

**GENERAL NOTES**

- THESE DOCUMENTS ARE TO BE USED ONLY BY THE PARTY WITH WHOM DFE HAS ENTERED INTO A CONTRACT.
- THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISION COLUMN.
- THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2024 ONTARIO BUILDING CODE (OBC) LATEST EDITION INCLUDING ALL THE LATEST STANDARDS REFERENCED THEREIN, AND ANY APPLICABLE ACTS OF AUTHORITY. CONSTRUCTION PRACTICES SHALL BE ACCORDING TO THE SAME. USE THE LATEST VERSIONS OF STANDARDS AND CODES LISTED BELOW. ELEMENTS OF STRUCTURES AND NON-STRUCTURAL COMPONENTS AND EQUIPMENT AND THEIR CONNECTIONS TO BE DESIGNED PER OBC LATEST EDITION.
- DO NOT SCALE THESE DRAWINGS. ERRORS MADE CAUSED BY SCALING THESE DRAWINGS ARE RESPONSIBILITY OF THE PARTY WHO USED THE DRAWINGS.
- WHERE DISCREPANCIES EXIST, THE MOST STRINGENT SHALL PREVAIL. NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- STRUCTURAL DRAWINGS TO BE USED TOGETHER WITH ALL OTHER SPECIFICATIONS AND CONTRACT DOCUMENTS.
- REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF HOLES, PUMPS, TRENCHES, CURBS, BOLTS, SLEEVES, OPENINGS, ETC.
- THE CONTRACTOR SHALL BECOME FAMILIARIZED WITH THE PROJECT ON SITE. INCLUDING EXISTING CONSTRUCTION. ANY ALTERATIONS FROM ASSUMED IN THE DRAWINGS MUST BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- THE ENGINEER MUST APPROVE SUBSTITUTIONS FOR SPECIFIED PRODUCTS AND MATERIALS.
- ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS - O.REG. 213/91.
- THE CONTRACTOR SHALL PROVIDE DESIGN AND CONSTRUCTION OF HORIZONTAL AND VERTICAL SHORING AND BRACING AS PER OREG 213/91. THE CONTRACTOR SHALL PROVIDE BRACING, SHORING, SHEET PILING ETC. TO PROTECT EXISTING OR ADJACENT STRUCTURES AFFECTED BY THIS WORK.
- AN INDEPENDENT INSPECTION AND TESTING COMPANY SHALL PROVIDE TESTS TO PROVE THAT CONSTRUCTION IS IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. REQUIRED TESTING SHALL BE AS PER THE TESTING AND INSPECTION TABLE BELOW.
- DOYTOCH & FILO ENGINEERING WILL PROVIDE GENERAL REVIEW OF CONSTRUCTION. DOYTOCH & FILO ENGINEERING WILL REVIEW SHOP DRAWINGS FOR GENERAL CONFORMITY WITH THE CONTRACT DOCUMENTS PREPARED BY "DOYTOCH & FILO". THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "DOYTOCH & FILO" IS NOT RESPONSIBLE FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. REVIEWED SHOP DRAWINGS DO NOT RELIEVE CONTRACTORS FROM RESPONSIBILITY FOR THEIR MISTAKES.
- SHOP DRAWINGS MUST BE SEALED BY PROFESSIONAL ENGINEER BEFORE BEING SUBMITTED TO DFE FOR REVIEW. U.N.O.
- THE OWNER AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF CONSTRUCTION PROGRESS, AND THEY SHALL INVITE THE ENGINEER TO COMPLETE GENERAL REVIEWS.

**TESTING AND INSPECTION**

- THE FOLLOWING ITEMS REQUIRE TESTING OR INSPECTION BY A CERTIFIED INDEPENDENT TESTING OR INSPECTION AGENCY UNLESS NOTED OTHERWISE. THE AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

ITEM	REQ'D	COMMENTS
SOIL BEARING CAPACITY	YES	BY SOILS ENGINEER
SOIL COMPACTION	YES	BY SOILS ENGINEER
REINFORCING STEEL PLACEMENT	YES	INSPECT FINAL PLACEMENT
CONC. COMPRESSIVE TESTS	YES	MIN. 2 SETS PER 100 CUBIC METRES
CONCRETE SLUMP	YES	
STRUCTURAL STEEL BOLTING	YES	
STRUCTURAL STEEL WELDING	YES	INSPECT ALL FIELD WELDS
MORTAR CUBES	YES	

- IT IS THE RESPONSIBILITY OF BOTH THE OWNER AND THE CONTRACTOR TO NOTIFY THE ENGINEER OF STRUCTURAL TESTING AND INSPECTION TO COMPLETE GENERAL REVIEWS.
- STRUCTURAL CONSULTANTS WILL PROVIDE GENERAL REVIEW OF CONSTRUCTION TO DETERMINE WHETHER THE CONSTRUCTION OF THAT WORK SHOWN ON THE DRAWINGS IS IN GENERAL CONFORMITY WITH THE PLANS, SKETCHES, DRAWINGS, AND SPECIFICATIONS FORMING PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR QUALITY CONTROL AND THE PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT. STRUCTURAL CONSULTANTS SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

**REQUIRED SUBMITTALS**

- THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION WHERE APPLICABLE.
- REVIEW OF THE SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAIL DESIGN. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE QUALITY CONTROL AND THE PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT. STRUCTURAL CONSULTANTS SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF THE FITTING OF BUILDING COMPONENTS. ANY DISCREPANCIES IN THE SHOP DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

ITEM	REQ'D SUBMITTAL?	ENGINEER'S STAMP REQ'D?	NOTES
REBAR SHOP DRAWINGS	YES	NO	INCL CONC BLOCK REINF
CONCRETE MIX DESIGNS	YES	NO	
MASONRY GROUT MIX DESIGN	YES	NO	
BLOCK MILL REPORT	YES	NO	
STRUCTURAL STEEL SHOP DRAWINGS	YES	YES	FOR CONNECTIONS ONLY
MISCELLANEOUS STEEL SHOP DRAWINGS	YES	YES	STAMP FOR STAIRS, LADDERS AND GUARDS
STEEL DECK SHOP DRAWINGS	YES	YES	
COLD FORMED STEEL FRAMING SHOP DWGS.	YES	YES	
FALL ARREST ANCHORS	YES	YES	
PRECAST SHOP DRAWINGS	YES	YES	

**COLD FORMED STEEL FRAMING (BY OTHERS)**

- ALL COLD FORMED STEEL FRAMING SHALL BE DESIGNED BY CFS SUPPLIER IN CONFORMANCE WITH THE REQUIREMENTS OF LATEST CSA S136-16.
- DESIGN ALL COLD FORMED STEEL FRAMING MEMBERS FOR THE GRAVITY AND LATERAL LOADINGS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE 2024 OBC LATEST EDITION. ALL CFS WALLS, NOT SHOWN ON STRUCTURAL DRAWINGS NOT SUPPORTING STRUCT. FRAMING THAT MEET CRITERIA OF LOAD BEARING PER OBC, SUCH AS ACTING AS OR SUPPORTING GUARDS, SUPP. EQUIPMENT ETC. TO BE DESIGNED PER OBC.
- CONFORM TO THE DEFLECTION REQUIREMENTS OF LATEST CSA S304 FOR STUDS SUPPORTING MASONRY VENEER.
- SHOP DRAWINGS FOR ALL COLD FORMED STRUCTURAL STEEL FRAMING INCLUDING CONNECTION, BRACING, AND BRIDGING DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION.
- SHOP DRAWINGS FOR ALL COLD FORMED STRUCTURAL STEEL FRAMING SHALL SHOW BOTH DESIGN AND INSTALLATION REQUIREMENTS. RETAIN A LICENSED PROFESSIONAL ENGINEER OF THE PROVINCE OF ONTARIO TO PREPARE, SEAL AND SIGN ALL SHOP DRAWINGS, AND TO PERFORM FIELD REVIEW.
- STEEL SHALL MEET THE REQUIREMENTS OF LATEST ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEET, ZINC COATED (GALVANIZED) BY THE HOT-DIP PROCESS. STRUCTURAL (PHYSICAL) QUALITY. STEEL STUDS 18 ga. AND LIGHTER SHALL HAVE MINIMUM YIELD STRENGTH OF 200MPa (33ksi). HEAVIER STUDS SHALL HAVE MINIMUM YIELD STRENGTH OF 345MPa (50ksi).

**FOUNDATIONS**

- GEOTECHNICAL DATA HAS BEEN OBTAINED FROM THE SOIL INVESTIGATION PERFORMED BY CHUNG & VANDER DELEN ENGINEERING LTD. AS REPORTED IN THEIR SOIL REPORT No. 2464, DATED MAY 26, 2025
- ALL FOOTINGS SHALL BEAR DIRECTLY ON NATURALLY CONSOLIDATED, UNDISTURBED SOIL, WITH A MINIMUM SOIL BEARING CAPACITY OF 150 kPa (SLS) AND 250 kPa (ULS) AT MIN. 1.2m BELOW GROUND.
- THE BEARING SOIL MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER BEFORE PROCEEDING WITH FOUNDATION WORK. ALL DISCREPANCIES TO BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- BOTTOM OF THE FOOTINGS SHALL BE BELOW THE LEVEL OF FREEZING DEPTH, BUT A MINIMUM 1200 mm (4'-0") BELOW FINISHED EXTERIOR GRADE, UNLESS NOTED OTHERWISE.
- PROTECT ALL SOIL FROM FREEZING ADJACENT TO AND BELOW ALL FOUNDATIONS DURING CONSTRUCTION.
- INSULATION IS SHOWN WHERE REQUIRED FOR PROTECTION OF THE FOUNDATIONS FROM DAMAGE DUE TO FROST ACTION ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR FOUNDATION INSULATION NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- ALL ORGANIC TOPSOIL AND LOOSE FILL TO BE REMOVED FROM THE SITE BEFORE CONSTRUCTION.
- WHERE APPROVED, GRANULAR FILL UNDER ALL FOOTINGS ON GRADE SHALL BE COMPACTED IN 150 mm (6") LAYERS TO SPECIFIED IN THE SOILS REPORT STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- PLACE BOTTOM OF NEW FOOTINGS AT THE SAME ELEVATION AS THE EXISTING ADJACENT FOOTINGS, UNLESS NOTED OTHERWISE. THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED 7 VERT. TO 10 HOR.(COORD. W/ SOILS CONSULTANT), AND MAX HEIGHT OF ONE STEP TO BE 600mm.
- SLABS ON GRADE
  - PLACE SLABS ON GRADE ON MATERIAL CAPABLE OF SAFELY SUPPORTING 25 kPa WITHOUT SETTLEMENT RELATIVE TO THE BUILDING FOUNDATIONS.
  - PROOF-ROLL EXISTING FILL MATERIAL. REMOVE ANY LOOSE OR SOFTENED AREAS BENEATH SLAB-ON-GRADE BEFORE PLACING GRANULAR FILL.
  - APPROVED GRANULAR FILL UNDER ALL SLABS ON GRADE SHALL BE COMPACTED IN 150 mm (6") LAYERS TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). FOLLOW INSTRUCTIONS OF SOIL REPORT.
  - BEFORE CASTING THE SLAB PLACE 200 mm (8") OF 19 mm (3/4") CLEAR CRUSHED STONE OVER THE SUB-BASE AND THOROUGHLY ROLL AND CONSOLIDATE TO THE LEVELS REQUIRED. FOLLOW INSTRUCTIONS OF SOIL REPORT.
- FOUNDATION WALLS WITH BACKFILL ON BOTH SIDES TO BE BACKFILLED SYMMETRICALLY, UNLESS TEMPORARY SHORING FOR THE WALL IS PROVIDED.
- ANY HORIZONTAL CONSTRUCTION JOINTS IN FOUNDATION WALLS TO BE APPROVED BY THE ENGINEER.
- DO NOT PLACE BACKFILL AGAINST WALLS RETAINING EARTH (OTHER THAN CANTILEVERED RETAINING WALLS) UNTIL THE WALLS AND THE FLOOR CONSTRUCTIONS AT THE TOP AND BOTTOM OF THE WALLS HAVE BEEN CAST AND HAVE ATTAINED 100% OF THEIR DESIGN STRENGTH.

**MASONRY**

- CONCRETE MASONRY UNITS SHALL CONFORM TO THE LATEST CSA CAN/CSA-A165 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 15MPa BASED ON NET CROSS-SECTIONAL AREA.
- REINFORCING BARS SHALL CONFORM TO CAN/CSA G30.18 GRADE 400W FOR REINFORCING STEEL WITH MINIMUM YIELD STRENGTH OF FY = 400 MPa.
- TYPE S MORTAR SHALL BE USED THROUGHOUT FOR LOAD BEARING BLOCK. TYPE N MORTAR SHALL BE USED FOR BRICK VENEER OR DECORATIVE NON-LOAD BEARING BLOCK. MORTAR TYPE S: MIN. COMPRESSIVE STRENGTH - 12.0 MPa MORTAR TYPE N: MIN. COMPRESSIVE STRENGTH - 7.5 MPa GROUT SHALL CONFORM TO CAN/CSA A179 GROUT MIN. COMPRESSIVE STRENGTH - 20 MPa
- ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF LATEST CSA STANDARDS CAN/CSA-A370, CAN/CSA-A371 AND CSA S304.
- ALL MASONRY WALLS SHALL BE HORIZONTALLY REINFORCED. MINIMUM REQUIREMENTS WITH (4.76 mm Ø) HEAVY DUTY "LADDER" TYPE JOINT REINFORCEMENT (OR APPROVED EQUAL) AND CONTINUOUS REINFORCEMENT AT EVERY SECOND COURSE (400 mm/16").
  - ALL JOINT REINFORCEMENT SHALL BE HOT-DIPPED GALVANIZED.
  - REINFORCEMENT SHALL BE LAPPED A MINIMUM OF 300mm (12") AT ALL JOINTS.
  - PREFABRICATED CORNER AND TEE REINFORCEMENT SHALL BE USED AT ALL WALL INTERSECTIONS.
  - REINFORCEMENT SHALL BE PLACED AS TO PROVIDE 16 mm (5/8") MORTAR COVER ON THE EXTERIOR FACE OF WALL AND 12 mm (1/2") COVER ON THE INTERIOR FACE OF WALL.
- UNLESS NOTED OTHERWISE, PROVIDE CONTINUOUS BOND BEAMS (REINFORCED WITH 1-15M) AT UNDERSIDE OF EACH FLOOR, ROOF AND AT TOP OF PARAPETS. ALSO PROVIDE BOND BEAMS AT TOP AND BOTTOM OF OPENINGS AND EXTEND 600mm PAST CORNERS. REINFORCE BOTTOM BOND BEAM WITH 1-15M. REINFORCE TOP BOND BEAM AS FOLLOWS:
  - SPANS LESS THAN 1500 mm
  - 200 mm DEEP BOND BEAM c/w 1-15M FULL LENGTH
  - SPANS 1500 mm TO 3000 mm
  - 400 mm DEEP BOND BEAM c/w 2-15M FULL LENGTH
- IN SEISMIC ZONES, IN ADDITION TO NOTE # 6 PROVIDE CONTINUOUS BOND BEAMS (REINFORCED WITH 1-15M) AT MAXIMUM VERTICAL INTERVALS OF 2400 mm O.C.
- ALL TIES FOR MASONRY VENEER SHALL BE DESIGNED AND SUPPLIED BY THE MASONRY CONTRACTOR IN ACCORDANCE WITH LATEST CSA STANDARDS S304 AND CAN/CSA-A370.
- ALL BLOCK MASONRY UNITS SHALL BE CONSTRUCTED WITH FULL HEAD JOINTS, AND FULL BED JOINTS UNDER THE FULL BEARING AREAS OF THE FACE SHELLS, AND UNDER WEBS SURROUNDING THOSE CELLS TO BE FILLED WITH GROUT.
- WHERE MASONRY THICKNESS CHANGES, GROUT 100% SOLID MIN. 200mm (8") THE LOWER/THICKER PORTION OF THE WALL.
- GROUT 100% SOLID BLOCKS AT PARAPETS.
- THE INTERSECTION OF ALL MASONRY WALLS SHALL BE TOOTHED OR CONTINUOUSLY REINFORCED WITH JOINT REINFORCEMENT.
- ALL MASONRY BENEATH CONCENTRATED LOADS (SUCH AS BEAMS, LINTELS, AND JOISTS) SHALL BE SOLID BLOCKS OR 100% GROUTED BLOCKS FOR A MINIMUM DEPTH OF 400 mm (16") OR 3 TIMES THE LENGTH OF BEARING AND PROJECTING A MINIMUM OF 200 mm (8") OR THE LENGTH OF BEARING BEYOND EACH EDGE OF BEARING, UNLESS OTHERWISE NOTED OR SHOWN.
- MAINTAIN SUPPORT OF MASONRY LINTELS FOR A MINIMUM OF SEVEN DAYS OR UNTIL SUFFICIENT STRENGTH IS GAINED TO SAFELY SUPPORT LOADS IMPOSED.
- WHERE STEEL BEARING PLATES ARE SHOWN ON THE DRAWINGS, THEY SHALL BE ANCHORED WITH A MINIMUM OF TWO 15M X 300mm LONG x 75mm HOOKED ANCHOR RODS WELDED TO THE PLATES AND EMBEDDED INTO GROUT FILL AS NOTED ABOVE.
- SEE PLANS AND SCHEDULES REGARDING LINTEL SIZES FOR MASONRY WALLS AND VENEER FOR ALL OPENINGS OR RECESSES IN MASONRY NOT SHOWN ON DRAWINGS GREATER THAN 300mm (12") AND UP TO 1200mm (4 FT.), INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT. PROVIDE ONE L89X89X5.4 (L3 1/2 X 3 1/2 X 1/4") ANGLE FOR EACH 100 mm (4") THICKNESS OF WALL.
- ALL MASONRY WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION UNTIL ADEQUATE DIAPHRAGM ACTION CAN BE DEVELOPED BY INSTALLED FLOOR AND ROOF STRUCTURAL COMPONENTS.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY CONTROL JOINTS. SPACING OF CONTROL JOINTS IN ALL WALLS SHALL BE CONSTRUCTED AS PER PLAN, BUT SHALL NOT EXCEED 6000 mm (20'-0") O.C. ALL REINFORCING TO BE DISCONTINUOUS AT CONTROL JOINTS. CONTROL JOINTS SHALL BE CAULKED WITH FOAM BACKER ROD AND SHALL NOT BE FILLED WITH MORTAR.
- REINFORCED MASONRY:
  - CELLS TO BE REINFORCED SHALL BE KEPT CLEAN OF MORTAR.
  - GROUT FOR REINFORCED CELLS, BOND BEAMS, LINTELS AND CELLS CONTAINING DOWELS, ANCHOR BOLTS AND INSERTS PER NOTE #3.
  - PROVIDE MINIMUM 2-15M VERTICALS FULL HEIGHT AT ALL WALL ENDS, CORNERS, INTERSECTIONS AND OPENINGS UNLESS OTHERWISE NOTED ON DRAWINGS.
  - PROVIDE 1-15M VERTICAL FULL HEIGHT EACH SIDE OF MOVEMENT JOINTS.
  - DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCEMENT IN WALL.
  - PROVIDE THE FOLLOWING LAPS FOR THE REINFORCEMENT INDICATED.
    - 10M BARS = 450 mm (18")
    - 15M BARS = 600 mm (24")
    - 20M BARS = 900 mm (36")
- EMBEDDED ITEMS ARE NOT TO INTERFERE WITH THE INTEGRITY OF THE MASONRY WALL OR LOCATION OF REINFORCEMENT. PROVIDE FULLY GROUTED LINTEL BEAM FOR CONDUITS AND PIPES RUNNING HORIZONTALLY WITHIN WALL.
- PROVIDE COLD WEATHER PROTECTION AS REQUIRED BY CAN/CSA-A371.
- PROVIDE MOVEMENT JOINTS PER ARCHITECTURAL DRAWINGS. MAXIMUM DISTANCE BETWEEN MOVEMENT JOINTS TO BE 6000mm (20'-0"). COORDINATE LOCATION WITH ENGINEER.

**CAST-IN-PLACE CONCRETE AND REINFORCING**

- ALL CONCRETE WORK TO CONFORM TO THE LATEST REQUIREMENTS OF CSA STANDARDS A23.1, A23.2 & A23.3.

CONCRETE MIX PROPERTIES TABLE ABOVE BASEMENT					
CONCRETE	MIN 28 DAYS STRENGTH (MPa)	SLUMP mm	AIR CONTENT (%)	MAX. AGGREGATE SIZE (mm)	EXPOSURE CLASS
EXPOSED FOUNDATION WALLS, RETAINING WALLS,	35	80 (±30)	4-7	3/4"	F-2
INTERIOR COLUMNS / PIERS / WALLS/ PILE CAPS, FOUNDATION WALLS/ BEAMS / SLABS AND GRADE BEAMS	35	80 (±30)	0	3/4"	N
INT. S.O.G.	25	80 (±30)	0	3/4"	N
CAISSONS	35	80 (±30)	5-8	3/4"	F-1
EXTERIOR SLAB (UNREINFORCED)	32	80 (±30)	5-8	3/4"	C-2
EXTERIOR SLAB (REINFORCED)	35	80 (±30)	5-8	3/4"	C-1
NON-SHRINKABLE GROUT	30	AS PER MANUF. RECOMEND	0	-	N
SPREAD FOOTINGS	25	80 (±30)	0	3/4"	N
STRIP FOOTINGS, MAT PADS	25	80 (±30)	0	3/4"	N
90mm TOPPING	35	80 (±30)	0	5/8"	N
60mm - 20mm TOPPING	35	BY SUPPLIER	BY SUPPLIER	BY SUPPLIER	N

- WELDED WIRE FABRIC SHALL CONFORM TO CAN/CSA G30.5 WITH A MINIMUM YIELD STRENGTH OF FY = 450 MPa. WELDED WIRE FABRIC SHEETS SHALL BE LAPPED A MINIMUM OF 150mm (6") AT JOINTS (U.N.O.).
- REINFORCING BARS SHALL CONFORM TO LATEST CAN/CSA G30.18 GRADE 400W FOR REINFORCING STEEL WITH MINIMUM YIELD STRENGTH OF FY = 400 MPa.
- INSTALLATION OF THE REINFORCING STEEL SHALL CONFORM TO THE REINFORCING STEEL INSTITUTE OF CANADA "MANUAL OF STANDARD PRACTICE".
- ALL REINFORCING LAP SPICES SHALL CONFORM TO THE LATEST CSA STANDARD A23.3 AND ALL BAR SPICES SHALL BE CLASS "B" TENSION SPICES (U.N.O.)
  - NO BAR SPICES SHALL BE LESS THAN IN THE TABLE BELOW.
  - INCREASE HORIZONTAL SPICE LENGTHS IN THE TABLE BY 1.3 TIMES WHERE MORE THAN 300mm (12") OF FRESH CONCRETE IS CAST BELOW THE SPICE.

CONCRETE	TENSION SPICE			COMPRESSION SPICE
	25 MPa	30 MPa	35 MPa	
10M	400 (16")	400 (16")	400 (16")	450 (18")
15M	600 (24")	600 (24")	600 (24")	450 (18")
20M	800 (32")	800 (32")	800 (32")	600 (24")
25M	1200 (48")	1100 (44")	1000 (40")	750 (30")
30M	1400 (56")	1300 (52")	1200 (48")	900 (36")
35M	1650 (66")	1500 (60")	1400 (56")	1050 (42")

- EMBEDMENT OF DOWELS SHALL BE MIN. EQUAL TO TENSION SPICE LENGTH, UNLESS NOTED OTHERWISE.
- REINFORCING BARS TO BE SYMMETRIC OVER SUPPORTS AND SYMMETRIC IN SPANS, UNLESS NOTED OTHERWISE.
- REINFORCING STEEL SHALL BE FIXED IN PLACE DURING PLACEMENT OF CONCRETE. BAR SUPPORTS SHALL SHALL BE STEEL, CONCRETE OR PLASTIC.
- THE REINFORCING STEEL SHALL BE CLEANED FROM OIL, GREASE, RUST AND DEBRIS BEFORE PLACEMENT OF CONCRETE.
- CONCRETE PROPERTIES:
  - ALL CONCRETE SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 35MPa UNLESS OTHERWISE SPECIFIED.
  - THE SLUMP SHOWN IN THE TABLE MAY BE INCREASED WHEN SUPER-PLASTICIZER IS USED.
- DO NOT ADD WATER TO CONCRETE UNLESS WRITTEN APPROVAL GIVEN BY THE ENGINEER. IF HIGHER SLUMP CONCRETE IS DESIRED, CONCRETE SUPPLIER SHALL DESIGN AND SUPPLY ACCORDINGLY.
- CONCRETE FORMWORK TOLERANCES SHALL CONFORM TO LATEST CSA STANDARD A23.1, UNLESS NOTED OTHERWISE.
- CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH LATEST CSA A23.1.
- VIBRATE ALL CONCRETE AT THE TIME OF POURING.
- CONTROL JOINTS IN SLABS ON GRADE SHALL BE MIN. 1/3 (SEE TYP DETAIL), MAX. DISTANCE BETWEEN CONTROL JOINTS IN SLABS-ON-GRADE SHALL BE LESS THAN THE GREATER OF 25 x t OR 3000 mm (10'-0") UNLESS NOTED OTHERWISE. CONTROL JOINTS IN EXTERIOR FOUNDATION WALLS TO BE AT MAX. 3000mm (10'-0") U.N.O.
- SUPPLY AND SET ANCHOR BOLTS, P.C. CONNECTIONS, SLEEVES, PIPE HANGERS, JOISTS AND OTHER INSERTS AND OPENINGS AS INDICATED OR SPECIFIED ELSEWHERE. FOR BEAMS AND COLUMNS, NO SLEEVES, DUCTS, PIPES OR OTHER OPENINGS SHALL PASS VERTICALLY OR HORIZONTALLY EXCEPT WHERE EXPRESSLY DETAILED ON STRUCTURAL DRAWINGS OR WHERE APPROVED IN ADVANCE BY ENGINEER. FOR SLABS AND WALLS: ALL SLEEVES AND OPENINGS GREATER THAN 100 mm (4") IN ANY DIMENSION OR REQUIRING THE CUTTING OF ANY REINFORCEMENT, AND NOT INDICATED ON STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE ENGINEER. FOR MULTIPLE OPENINGS OR SLEEVES: IF WITHIN 600mm (24") OF EACH OTHER CONSULT ENGINEER FOR DIRECTION. DO NOT MAKE HOLES IN SLABS CLOSER THAN 24" TO EDGE OF COLUMNS.
- CAST IN ANCHOR BOLTS SHALL CONFORM TO THE LATEST CSA STANDARD G40.21 OR ASTM F1554 WITH A MINIMUM YIELD STRENGTH OF 250 MPa AND SHALL BE SET TRUE AS TO LOCATION, ELEVATION AND PROJECTION TO THE FOLLOWING TOLERANCES: ANCHOR BOLT LOCATION = ± 3mm (1/8") ANCHOR BOLT PROJECTION = ± 6mm (1/4")
- CONSTRUCTION JOINTS FOR WALLS ARE BASED UPON VERTICAL JOINTS AT A MAXIMUM SPACING OF 10000mm (30'-0"). UNLESS CONTROL JOINTS ARE PROVIDED AS PER TYPICAL DETAIL. TOTAL LENGTH OF POUR TO BE DISCUSSED WITH ENGINEER PRIOR TO PROCEEDING.
- CONSTRUCTION JOINTS FOR WALLS, SLABS, AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY, JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS, AT MID SPAN IF POSSIBLE AND BE CLEAR OF SUPPORTS AND POINT LOADS.
- INSERTS, FRAME-OUTS, SLEEVES, BRACKETS, CONDUITS AND FASTENING DEVICES, SHALL BE INSTALLED AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT SHALL NOT IMPAIR THE STRUCTURAL STRENGTH OF THE SYSTEM, BE SO INSTALLED THAT THEY SHALL NOT REQUIRE THE CUTTING, BENDING, OR DISPLACEMENT OF THE REINFORCING OTHER THAN AS SHOWN ON THE TYPICAL DETAILS.
- ELECTRICAL CONDUITS SHALL NOT PASS THROUGH A COLUMN. SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 SLAB THICKNESS OR WALL OR BEAM WHICH IT IS EMBEDDED, SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTER UNLESS APPROVED AND HAVE A MINIMUM CONCRETE COVER OF 25mm (1") AND UNLESS SPECIFICALLY PERMITTED OTHERWISE, SHALL NOT RUN HORIZONTALLY IN A CONCRETE WALL.
- CONFORM TO THE CONCRETE COVER REQUIREMENTS OF LATEST CSA A23.1 AND THE FOLLOWING, UNLESS NOTED OTHERWISE:
  - FOR CONCRETE CAST AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH - 75mm

NOTES:

- THE SLAB COVERS IN TABLE 1, 2 AND 3 ARE FOR CONCRETE NOT PROTECTED BY A MEMBRANE OR A CORROSION INHIBITOR. FOR PARKING GARAGE SLABS - SEE TABLE 4.
- FOR COLUMN COVERS TO MATCH REINFORCEMENT EXCEEDING 63mm WITH A 4 HOUR FIRE RATING PROVIDE WIRE MESH USING 1.57mmØ 100mm EA WAY.
- THE COVER FOR A BUNDLE OF BARS SHALL BE THE SAME AS THAT FOR A SINGLE BAR WITH AN EQUIVALENT AREA.
- PROVIDE COVER FOR MINIMUM 2 HOURS FIRE RATING UNLESS OTHERWISE NOTED.
- REINFORCED CONCRETE WALLS WHICH MAY BE EXPOSED TO FIRE ON BOTH SIDES SIMULTANEOUSLY SHALL HAVE THE MINIMUM COVER REQUIREMENTS FOR COLUMNS.

