	WORK POINT					
DIA. Ø	DIAMETER	IF	INSIDE FACE	SL	SLAB, SHELF ANGLE	WSP-S	WSP-STRUCTURAL					
DIV	DIVIDER BEAM	JG	JOIST GIRDER	SLBB	SHORT LEG BACK TO BACK	ZRP	WELDED WIRE FABRIC					
DMA	DRILLED MASONRY ANCHOR, SEE GENERAL NOTES	KB	KNEE BRACING	SLS	SERVICEABILITY LIMIT STATE	ZRP	ZINC RICH PAINT					
DN	DOWN	(L)	LOW BEAM	SOG	SLAB-ON-GRADE	Yc	CONCRETE DENSITY					
DNW	DOUBLE NUT AND WASHER	ZL	BACK TO BACK ANGLES									

LOADING ABBREVIATIONS		TG-ABBR-02
At	FACTORED AXIAL LOAD IN kN (+ INDICATES TENSION, - INDICATES COMPRESSION)	
Cf	FACTORED COMPRESSION IN kN	
fc	COMPRESSIVE STRENGTH OF CONCRETE, IN MPa	
fy	YIELD STRENGTH IN MPa	
M	FACTORED MOMENT IN kN.m	
Mx	FACTORED MOMENT ABOUT X-X (STRONG) AXES IN kN.m	
My	FACTORED MOMENT ABOUT Y-Y (WEAK) AXES IN kN.m	
MPL	MASONRY PARTITION DEAD LOAD IN kN/m	
MT	FACTORED TORSION IN kN.m	
RH	FACTORED VERTICAL REACTION IN kN	
RH'	FACTORED HORIZONTAL REACTION IN kN	
P	SPECIFIED (UNFACTORED) POINT LOAD IN kN	
Pf	FACTORED POINT LOAD IN kN	
Vf	FACTORED SHEAR IN kN	
Tf	FACTORED TENSION IN kN	
WT	WEIGHT OF MECHANICAL EQUIPMENT	