TABLE 1 MINIMUM CONCRETE COVER FOR ELEMENTS NOT EXPOSED TO CHLORIDES NOR FREEZING AND THAWING (mm)					
ELEMENTS	COMMENTS	BAR SIZE	FIRE RATING		
			≤ 2	3	4
WALLS	FOUNDATION WALLS, RETAINING WALLS	ALL BAR SIZES	50		
		Ø ≤ 25M	25		
	FOUNDATION WALLS, SHEAR WALLS (e) RETAINING WALLS AND MISC. WALLS	30M	30		
		35M	35		
COLUMNS	COLUMNS	Ø ≤ 30M	40	55	
		35M			
	SLABS AND BEAMS	SLABS	Ø ≤ 25M	25	35
			30M		
SLABS AND BEAMS	BEAMS	Ø ≤ 25M	30	40	
		30M			
	SLABS AND BEAMS	BEAMS	35M	35	
			45M	45	

TABLE 2 MINIMUM CONCRETE COVER FOR ELEMENTS EXPOSED TO FREEZING AND THAWING (mm)					
ELEMENTS	COMMENTS	BAR SIZE	FIRE RATING		
			≤ 3	4	
WALLS	FOUNDATION WALLS, RETAINING WALLS	ALL BAR SIZES	50		
		Ø ≤ 25M	40		
	FOUNDATION WALLS, SHEAR WALLS (e) RETAINING WALLS AND MISC. WALLS	30M	45		
		35M	55		
COLUMNS	COLUMNS	Ø ≤ 30M	45	55	
		35M			
	SLABS AND BEAMS	SLABS AND BEAMS	Ø ≤ 25M	40	45
			30M		
SLABS AND BEAMS	SLABS AND BEAMS	35M	55		
		45M	70		

TABLE 3 MINIMUM CONCRETE COVER FOR ELEMENTS EXPOSED TO CHLORIDES (mm)				
ELEMENTS	COMMENTS	BAR SIZE	FIRE RATING	
			≤ 4	
WALLS	FOUNDATION WALLS, RETAINING WALLS AND MISC. WALLS (e)	Ø ≤ 25M	60	
		30M	60	
		35M	70	
		45M	90	
COLUMNS	COLUMNS	Ø ≤ 30M	60	
		35M	80	
		45M	80	
		55M	105	
SLABS AND BEAMS	SLABS AND BEAMS	Ø ≤ 25M	60	
		30M	70	
		35M	90	
		45M	90	

TABLE 4 MINIMUM CONCRETE COVER FOR ELEMENTS OF PARKING GARAGE PROTECTED BY MEMBRANE AND CORROSION INHIBITOR "M"				
ELEMENTS	COMMENTS	BAR SIZE	TOP COVER	BOT. COVER
			NORM./SEVERE	NORM./SEVERE
WALLS	FOUNDATION WALLS, RETAINING WALLS AND MISC. WALLS (e)	Ø ≤ 20M	≤ 4	≤ 2 3 4
			40	30 35 40
			30M	45
			35M	55

**NOTE TO CONTRACTOR:**

DO NOT SCALE DRAWINGS. CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

THE OWNER/ARCHITECT/CONTRACTOR IS ADVISED THAT D.F. ENGINEERING INC. CANNOT CERTIFY ANY COMPONENT OF THE SITE WORKS NOT INSPECTED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY D.F. ENGINEERING INC. PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR INSPECTION.

ISSUED FOR BUILDING PERMIT	1	2025-10-06
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**DFE**  
DOYTOCH & FILO ENGINEERING INC.  
Structural Engineers

Phones: (647) 838-4825 • (905) 719-1482

PROJECT  
**ST. ALOYSIUS CATHOLIC ELEMENTARY SCHOOL ADDITION**

904 CONNAUGHT STREET, KITCHENER, ON

DRAWING  
**GENERAL NOTES**

Design By:	TD/AF
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**STRUCTURAL STEEL**

- ALL STRUCTURAL STEEL AND JOIST DESIGN CONNECTIONS AND DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST CSA STANDARD S16.
  - REFER ALSO TO NOTES UNDER PLANS.
- STRUCTURAL STEEL SHALL CONFORM TO LATEST CAN/CSA-G40-20, AND CAN/CSA-G40-21
  - GRADE 350W CLASS C FOR I.S.S.
  - GRADE 350W FOR W SHAPES, S SHAPES, AND TEES.
  - GRADE 300W FOR CHANNELS, ANGLES, PLATES, RODS.
- BOLTED CONNECTIONS SHALL USE ASTM A325 BOLTS. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325. ANCHOR RODS SHALL BE FABRICATED FROM STEEL ROD CONFORMING TO CSA STANDARD G40.21 GRADE 300W.
- SHEAR STUDS TO CONFORM LATEST ASTM A108.
- WELDING MATERIALS TO CONFORM TO LATEST CSA W48.
- WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF LATEST CSA STANDARD W59.
- FILLET WELDS SHALL BE 6mm (1/4") MIN. U.N.O. BOLTS SHALL BE A325 19mm (3/4") MIN. U.N.O. BOLTED CONNECTIONS SHALL HAVE MIN. OF TWO BOLTS IN EACH CONNECTED PIECE. BOLTED CONNECTIONS SHALL BE DESIGNED AS BEARING CONNECTIONS U.N.O.
- STEEL COATINGS - STRUCTURAL STEEL SHALL BE CLEANED AND PREPARED TO CONFORM TO CSA LATEST STANDARD S16.
  - INTERIOR STRUCTURAL STEEL SHALL BE PRIMED AND PAINTED AS PER LATEST CSA/CAN-S16.
  - EXPOSED STEEL TO BE HOT DIP GALVANIZED IN ACCORDANCE TO LATEST CAN/CSA-G164. TOUCH UP OF WELDS AND CUTS OF GALVANIZED MEMBERS TO BE DONE WITH A MINIMUM OF 3 COATS OF ZINC RICH PAINT.
  - INTERIOR STEEL MEMBERS THAT ARE TO BE PROTECTED BY A CEMENTITIOUS FIRE PROOFING SHALL BE CLEANED AND REMAIN UNCOATED.
- FABRICATOR SHALL DESIGN CONNECTIONS IN ACCORDANCE WITH THE 2024 OBC FOR THE FORCES SHOWN ON THE DRAWINGS. BEAM CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF 50% OF THE BEAM SHEAR CAPACITY IF FACTORED DESIGN FORCES ARE NOT SHOWN ON THE DRAWINGS.
- MOMENT FRAMES CONNECTIONS TO BE CONTINUOUS COLUMN / INTERRUPTED BEAM TYPE U.N.O.
- WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN CONNECTIONS FOR 100% SECTION CAPACITY OF THE SMALLER MEMBER JOINED.
- COLUMN CAP PLATES TO BE MIN. 16mm (5/8") THICK U.N.O. COLUMN BASE PLATES TO BE MIN. 20mm (3/4") THICK U.N.O. HSS COLUMNS TO HAVE MIN. 10mm (3/8") THICK CAP PLATE WELDED ALL-AROUND U.N.O.
- ALL BEAMS CANTILEVERED OR CONTINUOUS OR SUPPORTED OVER A COLUMN OR OTHER SUPPORT, AND BEAMS SUPPORTING POINTS OF CONCENTRATED LOAD, SHALL HAVE A MIN. OF 2-10 mm (3/8") STIFFENERS EACH SIDE OF WEB U.N.O.
- TOP OF COLUMNS WHICH ARE NOT BRACED BY JOISTS OR BEAMS SHALL BE BRACED DIAGONALLY TO THE ROOF OR FLOOR BY A MINIMUM OF 4L76 x 76 x 6.4mm (L3 x 3 x 1/4") ANGLES FOR INTERIOR COLUMNS. A MINIMUM 2-L76 x 76 x 6.4mm (L3 x 3 x 1/4") ANGLES FOR EXTERIOR COLUMNS. BRACING SHALL BE BETWEEN TOP OF COLUMN AND TOP CHORD OF JOISTS.
- COLUMNS BUILT INTO MASONRY, ABUTTED BY, OR FACED WITH MASONRY WALLS SHALL HAVE ADJUSTABLE ANCHORS AT 400 mm (16") O.C. SPACED VERTICALLY. WHERE STEEL PROVIDES LATERAL BRACING ONLY TO MASONRY, ANCHORS SHALL ALLOW VERTICAL MOVEMENT BETWEEN STEEL MEMBERS AND MASONRY.
- BEARING PLATES ARE TO BE CENTRED BELOW ALL BEAMS OR LINTELS U.N.O. ON THE DRAWINGS. WELD TO BEARING PLATE WITH A MINIMUM 50 mm x 5 mm (2" x 3/16") FILLET ON BOTH SIDES OF BEAM.
- STEEL BEAMS AND LINTELS SHALL HAVE 200 mm (8") MINIMUM END BEARING ON MASONRY AND 65 mm (2 1/2") MINIMUM BEARING ON STEEL UNLESS INDICATED OTHERWISE.
- WHERE BACK-TO-BACK ANGLES ARE USED AS LINTELS OR SUPPORTS. STITCH WELD TOGETHER AT A MAXIMUM SPACING OF 300mm (12") O.C.
- ALL ROOF OPENINGS TO BE REINFORCED BY FRAMES PER TYP. DETAIL UNLESS NOTED OTHERWISE. MAXIMUM SPAN 2000 mm (6'-6"). FOR LARGER OPENING CONSULT STRUCTURAL ENGINEER. COORDINATE WITH MECHANICAL, ELECTRICAL AND SUB-TRADES TO AVOID INTERFERENCE WITH STRUCTURAL MEMBERS.
- PROVIDE TEMPORARY BRACING TO KEEP STRUCTURE SAFE AND PLUMB UNTIL PERMANENT BRACING SHOWN ON DRAWINGS INCLUDING FLOORS AND ROOFS IS CONSTRUCTED.

**METAL DECK**

- DESIGN METAL DECK IN CONFORMANCE WITH THE REQUIREMENTS OF LATEST CSA S136 FOR THE LOADS INDICATED ON THE DRAWINGS.
- UNLESS NOTED OTHERWISE, ROOF DECK SHALL BE 38 mm x 0.91 mm (1.5" x .036") VIC WEST STEEL INC. RD 938 (OR APPROVED EQUAL), MINIMUM 3 SPANS CONTINUOUS.
- UNLESS NOTED OTHERWISE, FLOOR DECK SHALL BE 38 mm x 0.76 mm (1.5" x .030") VIC WEST STEEL INC. HB938 (OR APPROVED EQUAL), MINIMUM 3 SPANS CONTINUOUS.
  - MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
  - WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS.
  - ESCALATORS, ELEVATORS, AND CONVEYING SYSTEMS.
  - GLASS BLOCK AND ITS ATTACHMENTS.
  - BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
  - NON - VERTICAL LOAD BEARING MASONRY, INCLUDING WALLS SERVING AS OR SUPPORTING GUARDS.
  - NON-STRUCTURAL CONCRETE TOPPINGS.
- DECK SHALL OVERLAP A MINIMUM OF 50 mm (2") AT ALL END JOINTS AND HAVE A MINIMUM BEARING LENGTH OF 50 mm (2") ON ALL STRUCTURAL STEEL.
- DECK HAS BEEN DESIGNED FOR DIAPHRAGM ACTION AND SHALL BE FASTENED AS FOLLOWS U.N.O.:
  - WELD DECK TO SUPPORTING STEEL WITH 20 mm (3/4") DIAMETER FUSED WELD AT TRANSVERSE WELD SPACING = 300 mm (12") O.C.
  - PERIMETER WELD SPACING = 300 mm (12") O.C.
  - SIDE LAP BUTT JUNCTION SPACING = 300 mm (12") O.C.
  - LONGITUDINAL WELD SPACING = 300 mm (12") O.C.
- DECK WELDS SHALL BE TOUCHED UP WITH APPROVED PAINT BY THE DECK ERECTOR.
- STEEL DECK WORK SHALL INCLUDE THE SUPPLY AND INSTALLATION OF ALL SHEET STEEL ANGLES, COVER PLATES, CLOSURES, STIFFENERS AND ANY OTHER ACCESSORIES REQUIRED.
- CUT OPENINGS AND REINFORCE EDGES AS REQUIRED FOR PIPES, DUCTS, ETC.
  - THE MAXIMUM SIZE OF AN UNREINFORCED OPENING IS 150 mm (6").
  - REINFORCE ALL OPENINGS LARGER THAN 150mm (6"), BUT NOT EXCEEDING 450 mm (18"), AS INDICATED BY THE METAL DECK SUPPLIER.
  - FOR OPENINGS GREATER THAN 450mm (18") NOT SHOWN ON THE DRAWINGS, CONTACT ENGINEER FOR DIRECTION.
- HANGER WIRE FOR SUSPENDED CEILINGS SHOULD PIERCE BOTH SIDES OF THE FLUTE AND BE LOOPED AROUND AND TIED.

**PRECAST CONCRETE ELEMENTS**

- ALL PRECAST ELEMENTS SHALL CONFORM TO THE LATEST CSA STANDARDS A23.1, A23.3, A23.4 AND CAN/CSA-S6 FOR ALL SPECIFIED DESIGN LOADS AND CARRY HANDLING STRESSES.
- ALL STRUCTURAL PRECAST AND CONNECTIONS TO BE ENGINEERED BY PRECAST SUPPLIER IN ACCORDANCE WITH THE 2024 OBC LATEST EDITION AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION. DRAWINGS SHALL HAVE THE STAMP OF A LICENSED PROFESSIONAL ENGINEER OF THE PROVINCE OF ONTARIO.
- SHOP DRAWINGS FOR PRECAST PANELS SHALL INCLUDE FULL LAYOUT, REQUIRED CONNECTION DETAILS, LAYOUT AND DETAILS OF REINFORCING STEEL, SUPPORTING SEATS, ETC.
- ALL PRECAST ELEMENTS SHALL BE ERECTED WITHIN ALLOWABLE TOLERANCES AS INDICATED OR SPECIFIED BY SUPPLIER. UNITS SHALL BE SET IN A TIGHT, LEVEL POSITION ON TRUE LEVEL BEARING SURFACE PROVIDED BY OTHERS. PRECAST UNITS SHALL BE FASTENED IN PLACE AS INDICATED ON REVIEWED SHOP DRAWINGS.
- SEE PRECAST MANUFACTURERS DRAWINGS AND DETAILS FOR PRECAST SLAB ARRANGEMENT DETAILS AND ACCESSORIES.
- PRECAST FLOOR / ROOF UNIT SUPPLIER TO PROVIDE ANTI-ROTATION BARS BETWEEN ALL PANEL ABUTMENT POINTS AND AS REQUIRED BY DESIGN UNLESS NOTED OTHERWISE ON DRAWINGS. FLOOR TO BE DESIGNED FOR DIAPHRAGM ACTION.
- CEMENT GROUT AT PANEL JOINTS AND CORES: 1 PART TYPE 10 PORTLAND CEMENT, 2.5 PARTS SAND, SUFFICIENT WATER FOR PLACEMENT AND HYDRATION.
- ALL JOINTS BETWEEN PRECAST FLOOR / ROOF UNITS INCLUDING JOINTS OVER LOAD BEARING WALLS OR SUPPORT STEEL BEAMS SHALL BE FULLY GROUTED.
- FIELD CUT HOLES AND OPENINGS UP TO 150 mm (6") DIAMETER FOR MECHANICAL TRADES. OPENINGS LARGER THAN 150 mm (6") TO BE LOCATED ON SHOP DRAWINGS AT THE TIME OF APPROVAL AND TO BE CUT IN THE FIELD. DO NOT CUT REINFORCING WITHOUT APPROVAL FROM PRE-CAST MANUFACTURER AND ENGINEER.

**CONCRETE BONDED TOPPING**

- WHERE NOTED ON DRAWINGS, PROVIDE A "BONDED TOPPING" AS FOLLOWS.
- CONFORM TO CAN/CSA-A23.1
- PREPARATION OF BASE SLAB SURFACE: ALL LAITANCE, DIRT, DUST, GREASE OR OTHER SUBSTANCES THAT WOULD INTERFERE WITH THE BOND BETWEEN THE BASE SLAB AND THE TOPPING SHALL BE REMOVED USING ONE OR MORE OF THE FOLLOWING METHODS:
  - WET OR DRY GRIFF SAND BLASTING.
  - HIGH PRESSURE WATER BLASTING.
  - MECHANICAL REMOVAL BY SCARIFIERS, SCRABBLERS OR GRINDING WHEELS.
  - POWER BROOMING AND VACUUMING.
  - ACID ETCHING (AFTER ACID ETCHING, THE SLAB SURFACE SHALL BE THOROUGHLY RINSED PRIOR TO THE APPLICATION OF THE BONDING AGENT. PROVIDE AND USE GOGGLES AND PROTECTIVE CLOTHING DURING PROCEDURES).
- PLACING BONDED TOPPING:
  - CONTACT THE TECHNICAL REPRESENTATIVE OF THE APPROVED BONDING AGENT SUPPLIER FOR TECHNICAL ASSISTANCE, ADVICE AND APPROVAL OF THE BASE SLAB SURFACE PRIOR TO APPLICATION OF AGENT.
  - CONTACT THE CONSULTANT FOR A REVIEW OF THE BASE SLAB PREPARATIONS PRIOR TO APPLICATION OF THE AGENT.
  - LATEX BONDING AGENT SHALL BE APPLIED TO BASE SLAB SURFACE IMMEDIATELY PRIOR TO PLACING THE CONCRETE TOPPING. IN STRICT ACCORDANCE WITH MANUFACTURERS DIRECTIONS.
  - CONCRETE FOR TOPPING: SEE CONCRETE SCHEDULE.
  - MINIMUM CONCRETE TOPPING THICKNESS IS 20mm
  - CONCRETE TOPPING SHALL BE REINFORCED WITH WELDED WIRE FABRIC 152X152 mm 18.7Xmm 18.7, UNLESS NOTED OTHERWISE.
  - FINISHING BONDED TOPPING SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY THE ARCHITECT.
  - CURING AND SEALING OF BONDED TOPPING: TOPPING SLAB SHALL BE KEPT CONTINUOUSLY MOIST FOR THE FIRST THREE DAYS AFTER PLACING AND THEN SPRAY CURED WITH SPECIFIED CURING/SEALING COMPOUND.

**OPEN WEB STEEL JOISTS**

- OPEN WEB STEEL JOISTS (OWSJS) SHALL CONFORM TO CSA STANDARDS S16 AND CAN/CSA-S136.
- WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD W59 AND SHALL BE UNDERTAKEN BY A FABRICATOR AND ERECTOR FULLY APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA STANDARD W47, DIVISION 1 AND DIVISION 2. FABRICATOR TO SUPPLY CERTIFICATION OF FUSION WELDING AND WELDING JOINT ONLY BE CARRIED OUT IN ACCORDANCE WITH OWNERS SAFETY REGULATIONS REGARDING WELDING.
- JOISTS TO BE DESIGNED FOR THE LOADS AS SPECIFIED ON DRAWINGS AND IN ACCORDANCE WITH THE 2024 OBC. DESIGN OF JOISTS SHALL ALSO INCLUDE ALL LOADS FROM MECHANICAL EQUIPMENT SUCH AS ROOF TOP UNITS, DUCTS AND PIPING.
- SHOP DRAWINGS OF JOIST DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION. JOIST DESIGN AND DETAILS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. JOIST DESIGN CALCULATIONS SHALL BE SUBMITTED FOR RECORD PURPOSES.
- PROVIDE SUFFICIENT CAMBER TO JOISTS TO ENSURE "0" CAMBER AFTER APPLICATION OF ALL DEAD LOADS SHOWN. ADJUST STIFFNESS AND REQUIRED CAMBER OF JOISTS ADJACENT TO MASONRY WALLS. STEEL BEAMS OF SHORTER SPAN AND THE LIKE TO PERMIT THE PROPER FASTENING OF THE STEEL DECK AS A GUIDE. LIMIT THE DIFFERENTIAL DEFLECTION OF THE ADJACENT JOIST, UNDER ALL DEAD LOADS, TO L/120, WHERE 'L' IS THE SPAN OF THE STEEL DECK PERPENDICULAR TO THE JOISTS.
- "TJ" ON PLANS DENOTES "THE JOIST". BOTTOM CHORD TO BE FRAMED INTO COLUMNS, BEAMS OR WALLS. ALL JOISTS AT COLUMNS TO BE THE JOISTS UNLESS OTHERWISE NOTED. THE JOIST CONNECTIONS SHALL BE BOLTED.
- WHERE THE JOISTS ARE INDICATED, DESIGN TOP AND BOTTOM CHORDS AND CONNECT TO COLUMNS TO SAFELY DEVELOP LOADS SHOWN OR A MINIMUM OF A 25 kN SPECIFIED LOAD IN TENSION OR COMPRESSION.
- DESIGN AND INSTALLATION OF ALL OWSJ BRIDGING SHALL BE IN ACCORDANCE WITH CSA S16. COMBINED DIAGONAL AND HORIZONTAL BRIDGING SHALL BE PROVIDED AT THE ENDS OF BRIDGING LINES AS REQUIRED. ENDS OF BRIDGING LINES SHALL BE ANCHORED TO STEEL, MASONRY OR OTHERWISE SHOWN AND BE CAPABLE OF RESISTING AN AXIAL LOAD OF AT LEAST 3 kN.
- BRIDGING SHOWN ON THE DRAWINGS IS INTENDED AS A GUIDELINE ONLY. DESIGN AND PROVIDE BRIDGING FOR ALL OWSJ AND TRUSSES AS PER CSA S16.
- OWSJS SHALL HAVE 100 mm (4") SHOE (U.N.O.)
- FOR OWSJ BEARINGS ON MASONRY, JOIST SUPPLIER SHALL DESIGN AND SUPPLY ALL BEARING PLATES AND BEARING PRESSURE SHALL NOT EXCEED 1.2 MPa (175 psi).
- ALL STEEL JOISTS SHALL BE WELDED TO STEEL BEAMS OR BEARING PLATES WITH A MINIMUM 50 mm x 5 mm (2" x 3/16") FILLET ON BOTH SIDES OF SHOES.
- ALL HANGERS, STUB COLUMNS, TRAPEZE BARS, ETC. THAT SUPPORT MECHANICAL, ELECTRICAL OR STRUCTURAL EQUIPMENTS, PIPES, DUCTS, CATWALKS, ETC. MUST BE CONNECTED TO AN OWSJ PANEL POINT OR WHERE THE WEB OF THE JOIST MEETS THE CHORD OF THE JOIST.

**NON-STRUCTURAL AND SECONDARY STRUCTURAL ELEMENTS**

- "NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT PART OF THE STRUCTURAL DESIGN SHOWN ON THESE DRAWINGS. SUCH ELEMENTS ARE DESIGNED, DETAILED AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THESE DRAWINGS OF DFE INC., WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS REQUIRED FOR THESE ELEMENTS. THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL ALSO PROVIDE ANY LETTERS REQUIRED BY BUILDING PERMIT AUTHORITIES.
- EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
  - ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, FLAG POSTS, CANOPIES, CEILING, MILLWORK, ETC.
  - LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
  - CLADDING, GLAZING, WINDOW MULLIONS, NON - VERTICAL LOAD INTERIOR AND EXTERIOR STUD WALLS, INCLUDING WALLS SERVING AS OR SUPPORTING GUARDS.
  - ARCHITECTURAL PRECAST, PRECAST CLADDING.
  - SKYLIGHTS.
  - MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
  - WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS.
  - ESCALATORS, ELEVATORS, AND CONVEYING SYSTEMS.
  - GLASS BLOCK AND ITS ATTACHMENTS.
  - BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
  - NON - VERTICAL LOAD BEARING MASONRY, INCLUDING WALLS SERVING AS OR SUPPORTING GUARDS.
  - NON-STRUCTURAL CONCRETE TOPPINGS.

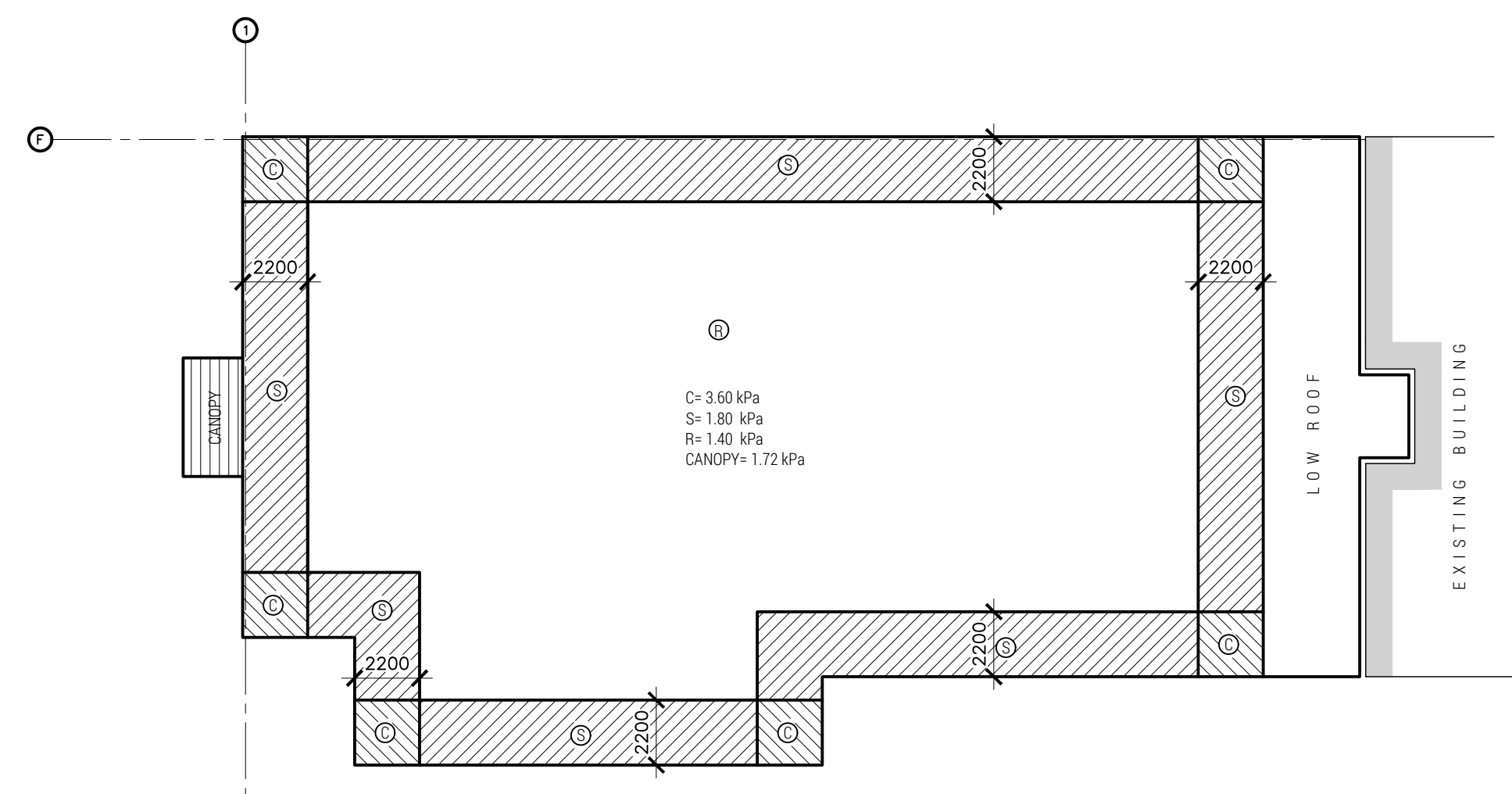
4" BRICK VENEER LOOSE LINTEL SCHED.		
MAX. CLEAR SPAN	SIZE	REMARKS
UP TO 1200 (4'-0")	L89x89x7.9 (L3 1/2" x 3 1/2" x 5/16")	
1201 TO 1800 (4'-0" TO 6'-0")	L127x89x8 (LLV) (L5" x 3 1/2" x 5/16" (LLV))	
1801 TO 2400 (6'-0" TO 8'-0")	L152x89x8 (LLV) (L6" x 3 1/2" x 5/16" (LLV))	
2400 TO 3000 (8'-0" TO 10'-0")	L152x89x9.5 (LLV) (L6" x 3 1/2" x 3/8" (LLV))	

NOTES:  
 1. LINTEL BEARING LENGTH TO BE MIN. 150mm (6")  
 2. ALL STRUCTURAL STEEL MEMBERS TO BE HOT DIPPED GALVANIZED.  
 3. SEE ARCHITECTURAL DRAWINGS FOR SPANS.

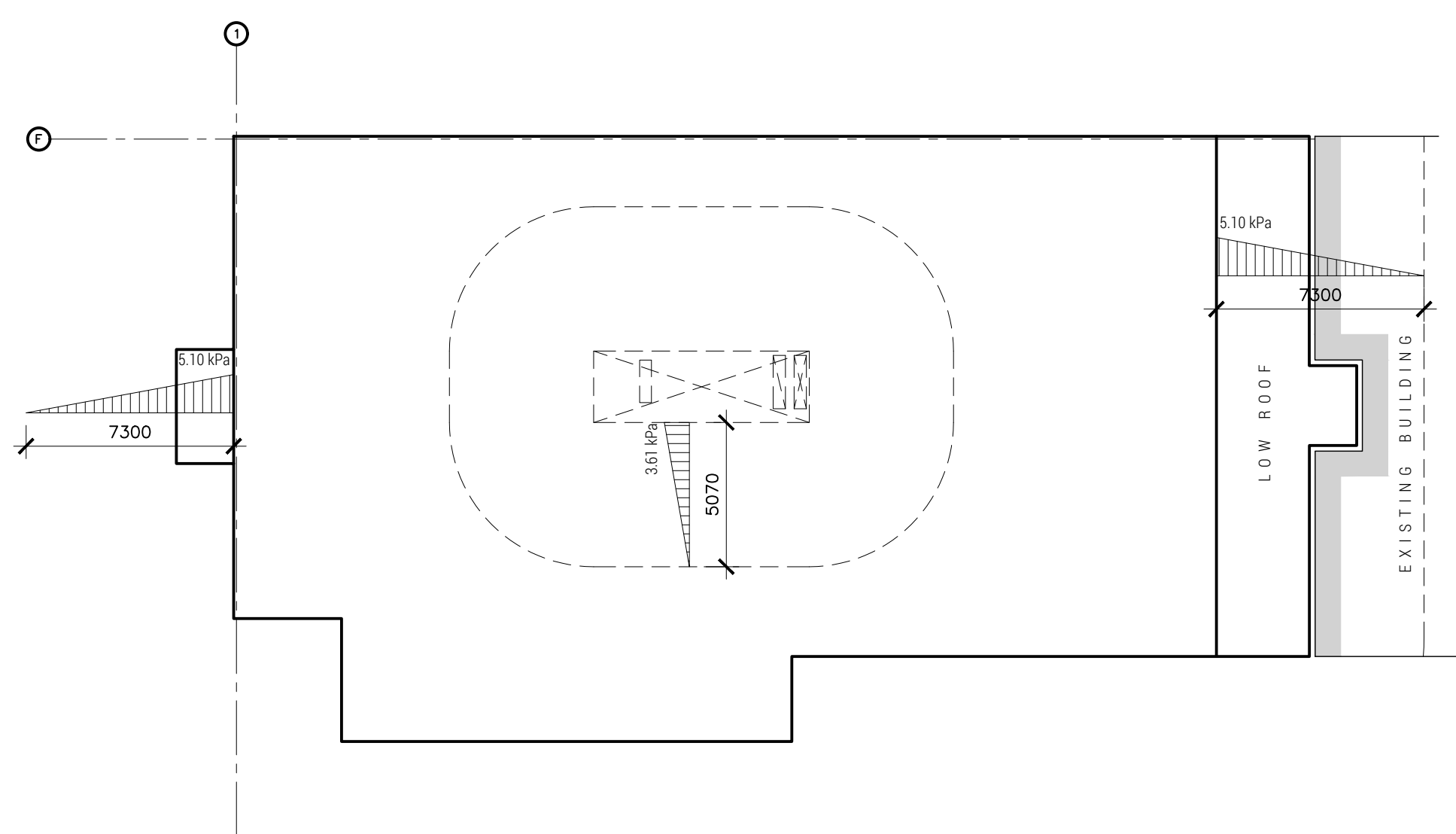
ABBREVIATIONS			
A.B	ANCHOR BOLT	HD.	HOOKED
ALT.	ALTERNATE	I.D.	INSIDE DIAMETER
ALUM.	ALUMINUM	KN.	KILONEWTON
ANCHS.	ANCHORS	kPa	KILOPASCAL
APPROX.	APPROXIMATELY	L.L.H.	LONG LEG HORIZONTAL
ARCH.	ARCHITECTURAL	L.L.V.	LONG LEG VERTICAL
B/F	BOTTOM FACE	L.P.	LOW POINT
B.PL.	BASE PLATE	LG.	LONG
BLC.	BLOCK	MAX.	MAXIMUM
BM.	BEAM	MECH.	MECHANICAL
BOT.	BOTTOM	METL.	METAL
BORG.	BEARING	MIN.	MINIMUM
BT.PL.	BENT PLATE	MISC.	MISCELLANEOUS
CW	COMPLETE WITH	m	METRE
CC	CENTRE TO CENTRE	mm	MILLIMETRE
C.J.	CONTROL JOINT	MPa	MEGAPASCAL
C.L.	CONCRETE LINTEL	N.I.C.	NOT IN CONTRACT
COL.	COLUMN	N.T.S.	NOT TO SCALE
CONC.	CONCRETE	No.	NUMBER
CONN.	CONNECTION	O.C.	ON CENTRE
CONSTRN	CONSTRUCTION	O.D.	OUTSIDE DIAMETER
CONT.	CONTINUOUS	O.H.	OVERHEAD
DEM.	DEMOLITION	OWSJ	OPEN WEB STEEL JOIST
DET.	DETAIL	PARTN	PARTITION
DIA.	DIAMETER	PL.	PLATE
DIM.	DIMENSION	R.C.	REINFORCED CONCRETE
DD.	DITTO	R.D.	ROOF DRAIN
DP.	DEEP	ROU	ROUGH OPENING
DWG.	DRAWING	REF.	REFERENCE
DWL.	DOWEL	REINF.	REINFORCED
E.F.	EACH FACE	RECD	REQUIRED
E.J.	EXPANSION JOINT	S.C.	SAVOUT
ELEC.	ELECTRICAL	S.D.F.	STEP DOWN FOOTING
EMBED.	EMBEDMENT	SECT.	SECTION
E.S.	EACH SIDE	S.L.H.	SHORT LEG HORIZONTAL
E.W.	EACH WAY	S.L.V.	SHORT LEG VERTICAL
EA.	EACH	S.O.G.	SLAB ON GRADE
EL.	ELEVATION	STL.	STEEL
EQ.	EQUAL	STIFF.	STIFFENER
EXTG.	EXISTING	STRUCT.	STRUCTURAL
F.F.	FACE TO FACE	T/O	TOP OF
FIN.	FINISHED	T.L.T.	LOWER LAYER
FLR.	FLOOR	T.U.L.	TOP UPPER LAYER
FNDN.	FOUNDATION	TYP.	TYPICAL
FTG.	FOOTING	U.N.O.	UNLESS NOTED OTHERWISE
GAUG.	GAUGE	UND.	UNDER
GALV.	GALVANIZED	VERT.	VERTICAL
G.RD.	GRADE	V.E.F.	VERTICAL EACH FACE
H.D.	HEAVY DUTY	V.I.F.	VERTICAL INSIDE FACE
H.D.G.	HOT DIPPED GALVANIZED	V.O.F.	VERTICAL OUTSIDE FACE
H.E.F.	HORIZONTAL EACH FACE	W.P.	WORKING POINT
H.O.F.	HORIZONTAL OUTSIDE FACE	W.W.M.	WELDED WIRE MESH
HORIZ.	HORIZONTAL	@	SPACED AT
H.P.	HIGH POINT		
HSS	HOLLOW STRUCTURAL STEEL		

DESIGN DATA TABLE		
BUILDING IMPORTANCE	HIGH	
FLOOR AND ROOF DESIGN LIVE LOADS ARE NOTED ON FRAMING PLANS		
SPECIFIED SNOW LOADS		
RAIN LOADING DESIGN DATA (1/50)	24h RAIN	119mm
SNOW LOADING DESIGN DATA (1/50)	Ss	2.0 kPa
	Sr	0.4 kPa
BASIC ROOF SNOW LOAD	S	2.3 kPa
ADDITIONAL SNOW ACCUMULATION IS SHOWN ON THE DRAWINGS.		
SPECIFIED WIND LOADS		
HOURLY WIND PRESSURE DESIGN DATA (1/50)	0.37 kPa	
WIND DESIGN CATEGORY	CATEGORY 2	
TERRAIN TYPE	'OPEN'	
SPECIFIED EARTHQUAKE LOADS		
SEISMIC LOADING DESIGN DATA	Sa (0.2, X <sub>0</sub> )	0.264
	Sa (0.5, X <sub>0</sub> )	0.254
	Sa (1.0, X <sub>0</sub> )	0.151
	Sa (2.0, X <sub>0</sub> )	0.0718
	Sa (5.0, X <sub>0</sub> )	0.0188
	Sa (10.0, X <sub>0</sub> )	0.00591
	PGV (X <sub>0</sub> )	0.16
	PGA (X <sub>0</sub> )	0.156
SITE CLASS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER	SITE CLASS	'D'
	Rd	1.5
SEISMIC FORCE MODIFICATION FACTORS FOR SEISMIC FORCE RESISTING SYSTEM	Ro	1.5
SEISMIC CATEGORY	SC2	

NOTES:  
 1. THE FOUNDATION WALLS HAVE BEEN DESIGNED ASSUMING THAT THEY ARE NOT SUBJECT TO HYDROSTATIC PRESSURE. ENSURE PROVISIONS HAVE BEEN MADE FOR APPROPRIATE DRAINAGE OF GROUNDWATER.  
 2. PRECAST CONTRACTOR: HOR. DESIGN FORCES BETWEEN WALLS AND FLOOR SLABS CAN BE REQUESTED FROM EOR.



GROSS SPECIFIED WIND UPLIFT



SNOW ACCUMULATION DIAGRAM

**NOTE TO CONTRACTOR:**  
 DO NOT SCALE DRAWINGS. CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

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ISSUED FOR BUILDING PERMIT	1	2025-10-06
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**DFE**  
**DOYTCHE & FILO ENGINEERING INC.**  
 Structural Engineers  
 Phone: (647) 836-4805 • (905) 719-1482

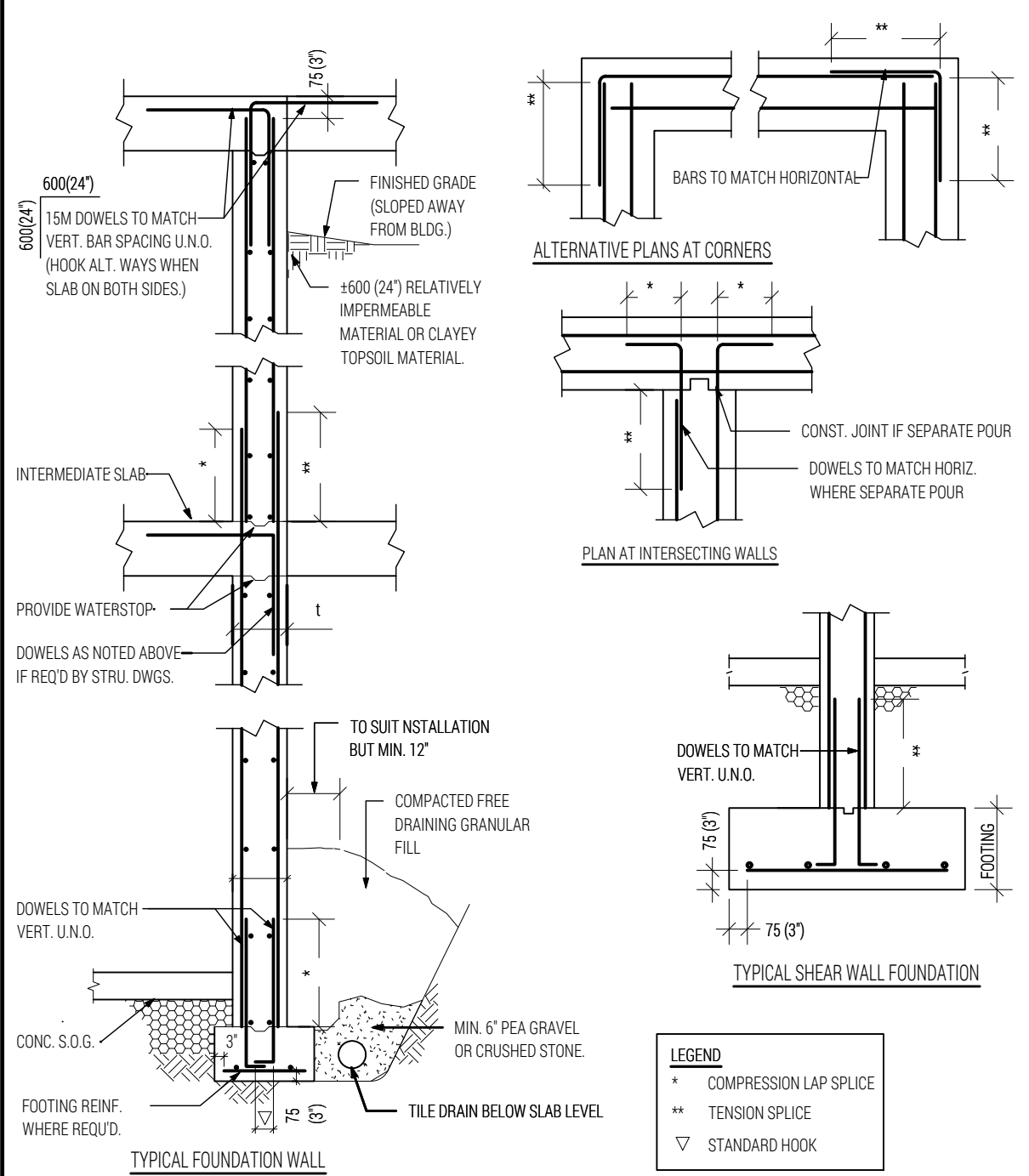
**LICENSED PROFESSIONAL ENGINEER**  
 T. N. DOYTCHEV  
 100113262  
 2025-10-06  
 PROVINCE OF ONTARIO

PROJECT: **ST. ALOYSIUS CATHOLIC ELEMENTARY SCHOOL ADDITION**  
 504 CONNAUGHT STREET, KITCHENER, ON

DRAWING: **GENERAL NOTES**

Design By:	TD/AF	Date:	2025-07-08
		Project No.:	25032601
Drawn By:	AF	Drawing No.:	
Scale:	AS NOTED		<b>S0.1</b>

### CONCRETE WALLS



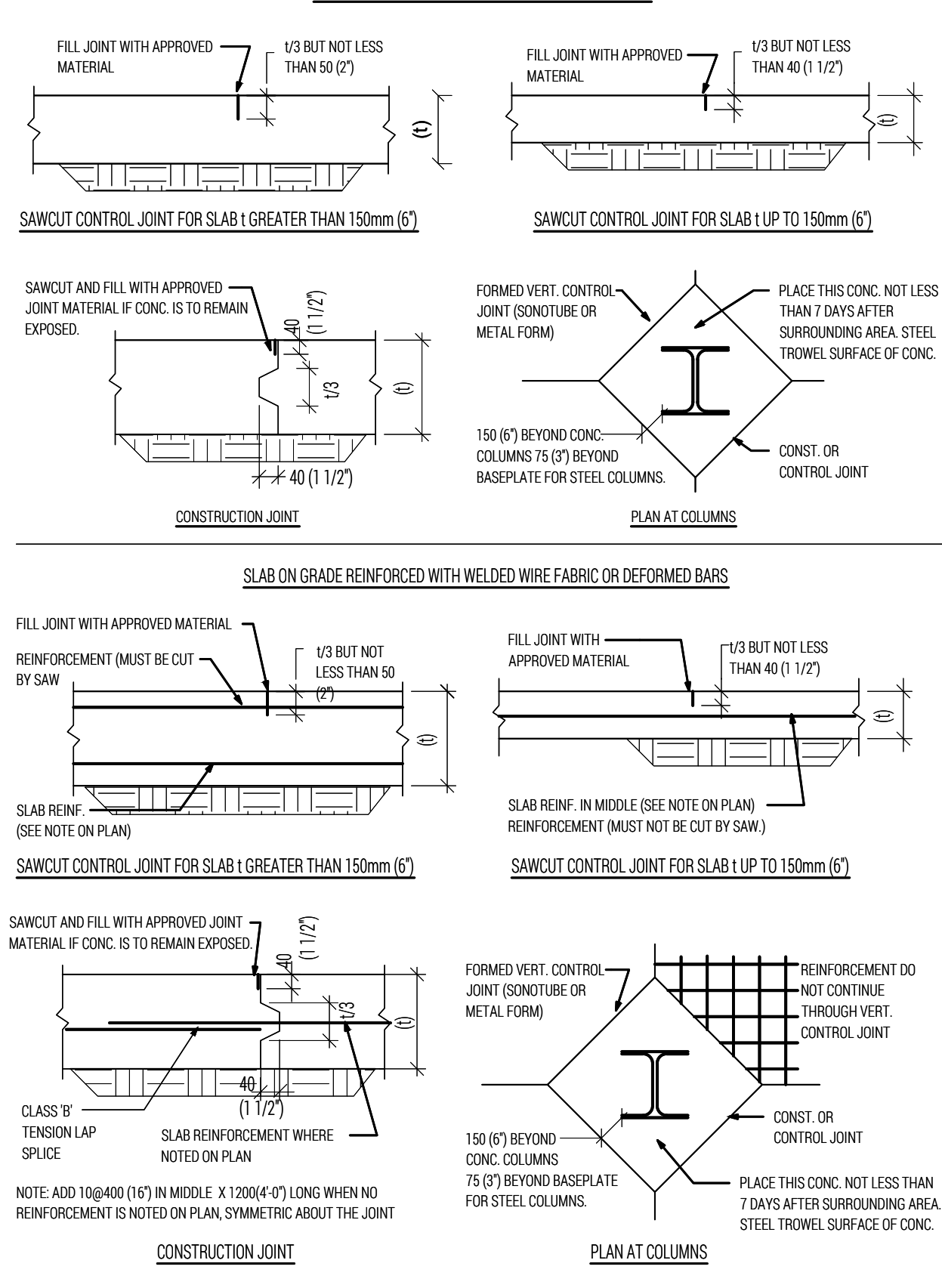
**MINIMUM REINFORCEMENT FOR CONCRETE WALLS TO BE AS FOLLOWS (UNLESS NOTED)**

VERT. U.N.D.	150	200	250	300	350
100/400	100/400	100/400	100/400	100/400	100/400
100/300	100/300	100/300	100/300	100/300	100/300
100/200	100/200	100/200	100/200	100/200	100/200
100/150	100/150	100/150	100/150	100/150	100/150
100/100	100/100	100/100	100/100	100/100	100/100
100/75	100/75	100/75	100/75	100/75	100/75
100/50	100/50	100/50	100/50	100/50	100/50

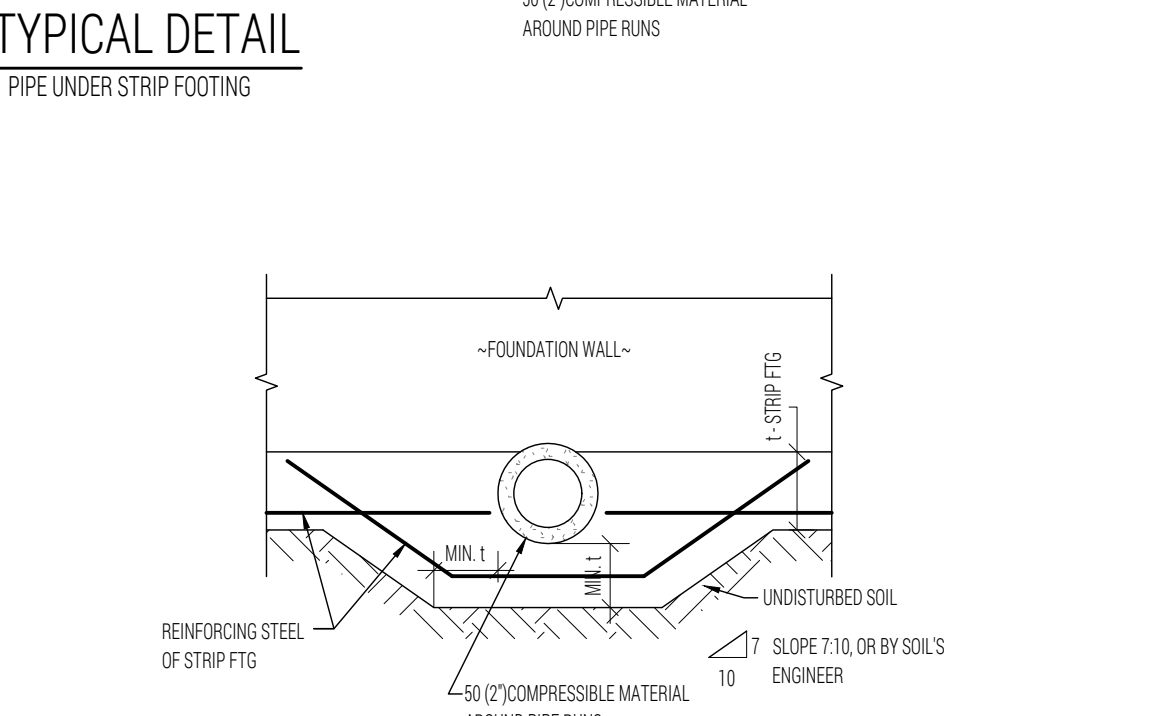
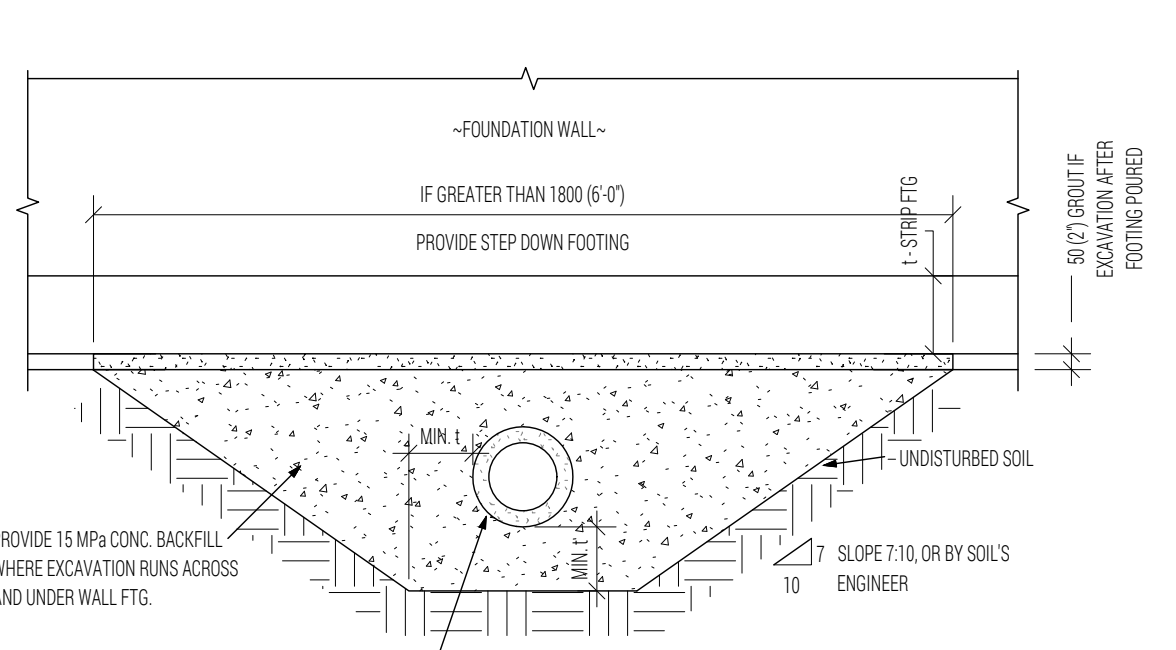
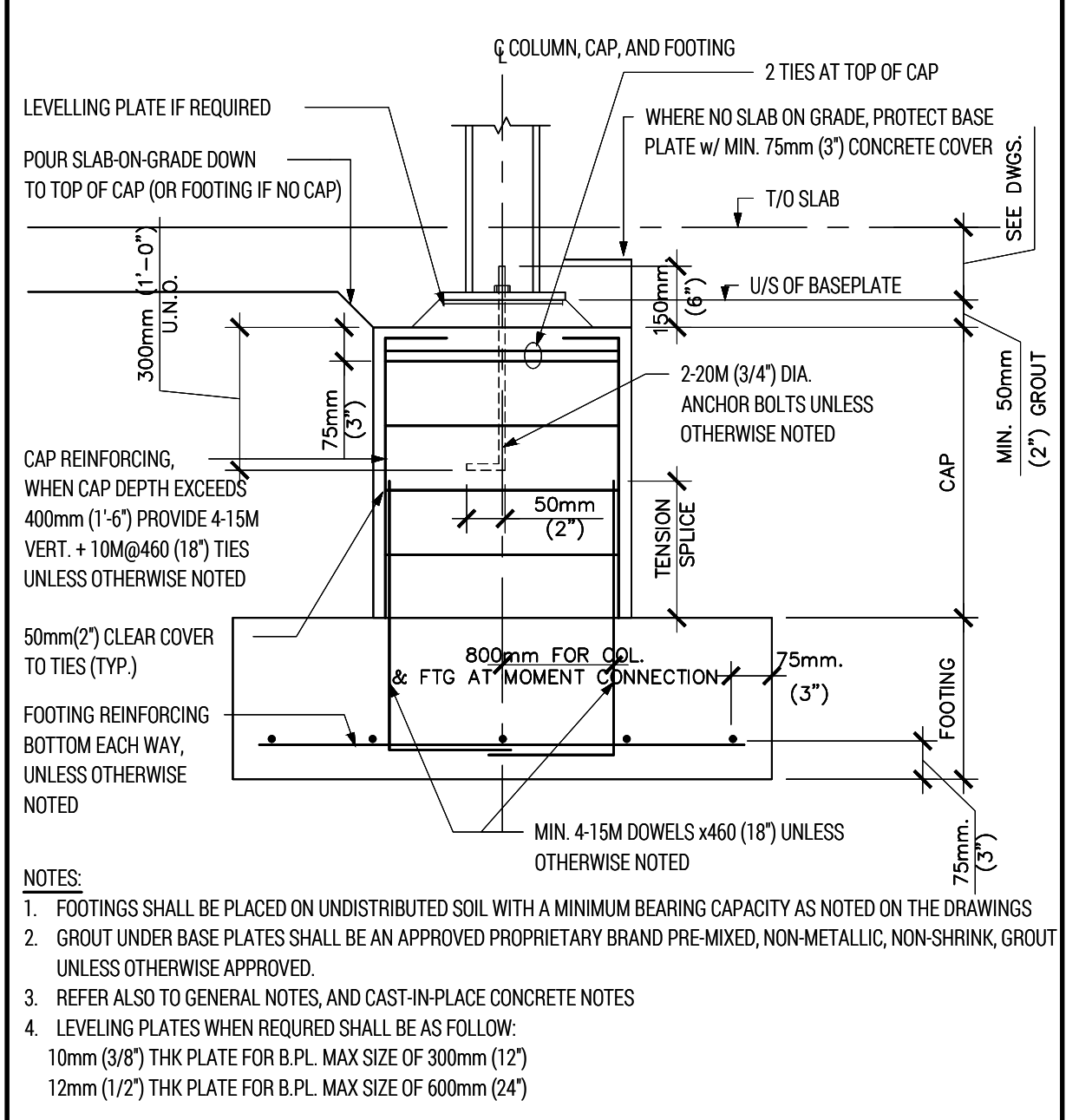
**NOTES:**

- LAP HORIZ. WALL REINF. WITH BASIC TENSION SPICE
- PROVIDE A MIN. OF 2-13M BARS IN ALL HEADS, SILLS, & JAMBS OF OPENINGS THROUGH CONC. WALLS, SUCH BARS TO EXTEND A MIN. OF 24" BEYOND EDGE OF OPENING.
- WALLS AND FOOTINGS ARE DESIGNED ASSUMING BOTH FACES ARE FORMED. IF WALL AND/OR FOOTINGS ARE TO BE PLACED DIRECTLY AGAINST SOIL (I.E. NO FORM USED), PERMISSION AND INSTRUCTIONS MUST BE OBTAINED FROM THE STRUCTURAL CONSULTANT.