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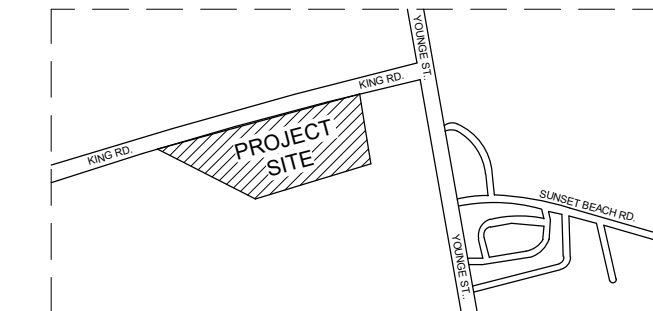
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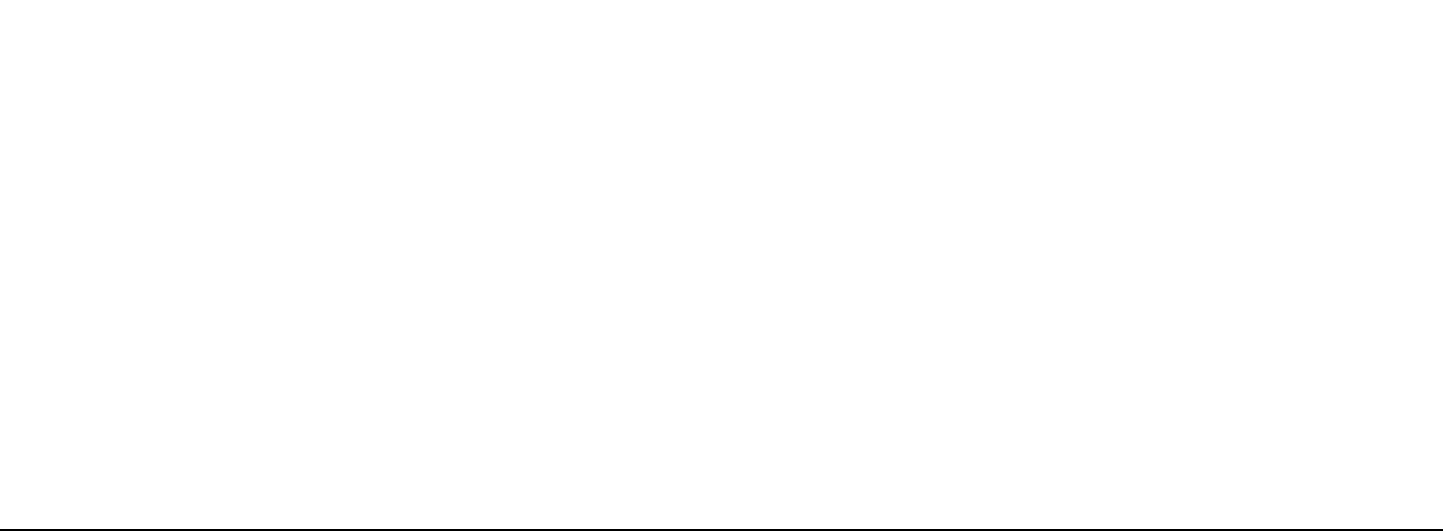
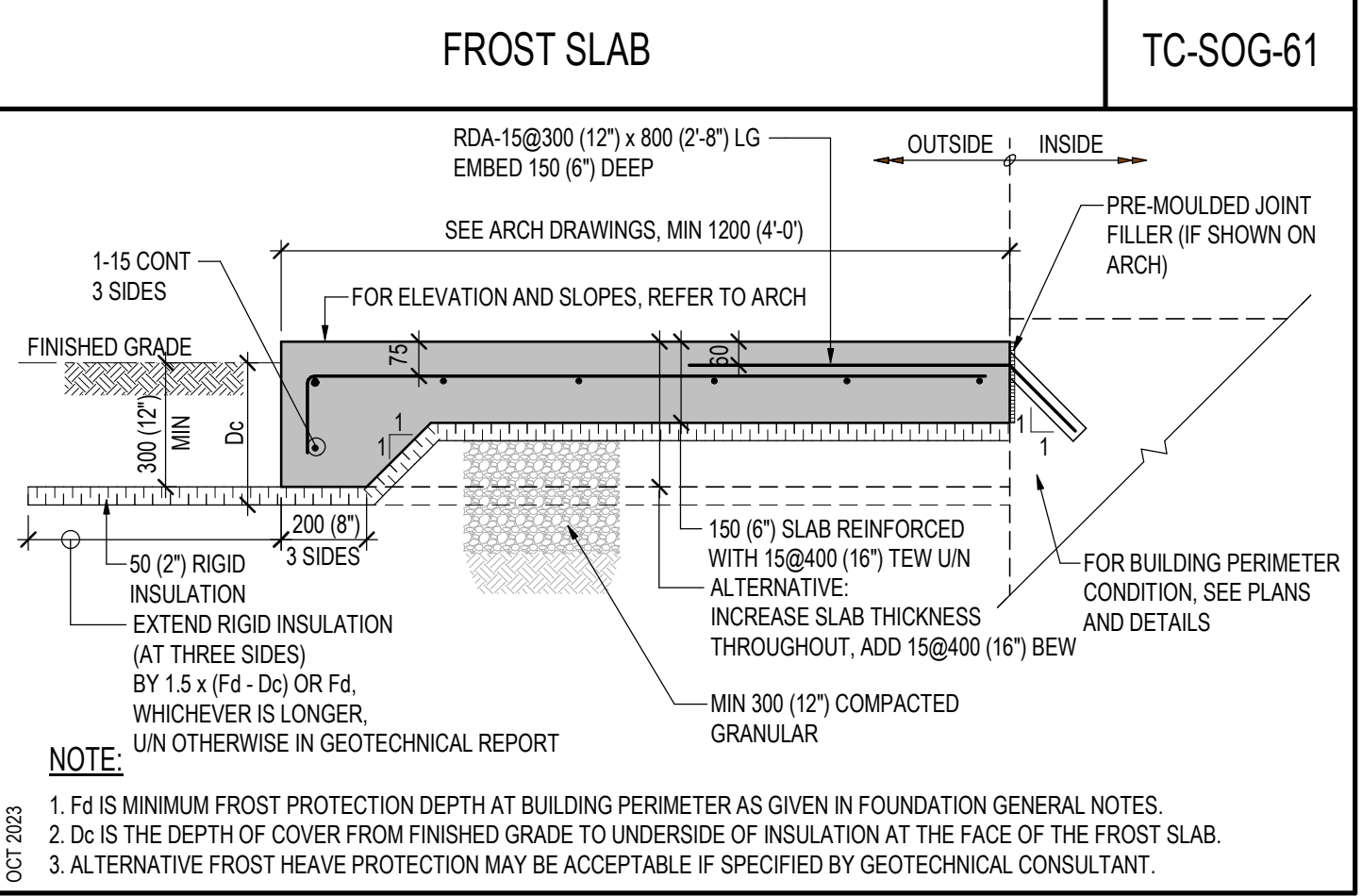
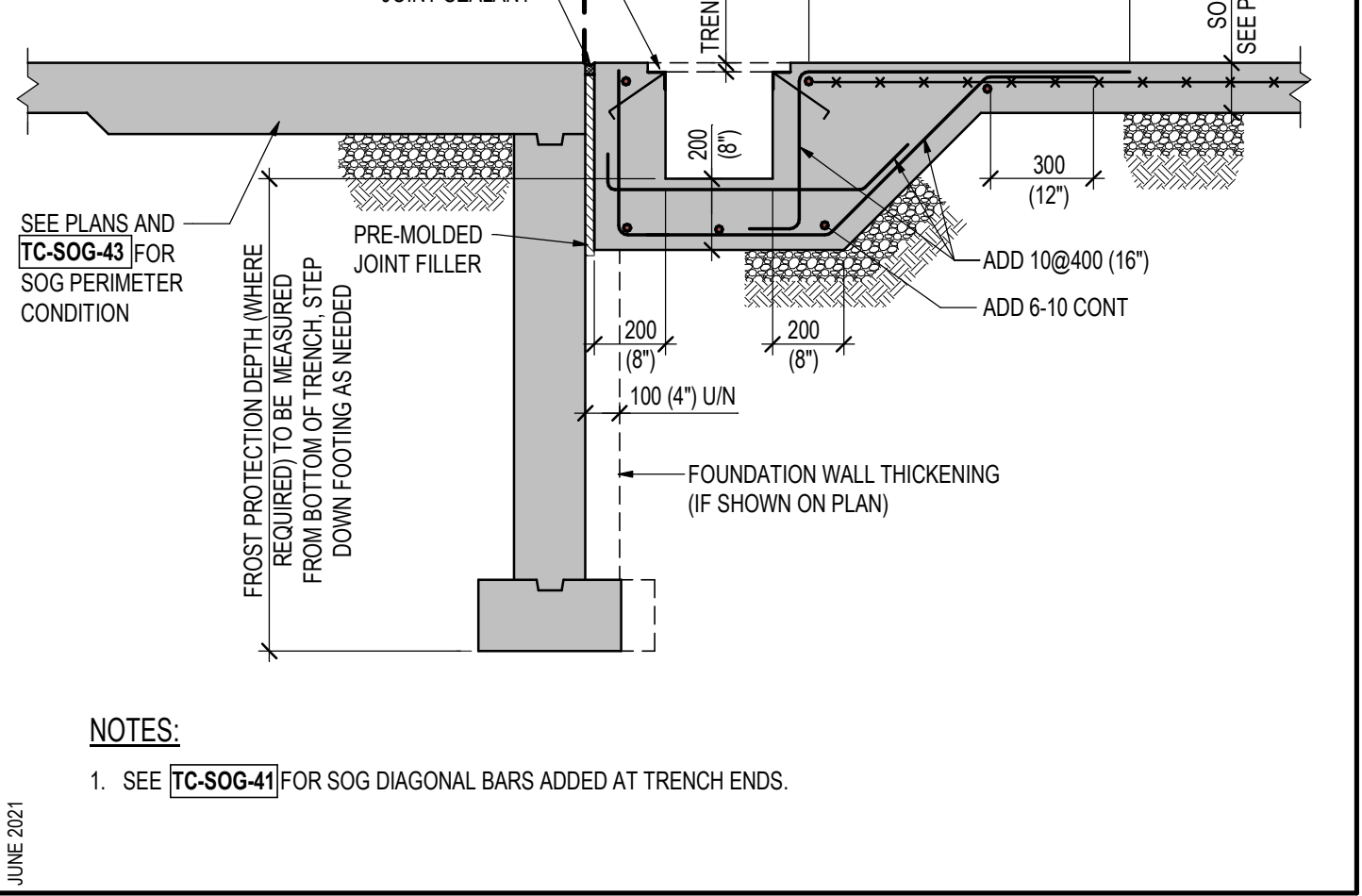
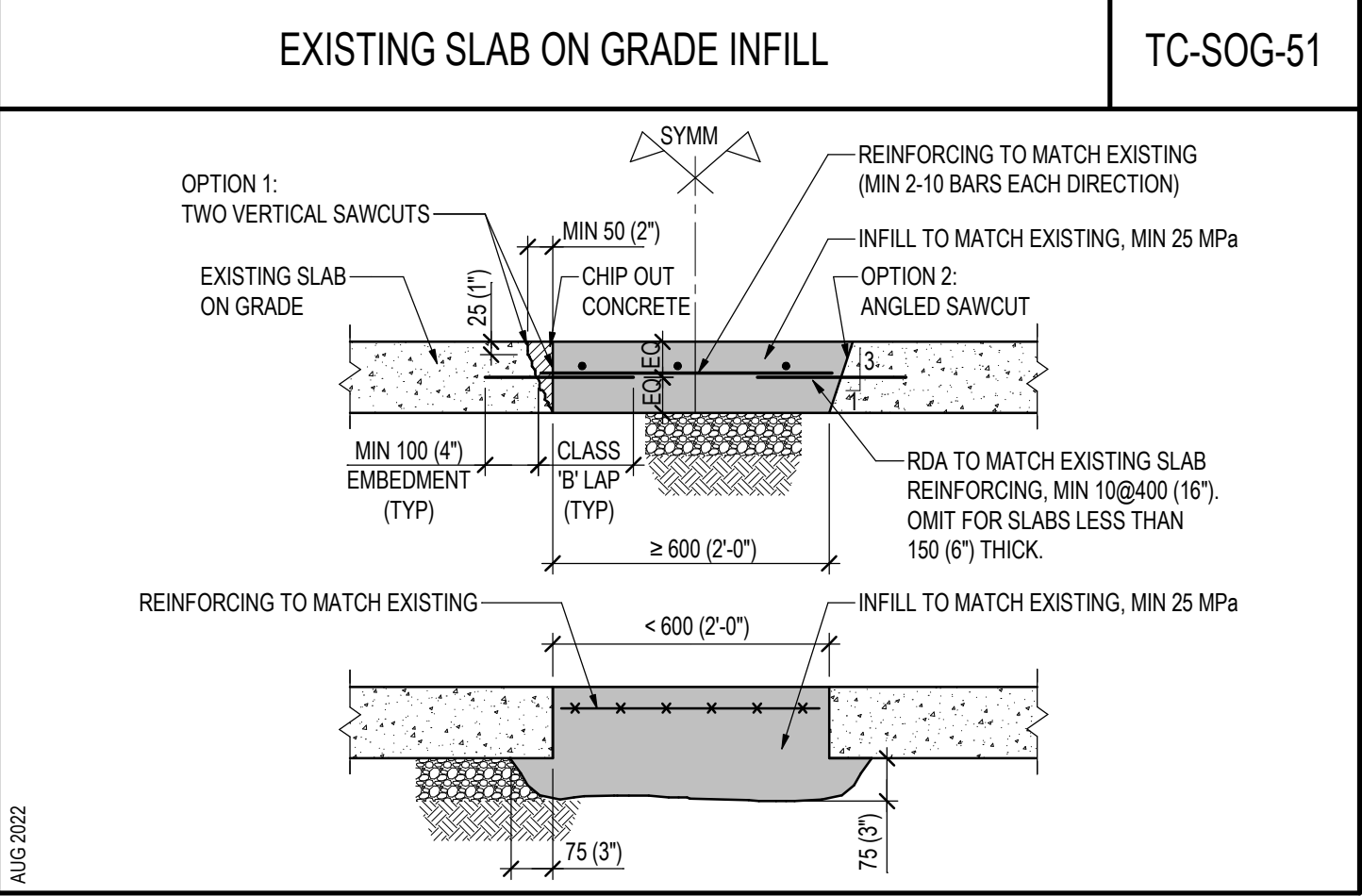
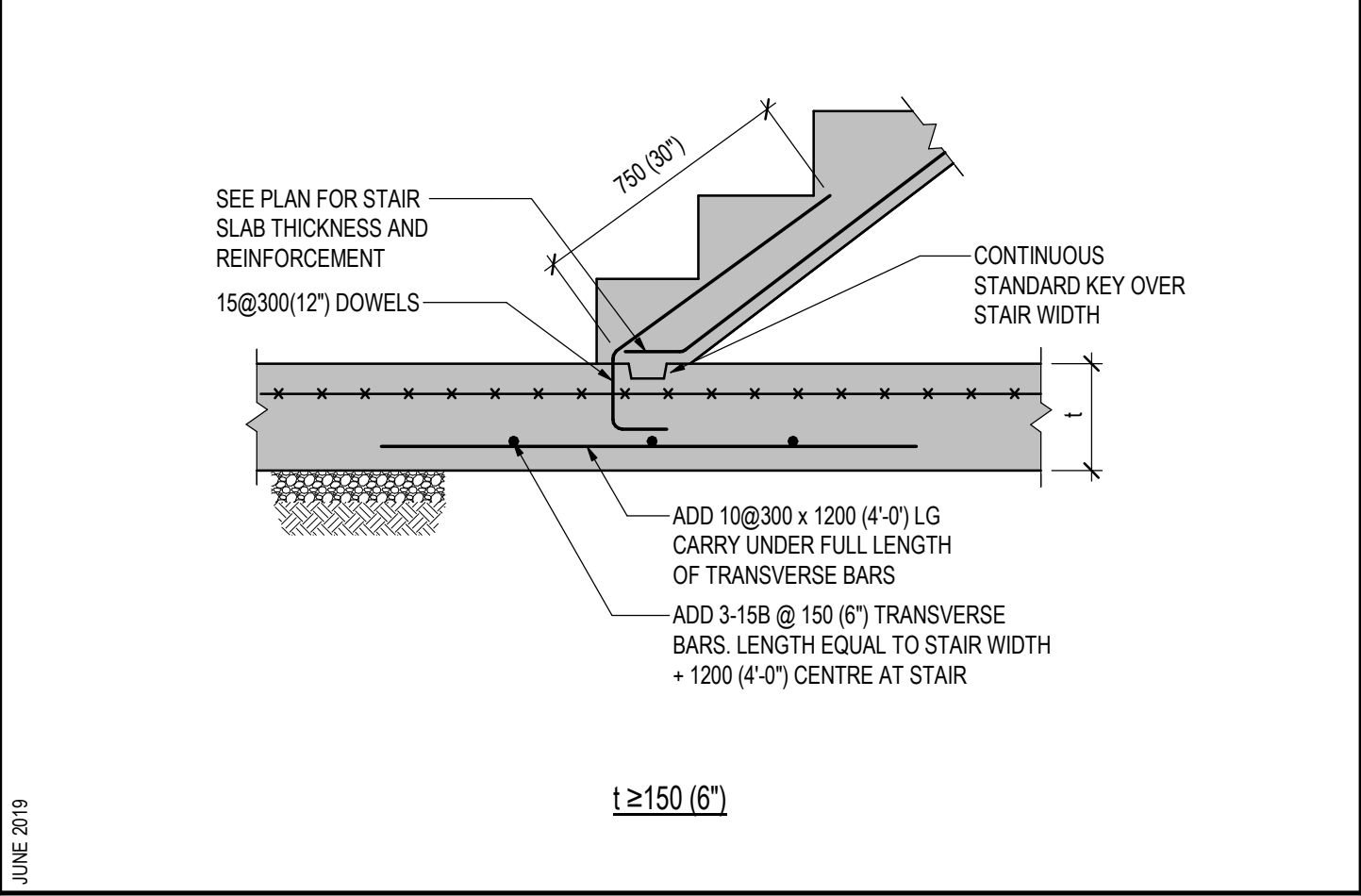
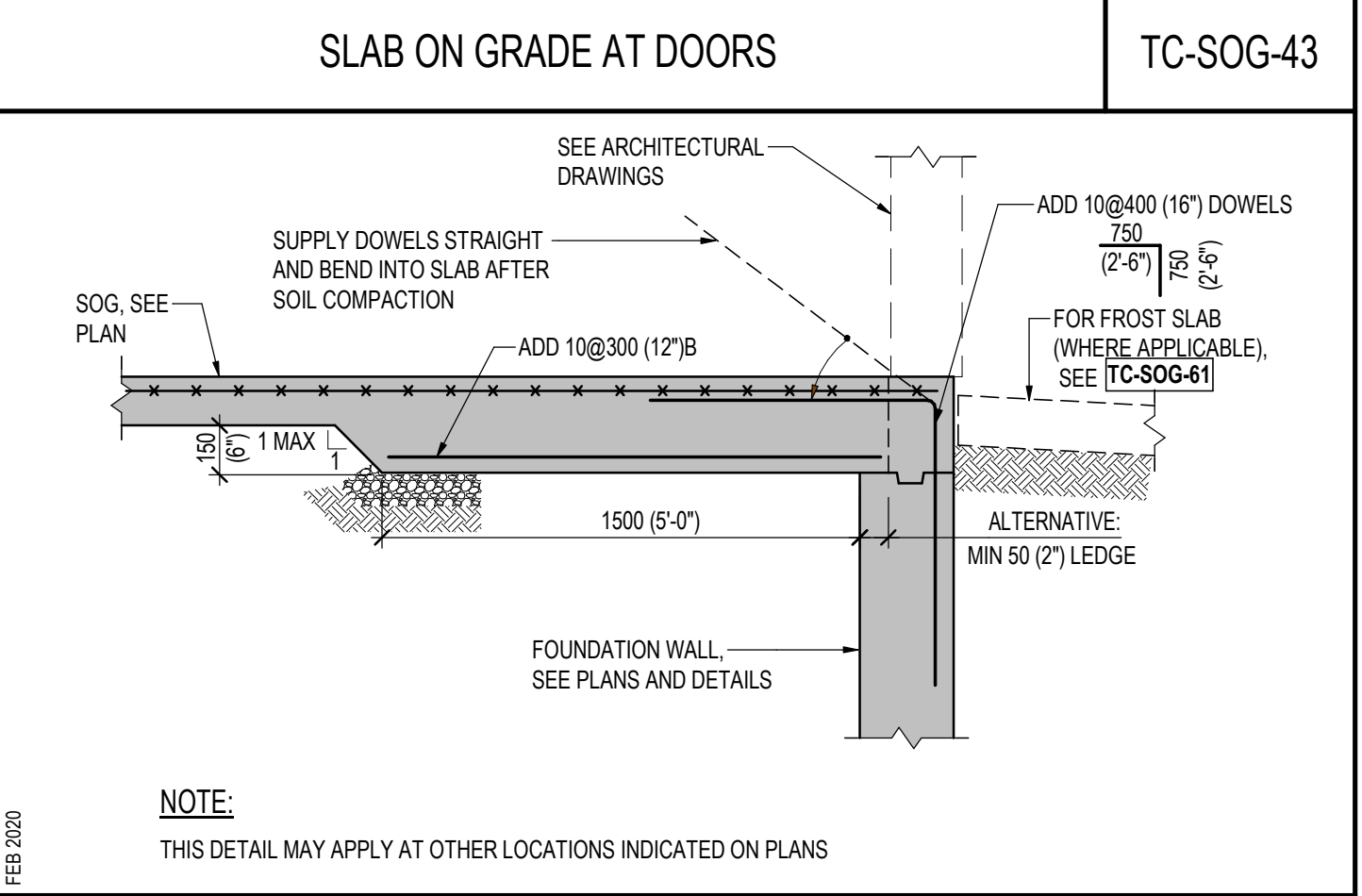
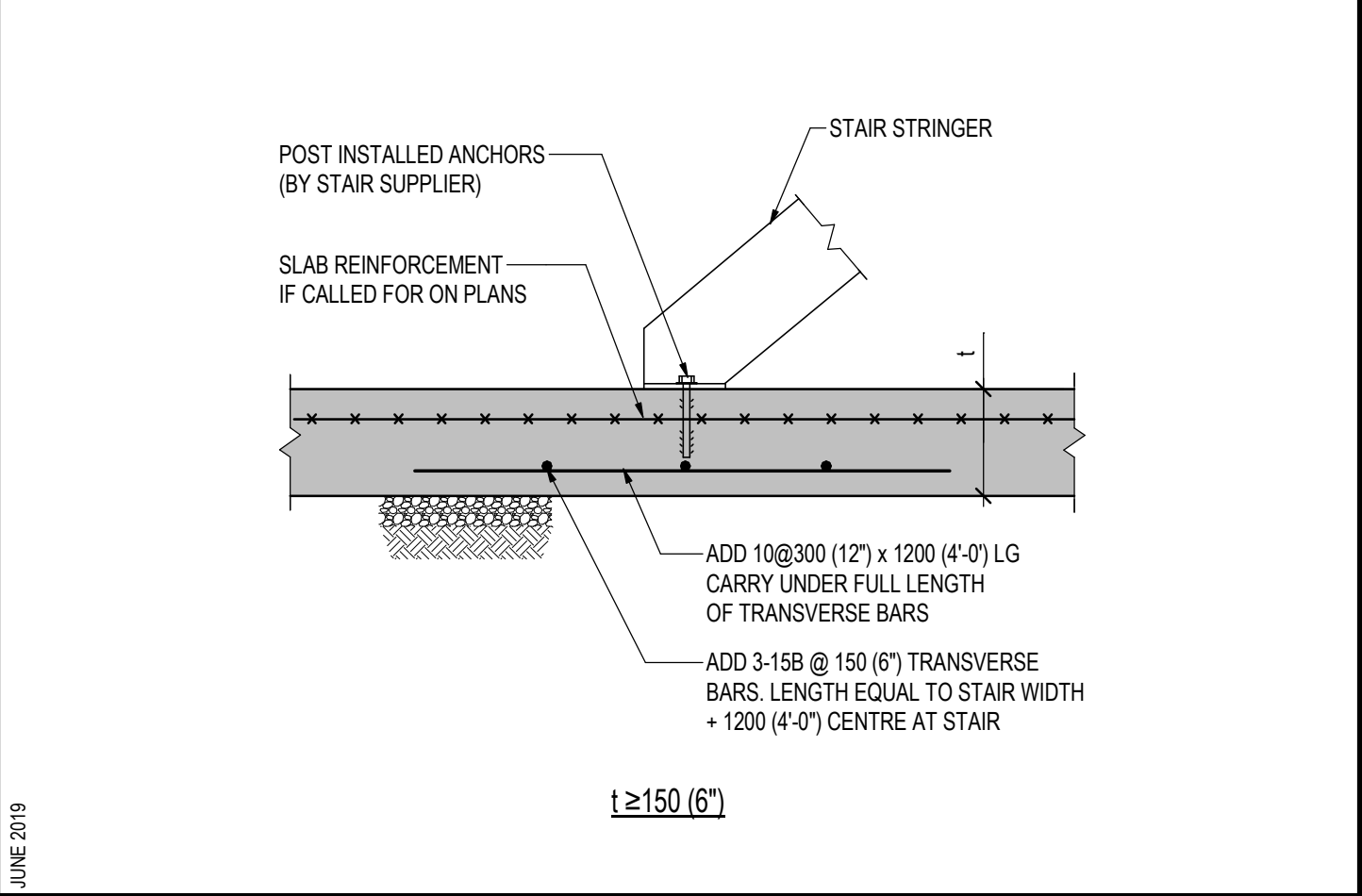
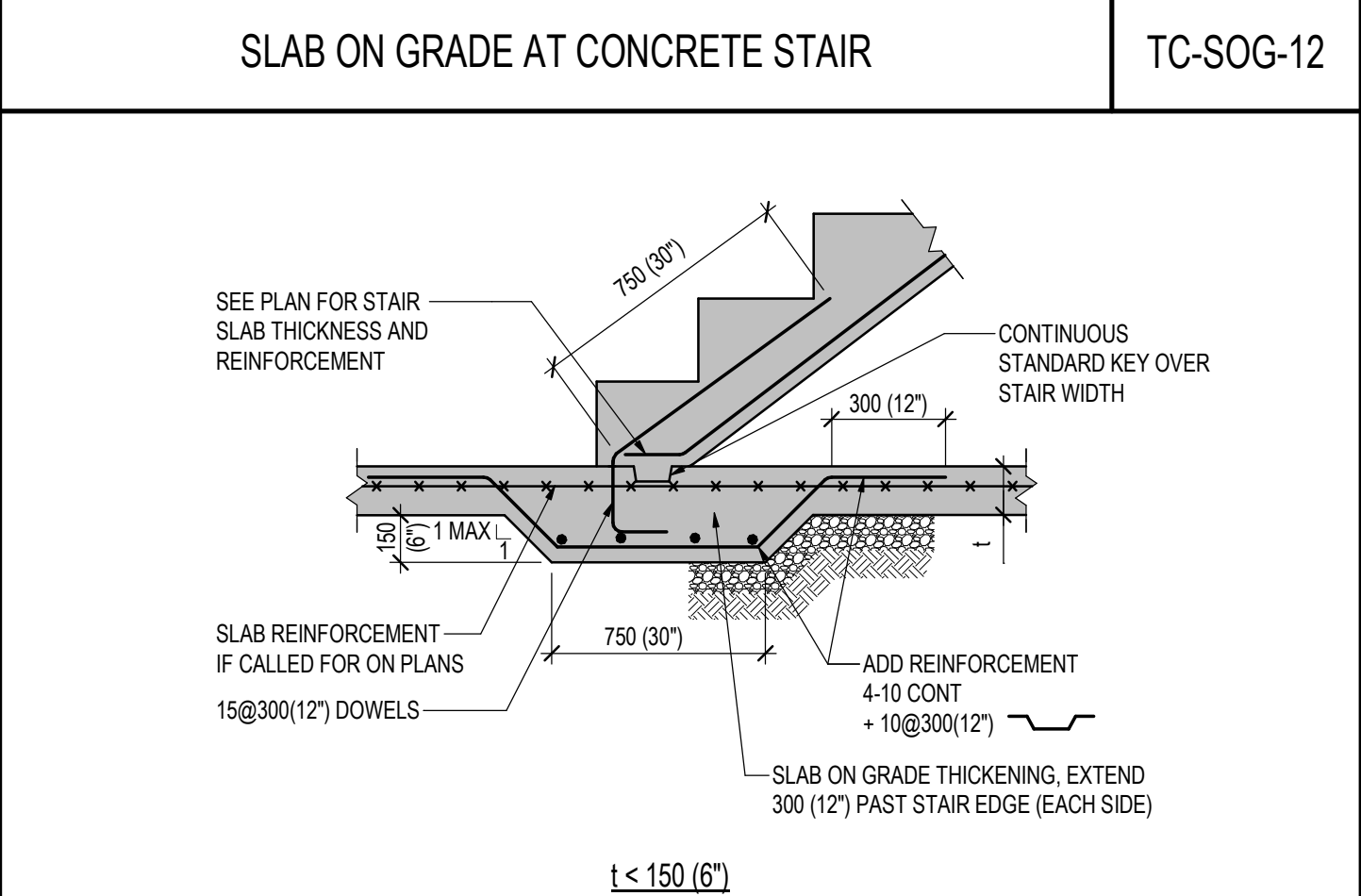
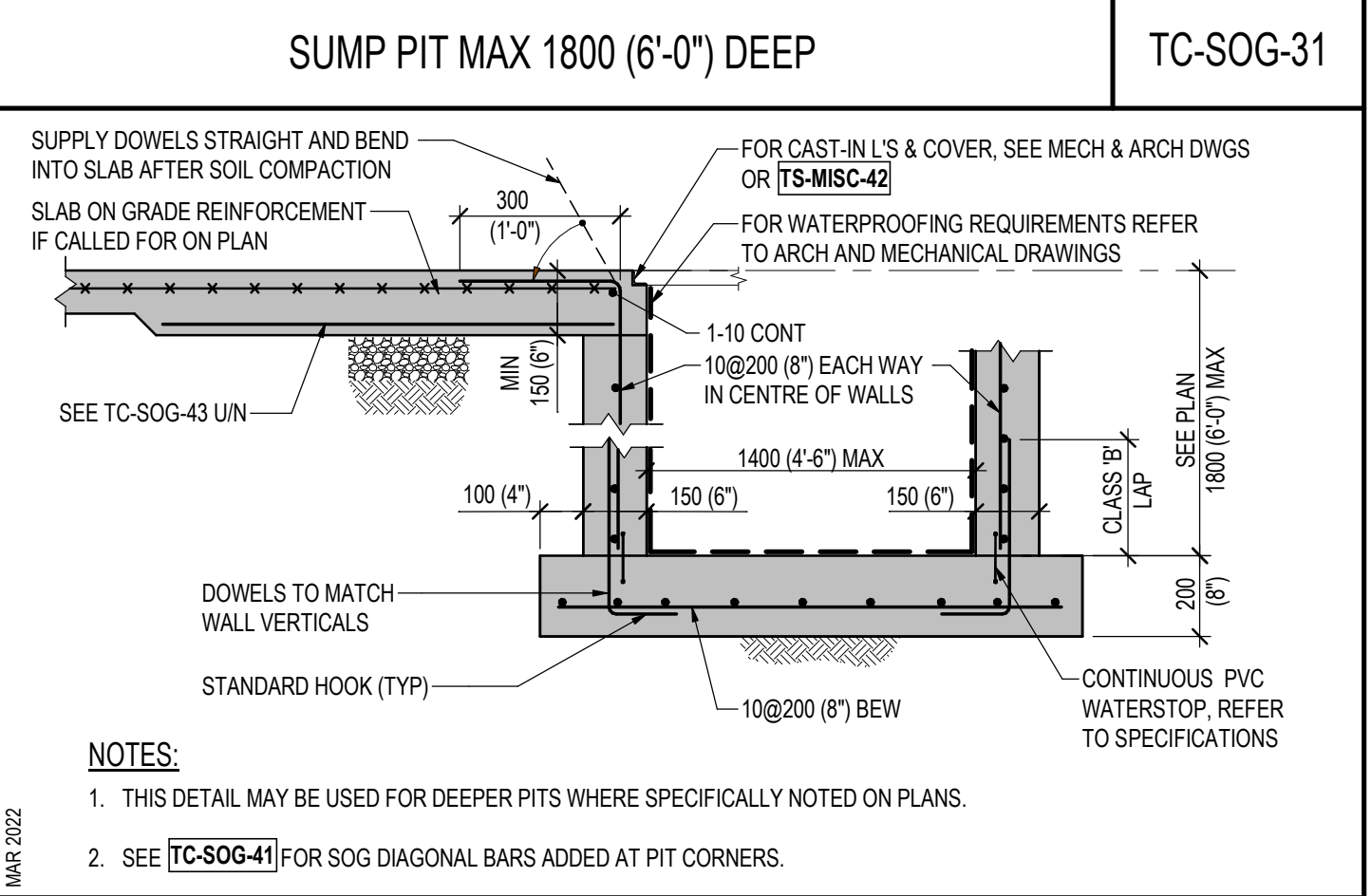
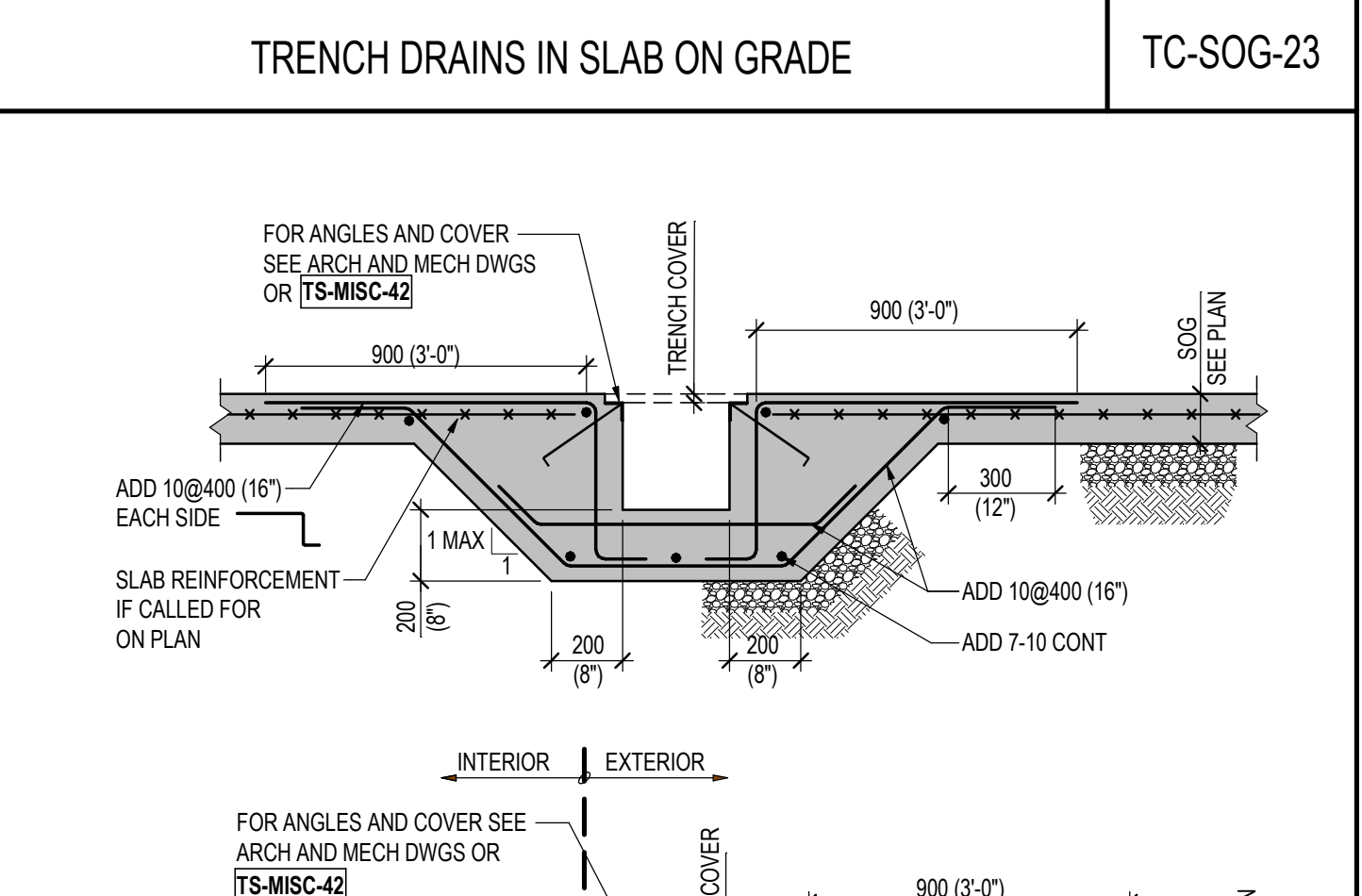
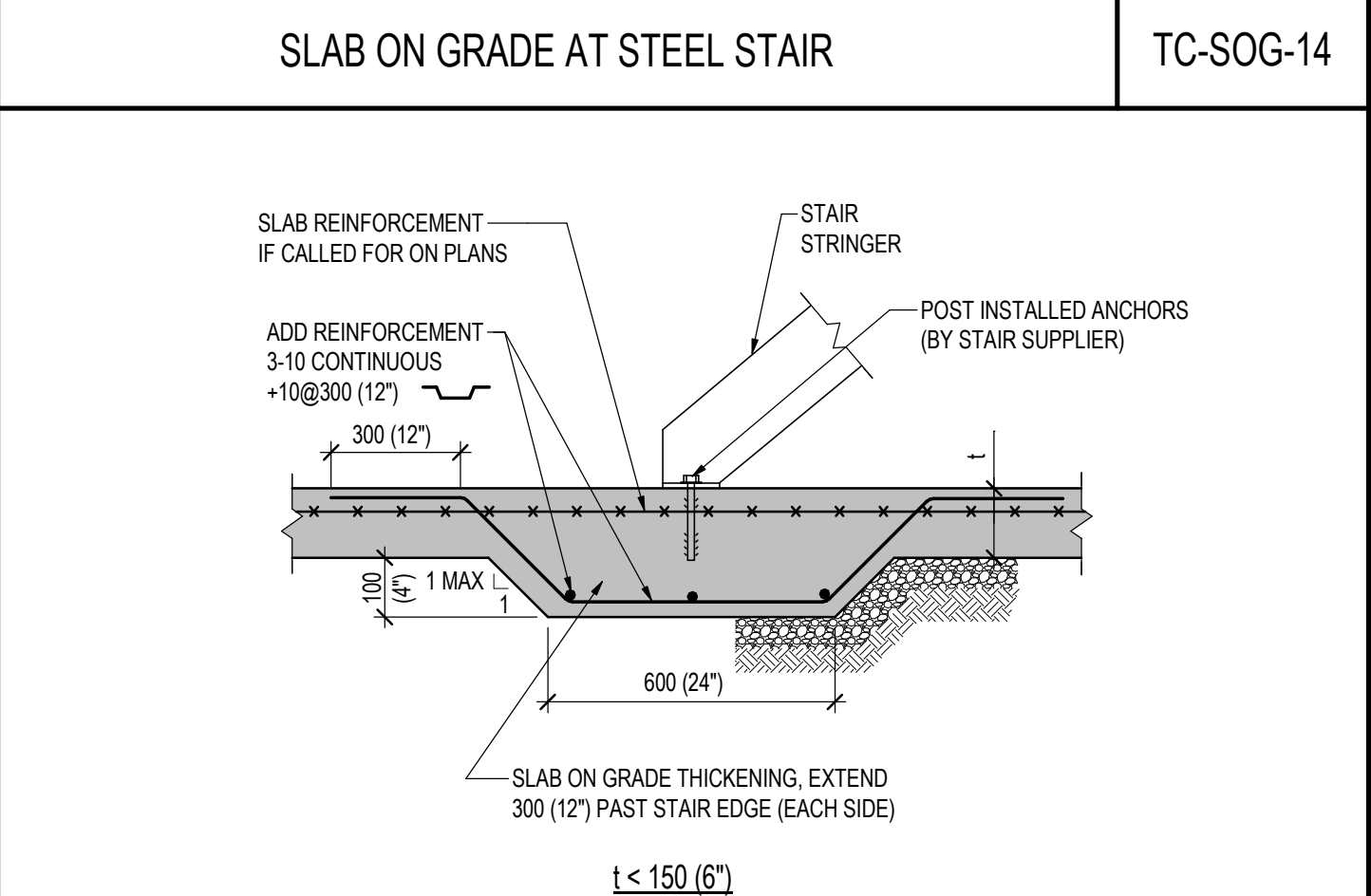
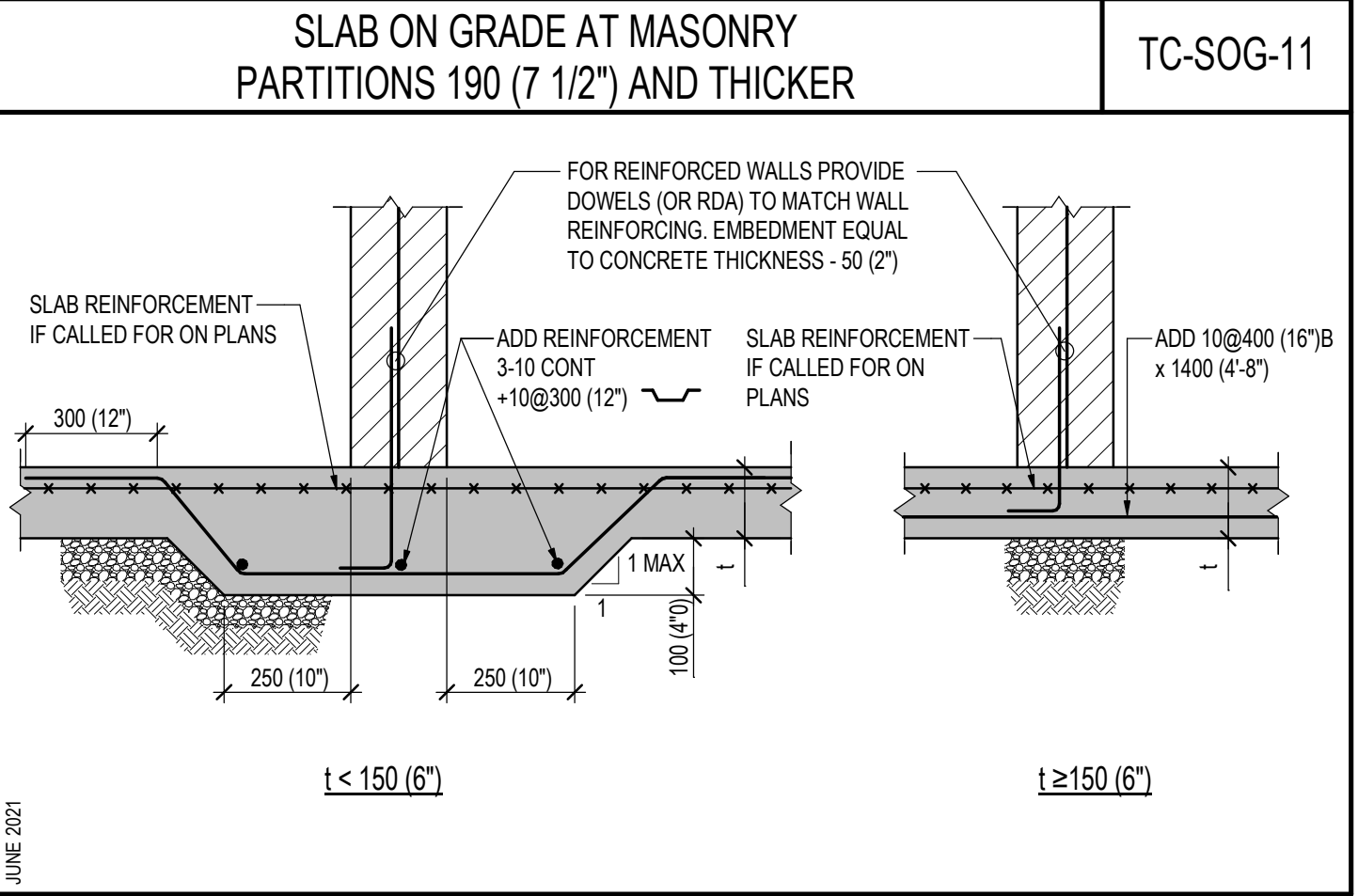
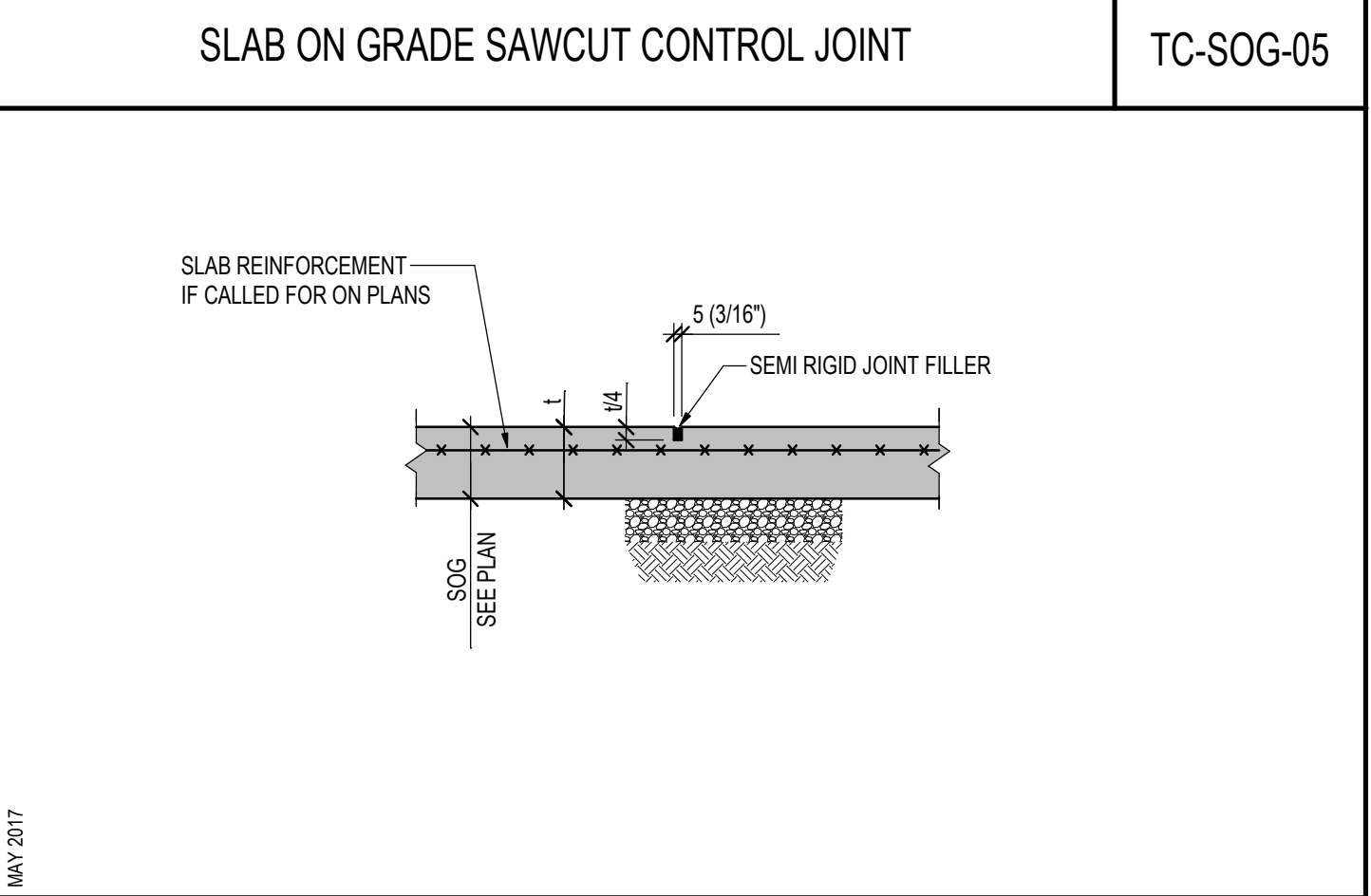
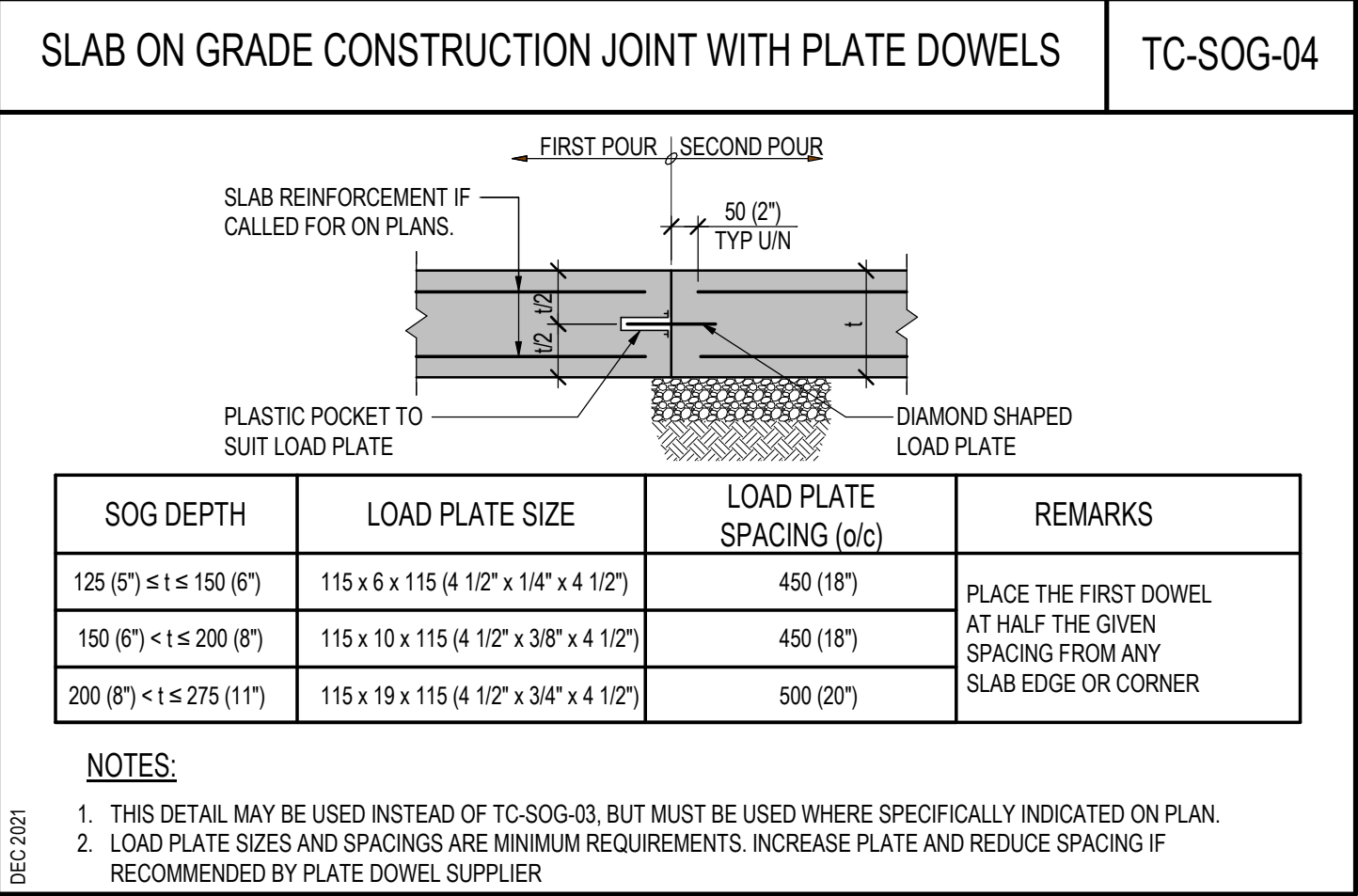
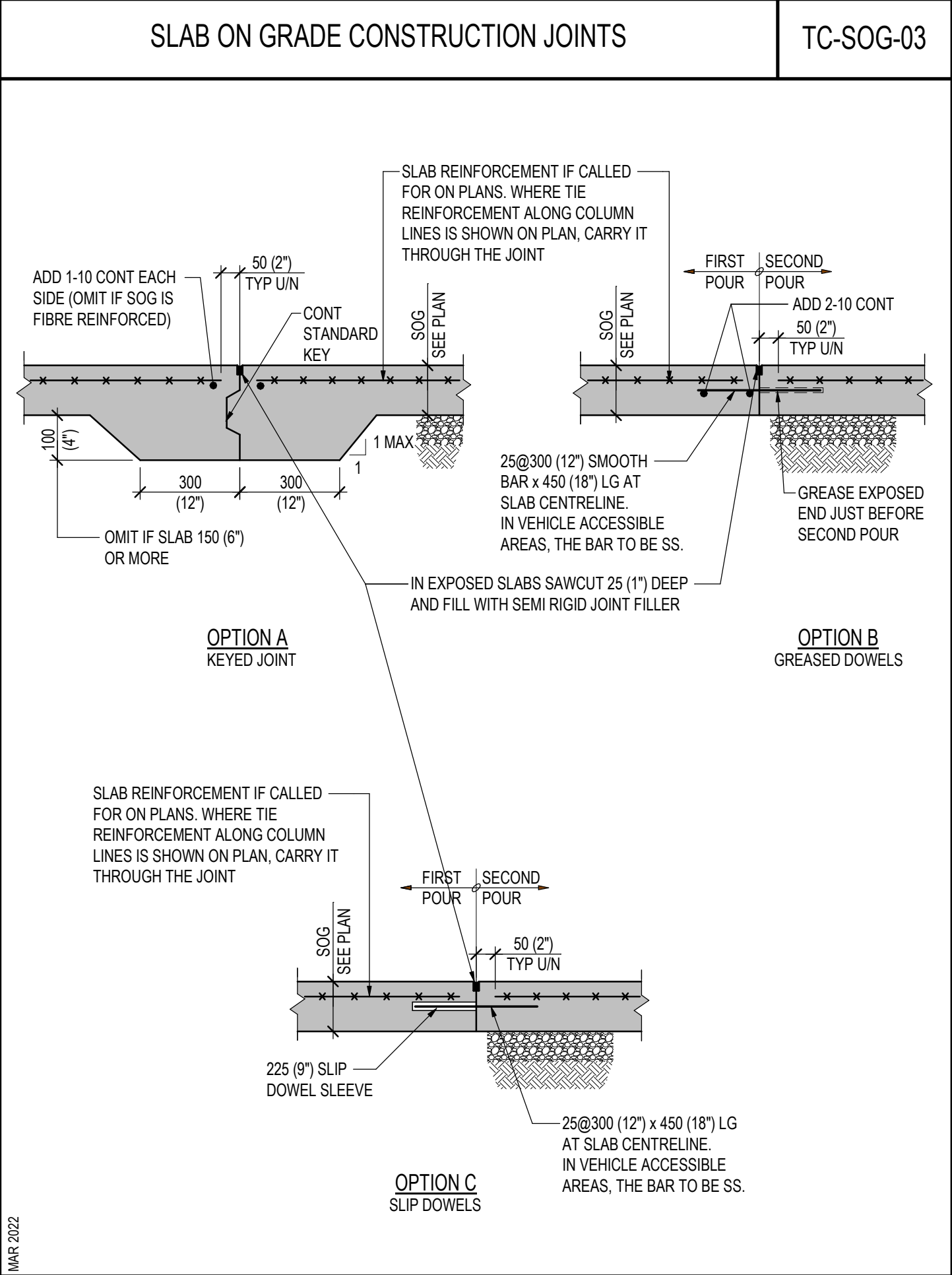
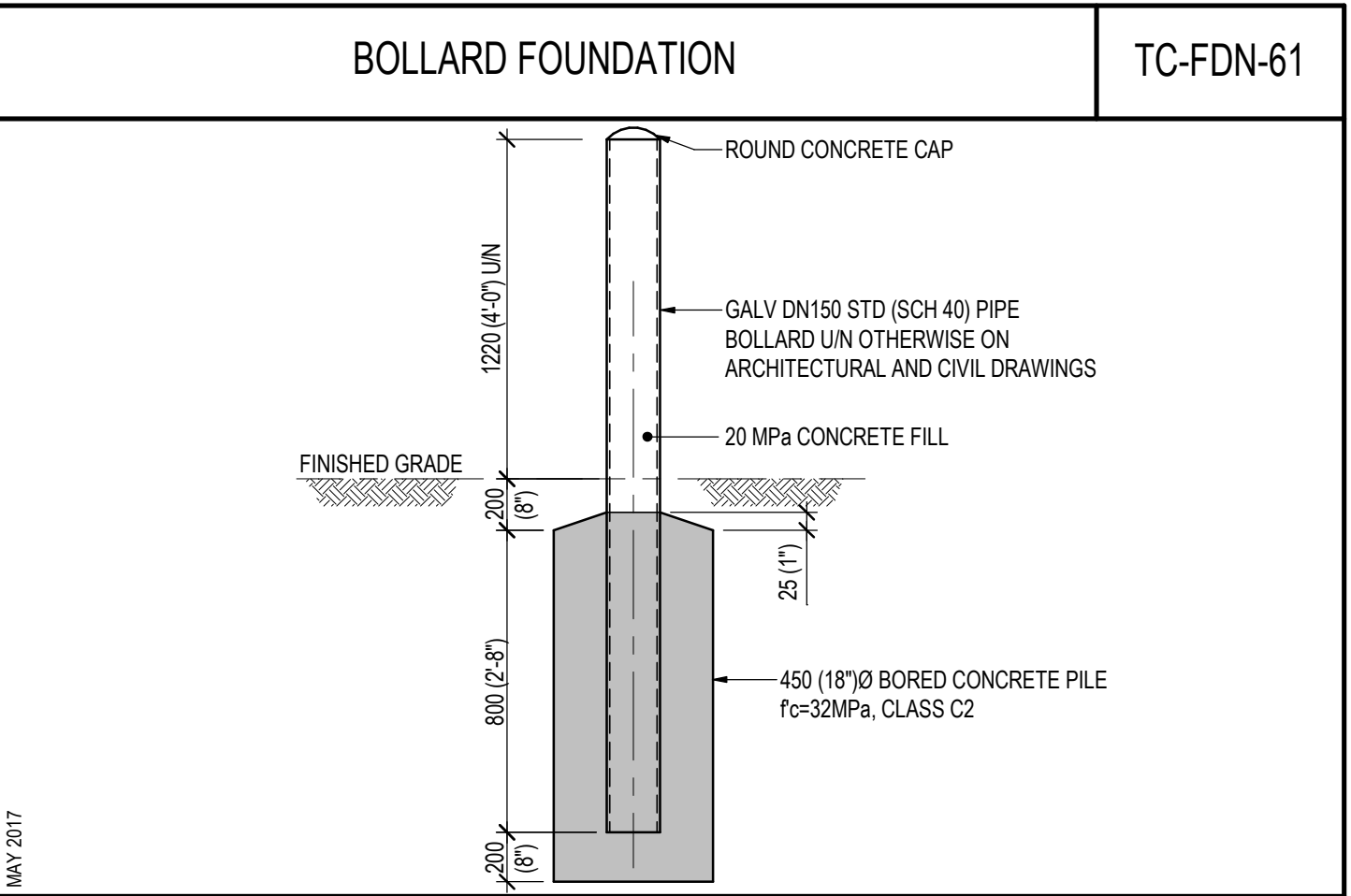
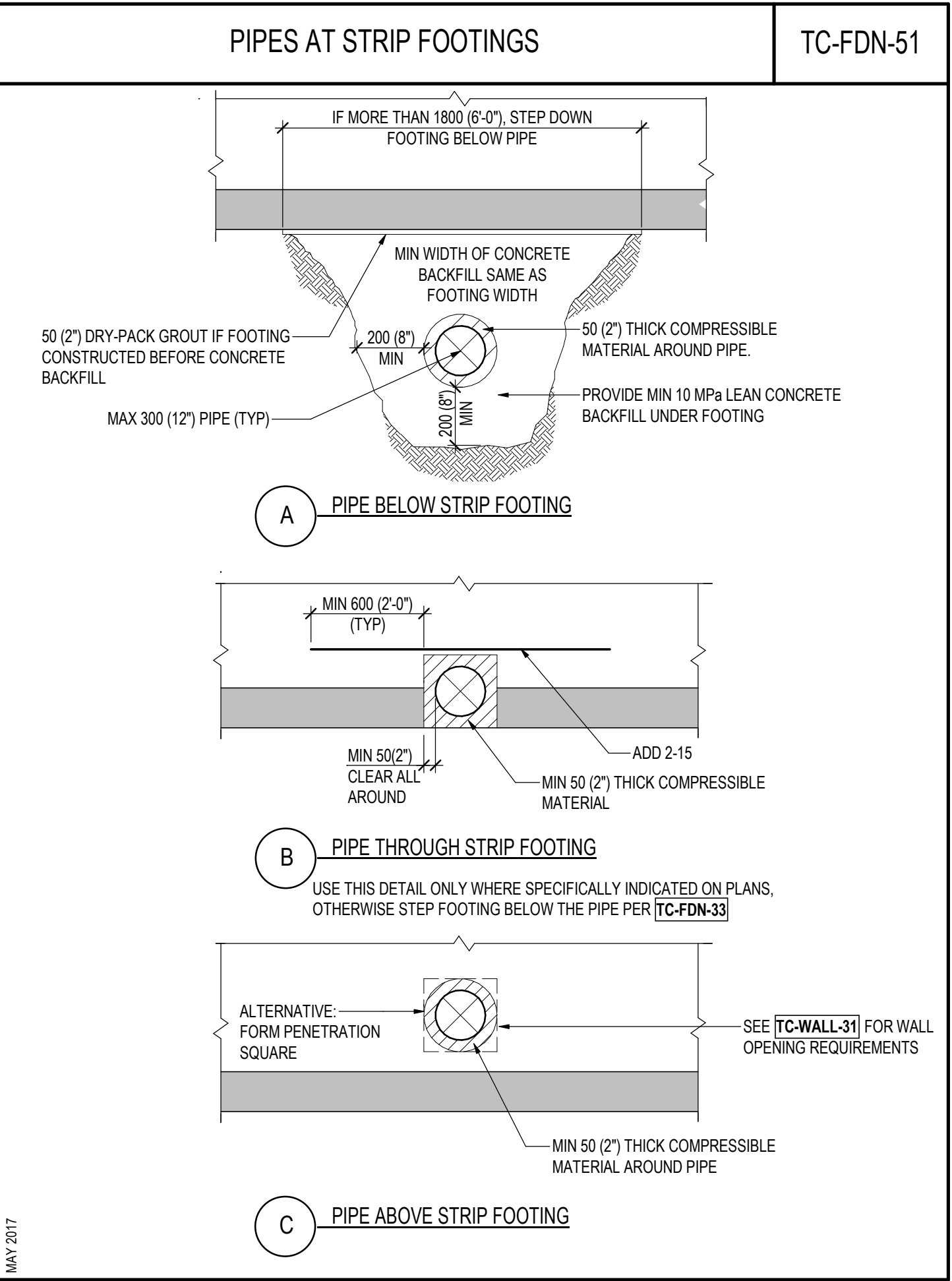
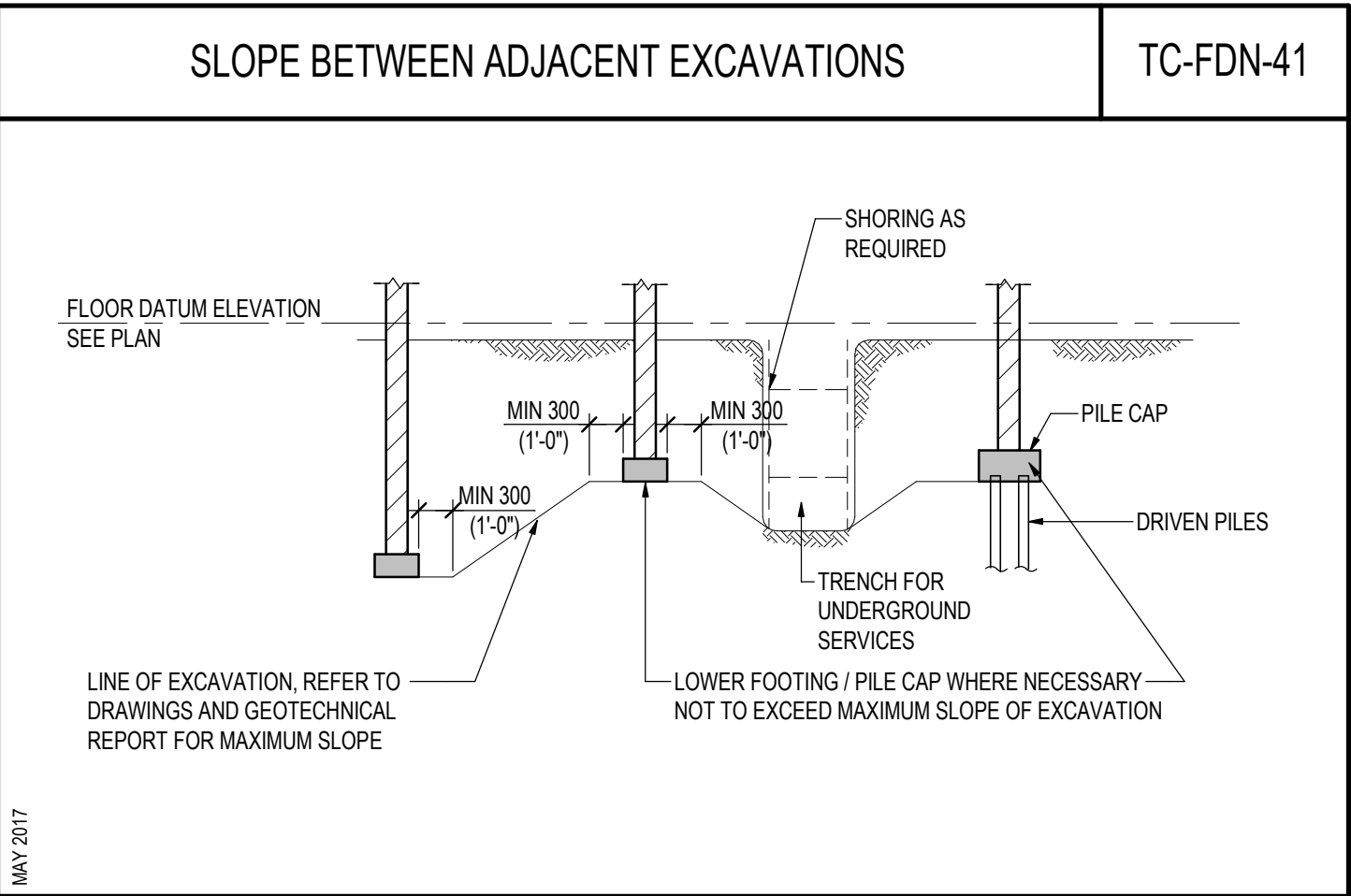
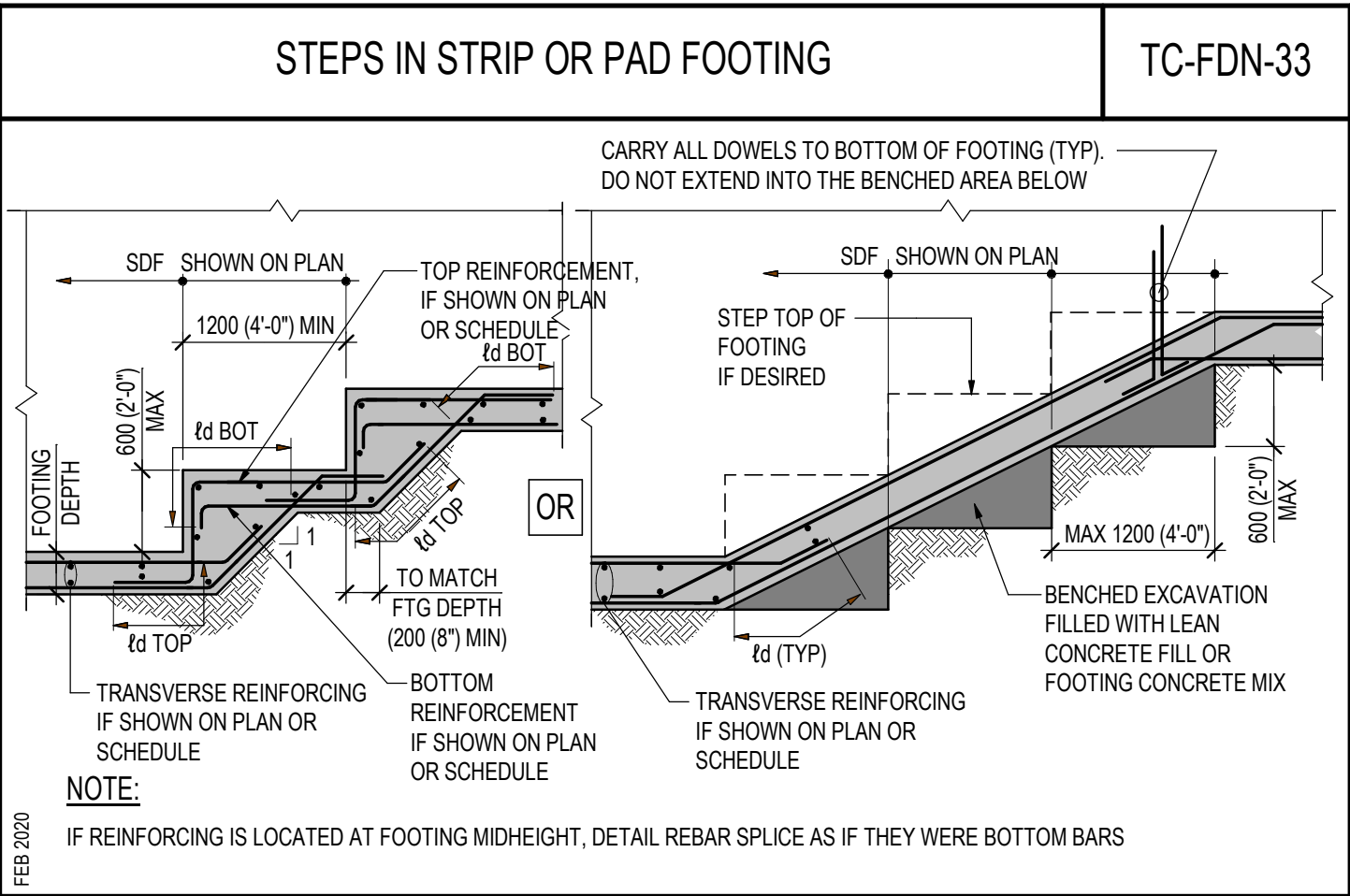
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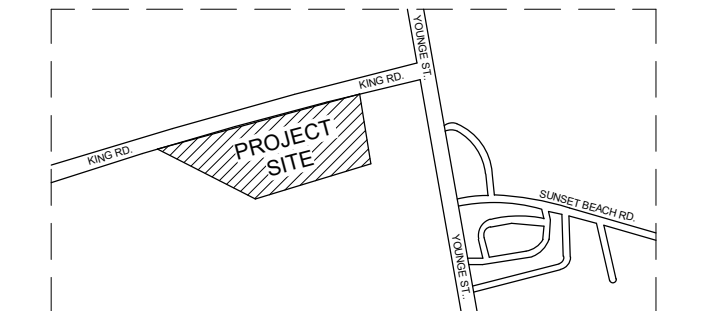
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TENSION DEVELOPMENT LENGTHS AND LAP SPLICES FOR BARS GRADE 400 MPa										TC-REINF-01
TENSION DEVELOPMENT LENGTHS l_d FOR GRADE 400 INDIVIDUAL BLACK BAR IN NORMAL DENSITY CONCRETE										
BAR SIZE	$f_c = 25$		$f_c = 30$		$f_c = 35$		$f_c = 40$		$f_c = 50$	
	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP
10	300 (12)	380 (15)	300 (12)	380 (15)	300 (12)	380 (15)	300 (12)	380 (15)	300 (12)	380 (15)
15	440 (17)	570 (23)	440 (17)	570 (23)	440 (17)	570 (23)	440 (17)	570 (23)	440 (17)	570 (23)
20	580 (23)	750 (30)	530 (21)	690 (27)	490 (19)	640 (25)	460 (18)	600 (24)	410 (16)	530 (21)
25	900 (36)	1170 (46)	830 (32)	1070 (42)	770 (30)	990 (39)	720 (28)	930 (37)	640 (25)	820 (32)
30	1080 (43)	1410 (55)	990 (39)	1290 (51)	920 (36)	1190 (47)	860 (34)	1100 (44)	770 (30)	1000 (39)
35	1260 (50)	1640 (65)	1160 (46)	1500 (60)	1070 (42)	1390 (55)	1000 (40)	1300 (52)	900 (35)	1160 (46)
45	1620 (64)	2110 (83)	1480 (59)	1930 (76)	1370 (54)	1780 (71)	1290 (51)	1550 (61)	1490 (59)	1500 (42)
55	1980 (78)	2580 (102)	1810 (72)	2350 (93)	1680 (66)	2180 (86)	1570 (62)	2040 (81)	1410 (56)	1820 (72)
									1280 (51)	1670 (66)