### TYPICAL SLAB ON GRADE DETAILS



### TYPICAL STEEL COLUMN FOUNDATION

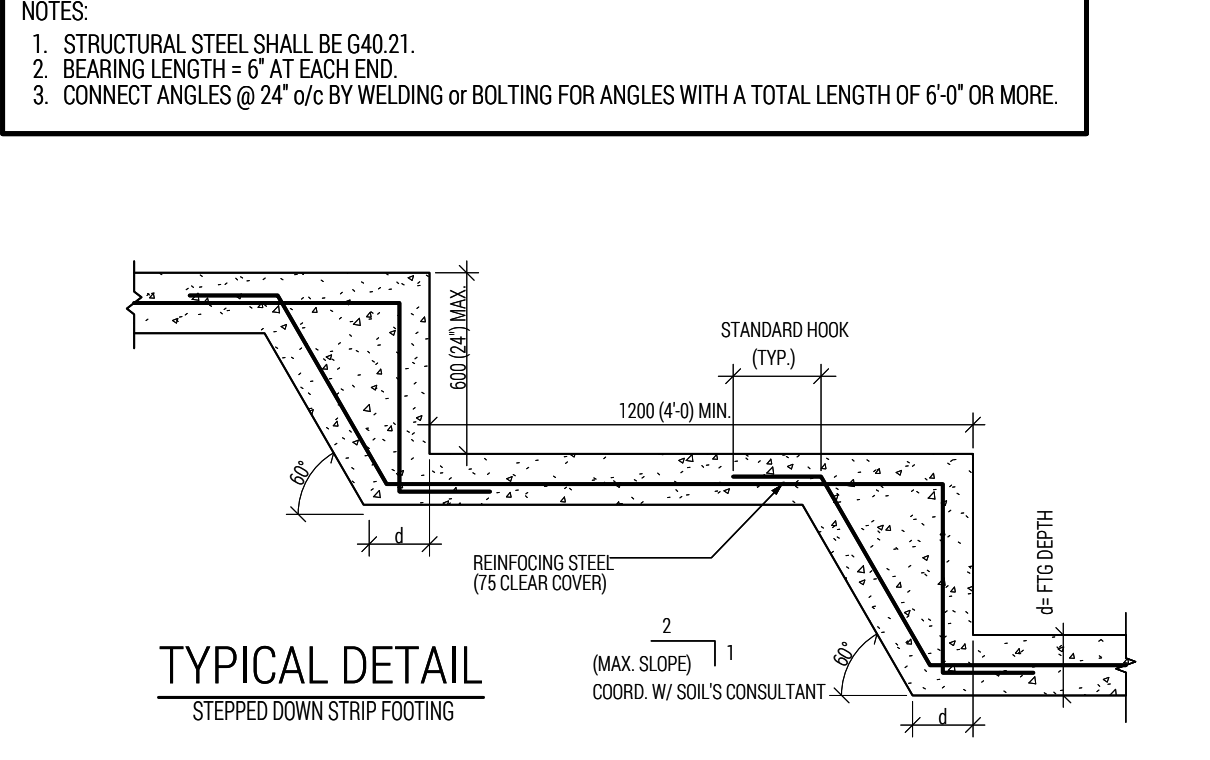


### NON-LOAD BEARING BLOCK LINTEL SCHED.

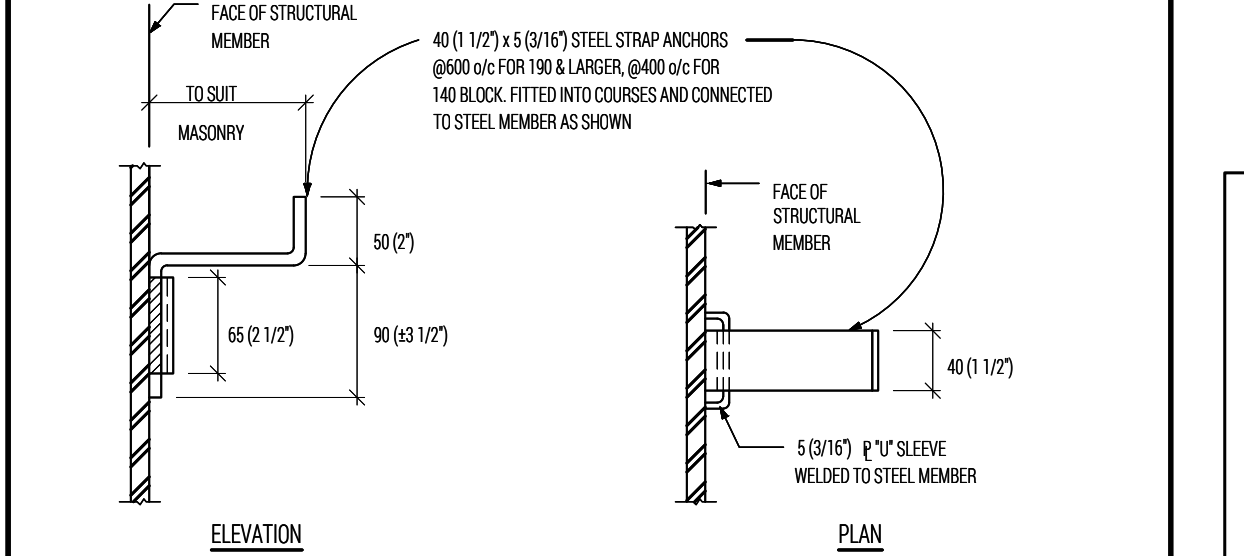
WIDTH	<1200 (<4'-0")		<1800 (<6'-0")		<2400 (<8'-0")		<3000 (<10'-0")		>3600 (>12'-0")		SECTION DETAIL
	VER 1	VER 2	VER 1	VER 2	VER 1	VER 2	VER 1	VER 2	VER 1	VER 2	
100 (4")	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	
150 (6")	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	
200 (8")	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	
250 (10")	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	
300 (12")	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	(1) L3 80/80/6 (L.L.V.) (2) L3 120/120/14 (L.L.V.)	

**NOTES:**

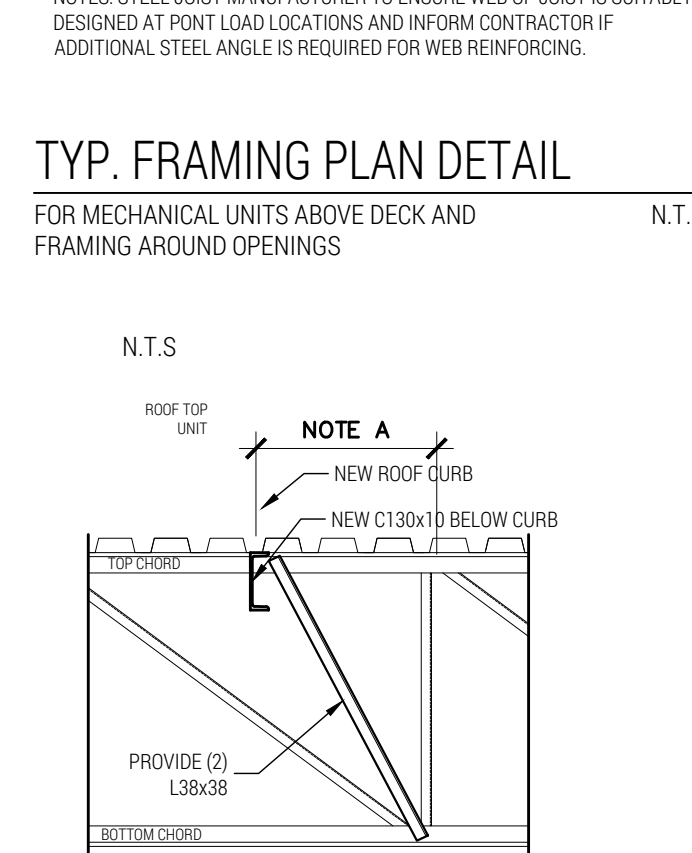
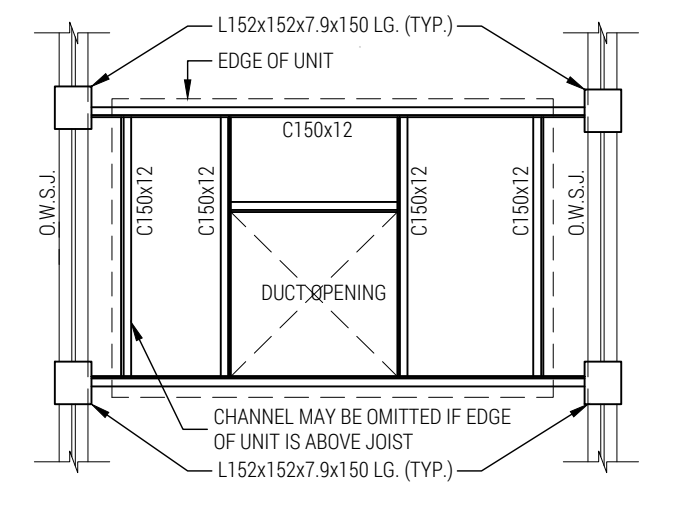
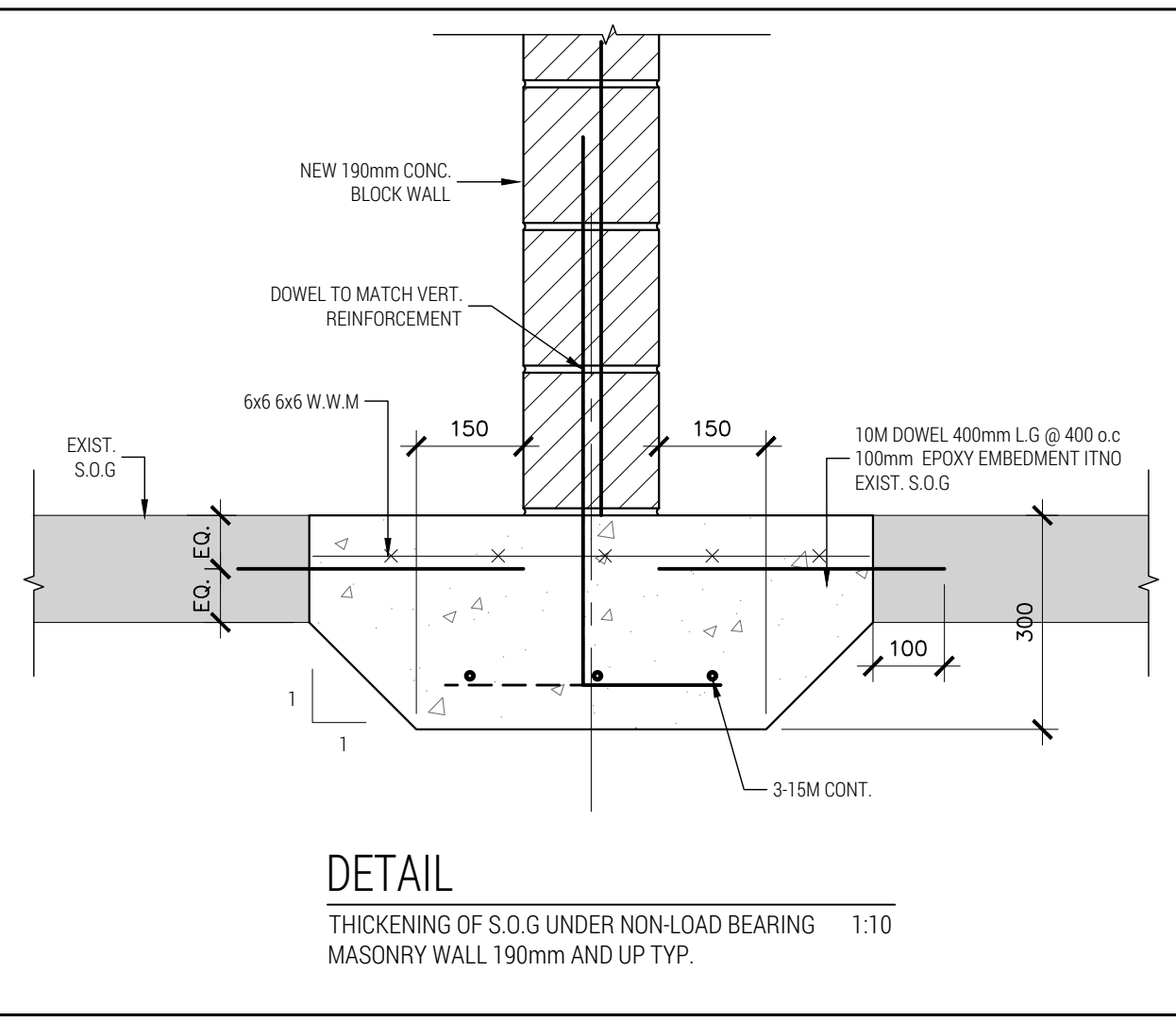
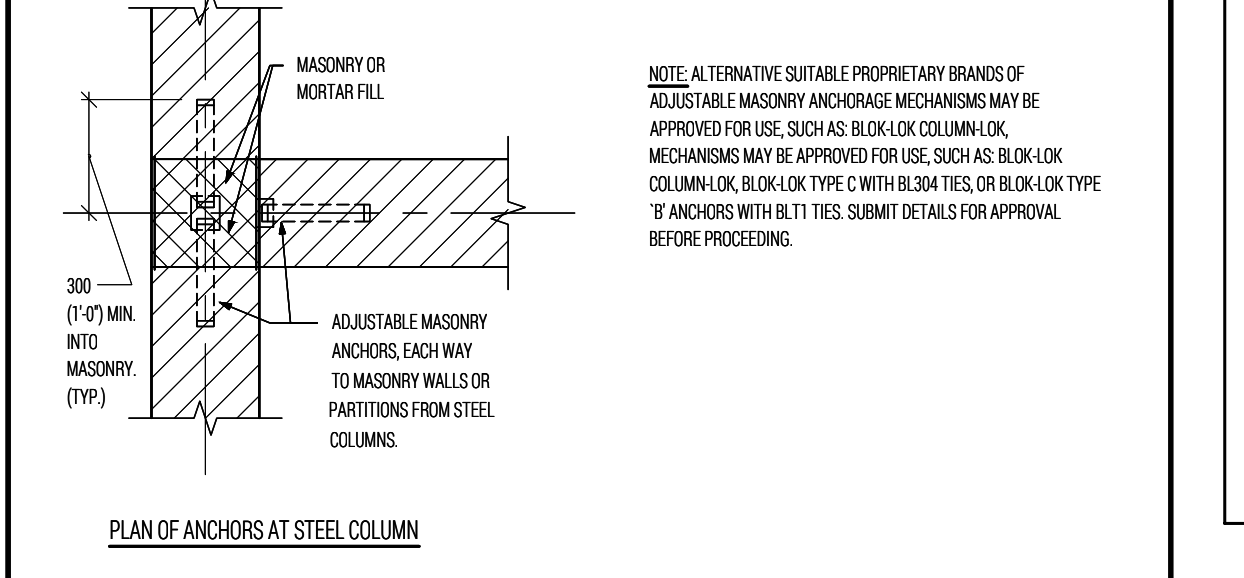
- STRUCTURAL STEEL SHALL BE G40.21
- BEARING LENGTH = 6" AT EACH END
- CONNECT ANGLES @ 24° c/c BY WELDING OR BOLTING FOR ANGLES WITH A TOTAL LENGTH OF 6'-0" OR MORE.



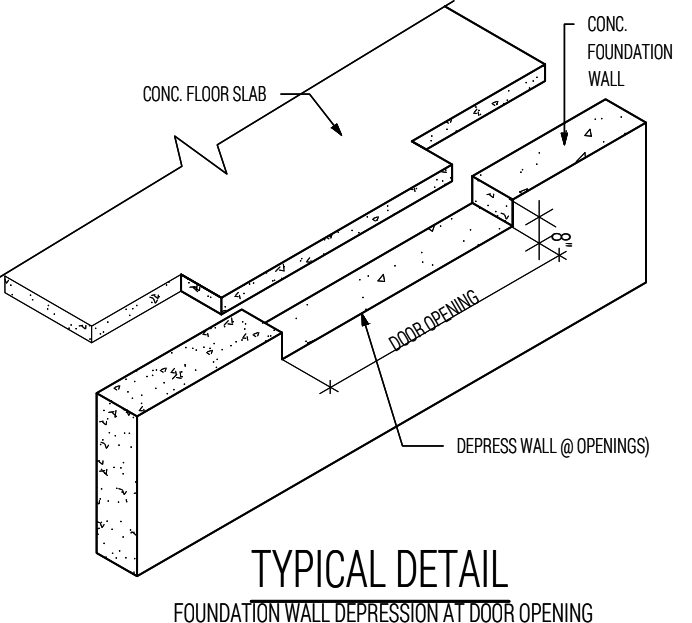
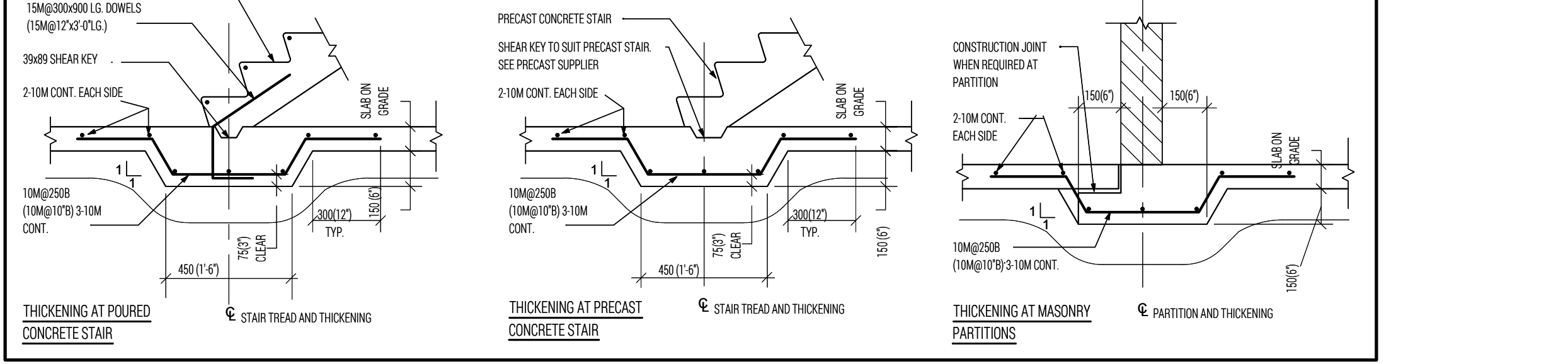
### ADJUSTABLE MASONRY ANCHORS TO STRUCTURAL STEEL



### MASONRY ANCHOR DETAILS



### TYPICAL THICKENED SLAB ON GRADE DETAILS



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ISSUED FOR BUILDING PERMIT 1 2025-10-06

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**DFE**

**DOYTCHE & FILO ENGINEERING INC.**

Structural Engineers

Phones: (647) 836-4805 • (905) 719-1482

**PROJECT**

**ST. ALOYSIUS CATHOLIC ELEMENTARY SCHOOL ADDITION**

504 CONNAUGHT STREET, KITCHENER, ON

**DRAWING**

**TYPICAL DETAILS**

Design By: TD/AF Date: 2025-07-08

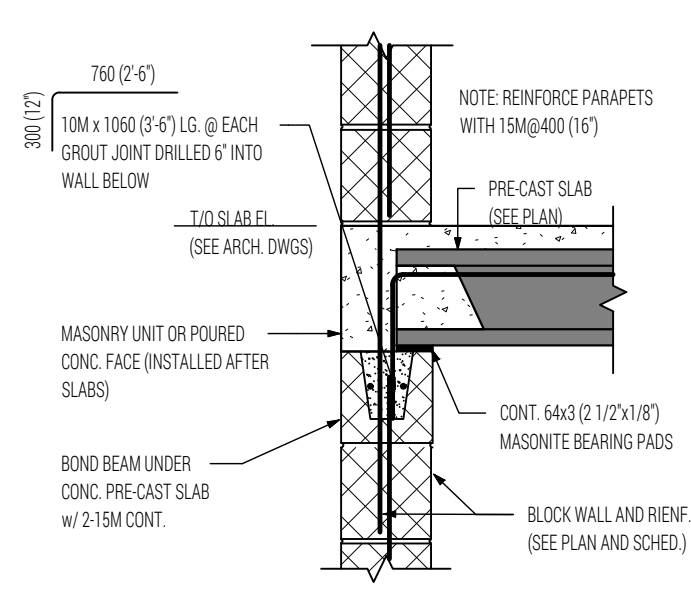
Project No.: 25032601

Drawn By: AF Drawing No.:

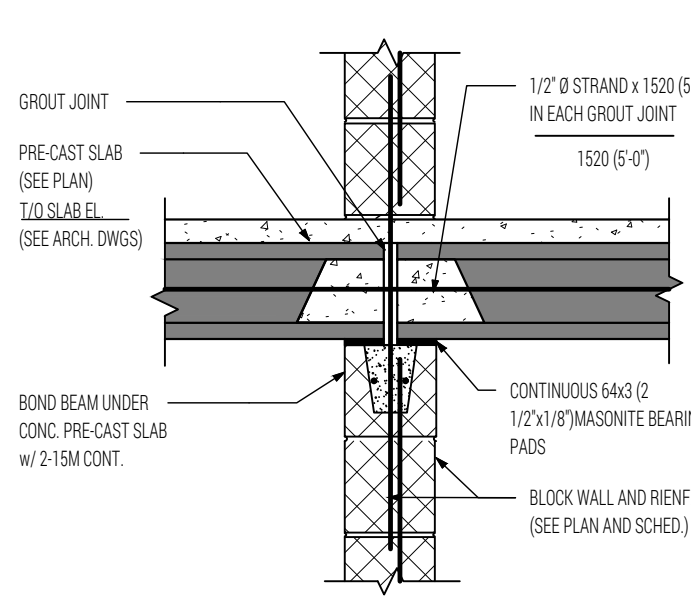
Scale: AS NOTED

**S0.2**

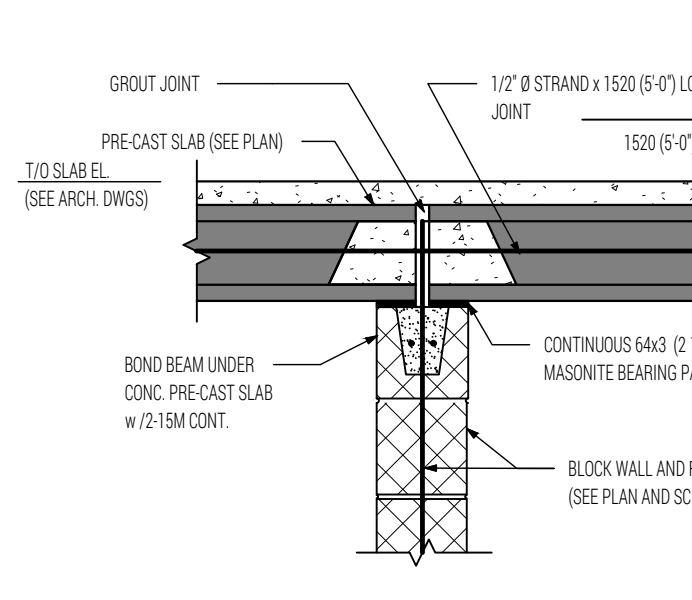




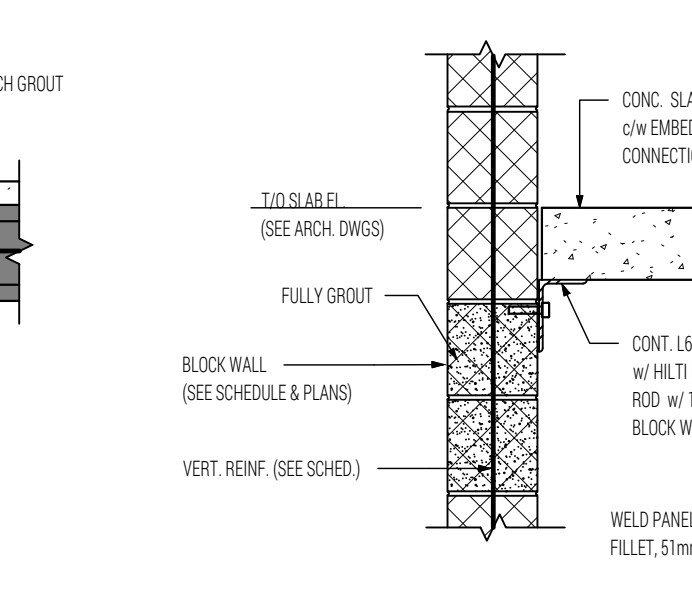
TYP. SECTION DETAIL @ PRECAST FLOOR BEARING ON BLOCK WALL (N.T.S.)



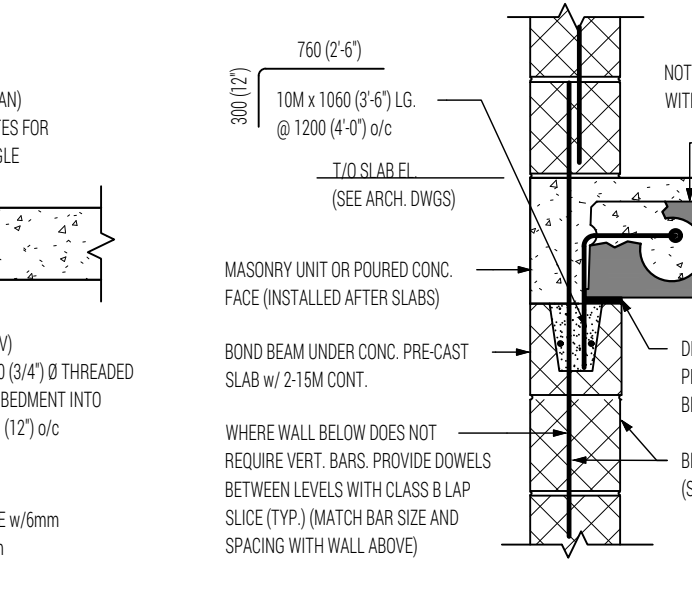
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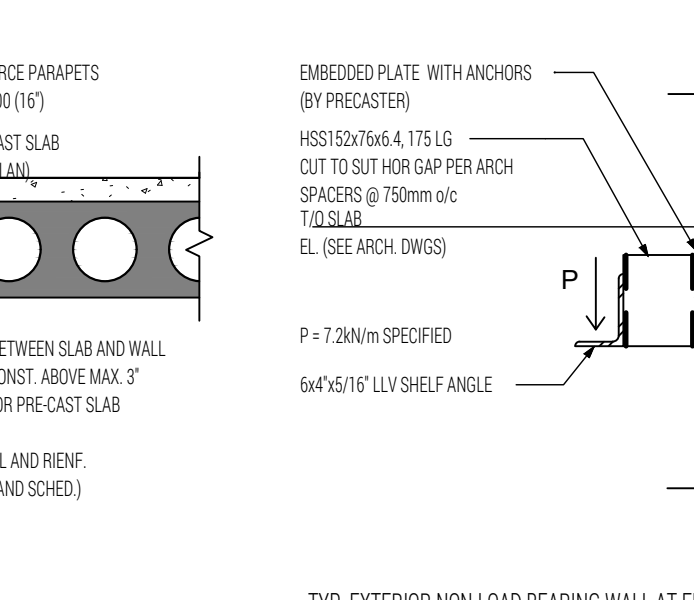
TYP. SECTION DETAIL @ PRECAST SLABS SHARED BEARING ON BLOCK (N.T.S.)



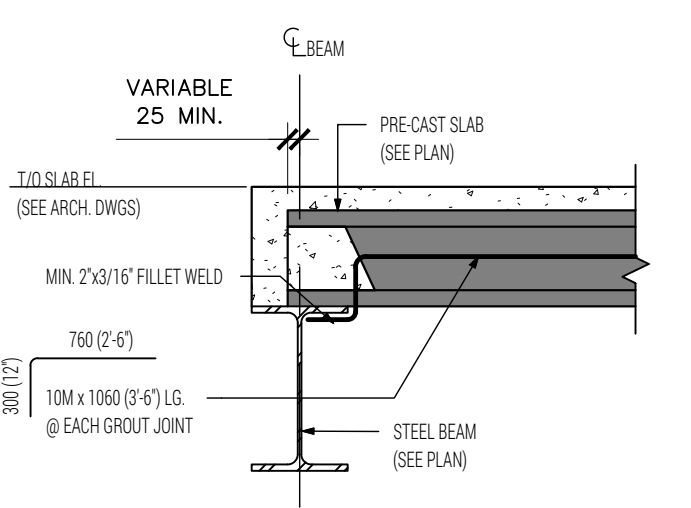
TYP. SECTION DETAIL @ AT PRECAST MID LANDING SHELF ANGLE (N.T.S.)



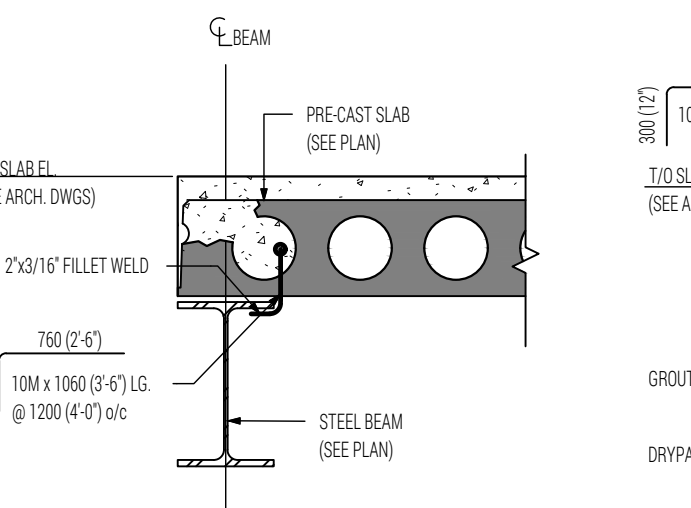
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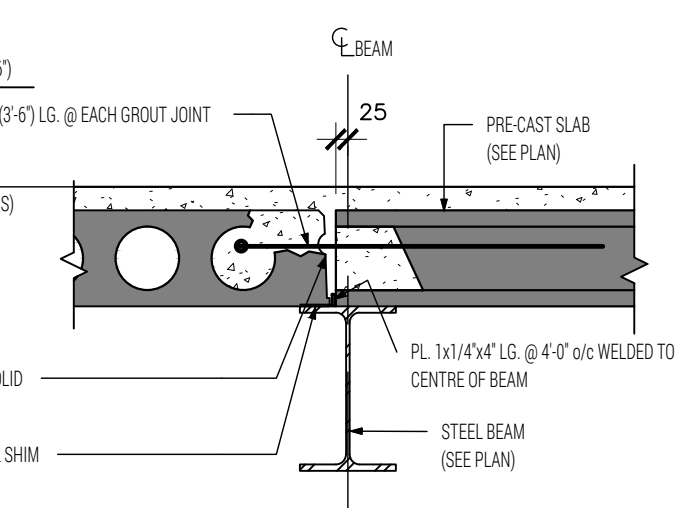
TYP. SECTION DETAIL @ EXTERIOR NON-LOAD BEARING WALL AT FLOOR WITH BRICK/STONE SHELF (N.T.S.)