CLASS B TENSION LAP SPlice LENGTHS FOR GRADE 400 INDIVIDUAL BLACK BAR IN NORMAL DENSITY CONCRETE										
BAR SIZE	$f_c = 25$		$f_c = 30$		$f_c = 35$		$f_c = 40$		$f_c = 50$	
	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	TOP
10	390 (16)	490 (19)	390 (16)	490 (19)	390 (16)	490 (19)	390 (16)	490 (19)	390 (16)	490 (19)
15	570 (23)	740 (29)	520 (21)	670 (27)	480 (19)	620 (25)	400 (16)	520 (20)	390 (16)	480 (19)
20	750 (29)	980 (39)	690 (27)	890 (35)	640 (25)	830 (33)	600 (24)	770 (30)	630 (25)	760 (30)
25	1170 (46)	1530 (61)	1070 (42)	1390 (55)	990 (39)	1290 (51)	830 (33)	1210 (48)	830 (33)	1000 (39)
30	1410 (56)	1830 (72)	1290 (51)	1670 (66)	1190 (47)	1550 (61)	1110 (44)	1450 (57)	1000 (39)	1300 (51)
35	1640 (65)	2130 (84)	1500 (60)	1950 (77)	1390 (55)	1800 (72)	1300 (52)	1690 (67)	1160 (46)	1510 (59)

- FOR EPOXY BARS MULTIPLY VALUES IN TABLE BY 1.5 EXCEPT THAT A MULTIPLIER OF 1.2 CAN BE USED WHEN CLEAR COVER IS MORE THAN 3x BAR DIAMETER AND CLEAR SPACING BETWEEN BARS IS MORE THAN 3x BAR DIAMETER.
 - FOR SEMI-LOW DENSITY CONCRETE ($1850 < f_c \leq 2150 \text{ kg/m}^3$) MULTIPLY VALUES IN TABLE BY 1.2. FOR LOW DENSITY CONCRETE ($f_c \leq 1850 \text{ kg/m}^3$) MULTIPLY VALUES IN TABLE BY 1.3.
 - FOR BUNDLED BARS, MULTIPLY VALUES IN TABLE BY 1.1 FOR A TWO BAR BUNDLE, 1.2 FOR A THREE BAR BUNDLE AND 1.33 FOR A FOUR BAR BUNDLE.
 - "TOP" MEANS THAT THERE IS MORE THAN 300 (12") OF CONCRETE BELOW, AND LESS THAN 300 (12") OF CONCRETE ABOVE THE HORIZONTAL BAR WITHIN THE INDIVIDUAL CONCRETE POUR. ALL HORIZONTAL BARS IN WALLS TO BE CONSIDERED "TOP".
 - ALL VERTICAL BARS ARE CONSIDERED "BOTTOM".

MASONRY WALLS ABUTTING CONCRETE OR STEEL STRUCTURE		TM-WALL-21
<p>NOTES:</p> <ol style="list-style-type: none"> 1. SEE MASONRY GENERAL NOTES FOR MOVEMENT JOINT SIZE. 2. FILL MOVEMENT JOINT WITH COMPRESSIBLE MATERIAL. REFER TO ARCHITECTURAL SPECIFICATIONS FOR FIRE STOPPING REQUIREMENTS. 		

FOR VALUES NOT PROVIDED IN TABLES INTERPOLATE BETWEEN THE NEAREST VALUES PROVIDED.