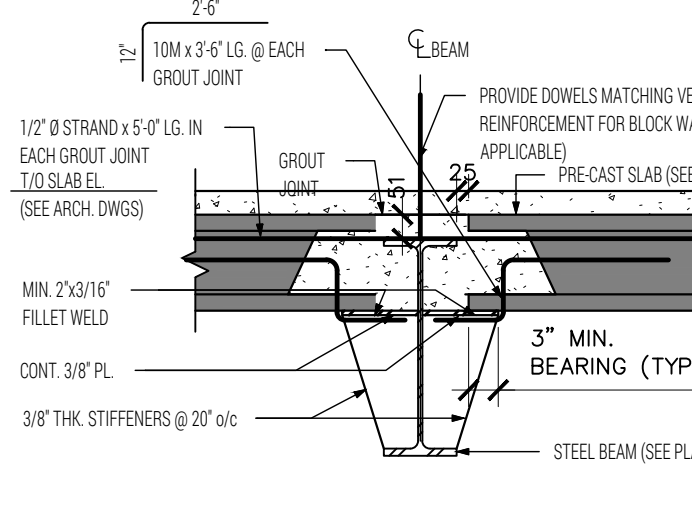
TYP. SECTION DETAIL @ PRECAST SLAB BEARING ON STEEL BEAM (N.T.S.)



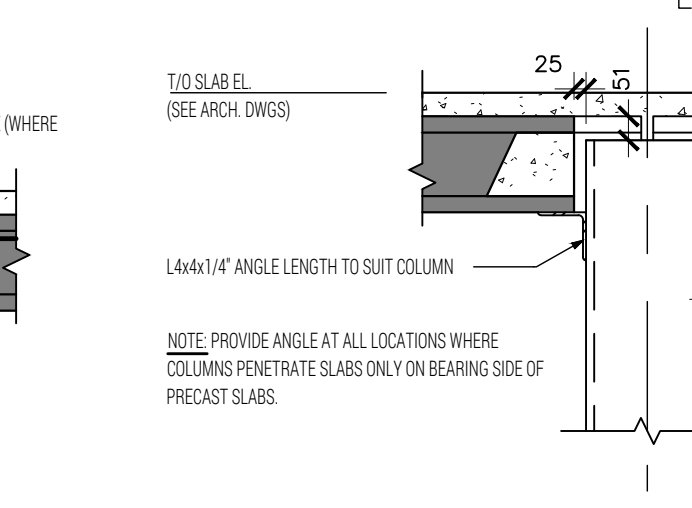
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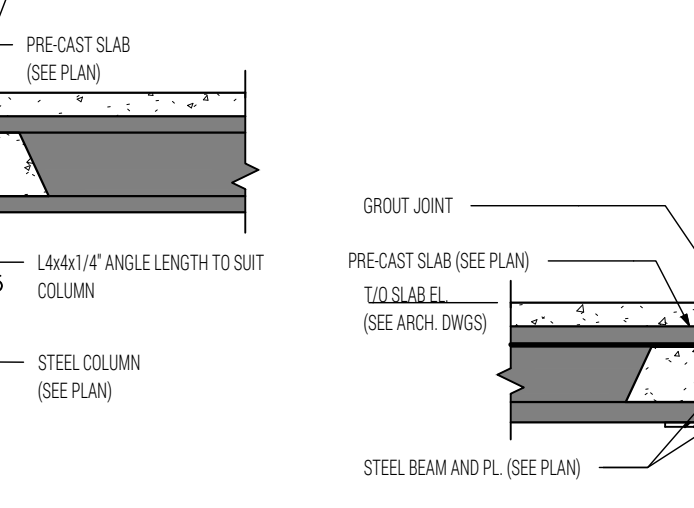
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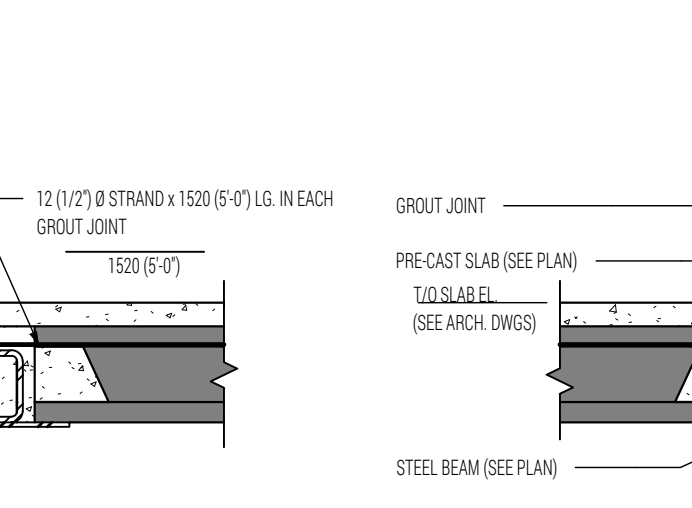
TYP. SECTION DETAIL @ PRECAST SLABS ON ELEVATED BEAM AND SIDE PLATES (N.T.S.)



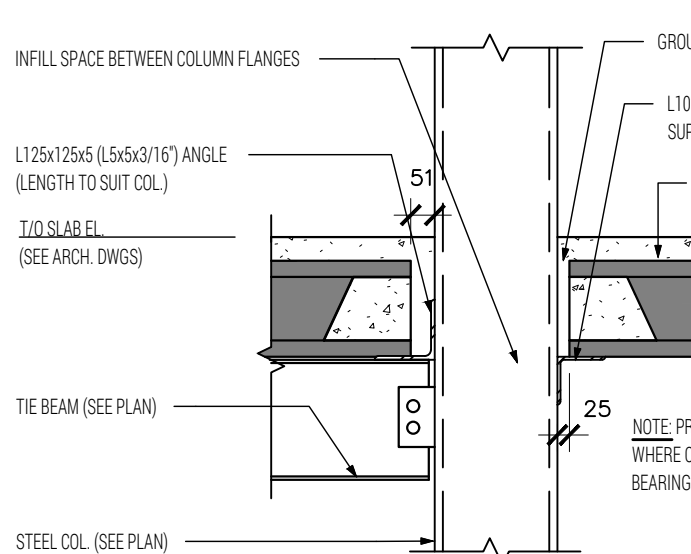
TYP. SECTION DETAIL @ COLUMN THROUGH PRECAST SLABS (N.T.S.)



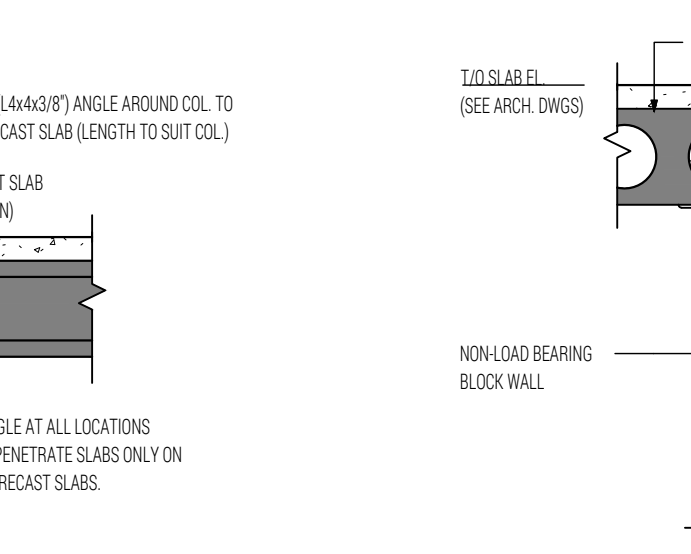
TYP. SECTION DETAIL @ PRECAST FLOORS FLUSH WITH UNDERSIDE OF STEEL BEAM (N.T.S.)



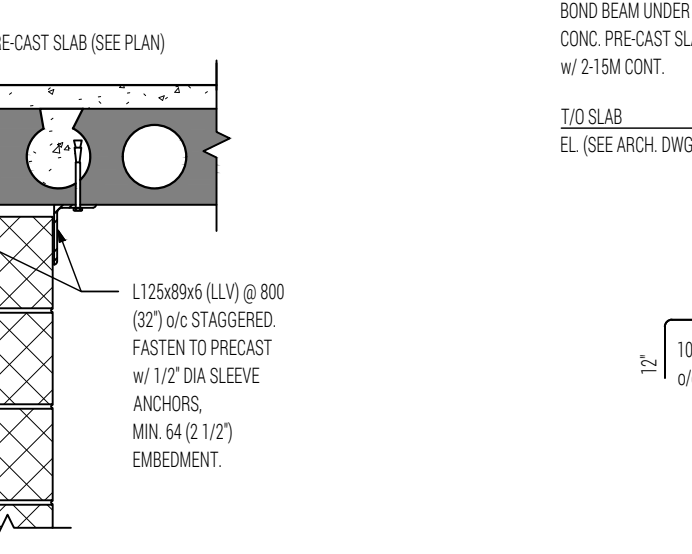
TYP. SECTION DETAIL @ PRECAST FLOORS FLUSH WITH UNDERSIDE OF STEEL BEAM (N.T.S.)



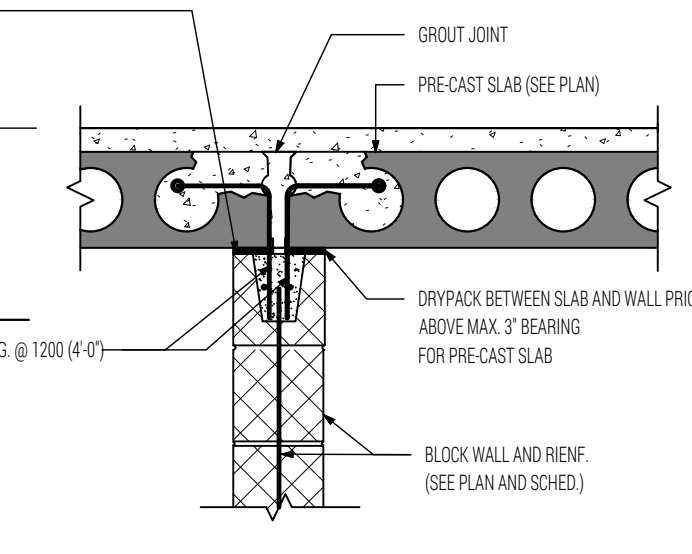
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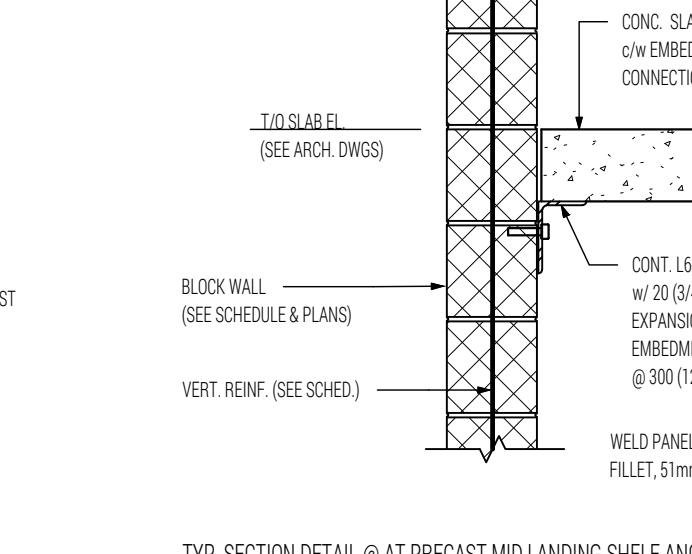
TYPICAL SECTION DETAIL @ NON-LOAD BEARING CONC. BLOCK WALL UNDER PRECAST SLAB



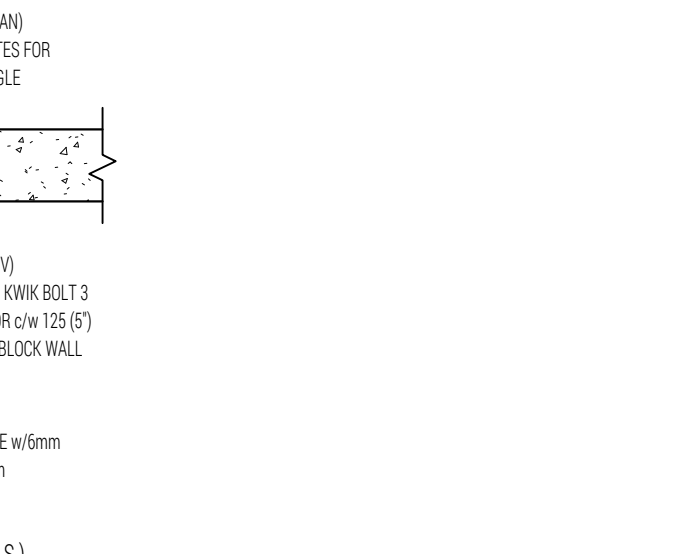
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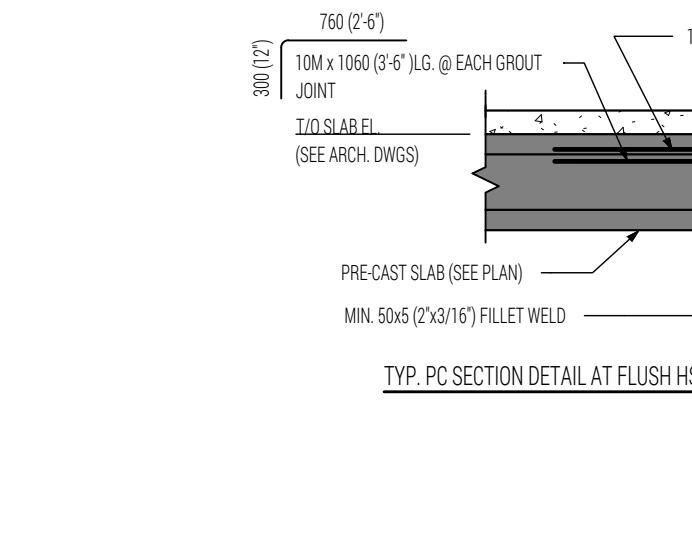
TYP. SECTION DETAIL @ AT PRECAST MID LANDING SHELF ANGLE (N.T.S.)



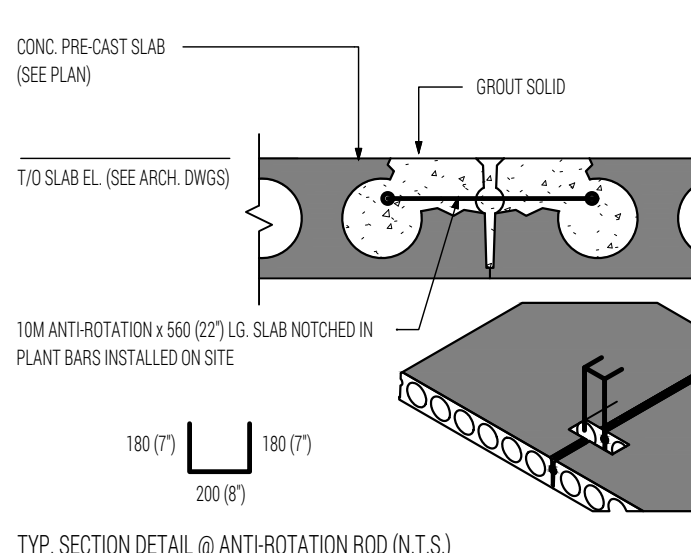
TYP. SECTION DETAIL @ PRECAST SLAB BEARING ON STEEL BEAM IN BLOCK WALL (N.T.S.)



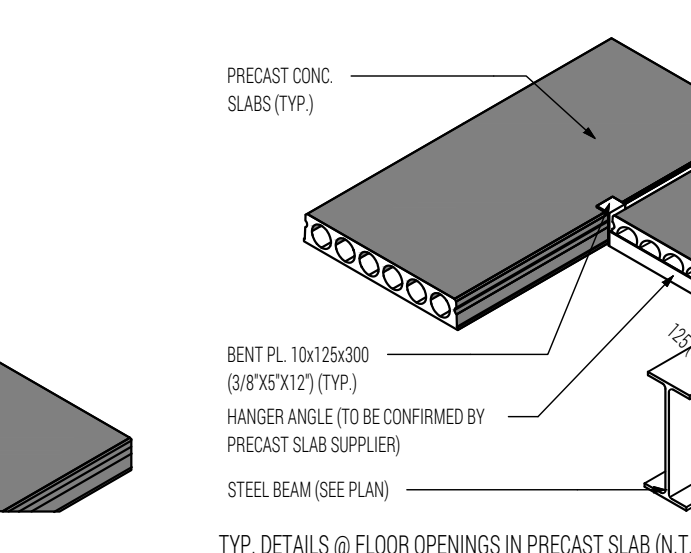
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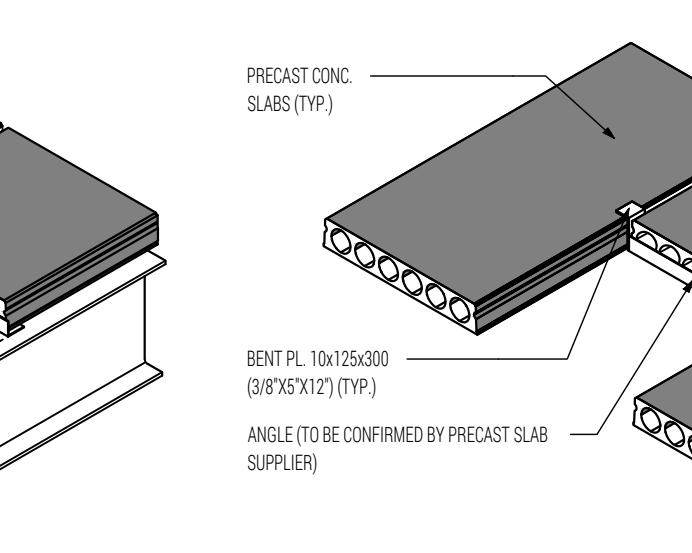
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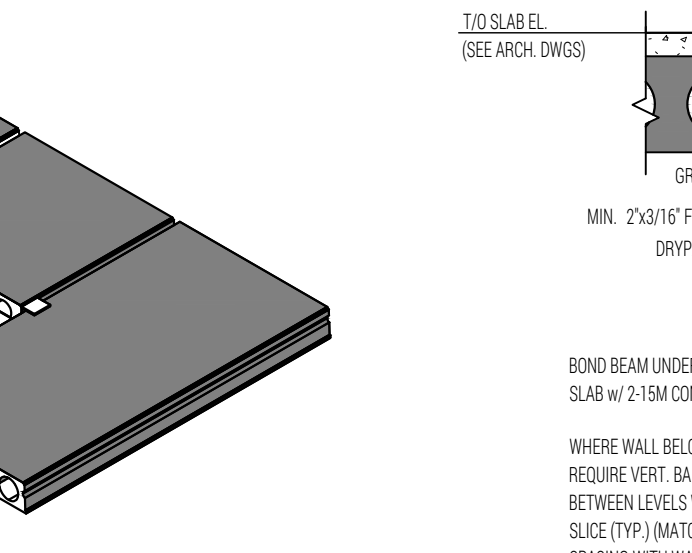
TYP. SECTION DETAIL @ ANTI-ROTATION ROD (N.T.S.)



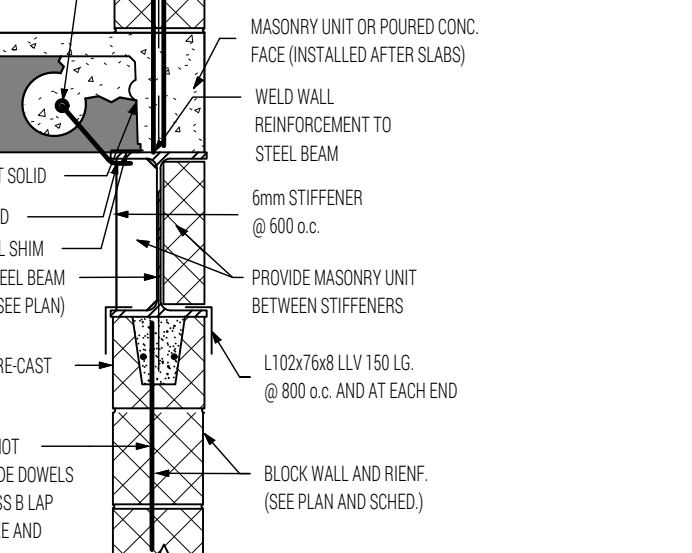
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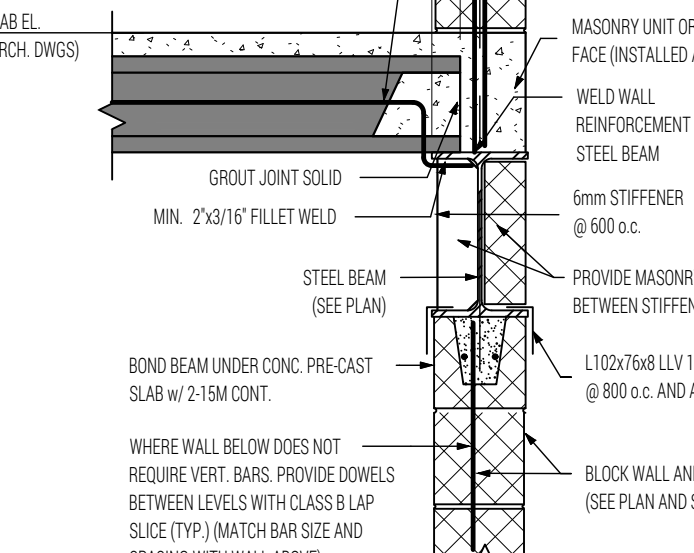
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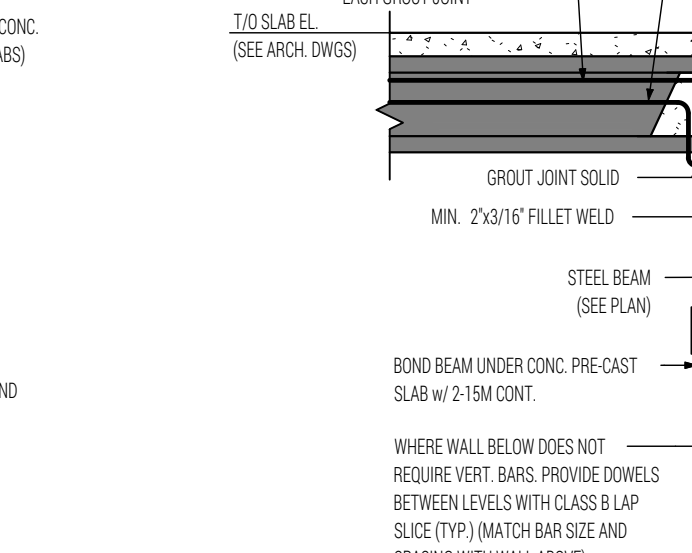
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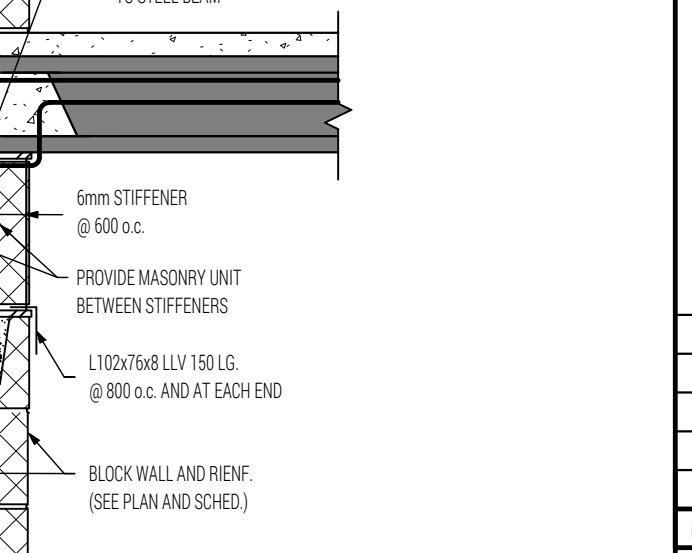
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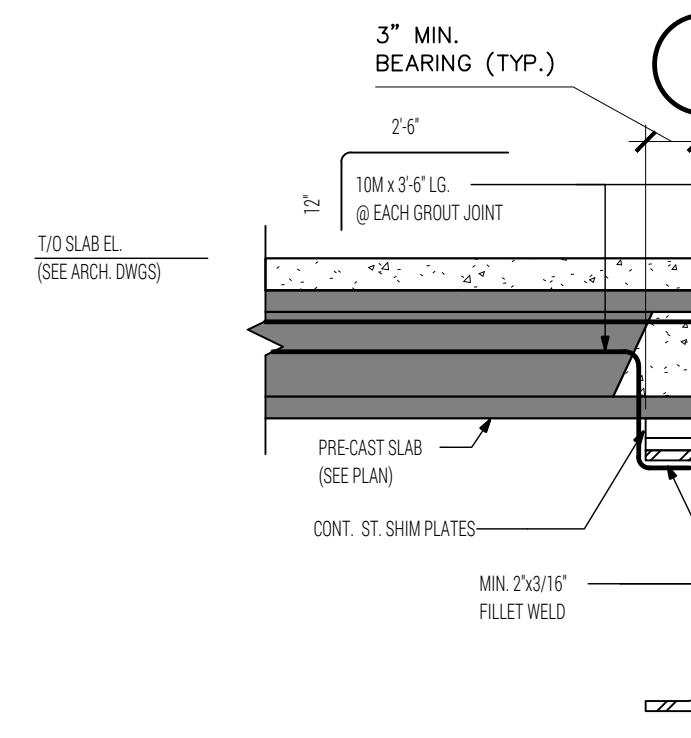
TYP. SECTION DETAIL @ PRECAST SLAB BEARING ON STEEL BEAM IN BLOCK WALL (N.T.S.)



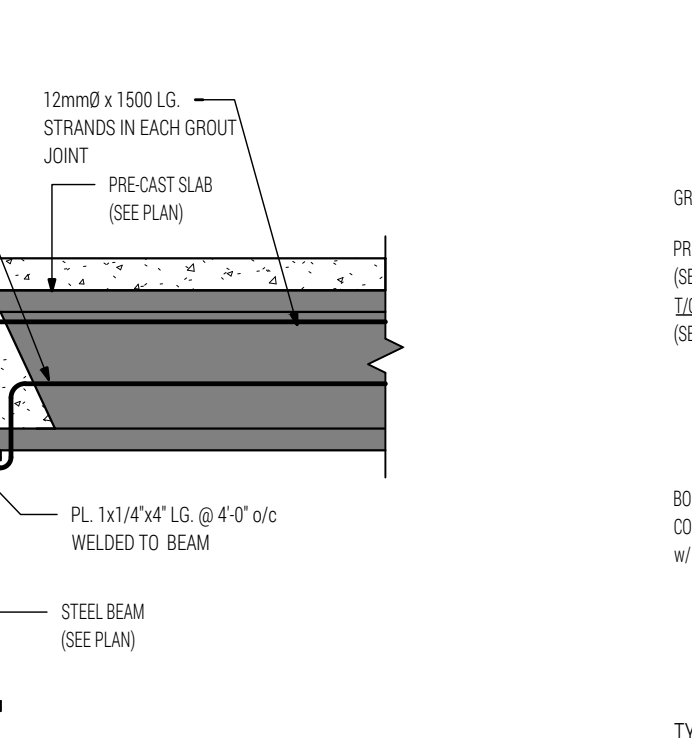
TYP. SECTION DETAIL @ PRECAST SLAB BEARING ON STEEL BEAM IN BLOCK WALL (N.T.S.)



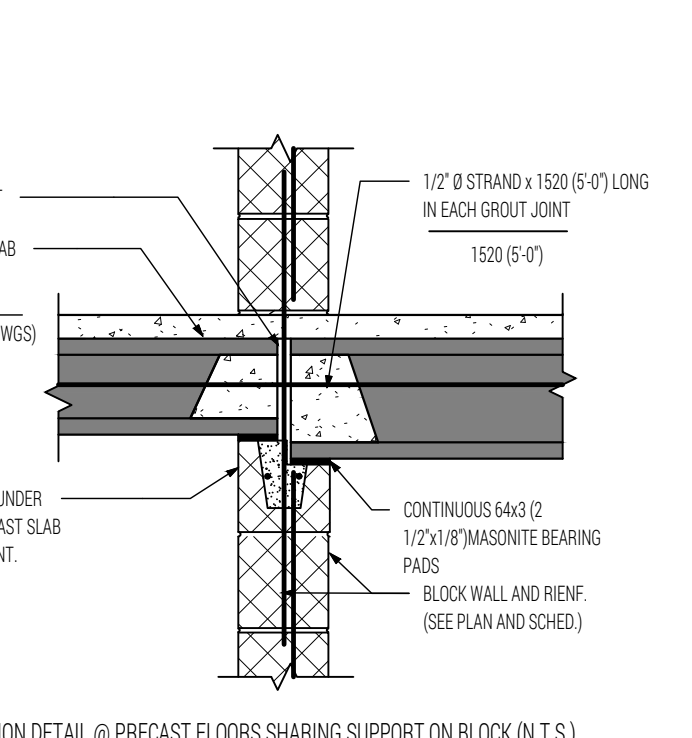
TYP. SECTION DETAIL @ PRECAST SLAB BEARING ON STEEL BEAM IN BLOCK WALL (N.T.S.)