JUNE 2017

TM-WALL-21

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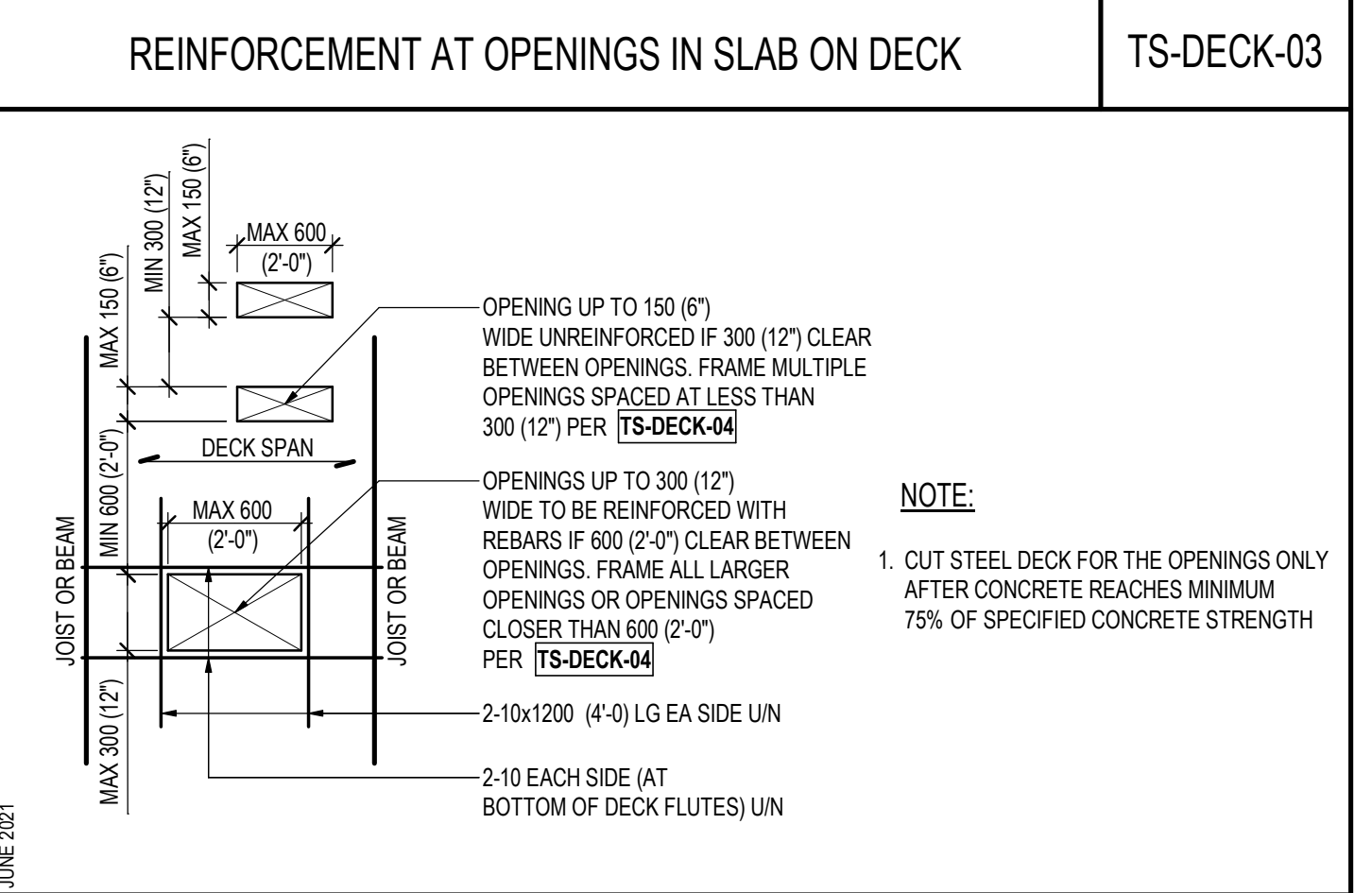
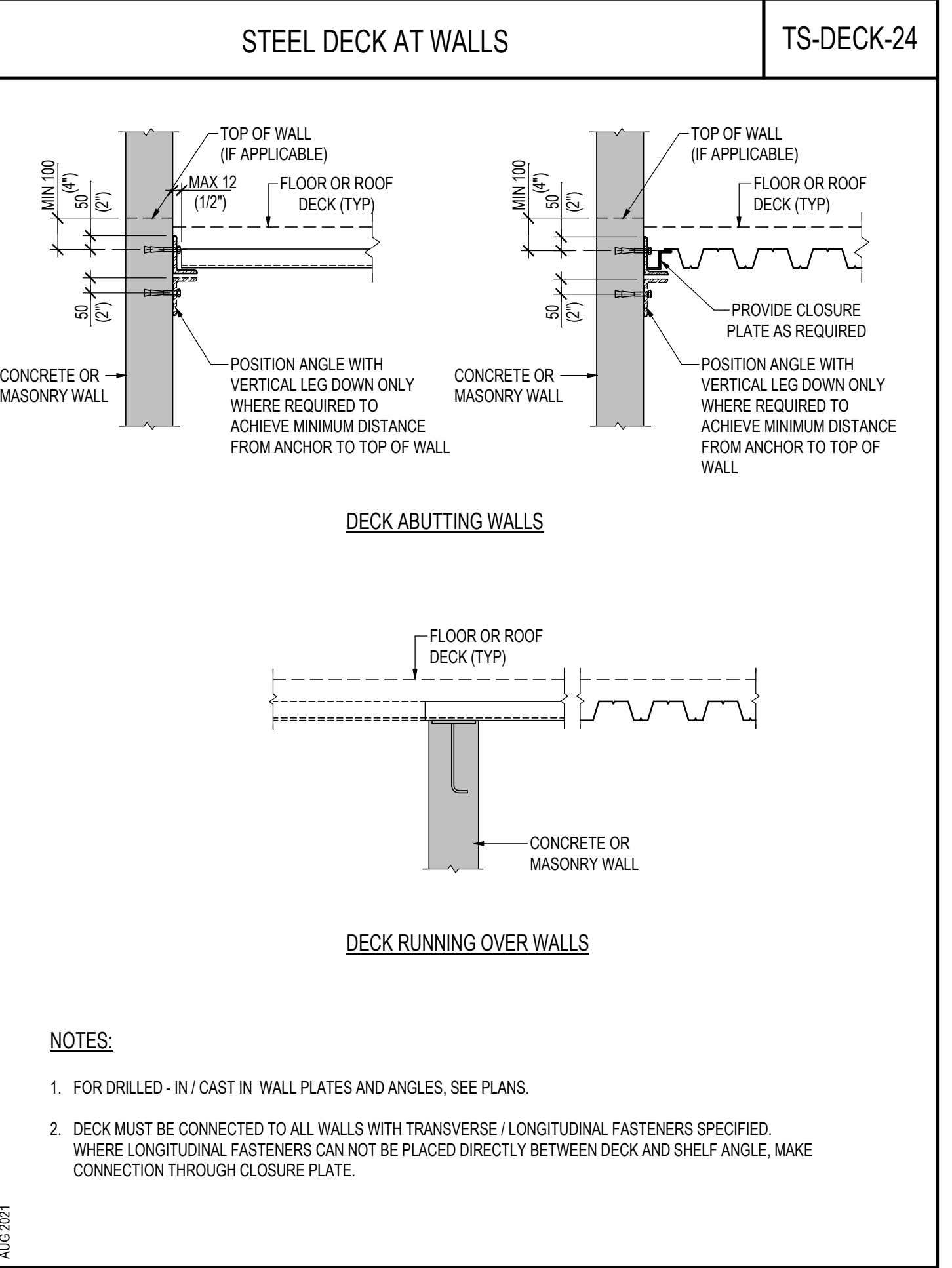
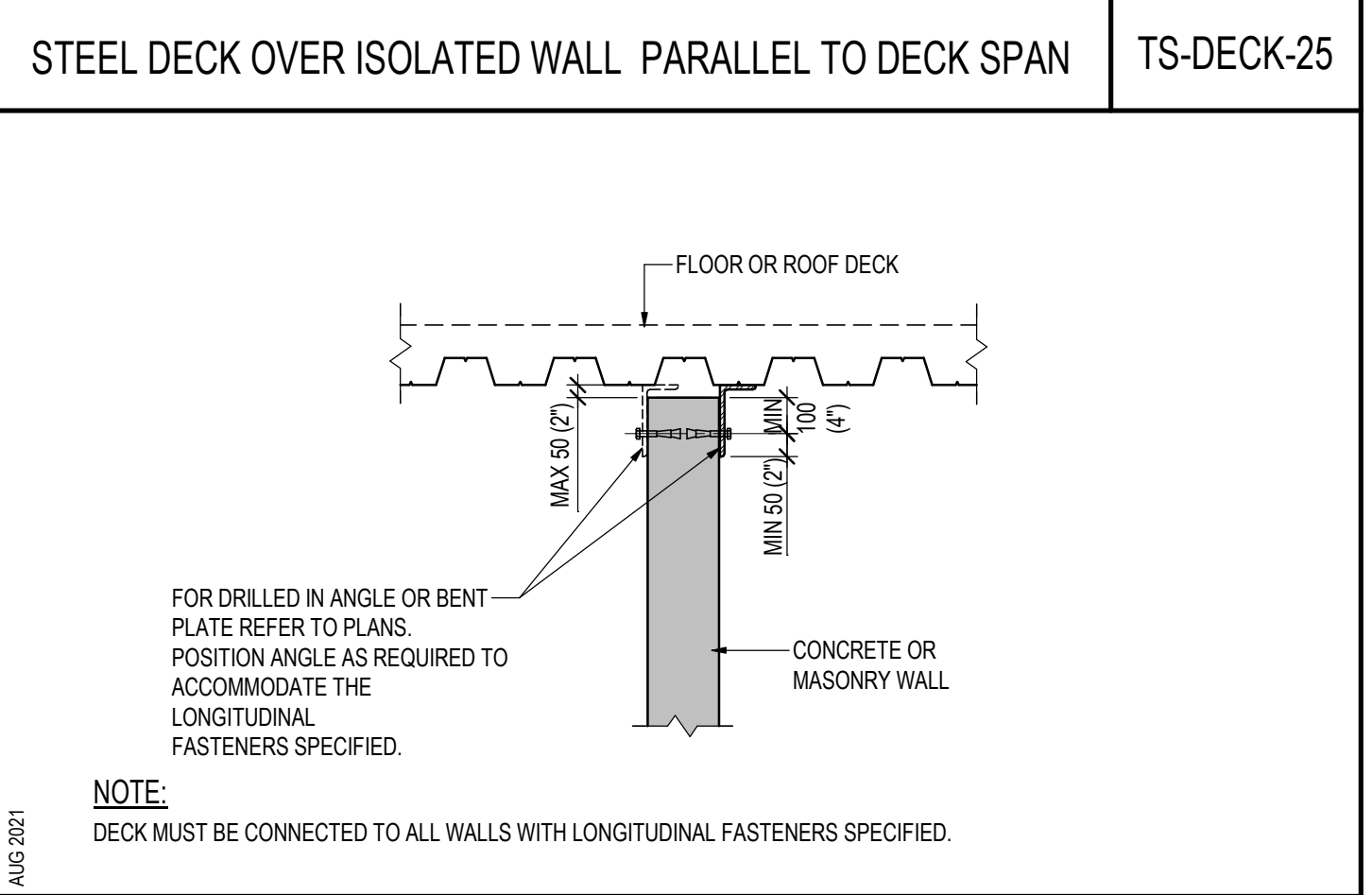
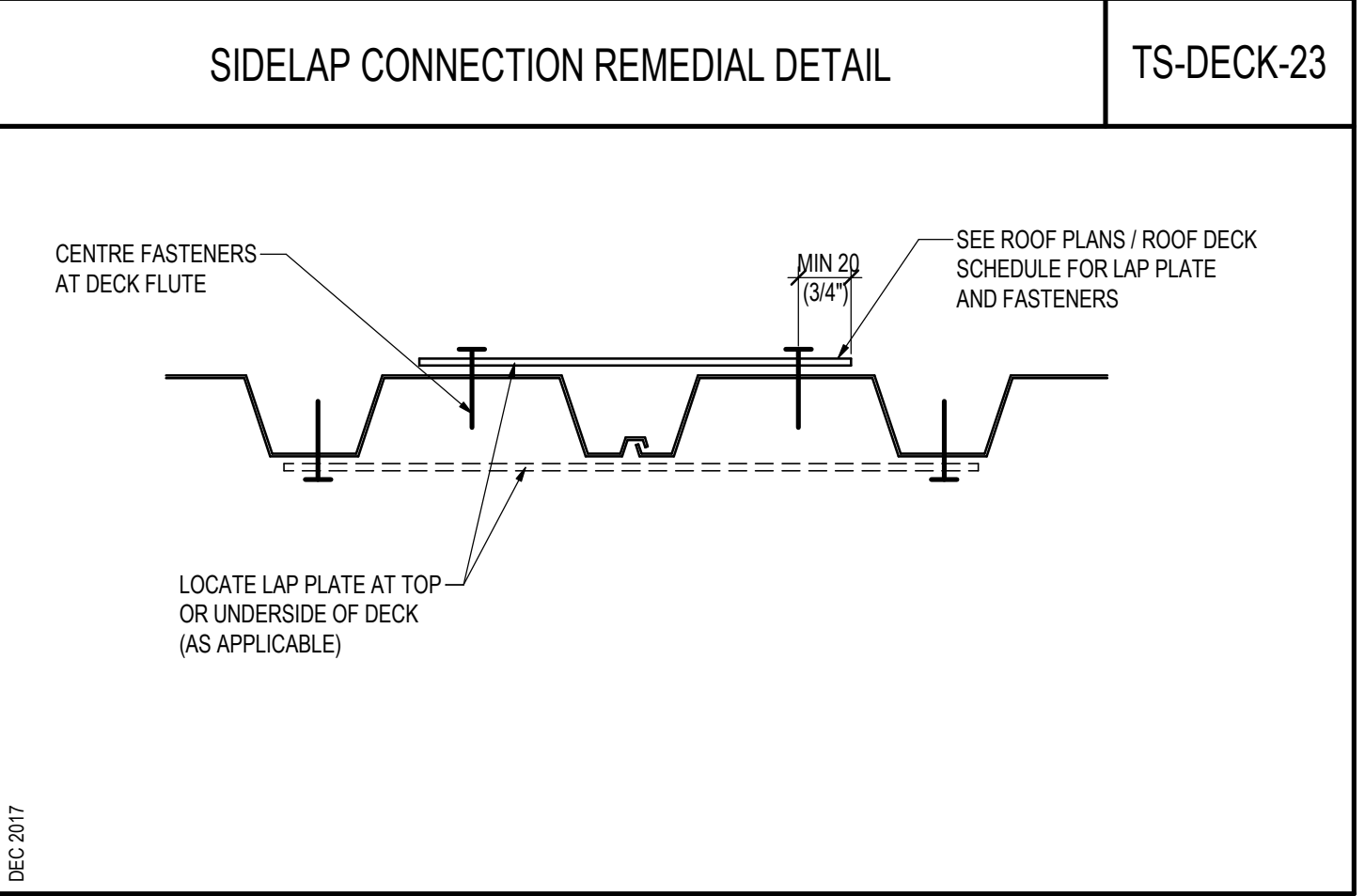
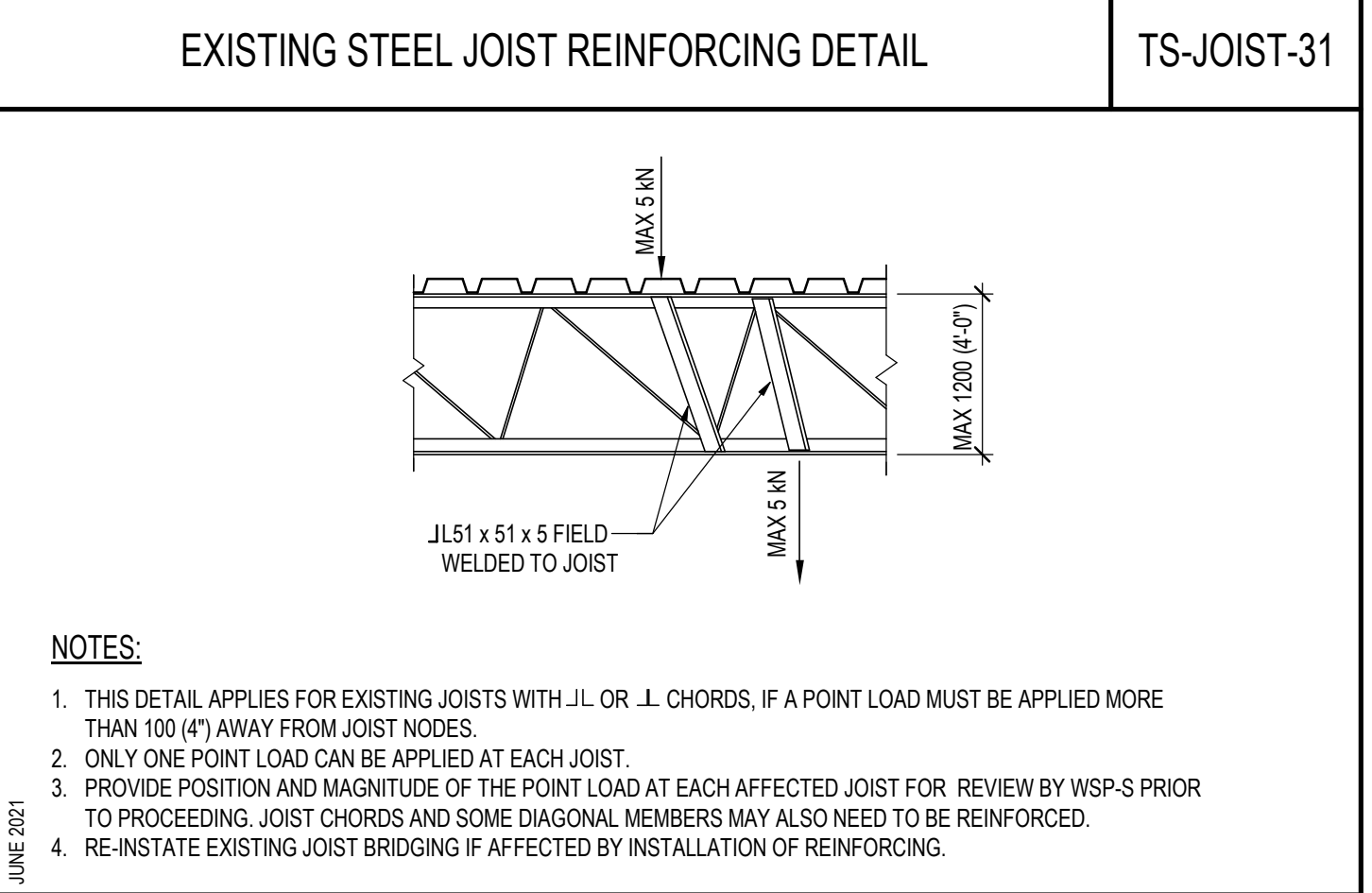
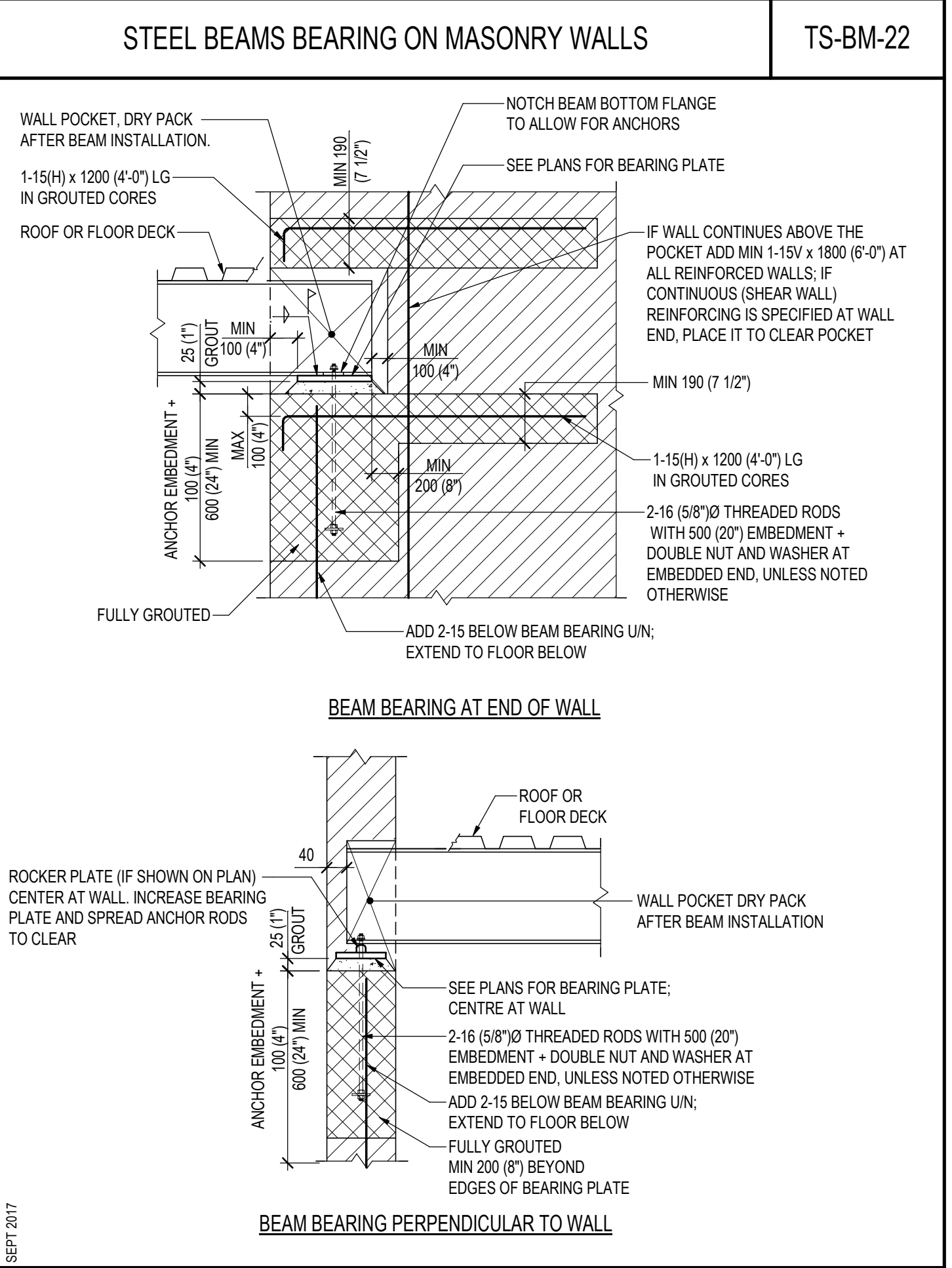
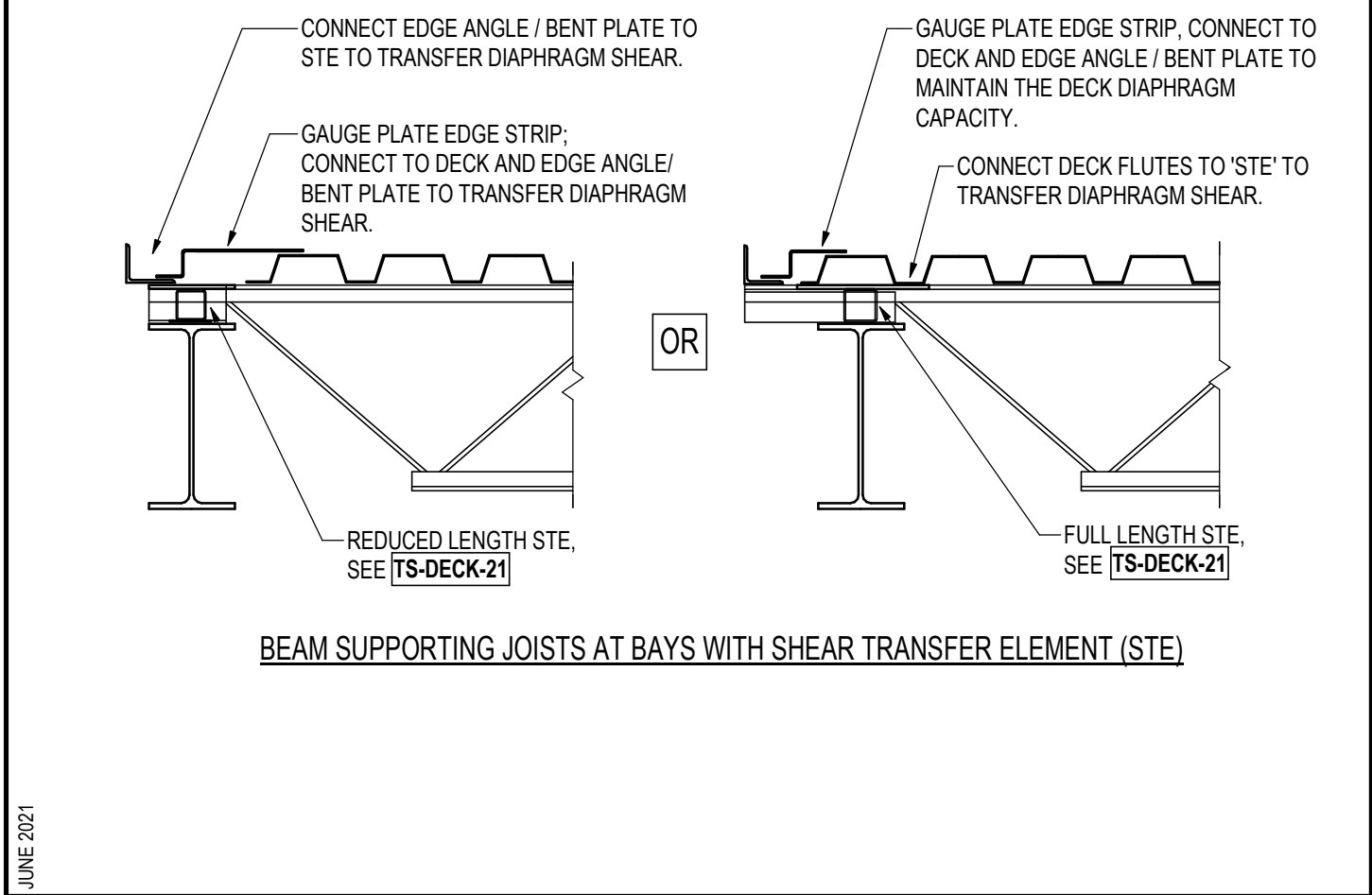
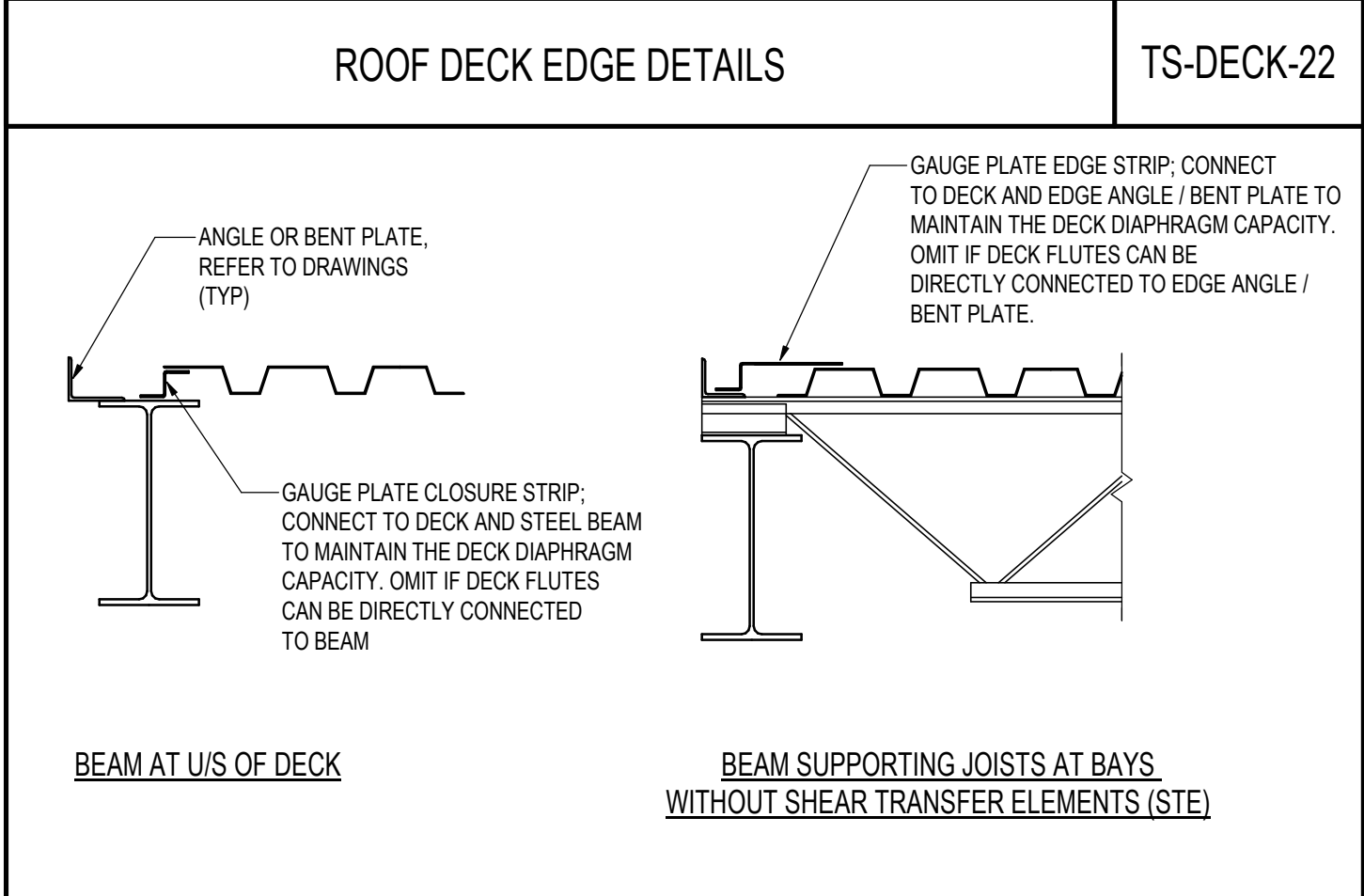
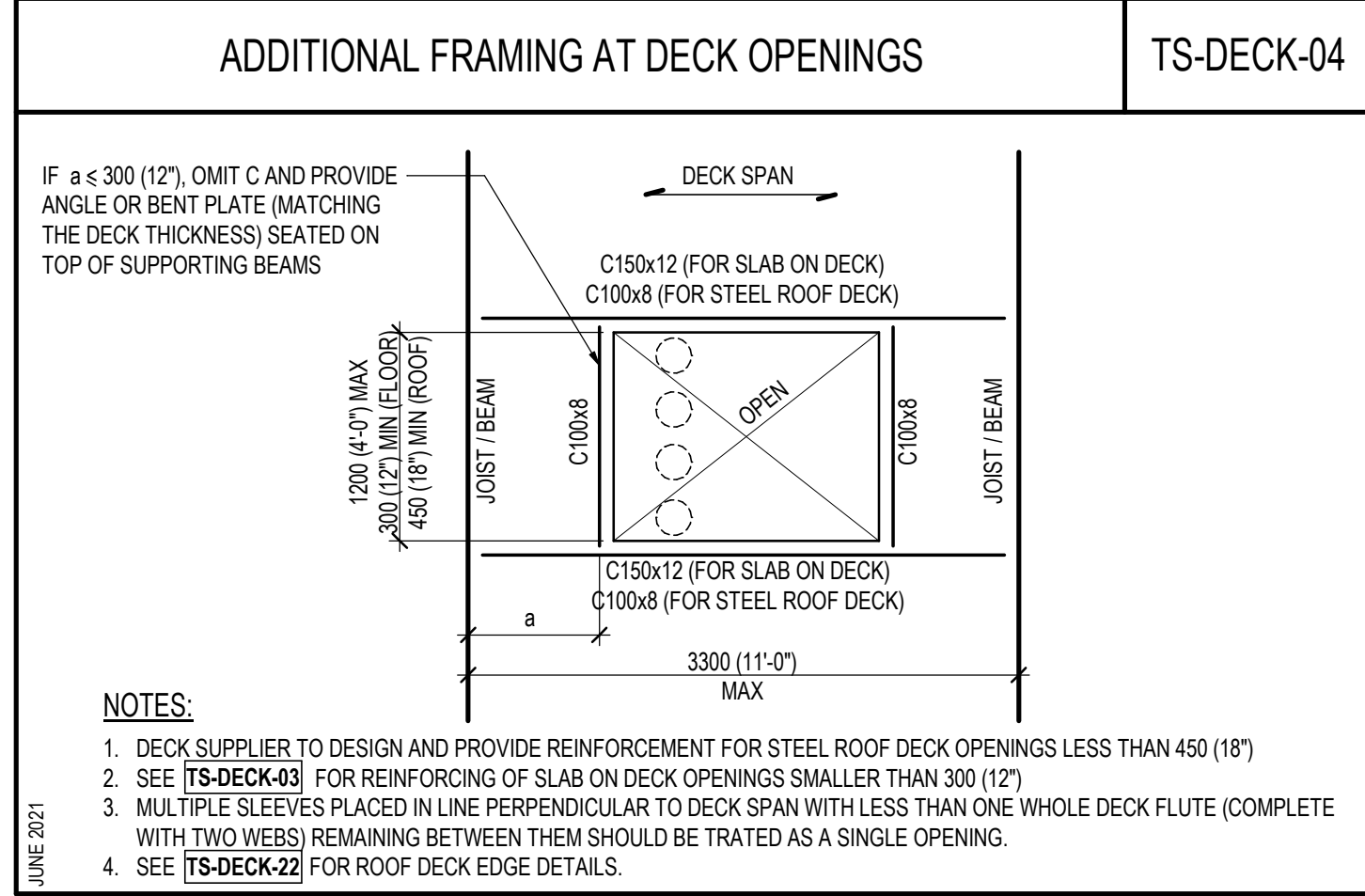
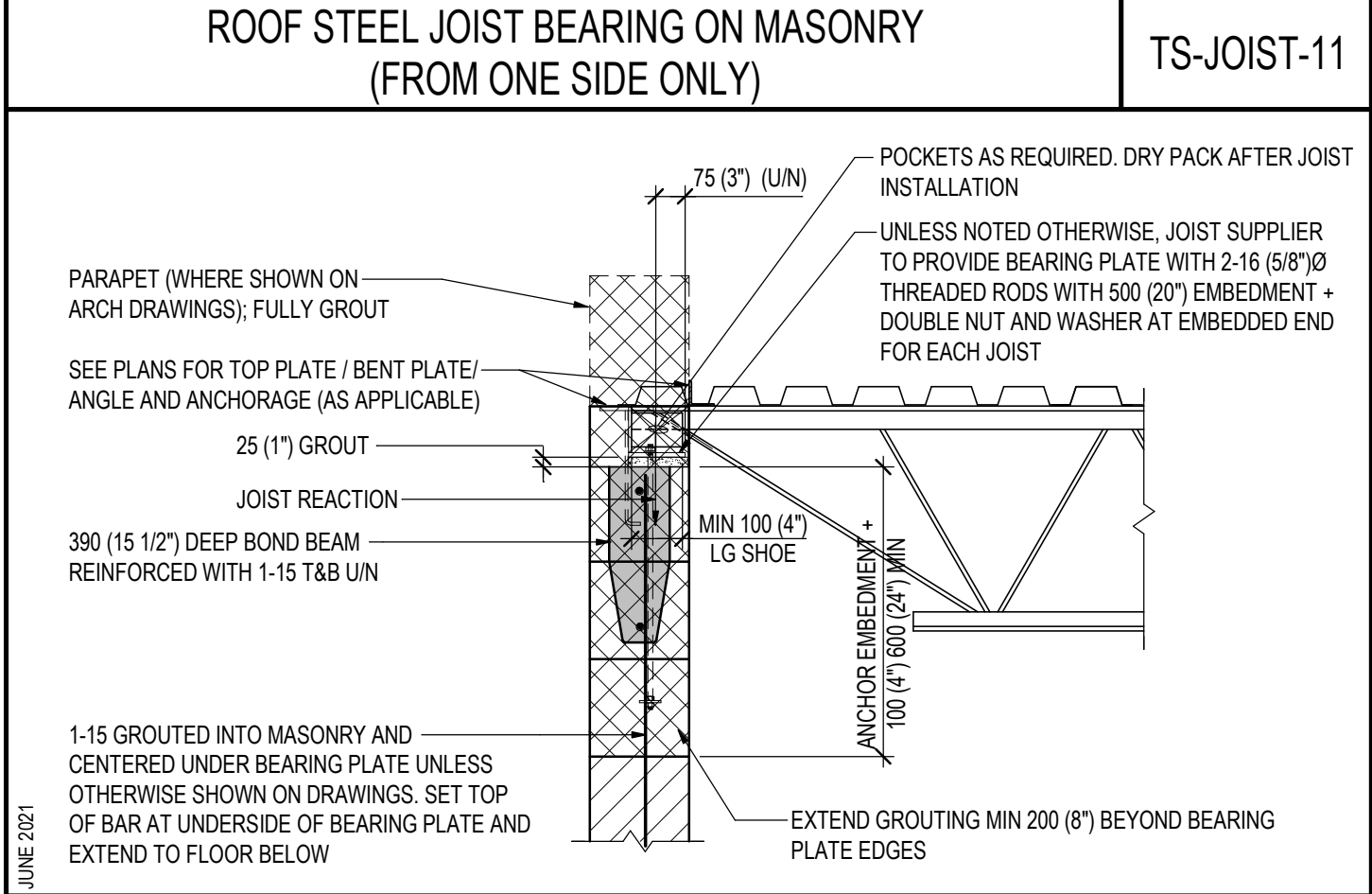
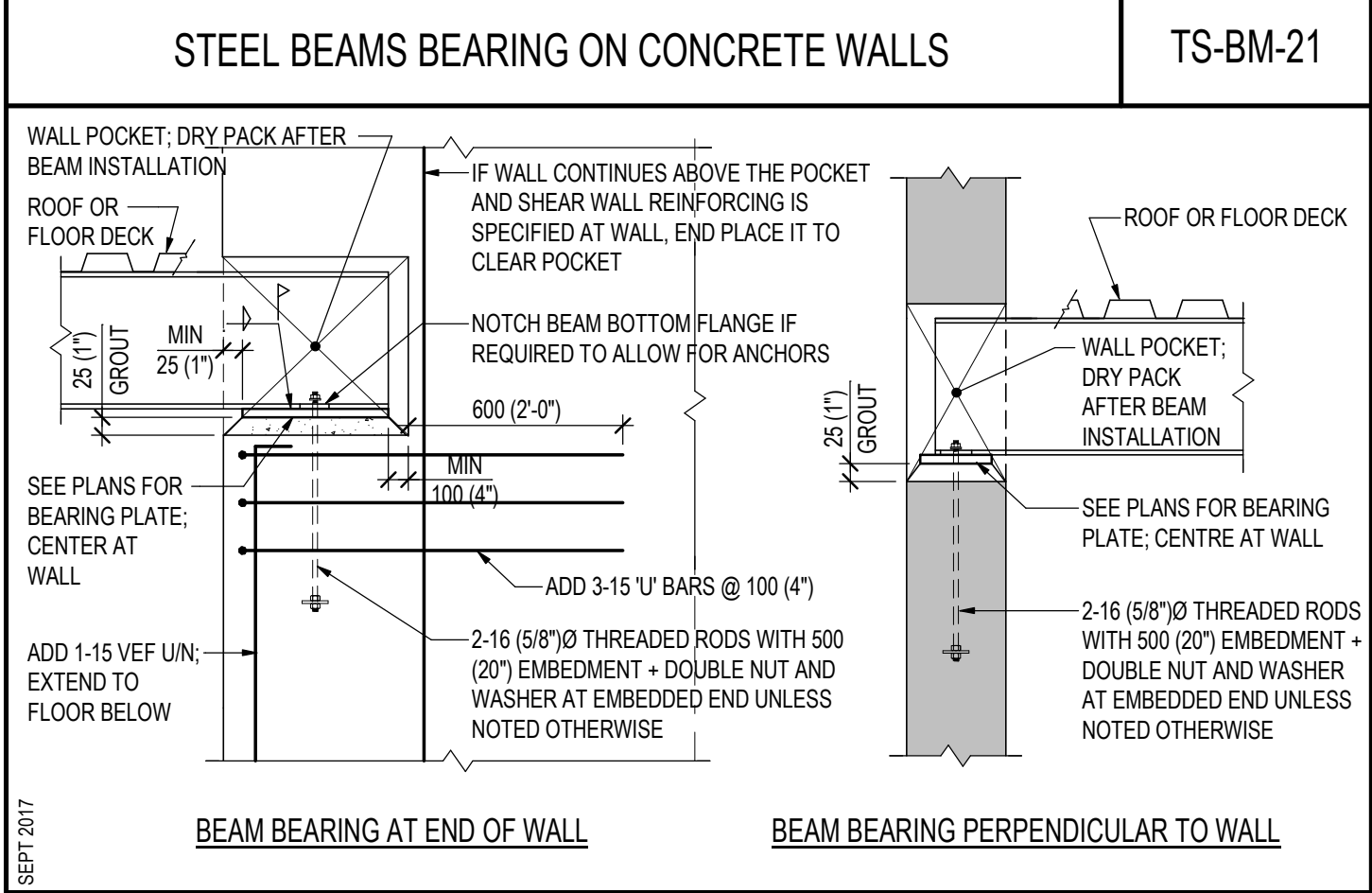
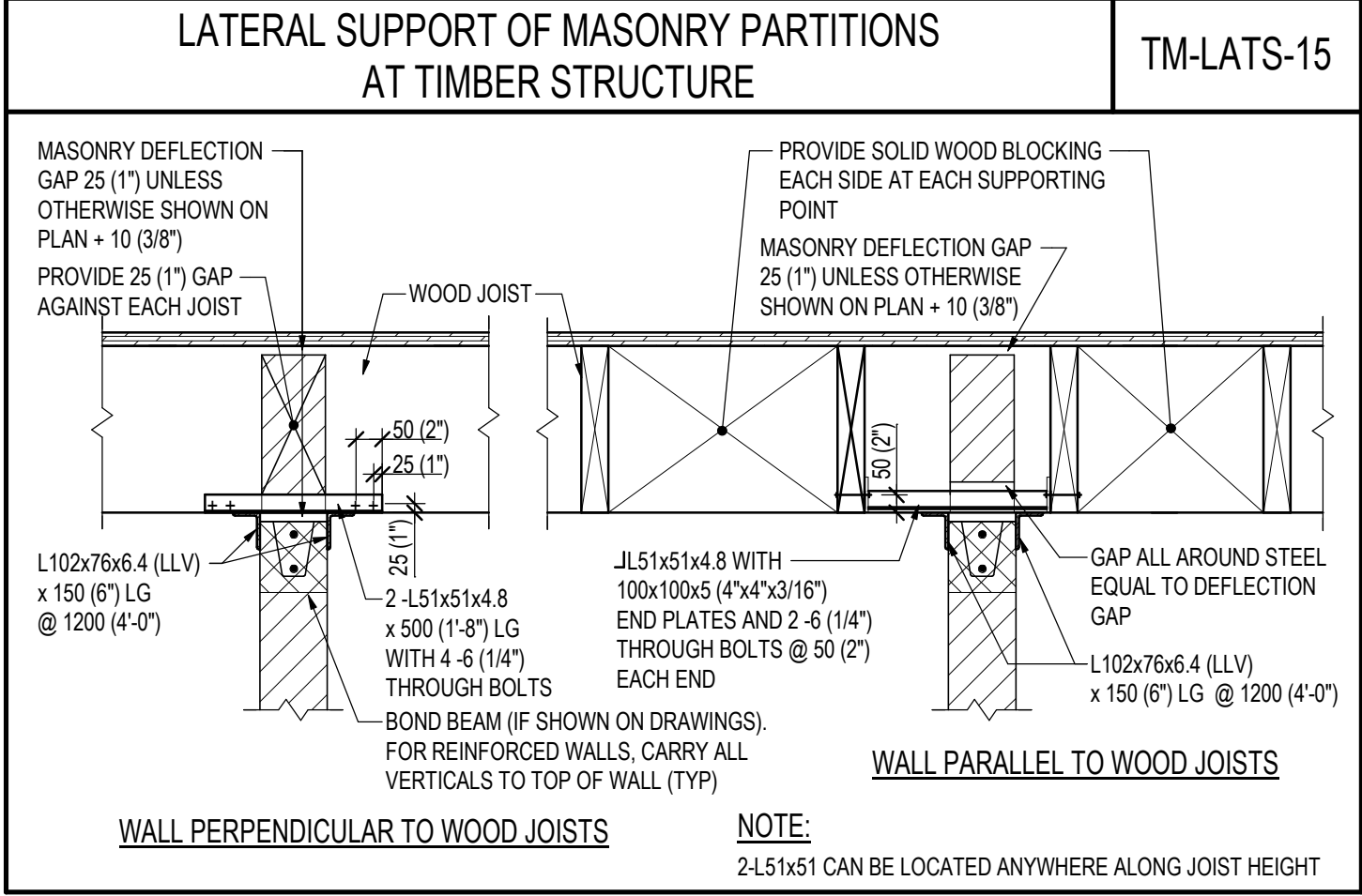
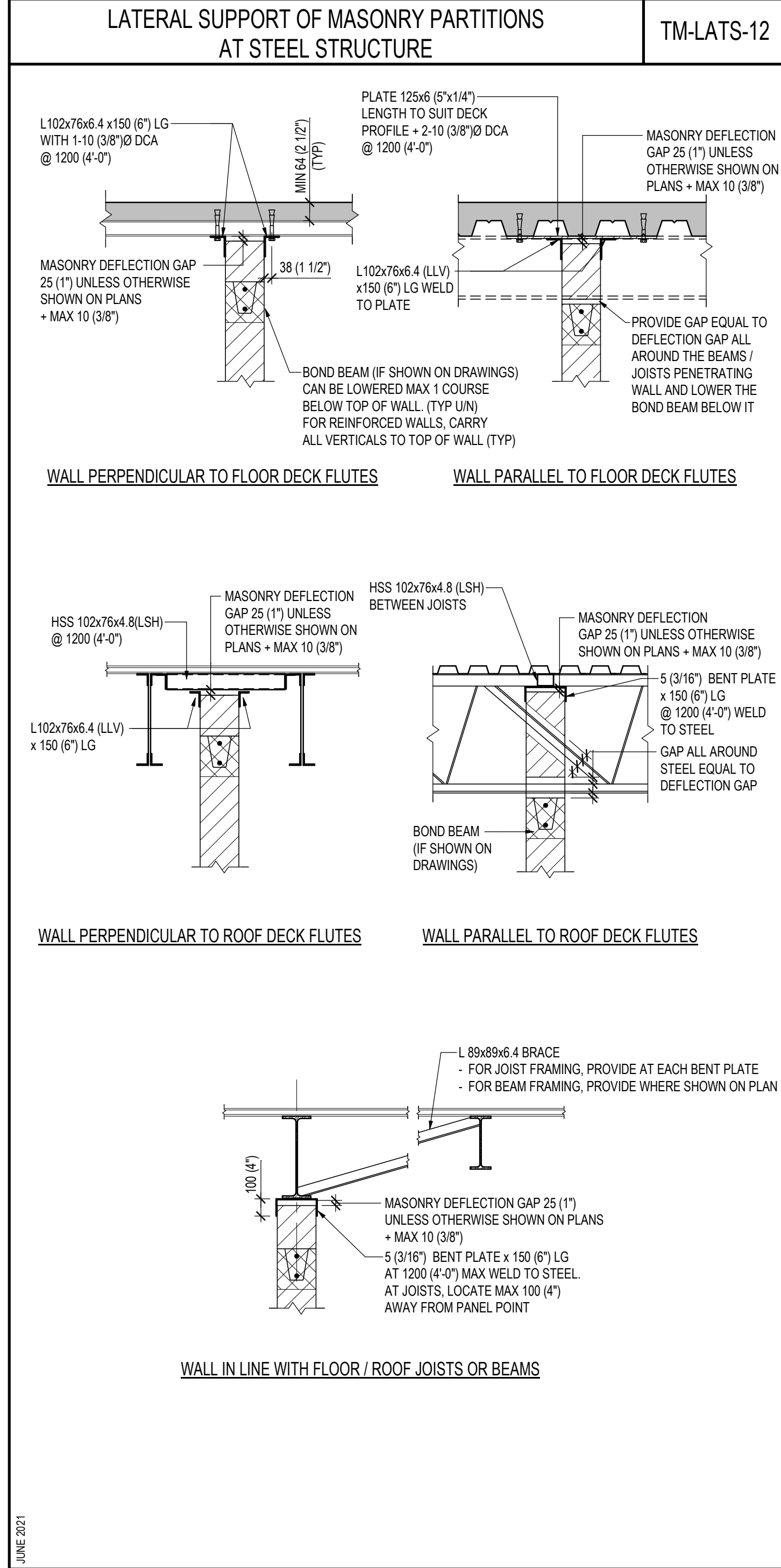
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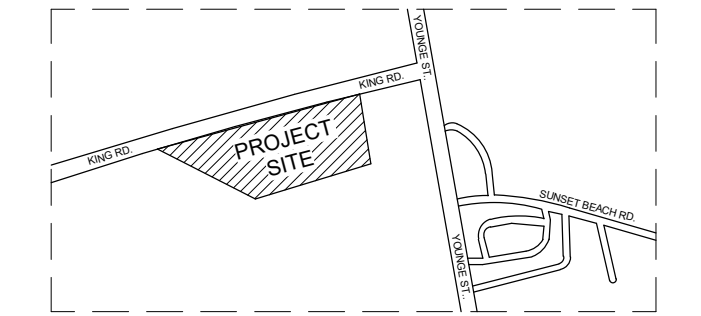
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CONSTRUCTION**