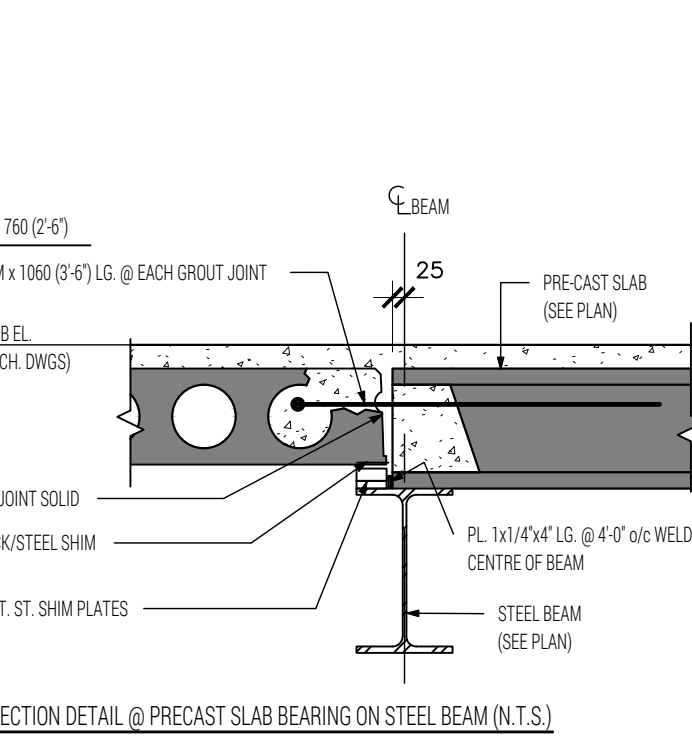
TYP. SECTION DETAIL @ PRECAST FLOORS SHARING SUPPORT ON BLOCK (N.T.S.)



TYP. SECTION DETAIL @ PRECAST FLOORS SHARING SUPPORT ON BLOCK (N.T.S.)



TYP. SECTION DETAIL @ PRECAST FLOORS SHARING SUPPORT ON BLOCK (N.T.S.)



TYP. SECTION DETAIL @ PRECAST FLOORS SHARING SUPPORT ON BLOCK (N.T.S.)

SECTION  
S0.3

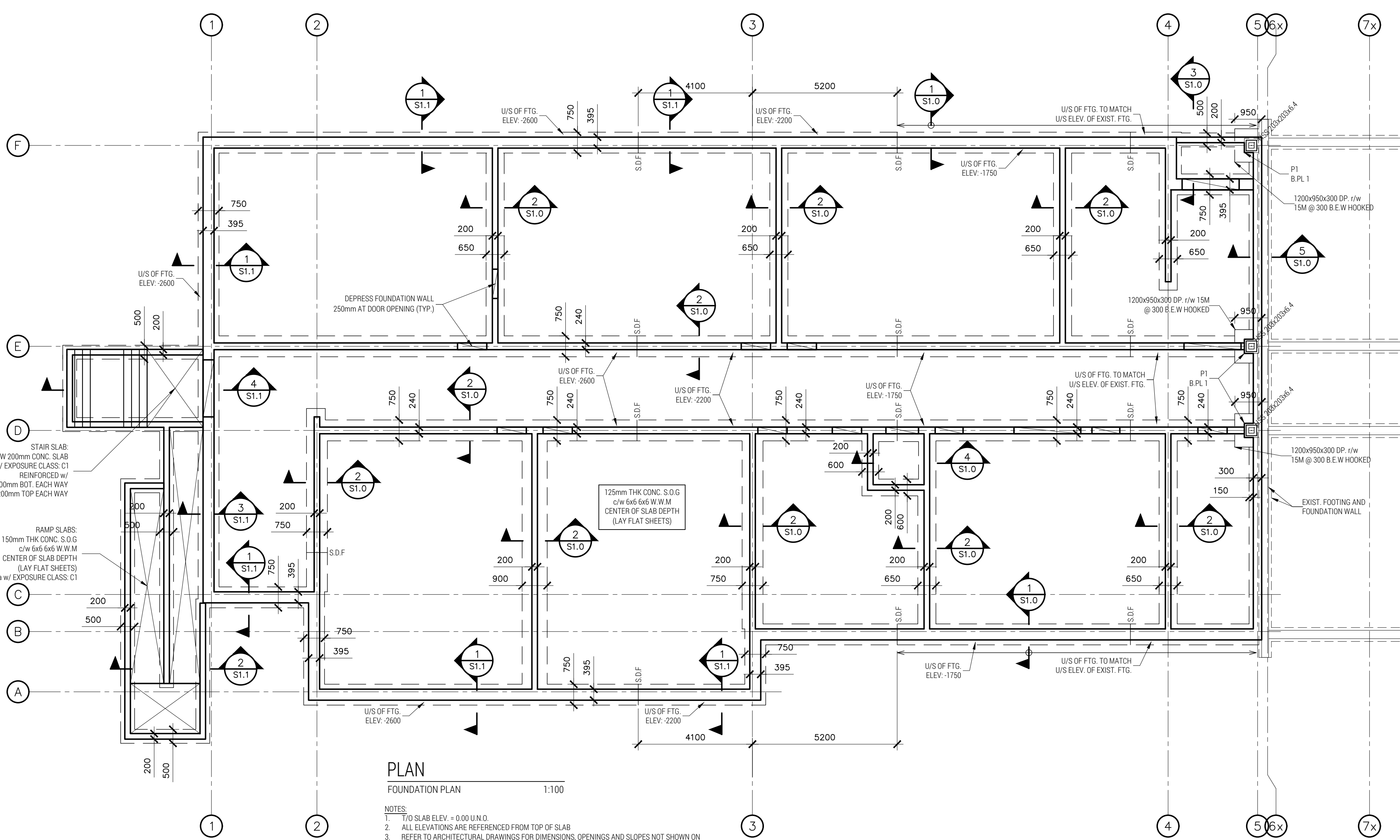
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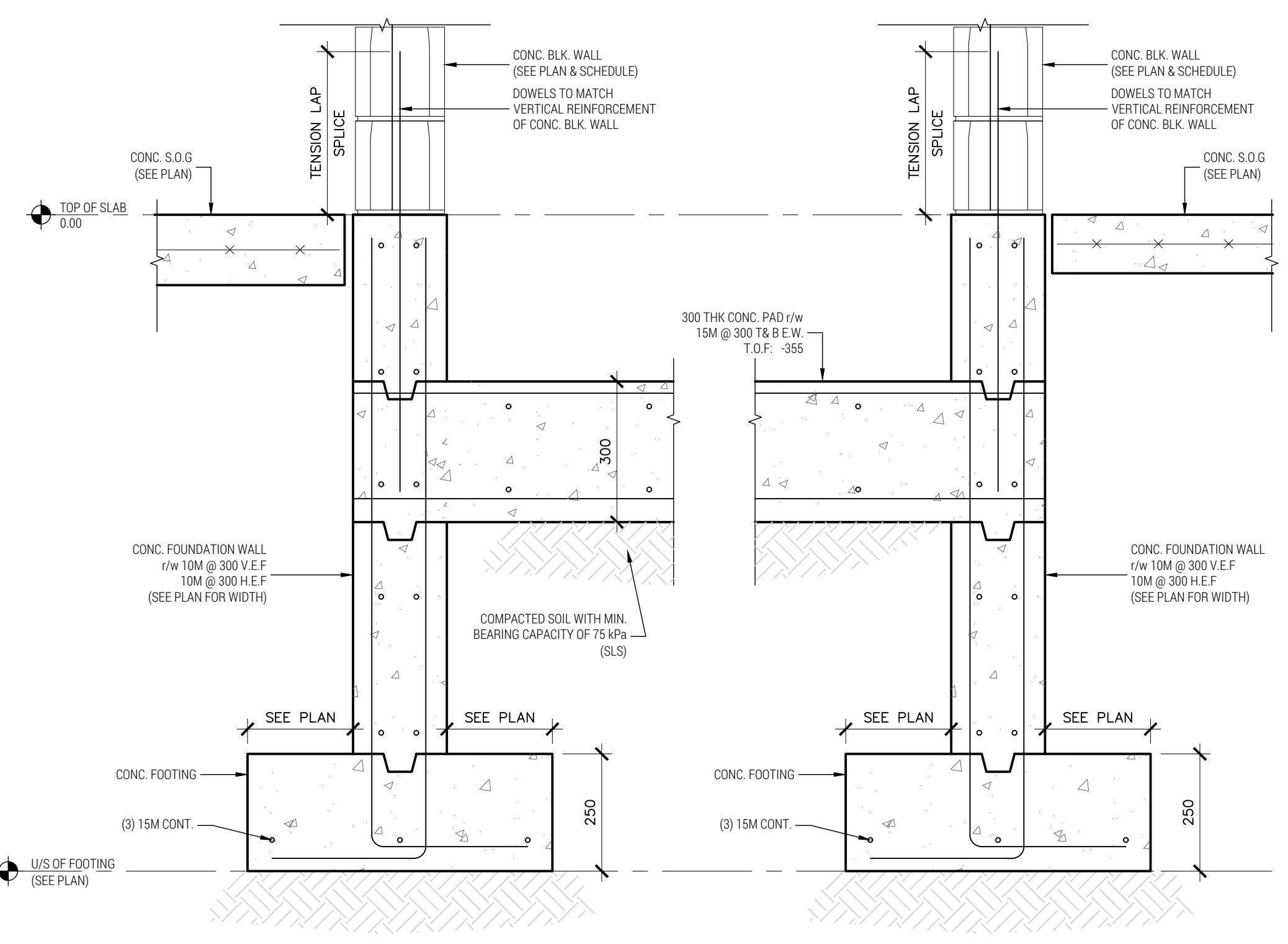
**DFE**  
**DOYTCHE & FILO ENGINEERING INC.**  
Structural Engineers  
T. N. DOYTCHEV  
100113262  
2025-10-06  
PROVINCE OF ONTARIO  
Phone: (416) 836-4805 • (905) 719-1482

PROJECT  
**ST. ALOYSIUS CATHOLIC ELEMENTARY SCHOOL ADDITION**  
504 CONNAUGHT STREET, KITCHENER, ON  
DRAWING  
**TYPICAL DETAILS**  
Design By: TD/AF Date: 2025-07-08  
Project No.: 25032601  
Drawn By: AF Drawing No.:  
Scale: AS NOTED **S0.3**

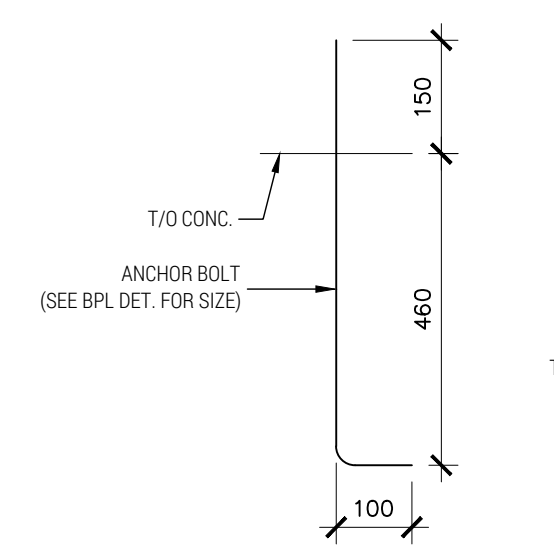


**PLAN**  
FOUNDATION PLAN 1:100

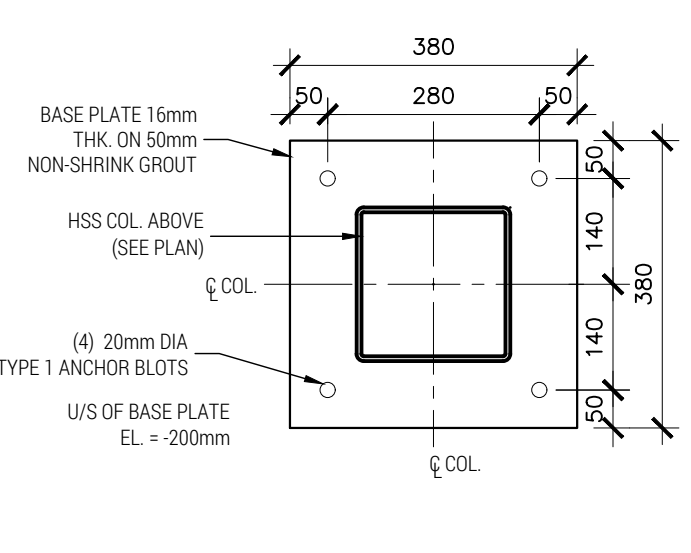
**NOTES:**  
 1. FLOOR SLAB ELEV. = 0.00 U.N.O.  
 2. ALL ELEVATIONS ARE REFERENCED FROM TOP OF SLAB  
 3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, OPENINGS AND SLOPES NOT SHOWN ON THIS DRAWING.  
 4. SEE BASE PLATE DETAILS FOR COLUMN ANCHORS AND BASE PLATES NOT INDICATED ON PLAN.  
 5. ALL FOOTINGS ARE SYMMETRIC TO THE WALLS/COLUMNS U.N.O.



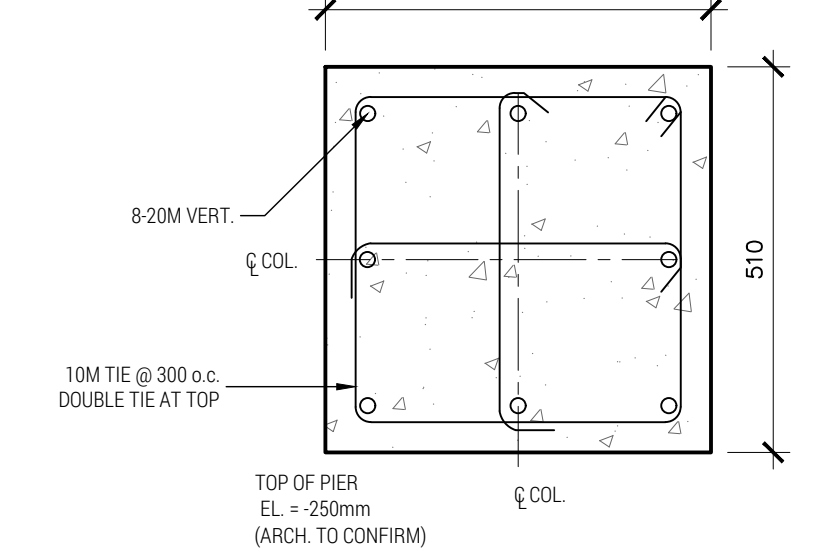
**SECTION 4**  
S1.0 1:10



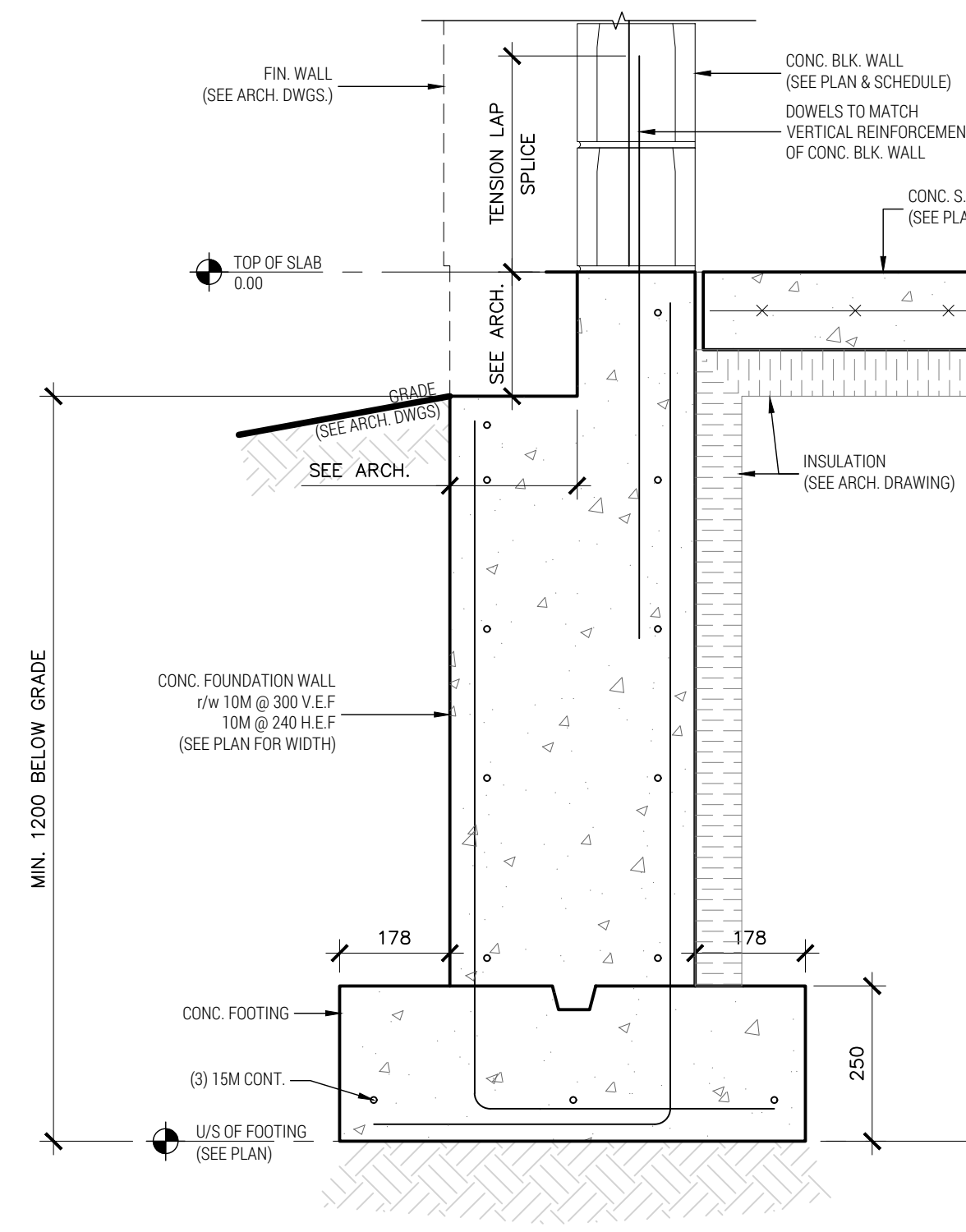
**TYPE 1 ANCHOR BOLT**  
1:100



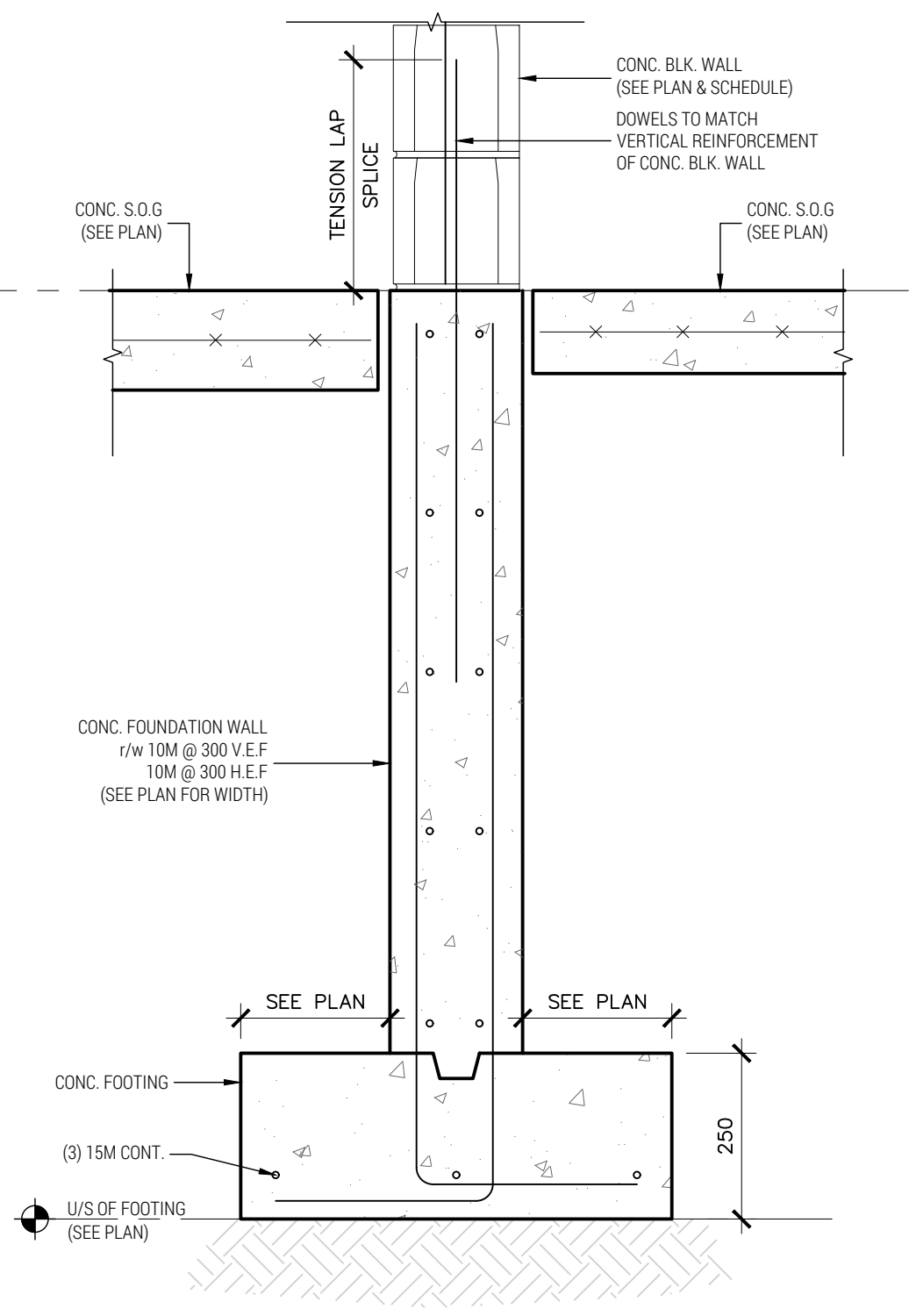
**BASE PLATE 'BPL.1' PLAN**  
1:10



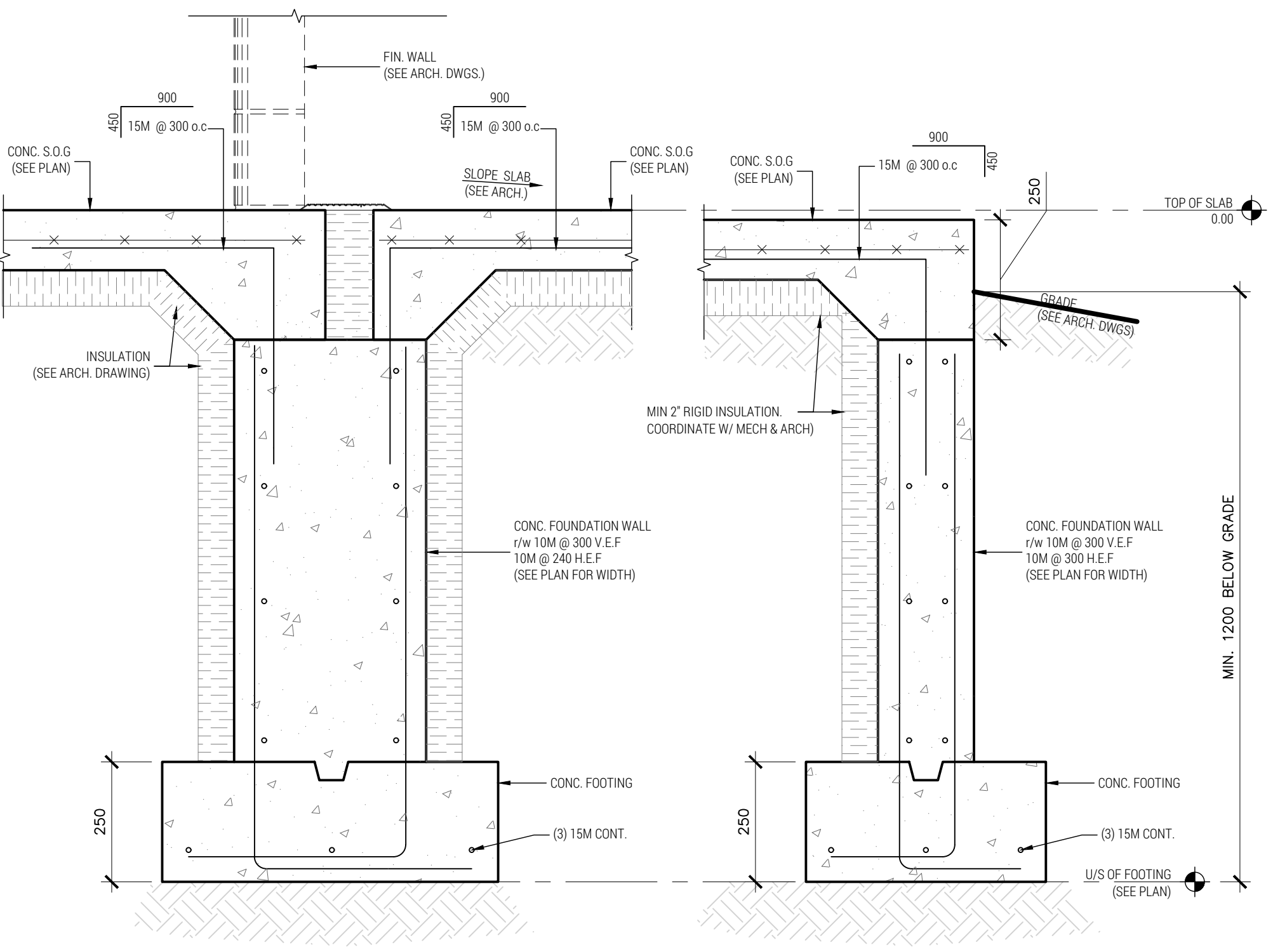
**PIER '1' PLAN**  
1:10



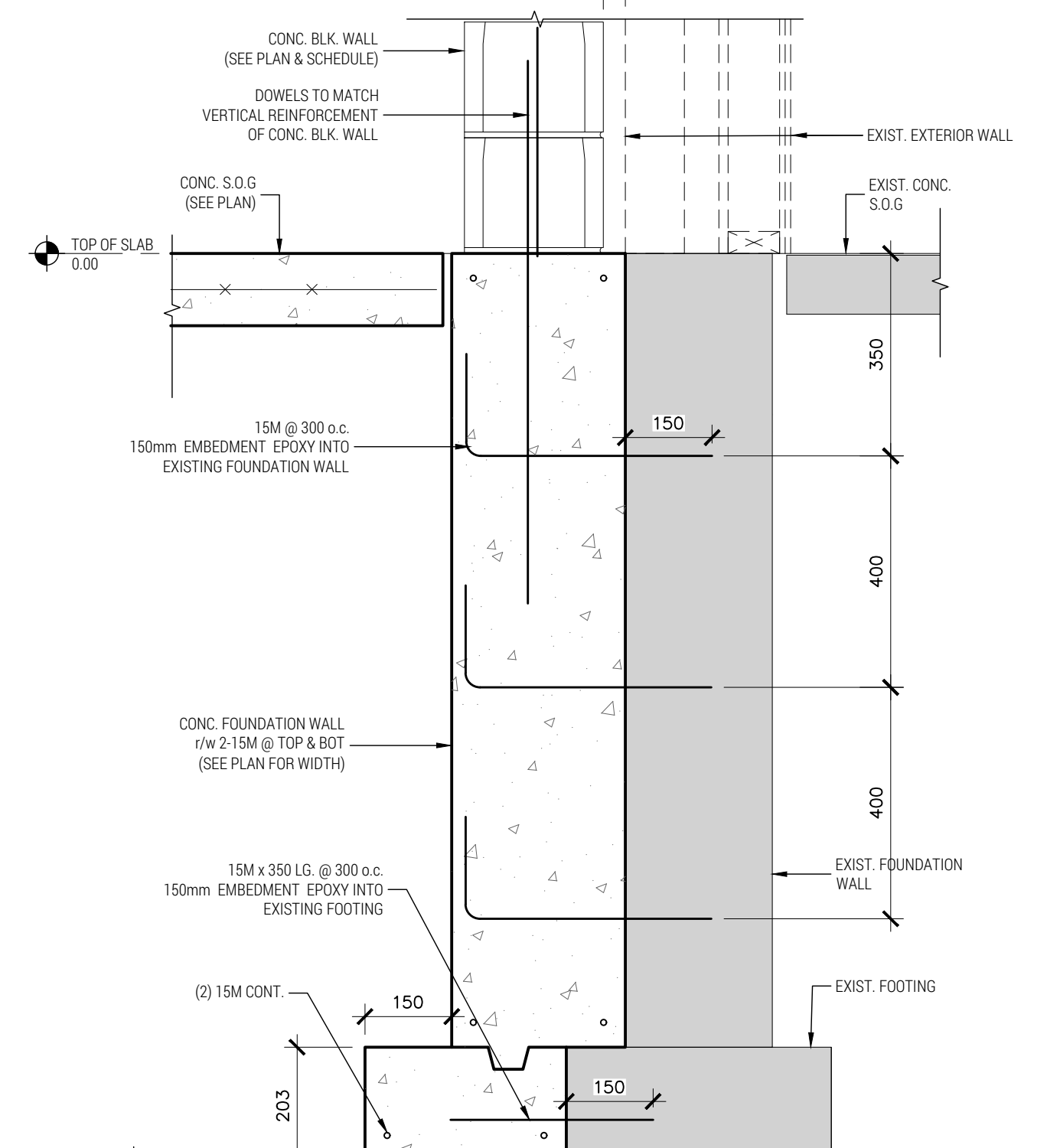
**SECTION 1**  
S1.0 1:10



**SECTION 2**  
S1.0 1:10



**SECTION 3**  
S1.0 1:10



**SECTION 5**  
S1.0 1:10

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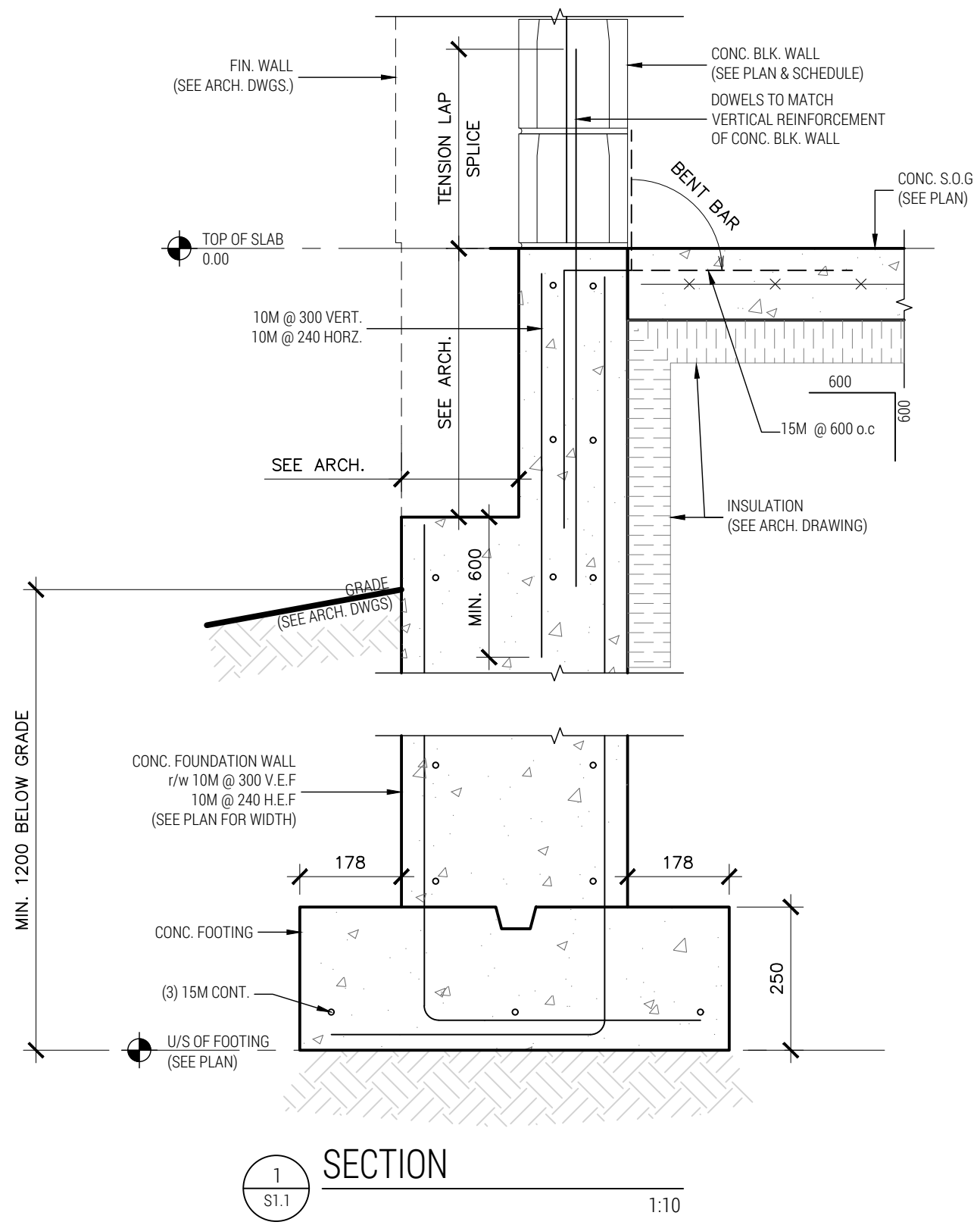
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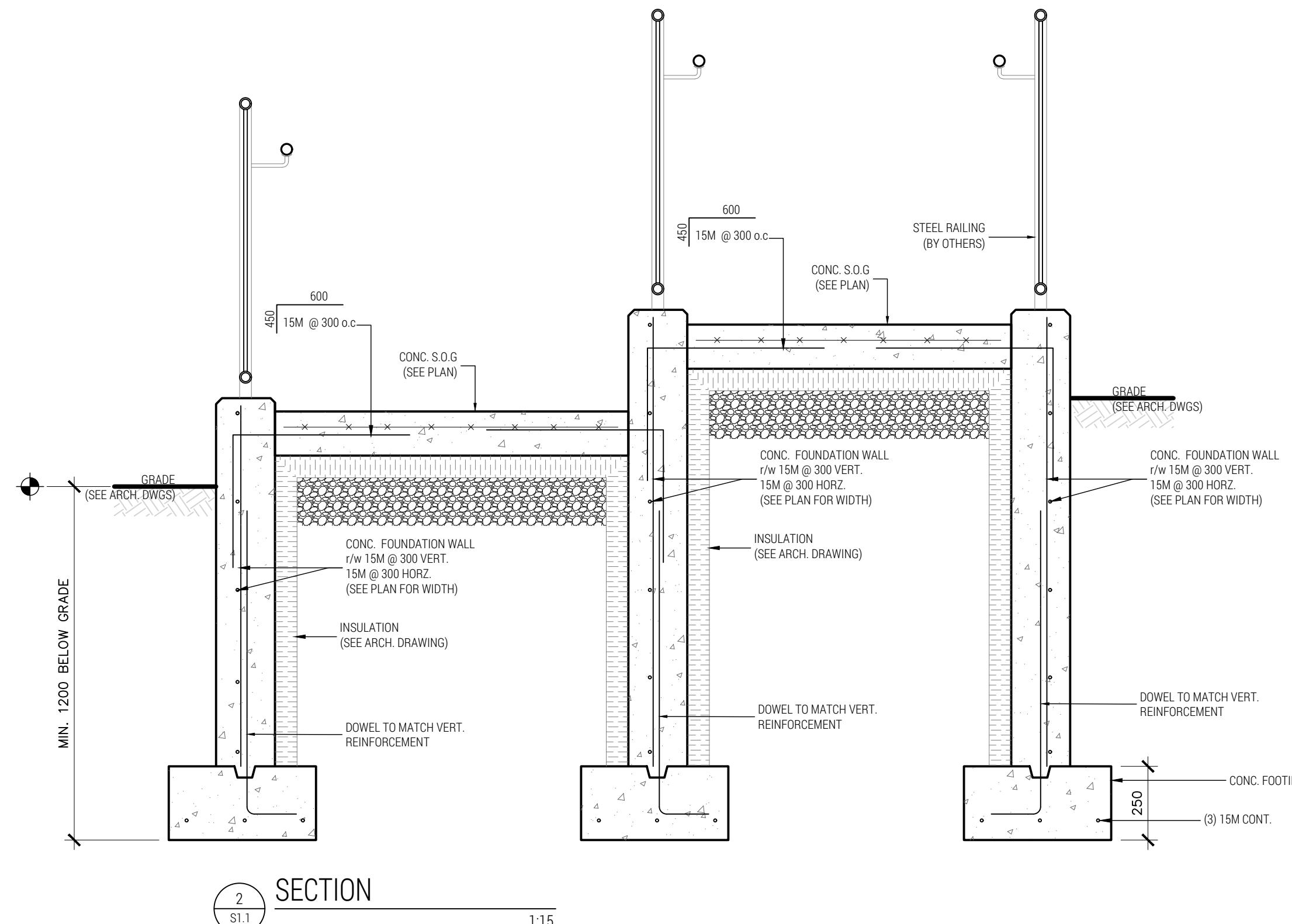
**DFE**  
**DOYTSCH & FILO ENGINEERING INC.**  
 Structural Engineers  
 T. N. DOYTSHEV  
 100113262  
 2025-10-06  
 PROVINCE OF ONTARIO  
 Phone: (416) 836-4805 / (905) 719-1482

PROJECT  
**ST. ALOYSIUS CATHOLIC ELEMENTARY SCHOOL ADDITION**  
 504 CONNAUGHT STREET, KITCHENER, ON  
 DRAWING  
**FOUNDATION PLANS, AND SECTIONS**

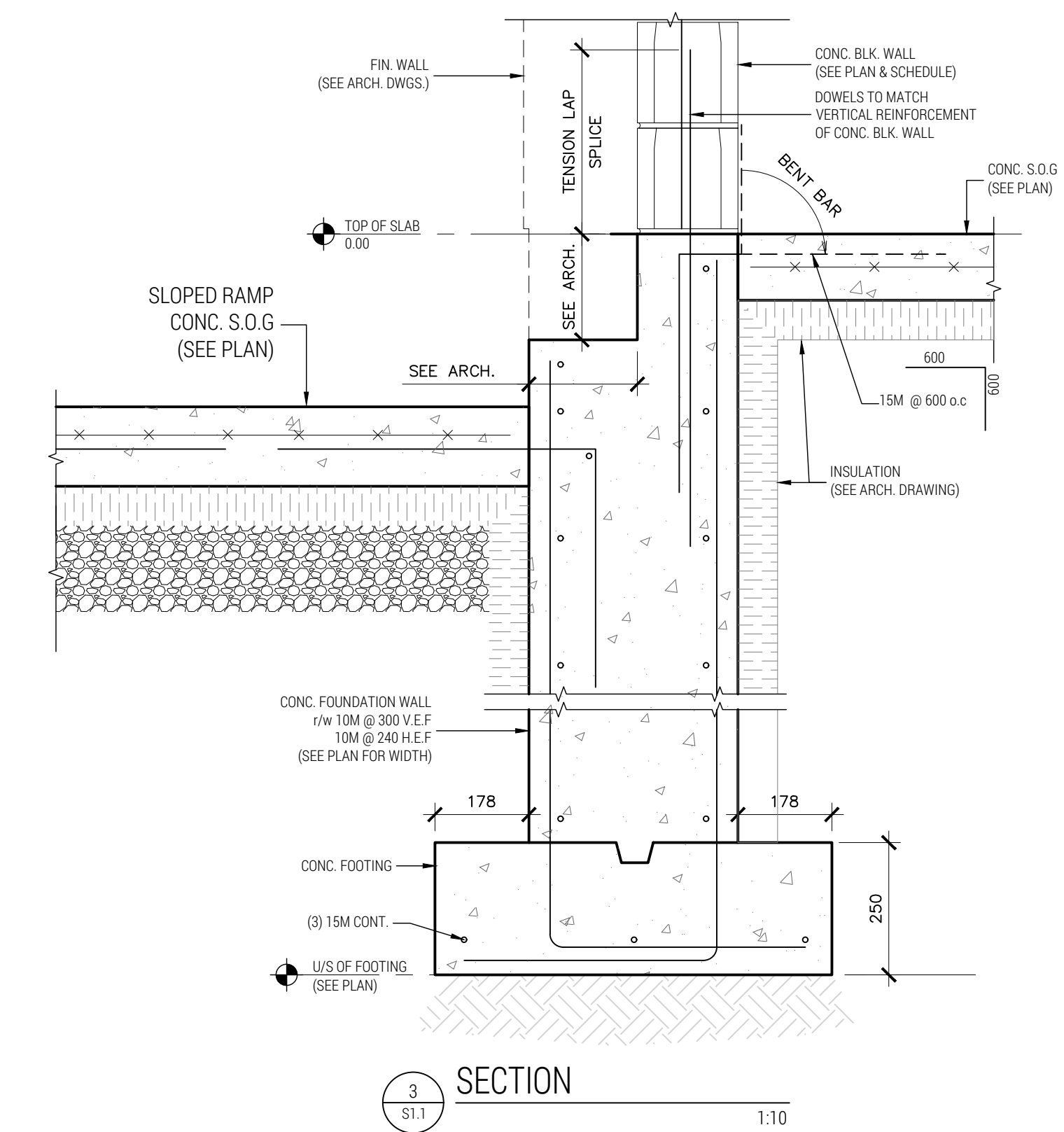
Design By: TD/AF Date: 2025-07-08  
 Project No.: 25032601  
 Drawn By: AF Drawing No.:  
 Scale: AS NOTED **S1.0**



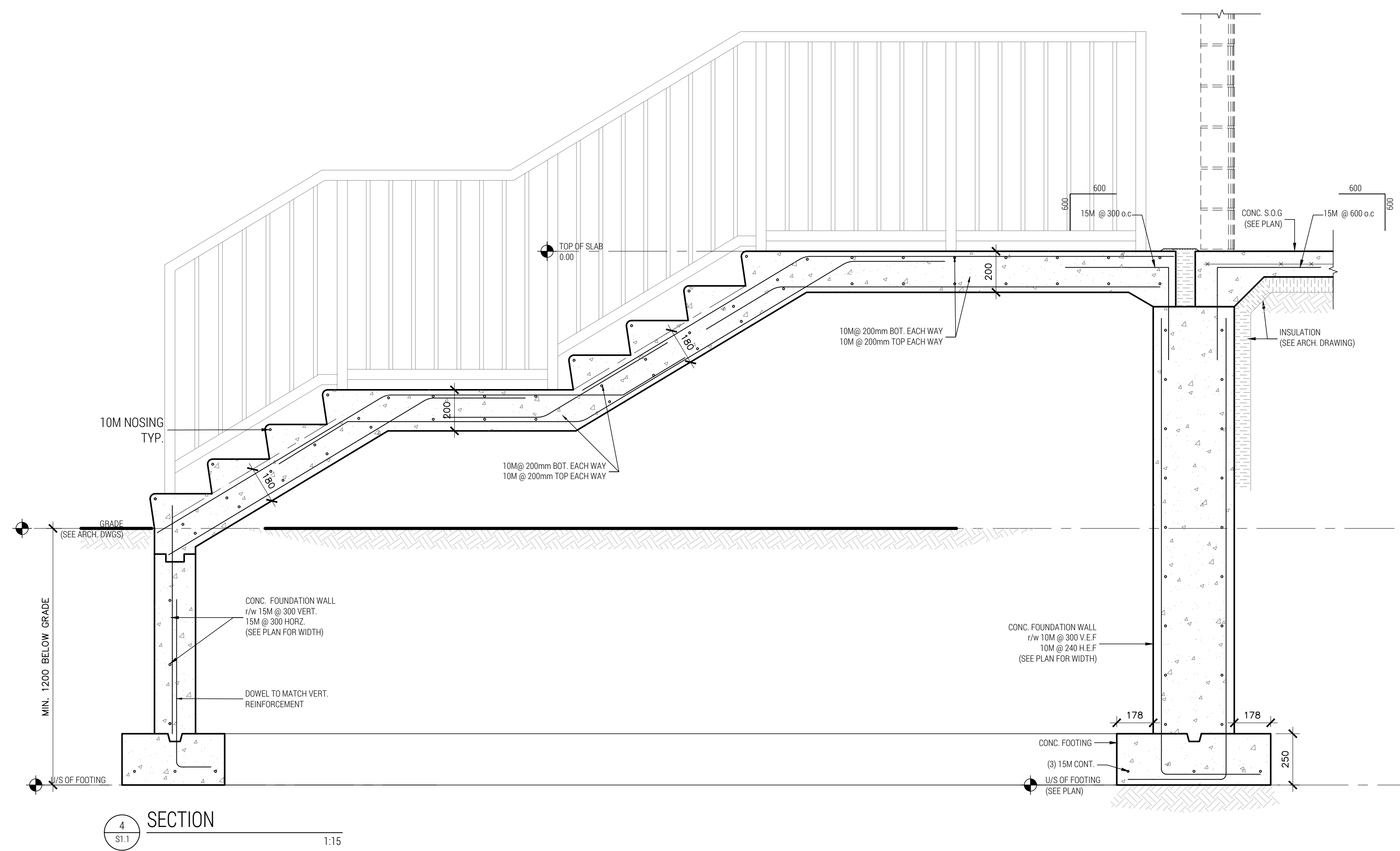
1 SECTION  
S1.1 1:10



2 SECTION  
S1.1 1:15



3 SECTION  
S1.1 1:10



4 SECTION  
S1.1 1:15

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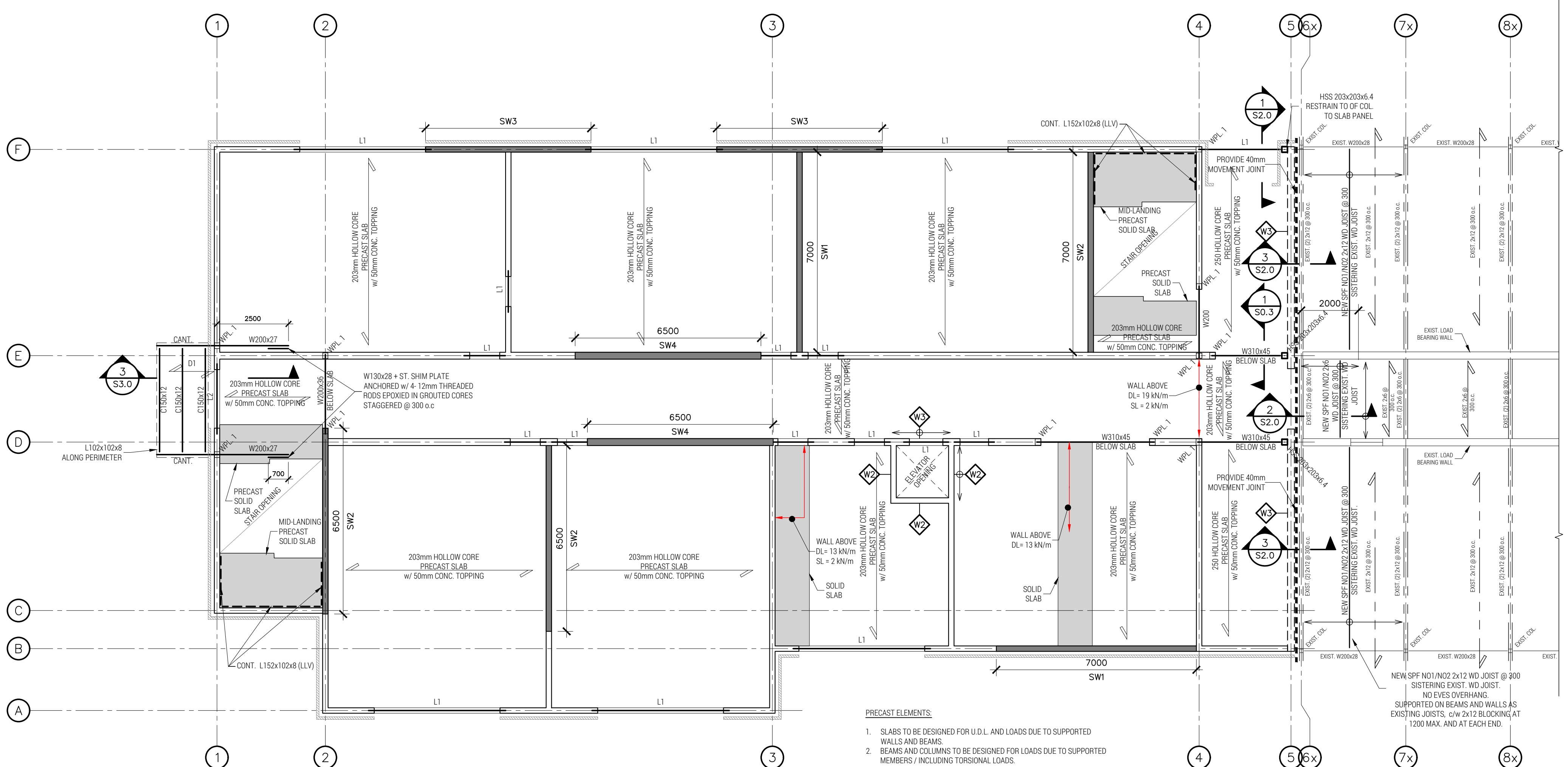
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**DFE**  
**DOYTCHEV & FILO ENGINEERING INC.**  
Structural Engineers

PHONES: (647) 836-4805 • (905) 719-1482

**LICENSED PROFESSIONAL ENGINEER**  
T. N. DOYTCHEV  
100113262  
2025-10-06  
PROVINCE OF ONTARIO

PROJECT	ST. ALOYSIUS CATHOLIC ELEMENTARY SCHOOL ADDITION		
DRAWING	FOUNDATION PLANS, AND SECTIONS		
Design By:	TD/AF	Date:	2025-07-08
Drawn By:	AF	Project No.:	25032601
Scale:	AS NOTED	Drawing No.:	S1.1



**PLAN**  
SECOND FLOOR FRAMING PLAN 1:100

**DESIGN LOADS**

**SUPERIMPOSED DEAD**

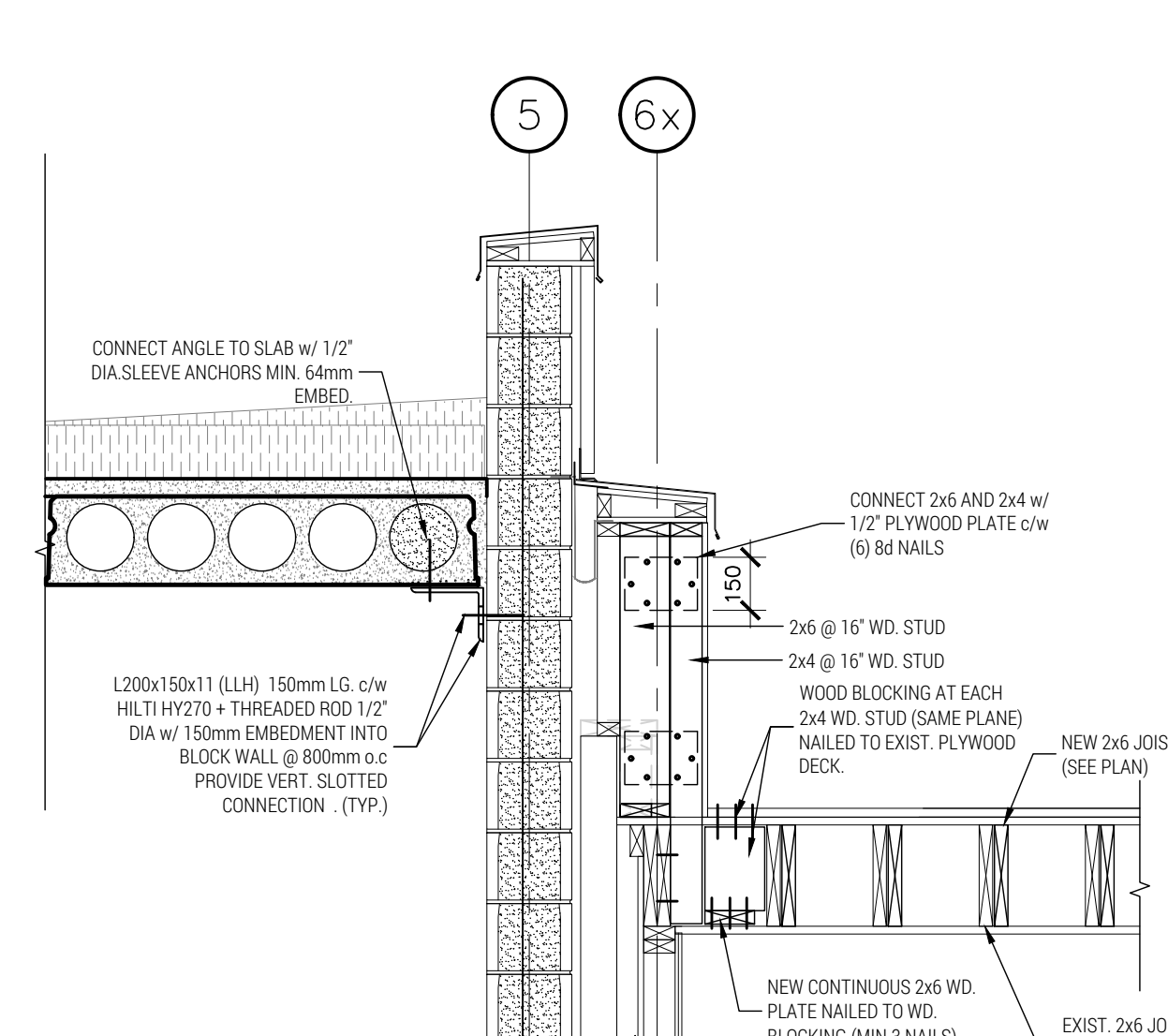
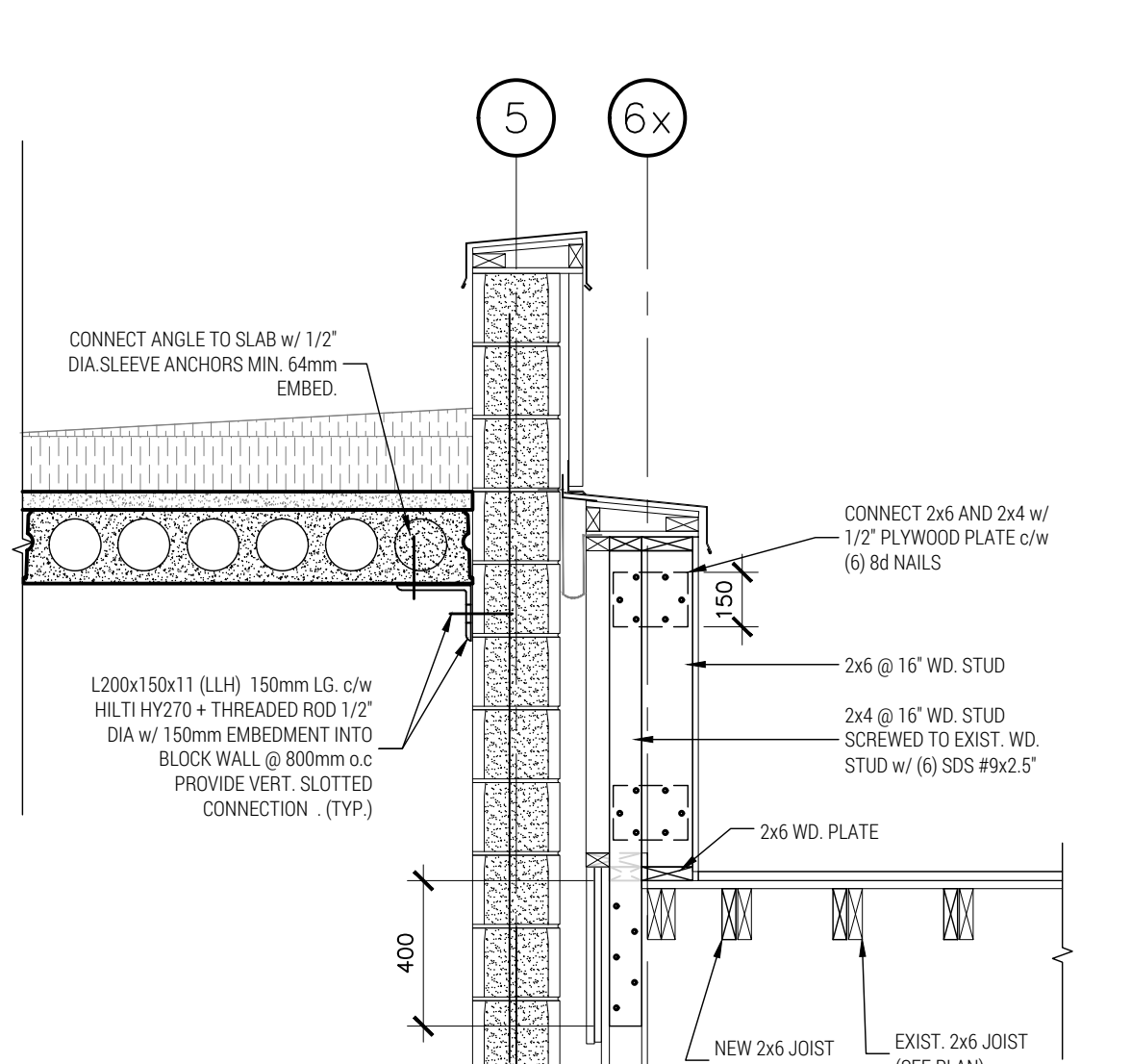
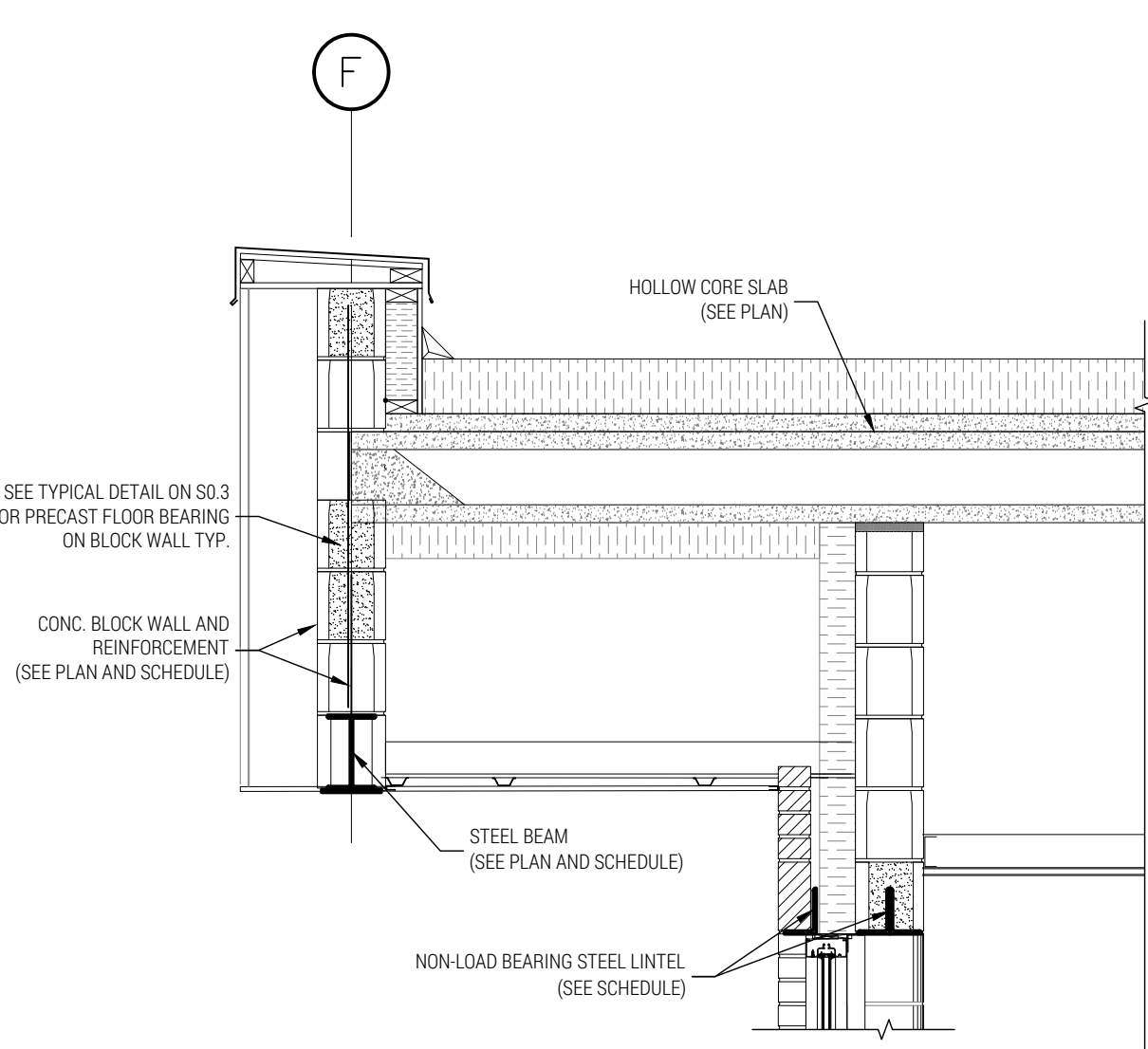
CLASSROOM, CORRIDORS AND LOBBY  
INCL. 14Pa FOR PARTITIONS ..... 3.53 kPa