THIS BAR IS 25mm LONG WHEN PLOTTED AT
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NORTH ARROW:

DIGITAL REFERENCE:

PROJECT NO.: CAD011157-0343 CONTRACT NO.
DRAWN BY: SN CHECKED BY: SN APPROVED BY: KKZ
KEYPLAN:



4 20-03-2025 ISSUED FOR TENDER
3 04-03-2025 ISSUED FOR CLIENT REVIEW - TENDER
2 17-01-2025 STAGE
1 01-03-2024 ISSUED FOR PERMIT
1 01-03-2024 ISSUED FOR SITE PLAN APPROVAL
MD DATE
PROJECT

CONNOR BUILDING

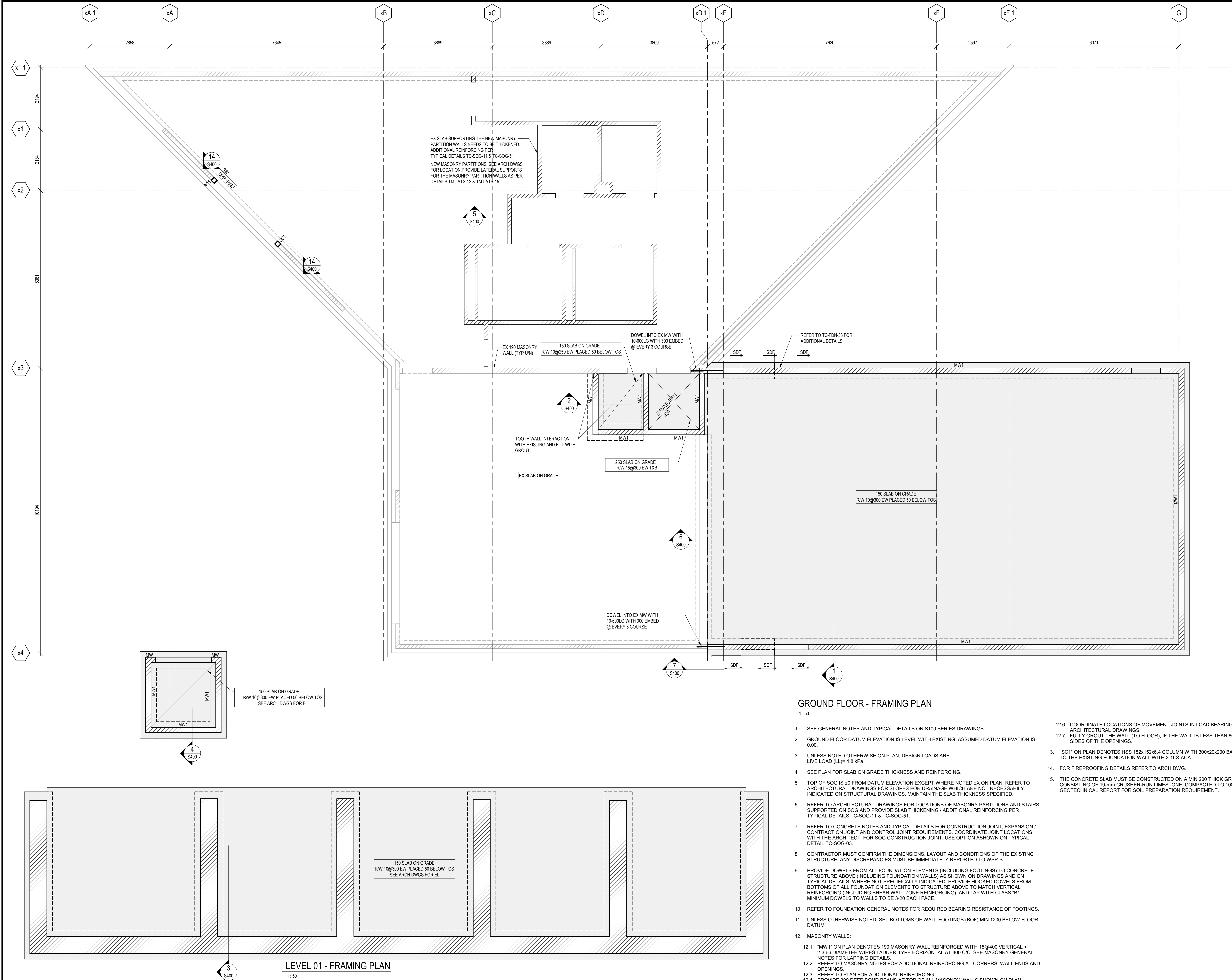
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TYPICAL DETAILS

DRAWING NO.

S108

PRINT DATE: 2025-03-20 8:40:01 PM



GROUND FLOOR - FRAMING PLAN

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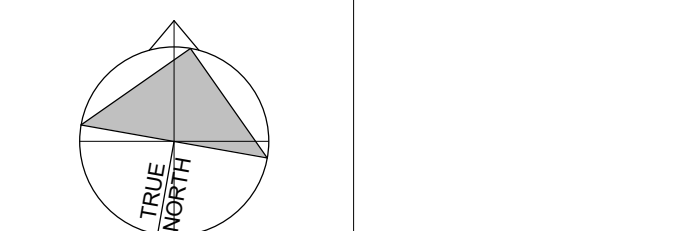
- SEE GENERAL NOTES AND TYPICAL DETAILS ON S100 SERIES DRAWINGS.
- GROUND FLOOR DATUM ELEVATION IS LEVEL WITH EXISTING. ASSUMED DATUM ELEVATION IS 0.00.
- UNLESS NOTED OTHERWISE ON PLAN, DESIGN LOADS ARE:
LIVE LOAD (LL)= 4.8 kPa
- SEE PLAN FOR SLAB ON GRADE THICKNESS AND REINFORCING.
- TOP OF SOG IS ±0 FROM DATUM ELEVATION EXCEPT WHERE NOTED ±X ON PLAN. REFER TO ARCHITECTURAL DRAWINGS FOR SLOPES FOR DRAINAGE WHICH ARE NOT NECESSARILY INDICATED ON STRUCTURAL DRAWINGS. MAINTAIN THE SLAB THICKNESS SPECIFIED.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY PARTITIONS AND STAIRS SUPPORTED ON SOG AND PROVIDE SLAB THICKENING / ADDITIONAL REINFORCING PER TYPICAL DETAILS TC-SOG-11 & TC-SOG-51.
- REFER TO CONCRETE NOTES AND TYPICAL DETAILS FOR CONSTRUCTION JOINT, EXPANSION / CONTRACTION JOINT AND CONTROL JOINT REQUIREMENTS. COORDINATE JOINT LOCATIONS WITH THE ARCHITECT. FOR SOG CONSTRUCTION JOINT, USE OPTION AS SHOWN ON TYPICAL DETAIL TC-SOG-43.
- CONTRACTOR MUST CONFIRM THE DIMENSIONS, LAYOUT AND CONDITIONS OF THE EXISTING STRUCTURE. ANY DISCREPANCIES MUST BE IMMEDIATELY REPORTED TO WSP-S.
- PROVIDE DOWELS FROM ALL FOUNDATION ELEMENTS (INCLUDING FOOTINGS) TO CONCRETE STRUCTURE ABOVE (INCLUDING FOUNDATION WALLS) AS SHOWN ON DRAWINGS AND ON TYPICAL DETAILS. WHERE NOT SPECIFICALLY INDICATED, PROVIDE HOOKED DOWELS FROM BOTTOMS OF ALL FOUNDATION ELEMENTS TO STRUCTURE ABOVE TO MATCH VERTICAL REINFORCING (INCLUDING SHEAR WALL ZONE REINFORCING), AND LAP WITH CLASS "B", MINIMUM DOWELS TO WALLS TO BE 3-20 EACH FACE.
- REFER TO FOUNDATION GENERAL NOTES FOR REQUIRED BEARING RESISTANCE OF FOOTINGS.
- UNLESS OTHERWISE NOTED, SET BOTTOMS OF WALL FOOTINGS (BOF) MIN 1200 BELOW FLOOR DATUM.
- MASONRY WALLS:
 - "MW1" ON PLAN DENOTES 190 MASONRY WALL REINFORCED WITH 15@400 VERTICAL + 2-3.66 DIAMETER WIRES LADDER-TYPE HORIZONTAL AT 400 C/C. SEE MASONRY GENERAL NOTES FOR LAPPING DETAILS.
 - REFER TO MASONRY NOTES FOR ADDITIONAL REINFORCING AT CORNERS, WALL ENDS AND OPENINGS.
 - REFER TO PLAN FOR ADDITIONAL REINFORCING.
 - PROVIDE 390 DEEP BOND BEAMS AT TOP OF ALL MASONRY WALLS SHOWN ON PLAN, REINFORCE WITH 1-15T&8 CONT. REFER TO SECTIONS FOR ADDITIONAL DETAILS.
 - WHERE PLAN CALLS FOR BOND BEAM TO BE USED AS LINTEL OVER OPENINGS REINFORCE AS PER "L1" INDICATED ON MAIN ROOF FRAMING PLAN NOTES.
 - COORDINATE LOCATIONS OF MOVEMENT JOINTS IN LOAD BEARING MASONRY WITH ARCHITECTURAL DRAWINGS.
 - FULLY GROUT THE WALL (TO FLOOR), IF THE WALL IS LESS THAN 600(2'-0") WIDE ON TWO SIDES OF THE OPENINGS.
- "SC1" ON PLAN DENOTES HSS 152x152x6.4 COLUMN WITH 300x20x200 BASE PLATE ANCHORED TO THE EXISTING FOUNDATION WALL WITH 2-16Ø ACA.
- FOR FIREPROOFING DETAILS REFER TO ARCH DWG.
- THE CONCRETE SLAB MUST BE CONSTRUCTED ON A MIN 200 THICK GRANULAR BEDDING, CONSISTING OF 19-mm CRUSHER-RUN LIMESTONE, COMPACTED TO 100% SPMD. REFER TO GEOTECHNICAL REPORT FOR SOIL PREPARATION REQUIREMENT.

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CONSTRUCTION**

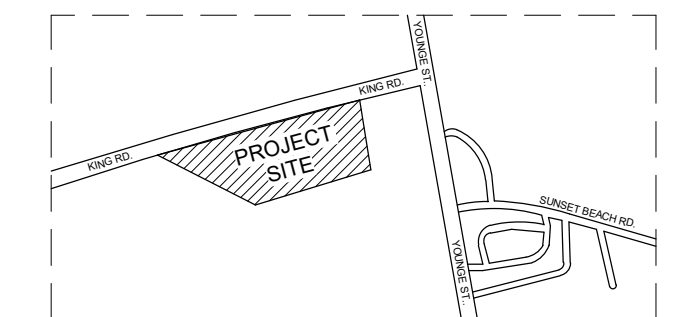
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NORTH ARROW: DIGITAL REFERENCE.