**LIVE LOAD**

CLASSROOM ..... 2.4 kPa  
MECH ROOM ..... 3.6 kPa  
CORRIDORS, STAIRS AND LOBBY ..... 4.8 kPa

- NOTES:**
- REFER TO ARCHITECTURAL DRAWINGS FOR TOP OF SLAB ELEVATIONS.
  - ELEVATIONS ON PLAN ARE REFERENCED FROM T/O FLOOR SLAB (N.O.).
  - REFER TO ARCH. DWGS. FOR DIMENSIONS, OPENINGS, DEPRESSIONS AND SLOPES NOT SHOWN ON THIS DRAWING.
  - PRECAST BEAMS, WALLS, COLUMNS AND HOLLOW CORE SLAB INCLUDING CONNECTION DETAILS & TOPPING DETAILS TO BE DESIGNED BY PRECAST SUPPLIER. SHOP DRAWINGS BEARING THE STAMP OF A P. ENG. OF ONTARIO TO BE SUBMITTED TO DESIGN ENGINEER FOR REVIEW.
  - LOCATION OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE COORDINATED WITH MECHANICAL CONTRACTOR.
  - FOR MECHANICAL, ELECTRICAL AND OTHER OPENINGS IN SLAB SEE MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.
  - PRECAST CONCRETE STAIRS TO BE DESIGNED BY SUPPLIER. SHOP DRAWINGS STAMPED BY P. ENG. OF ONTARIO TO BE SUBMITTED FOR REVIEW.
  - REFER TO ARCH. PLAN FOR SLOPES ON SLAB, PRECAST CURB LOCATIONS AND NON-LOAD BEARING CONCRETE BLOCK WALLS.
  - SEE PRECAST SHOP DRAWINGS FOR LOCATIONS OF PRECAST COLUMNS, WALLS AND BEAMS.
  - NO MOVEMENT JOINT IN SHEAR WALLS.

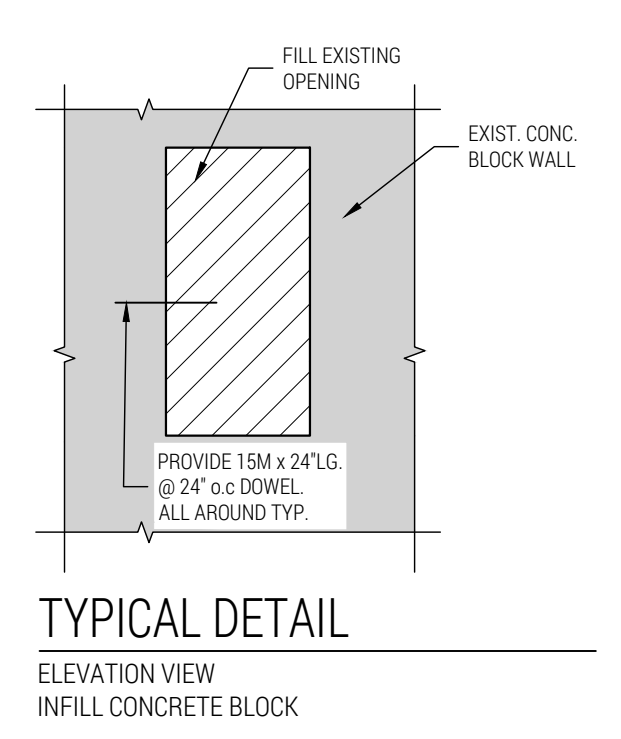
- PRECAST ELEMENTS**
- SLABS TO BE DESIGNED FOR U.D.L. AND LOADS DUE TO SUPPORTED WALLS AND BEAMS.
  - BEAMS AND COLUMNS TO BE DESIGNED FOR LOADS DUE TO SUPPORTED MEMBERS / INCLUDING TORSIONAL LOADS.
  - WALLS TO BE DESIGNED FOR ALL APPLIED LOADS, INCLUDING FOR LOCAL CONCENTRATED LOADS.
  - FLOOR TO BE DESIGNED FOR DIAPHRAGM ACTION.
  - ALL REINFORCEMENT ON TYP. DETAILS IS MINIMUM.
- LEGEND**
- DENOTES LOCATION OF ROUGH OPENING
- DENOTES LOCATION OF ALL FLOOR OPENINGS WITH MECH. CONTRACTOR.
- DENOTES LOCATION OF 40mm GAP (MOVEMENT JOINT) BETWEEN EXISTING AND NEW STRUCTURE TYPICAL.
- D1 - 38x0.75mm L2C 'R0338' W/CWEST' METAL DECK (3 SPAN CONT.)
- ALL INTERIOR NON-LOAD BEARING CONCRETE BLOCK WALL TO BE WA (SEE CONCRETE BLOCK WALL SCHEDULE)
  - PROVIDE STEEL LINTEL FOR ALL OPENING IN INTERIOR NON-LOAD BEARING BLOCK WALL AS PER SCHEDULE ON S0.2



**SECTION 1**  
S2.0 1:20

**SECTION 2**  
S2.0 1:20

**SECTION 3**  
S2.0 1:20



**TYPICAL DETAIL**  
ELEVATION VIEW  
INFILL CONCRETE BLOCK

**WALL PLATE SCHED.**

MARK	DESCRIPTION
WPL.1	15mm THK. x 200 L.G. x 180 WIDE c/w (2) 15mm Ø x 300 EMBEDMENT ANCHOR ROD FULLY GROUT (2) MASONRY COURSES 600mm LG. (SEE GENERAL NOTES)
WPL.2	15mm THK. x 180 L.G. x 200 WIDE c/w (2) 15mm Ø x 300 EMBEDMENT ANCHOR ROD (SEE GENERAL NOTES FOR GROUTING)

**NOTES:**

- CONCRETE FILL SOLID (2) MASONRY COURSES MIN. BENEATH ALL BEARING PLATES.
- PLATE DIMENSION NOTED AS 'LENGTH' TO BE PARALLEL WITH BEAM WEB.
- FIELD WELD BEAM TO BEARING PLATE w/(2) 6.4mm x 40mm L.G. FILLET WELDS (EACH SIDE)

**LINTEL SCHEDULE**

MARK	SIZE	BEARING	DETAIL
L1	W200x27 + 8mm PLATE AT BOT. FLANGE, WIDTH TO SUIT	W.P.L. 180 x 12 x 200 c/w 2-15M ROD 300' L.G.	WELD WALL REINF. TO LINTEL
L2	W200x27 + 10mm PLATE AT BOT. FLANGE, WIDTH TO SUIT	W.P.L. 180 x 12 x 200 c/w 2-15M ROD 300' L.G.	WELD WALL REINF. TO LINTEL 10mm STEEF @ 600mm o.c

**CONCRETE BLOCK WALL SCHEDULE**

MARK	DESCRIPTION
<b>W1</b> (ALL LOAD BEARING U.N.O.)	190mm CONC. BLOCK AND 240mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 800 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY SECOND COURSE
<b>W2</b>	190mm CONC. BLOCK (FULLY GROUTED) - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 800 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY COURSE
<b>W3</b>	240mm CONC. BLOCK (FULLY GROUTED) - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 800 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY COURSE
<b>W4</b> (NON-LOAD BEARING) NOT SHOWN	140mm CONC. BLOCK, 190mm CONC. BLOCK AND 240mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 10M @ 1000 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY SECOND COURSE
<b>SW1</b>	190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 20 MPa - 15M @ 200 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY COURSE - 1-15M HORIZ. BAR @ 2000 SPACED VERT.
<b>SW1a</b>	190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 20 MPa - 15M @ 800 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY SECOND COURSE - 1-10M HORIZ. BAR @ 2000 SPACED VERT.
<b>SW2</b>	190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 200 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY SECOND COURSE - 1-15M HORIZ. BAR @ 2000 SPACED VERT.
<b>SW2a</b>	190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 800 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY SECOND COURSE - 1-15M HORIZ. BAR @ 2000 SPACED VERT.
<b>SW3</b>	190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 200 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY COURSE
<b>SW3a</b>	190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 800 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY SECOND COURSE
<b>SW4</b>	240mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 200 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY COURSE - 1-15M HORIZ. BAR @ 2000 SPACED VERT.
<b>SW4a</b>	240mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 800 VERT - HEAVY DUTY BLOCK/OK TRUSS / LADDER AT EVERY SECOND COURSE - 1-15M HORIZ. BAR @ 2000 SPACED VERT.

**NOTES:**

- FULLY GROUT ALL REINFORCED CORES.
- ALL WALLS NOTED FULLY GROUTED ARE TO BE 100% FILLED WITH GROUT.
- COORDINATE ALL WALL OPENINGS WITH ARCH. DWGS. AND MECHANICAL CONTRACTOR.
- PROVIDE ADDITIONAL BARS/MATCHING WALL REINF. SIZE, FULL HEIGHT @ ALL WALL ENDS, INTERSECTIONS AND OPENINGS UNLESS OTHERWISE NOTED ON DRAWINGS.
- PROVIDE STANDARD TENSION SPACES FOR ALL HORIZONTAL AND VERTICAL WALL REINFORCEMENT.
- ALL BARS CONNECTING BETWEEN FLOORS TO BE TIED TOGETHER REFER TO SECTION DETAILS.
- SOLID FILLED VOIDS TO BE MADE WITH 20MPa FLOWABLE GROUT (MORTAR FALL NOT PERMITTED).
- PROVIDE DOWELS FROM FOOTING OR SUPPORTING STRUCTURES TO WALLS ABOVE TO MATCH VERTICAL WALL REINFORCEMENT.

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ISSUED FOR BUILDING PERMIT 1 2025-10-06

**DFE**  
**DOYTSCH & FILO ENGINEERING INC.**  
Structural Engineers

**LICENCED PROFESSIONAL ENGINEER**  
T. N. DOYTSCH  
100113262  
2025-10-06  
PROVINCE OF ONTARIO

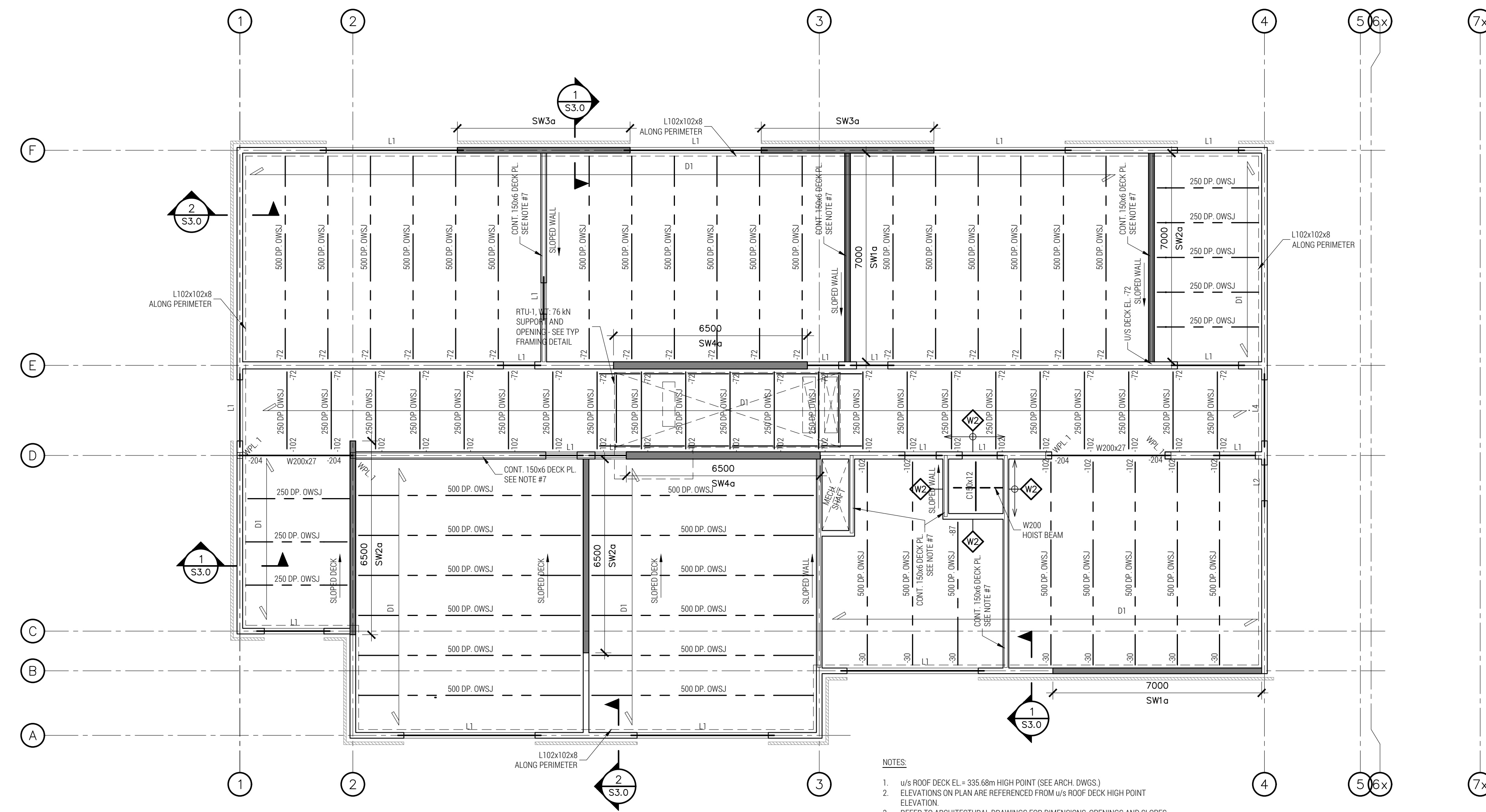
Phones: (647) 836-4805 • (905) 719-1482

PROJECT  
**ST. ALOYSIUS CATHOLIC ELEMENTARY SCHOOL ADDITION**

504 CONNAUGHT STREET, KITCHENER, ON

DRAWING  
**SECOND FLOOR FRAMING PLAN, SCHEDULES AND DETAILS**

Design By: TD/AF Date: 2025-07-08  
Project No.: 25032601  
Drawn By: AF Drawing No.:  
Scale: AS NOTED **S2.0**



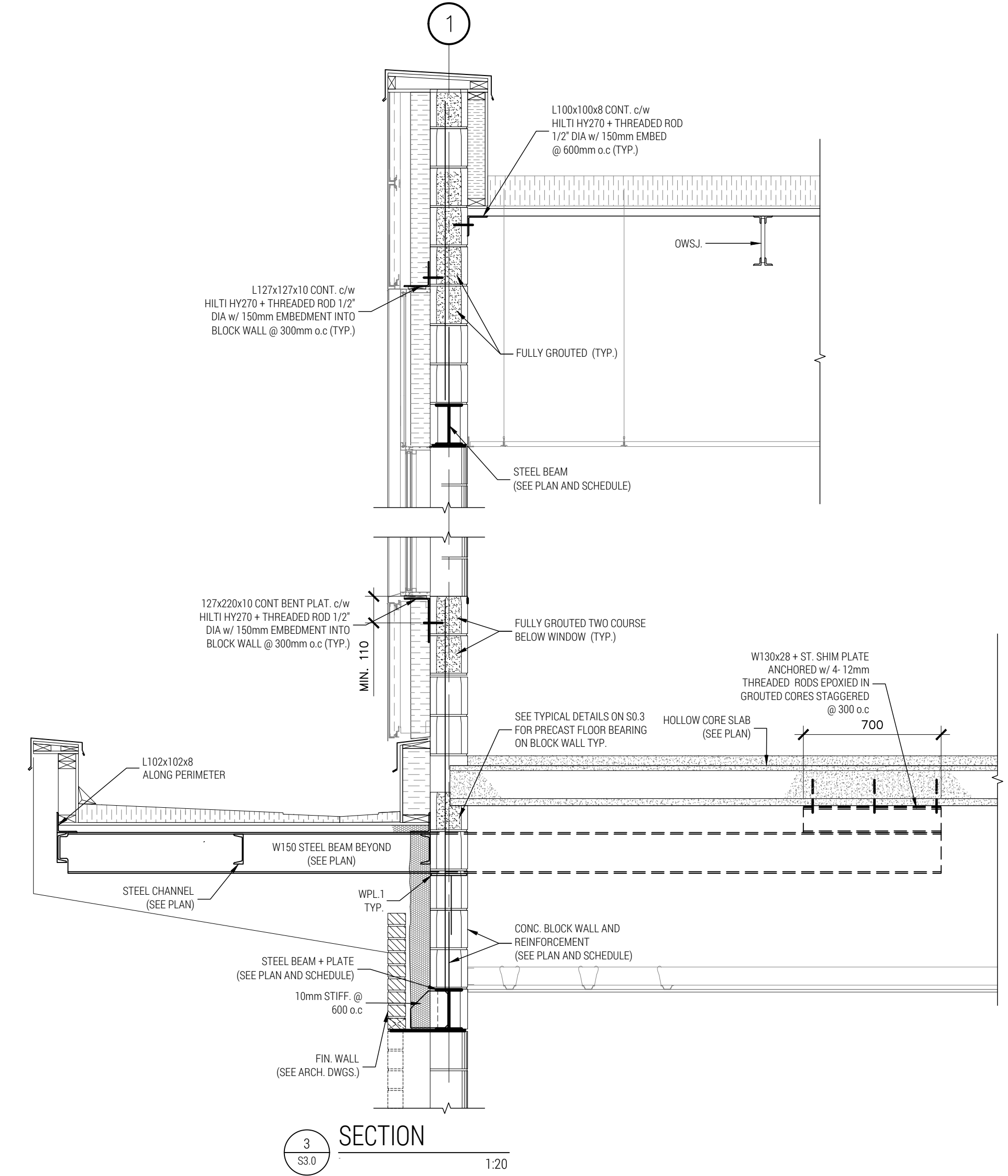
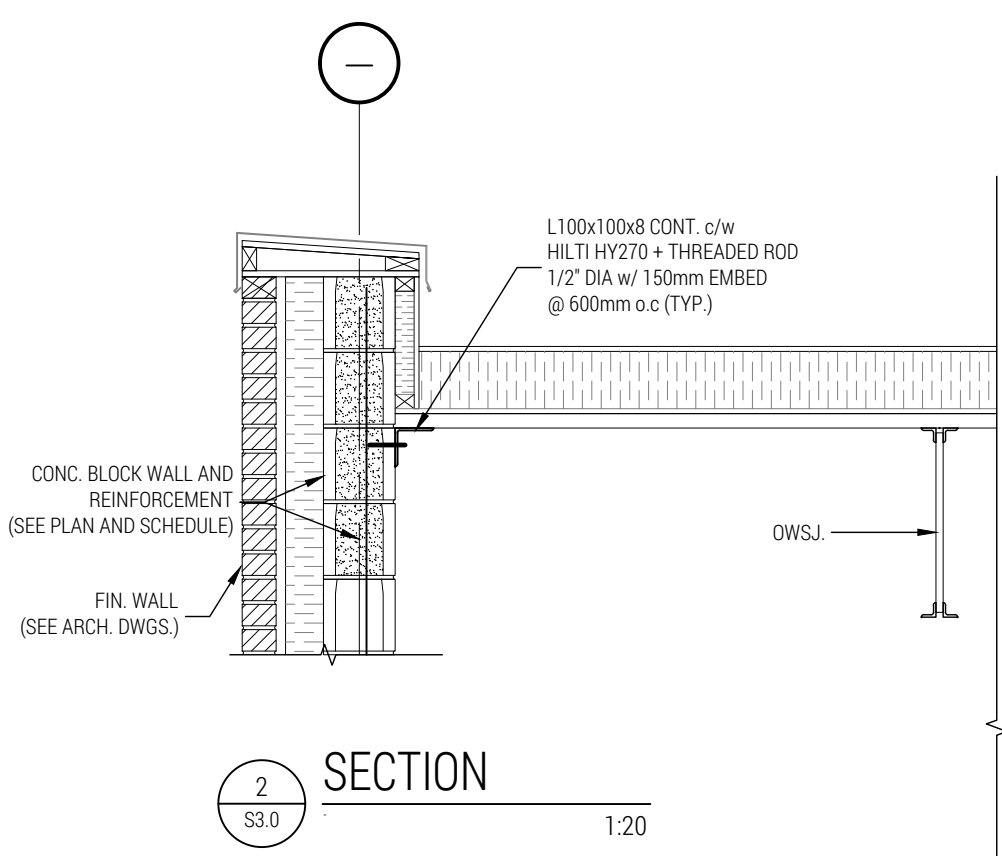
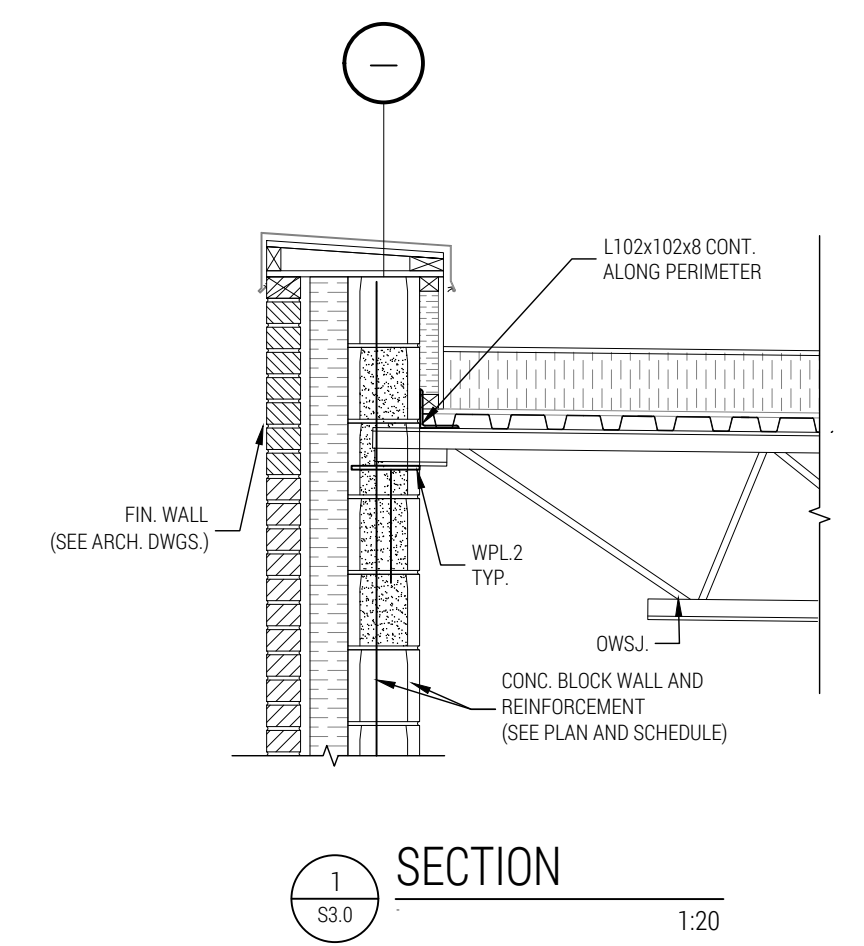
**PLAN**  
ROOF FRAMING PLAN 1:100

**DESIGN LOADS:**  
ROOF DEAD LOAD = 1.72 kPa  
ROOF SNOW LOAD = 2.30kPa + SNOW ACCUMULATION (REFER TO DWG S0.1)  
REFER TO MECHANICAL DRAWINGS FOR ROOF TOP UNIT WEIGHTS AND LOCATIONS.

**LEGEND:**  
DENOTES LOCATION OF ROUGH OPENING  
DENOTES LOCATION OF 40mm GAP (EXPANSION JOINT) BETWEEN EXISTING AND NEW STRUCTURE TYPICAL

- D1 - 38x0 76mm L2C 'RD938 VIOVST' METAL DECK (3 SPAN CONT.)
- ALL INTERIOR NON-LOAD BEARING CONCRETE BLOCK WALL TO BE W4 (SEE CONCRETE BLOCK WALL SCHEDULE)
  - PROVIDE STEEL LINTEL FOR ALL OPENING IN INTERIOR NON-LOAD BEARING BLOCK WALL AS PER SCHEDULE ON S0.2

- NOTES:**
- w/s ROOF DECK EL. = 335.68m HIGH POINT (SEE ARCH. DWGS.)
  - ELEVATIONS ON PLAN ARE REFERENCED FROM w/s ROOF DECK HIGH POINT ELEVATION
  - REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, OPENINGS AND SLOPES NOT SHOWN ON THIS DRAWINGS.
  - SEE BASE PLATE DETAILS FOR COLUMN ANCHORS AND BASE PLATES NOT INDICATED ON PLAN
  - LOCATION OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE CONFIRMED BY MECHANICAL CONTRACTOR BEFORE STRUCTURAL STEEL IS FABRICATED. REFER TO MECHANICAL DRAWINGS. MECHANICAL EQUIPMENT AND PIPING MUST BE HUNG FROM O.W.S.J. PANEL POINTS.
  - FRAME ALL ROOF OPENINGS AND MECHANICAL UNITS AS SHOWN ON TYPICAL DETAIL U.N.O.
  - CONTINUOUS DECK PLATES ARE COMPLETED WITH 16 DIA. ANCHORS 300 LONG + 50 HOOK AT 600 o.c. FILL TOP 2 BLOCK COURSES SOLID AT ANCHOR LOCATIONS AND TOP COURSE SOLID FULL LENGTH AT DECK PLATE.



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2025-10-06  
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PROJECT  
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504 CONNAUGHT STREET, KITCHENER, ON  
DRAWING  
**ROOF FRAMING PLAN, SCHEDULES AND DETAILS**  
Design By: TD/AF Date: 2025-07-08  
Project No.: 25032601  
Drawn By: AF Drawing No.:  
Scale: AS NOTED **S3.0**