PROJECT NO.: C40011757-0343 CONTRACT NO.
DRAWN BY: SN CHECKED BY: SN APPROVED BY: KKZ

KEYPLAN:



4	20-03-2025	ISSUED FOR TENDER
3	04-03-2025	ISSUED FOR CLIENT REVIEW - TENDER
2	17-01-2025	STAGE
1	01-03-2024	ISSUED FOR PERMIT
ND	DATE	ISSUED FOR SITE PLAN APPROVAL
PROJECT		

CONNOR BUILDING

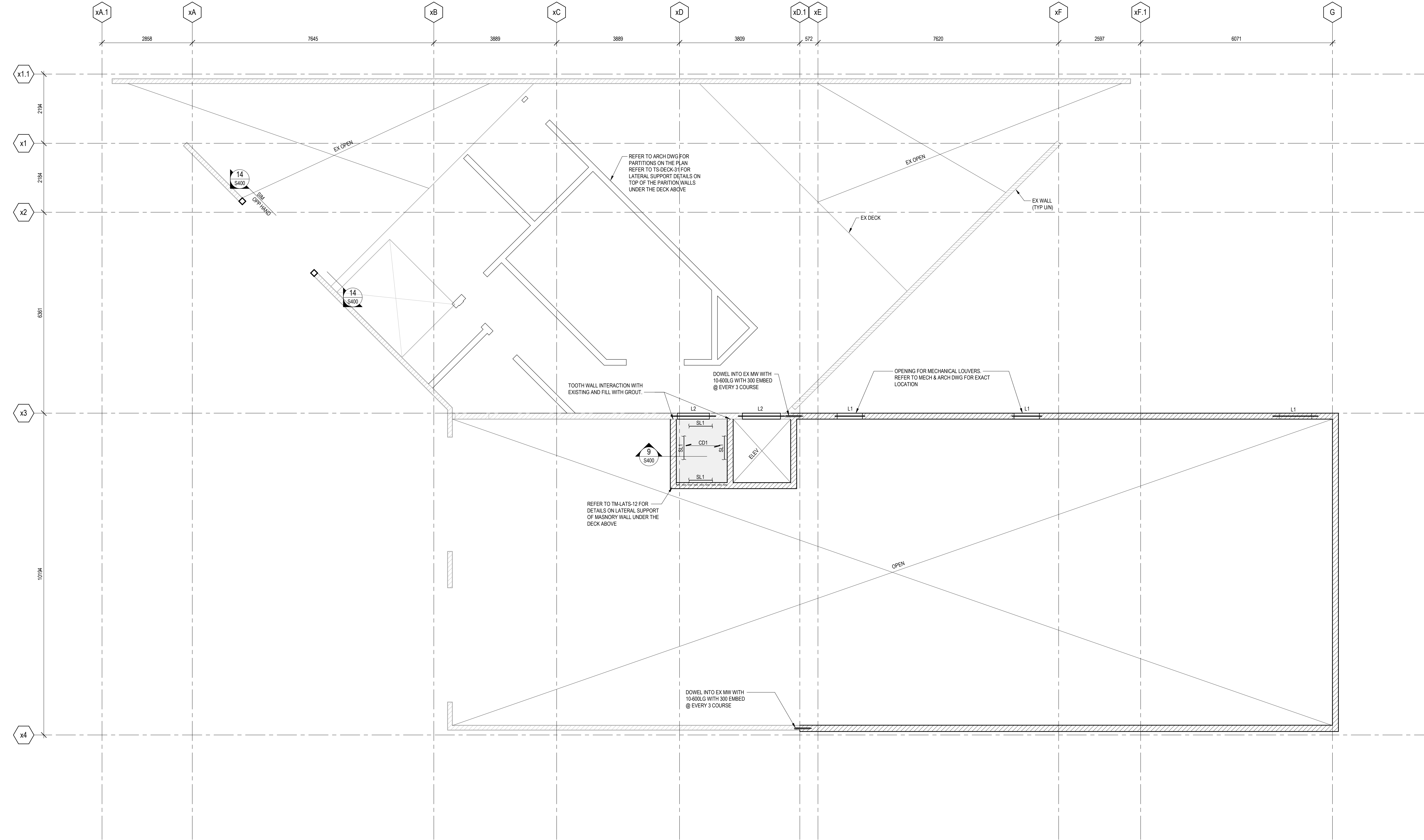
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**FOUNDATION AND
GROUND FLOOR PLAN**

DRAWING NO.

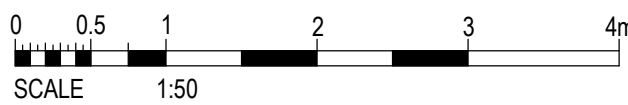
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SECOND FLOOR FRAMING PLAN

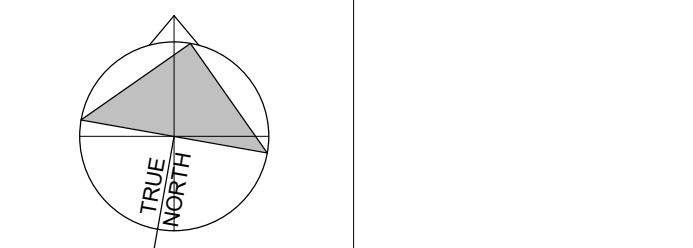
- 1:50
- SEE GENERAL NOTES AND TYPICAL DETAILS ON S100 SERIES DRAWINGS.
 - SECOND FLOOR IS LEVEL WITH EXISTING. ASSUMED DATUM ELEVATION IS 2700.
 - UNLESS NOTED OTHERWISE ON PLAN, DESIGN LOADS FOR IT DATA CLOSET.
LIVE LOAD (LL) = 4.8 kPa
SUPERIMPOSED DEAD LOAD (SDL) = 1.0 kPa
 - UNLESS OTHERWISE NOTED ON PLANS OR DETAILS, THE FOLLOWING DATA APPLY:
 - TOP OF SLAB IS ±0 FROM DATUM ELEVATION EXCEPT AS CROSSED AND NOTED ±X ON PLAN.
 - REFER TO TYPICAL DETAIL TS-DECK-03 FOR MAXIMUM SIZE OF OPENINGS IN SLAB ON DECK AND FOR ADDITIONAL REINFORCING AROUND THEM.
 - FRAME SIDES OF DECK OPENINGS AS PER TYPICAL DETAIL TS-DECK-04.
 - "CD1" ON PLAN DENOTES 190 TK SLAB (114 DEEP CONCRETE SLAB OVER 76 DEEP GALVANIZED COMPOSITE STEEL DECK), MIN. C.N.T=0.91MM. REFER TO STEEL DECK GENERAL NOTES FOR SLAB REINFORCING.
 - WHERE MECHANICAL LOADS ARE SHOWN ON PLAN, THE VALUES ARE ASSUMED. CONFIRM EXACT MAGNITUDE AND POSITION OF MECHANICAL LOADS WITH MECHANICAL SHOP DRAWINGS AND NOTIFY WSP-S IF ASSUMED VALUES ARE EXCEEDED.
 - "SL1" ON PLAN INDICATES L152x89x7.9 (LLV) SHELF ANGLE. ANCHOR TO WALL WITH 19 DIA. DMA AT 400 CENTRES MAXIMUM. GROUT MASONRY WALL SOLID AT LEAST 200 (8") AROUND EACH ANCHOR.
 - "L1" ON PLAN DENOTES 190x390 MASONRY LINTEL REINFORCED WITH 2-15 T&B AND 10@200 HH SINGLE LEG STIRRUPS. FOR ADDITIONAL INFO, REFER TO DETAIL TM-WALL-12.
 - "L2" ON PLAN DENOTES LINTELS 2-L152x89x9.5 ABOVE THE NEW OPENINGS IN THE EXISTING MASONRY WALL. REFER TO DETAILS TM-WALL-14 FOR ALL REQUIRED DETAILS.
 - FOR FIREPROOFING DETAILS REFER TO ARCH DWG.
 - FOR ROOF AREAS, SEE ROOF FRAMING PLAN NOTES ON DRAWING S202.



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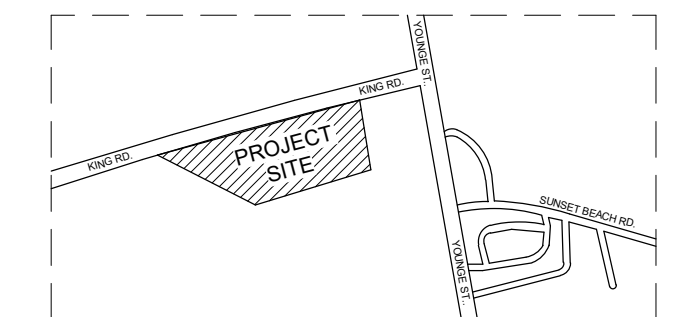
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PROJECT NO.: CA0011757-0343 CONTRACT NO.

DRAWN BY: SN CHECKED BY: SN APPROVED BY: KKZ

KEYPLAN:



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3	04-03-2025	ISSUED FOR CLIENT REVIEW - TENDER
2	17-01-2025	STAGE
1	01-03-2024	ISSUED FOR PERMIT
1	01-03-2024	ISSUED FOR SITE PLAN APPROVAL
NO.	DATE	ISSUED

PROJECT

CONNOR BUILDING

DRAWING TITLE

**SECOND FLOOR
FRAMING PLAN**

DRAWING NO.

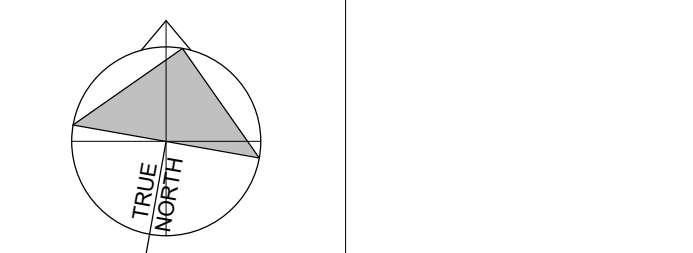
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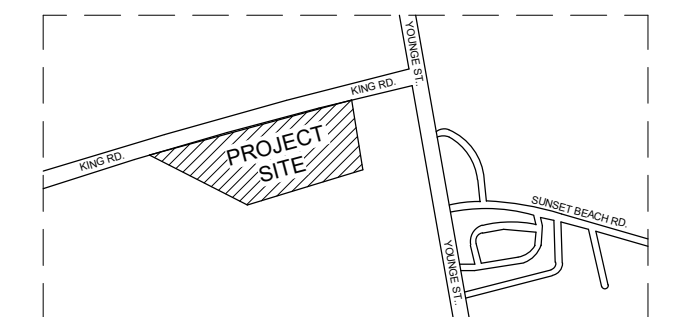
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NORTH ARROW: DIGITAL REFERENCE:



PROJECT NO.: C40011757-0343 CONTRACT NO.
DRAWN BY: SN CHECKED BY: SN APPROVED BY: KKZ

KEYPLAN:



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3	04-03-2025	ISSUED FOR CLIENT REVIEW - TENDER
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NO.	DATE	ISSUED FOR SITE PLAN APPROVAL

PROJECT

CONNOR BUILDING

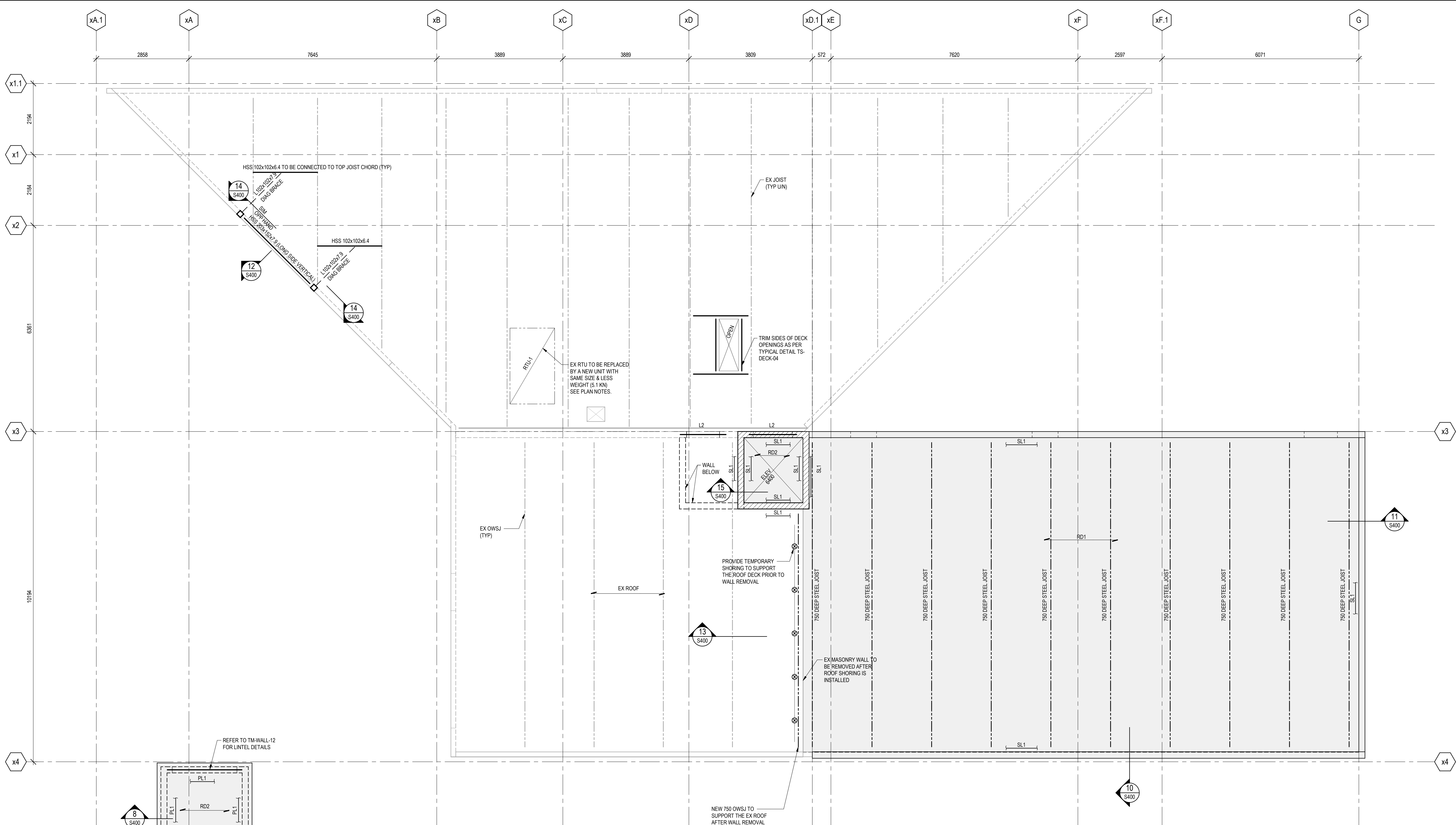
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ROOF FRAMING PLAN

DRAWING NO.

S202

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ROOF FRAMING PLAN

1:50

- SEE GENERAL NOTES AND TYPICAL DETAILS ON S100 SERIES DRAWINGS.
- ROOF DATUM ELEVATION IS 5708.
- UNLESS NOTED OTHERWISE ON PLAN, DESIGN LOADS ARE:
LIVE LOAD (SNOW) = 1.6 kPa MINIMUM + SNOW PILING AREAS NOTED ON PLAN
LIVE LOAD (RAIN PONDING) IS INDICATED ON PLAN IF AND WHERE IT EXCEEDS SNOW LOAD.
SUPERIMPOSED DEAD LOAD = 1.0 kPa (ROOFING+INSULATION) + 0.30 kPa (M&E) = 1.30 kPa
SELF WEIGHT (SWT) = 0.2 kPa (STEEL DECK) + 0.2 kPa (OWSJ) = 0.2 kPa
- DESIGN AND CONNECT STEEL DECK, JOISTS AND BRIDGING FOR NET FACTORED UPLIFT OF 1.50 kPa DUE TO WIND.
- UNLESS OTHERWISE NOTED ON PLANS OR DETAILS, THE FOLLOWING DATA APPLY:
 - TOP OF ROOF DECK IS ±0 FROM DATUM ELEVATION EXCEPT AS CROSSED AND NOTED ±X ON PLAN.
 - TOPS OF STEEL JOISTS ARE AT UNDERSIDE OF ROOF DECK.
 - FRAME SIDES OF DECK OPENINGS AS PER TYPICAL DETAIL TS-DECK-04.
 - UNLESS NOTED OTHERWISE, PROVIDE CONTINUOUS BENT PLATE AT ALL ROOF DECK EDGES.
 - TRIM ALL SIDES OF OPENINGS IN METAL WALL SYSTEM WITH C150X12.
 - JOIST SHOES SHALL BE 150 DEEP.
- "RD1" ON PLAN DENOTES 38 DEEP GALVANIZED STEEL ROOF DECK, MIN. CNT=0.91. FASTEN DECK AS PER ROOF AND FLOOR DECK ASSEMBLIES GENERAL NOTES TO RESIST FACTORED DIAPHRAGM SHEAR = 10 kN/m.
- "RD2" ON PLAN DENOTES 76 DEEP GALVANIZED STEEL ROOF DECK, MIN. CNT=0.91. FASTEN DECK AS PER ROOF AND FLOOR DECK ASSEMBLIES GENERAL NOTES TO RESIST FACTORED DIAPHRAGM SHEAR = 10 kN/m.
- WHERE MECHANICAL LOADS ARE SHOWN ON PLAN, THE VALUES ARE ASSUMED. CONFIRM EXACT MAGNITUDE AND POSITION OF MECHANICAL LOADS WITH MECHANICAL SHOP DRAWINGS AND NOTIFY WSP-S IF ASSUMED VALUES ARE EXCEEDED.
- "PL1" ON PLAN DENOTES 175x6 (7"x1/4") CONTINUOUS STEEL PLATE WITH 12 (1/2") Ø x 300 (14") LONG ANCHORS PLUS 50 (2") HOOK AT 600 (2'-0") CENTRES IN GROUTED MASONRY CORES.
- "SL1" ON PLAN INDICATES L152x89x7.9 (LLV) SHELF ANGLE, ANCHOR TO WALL WITH 19 DIA. DMA AT 400 CENTRES MAXIMUM. GROUT MASONRY WALL SOLID AT LEAST 200 (8") AROUND EACH ANCHOR.
- "L1" ON PLAN DENOTES 190x390 MASONRY LINTEL REINFORCED WITH 2-15 T&B AND 10@200 SINGLE LEG STIRRUPS. FOR ADDITIONAL INFO, REFER TO DETAIL TM-WALL-12.
- "L2" ON PLAN DENOTES LINTELS 2-L2-L152x89x9.5 ABOVE THE NEW OPENINGS IN THE EXISTING MASONRY WALL. REFER TO DETAILS TM-WALL-14 FOR ALL REQUIRED DETAILS.
- FOR FLOOR AREAS, SEE FLOOR FRAMING PLAN NOTES ON DRAWING S201 & S202.
- FOR FIREPROOFING DETAILS REFER TO ARCH DWG.
- EX ROOF OPENINGS TO BE INFILLED WITH SIMILAR SIZE METAL DECK PROFILE. MIN DECK SPLICE OVERLAP WITH EX METAL PAN = 200. FASTENER SPACINGS @ MAX 150 (TYP UN).
- THE NEW RTU WEIGHS 5.1 KN. THE CONTRACTOR MUST REVIEW AND VERIFY THE WEIGHT OF THE EXISTING ROOFTOP UNIT PRIOR TO INSTALLING THE NEW UNIT. IF THE NEW UNIT IS HEAVIER THAN THE EXISTING ONE, IT MUST BE IMMEDIATELY REPORTED TO WSP-S.

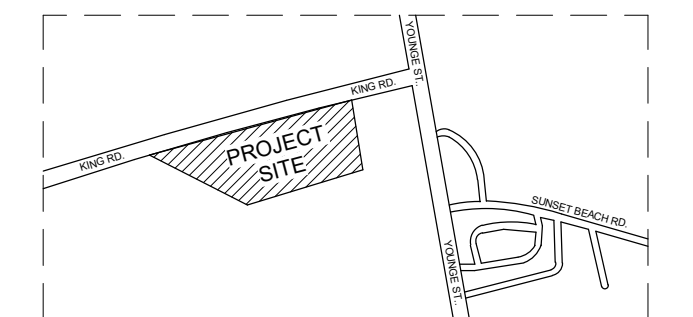
0 0.5 1 2 3 4m
SCALE 1:50

**NOT FOR
CONSTRUCTION**

THIS BAR IS 25mm LONG WHEN PLOTTED AT
CORRECT SCALE. DO NOT SCALE DRAWINGS.

NORTH ARROW: DIGITAL REFERENCE:

PROJECT NO.: CA0011757-0343 CONTRACT NO.
DRAWN BY: SN CHECKED BY: SN APPROVED BY: KKZ
KEYPLAN:



4	20-03-2025	ISSUED FOR TENDER
3	04-03-2025	ISSUED FOR CLIENT REVIEW - TENDER
2	17-01-2025	STAGE
1	01-03-2024	ISSUED FOR PERMIT
1	01-03-2024	ISSUED FOR SITE PLAN APPROVAL
1	01-03-2024	ISSUED

CONNOR BUILDING

DRAWING TITLE

SECTIONS AND DETAILS

DRAWING NO.

S400

PRINT DATE: 2025-03-20 8:40:05 PM

