GENERAL REQUIREMENTS AND DESIGN LOADS

GENERAL

1. STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS - INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL AND CIVIL DRAWINGS, THE GEOTECHNICAL REPORTS AND THE SPECIFICATIONS.
2. DO NOT SCALE THESE DRAWINGS.
3. ALL WORK MUST COMPLY WITH THE PROVISIONS OF THE CURRENT ONTARIO BUILDING CODE (OBC), THE OCCUPATIONAL HEALTH & SAFETY ACT, THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND ALL RELEVANT CODES AND STANDARDS.
4. DETAILS OF EXISTING CONDITIONS AND CONSTRUCTION ARE SHOWN BASED ON INFORMATION AVAILABLE AT THE TIME OF PREPARING DESIGN DRAWINGS. IF, PRIOR TO OR DURING CONSTRUCTION, CONDITIONS ARE REVEALED THAT DIFFER FROM CONDITIONS SHOWN, ADVISE THE STRUCTURAL ENGINEER BEFORE PROCEEDING.
5. THESE DRAWINGS SHOW THE COMPLETED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY ON THE JOB SITE AND THE DESIGN, INSTALLATION AND SUPERVISION OF ALL TEMPORARY WORKS REQUIRED TO SAFELY COMPLETE THE PROJECT.
6. DO NOT IMPOSE CONSTRUCTION LOADS ON THE STRUCTURE IN EXCESS OF THE DESIGN LOADS.
7. DO NOT CUT OR MAKE ADDITIONAL HOLES OR OPENINGS IN STRUCTURAL ELEMENTS WITHOUT APPROVAL OF STRUCTURAL ENGINEER.
8. REFER TO ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWINGS FOR EXACT LOCATIONS OF PITS, DEPRESSIONS, SUMPS, TRENCHES, CURBS, SLEEVES, CHAMFERS, SLOPES AND ROOF MOUNTED OR SUSPENDED EQUIPMENT.
9. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
10. FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE AS INDICATED FOR SIMILAR CONDITIONS.
11. CONTRACTOR MUST VERIFY/COORDINATE ALL DIMENSIONS AND PENETRATIONS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO CONSTRUCTION. REPORT ANY INCONSISTENCIES BEFORE PROCEEDING WITH THE WORK. ANY OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS MUST BE APPROVED BY STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

DESIGN NOTES

1. THE STRUCTURE INDICATED ON THESE DRAWINGS HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT ONTARIO BUILDING CODE (OBC), AND THE FOLLOWING CANADIAN DESIGN STANDARDS:

   ◆ CONCRETE STRUCTURE: CSA A23.3-14 (DESIGN OF CONCRETE STRUCTURES)

   ◇ STEEL STRUCTURE: CSA S16-14 (R2019) (DESIGN OF STEEL STRUCTURES)

   ◇ MASONRY STRUCTURE: CSA S304-14 (R2019) (DESIGN OF MASONRY STRUCTURES)

   ◇ WOOD STRUCTURE: CSA 086-14 (R2019) (ENGINEERING DESIGN IN WOOD)
2. THE ROOF HAS BEEN DESIGNED FOR WATER ACCUMULATION TO A DEPTH OF 152mm TO ALLOW FOR THE USE OF STORM WATER FLOW CONTROL DRAINS.
3. UNIT LOADS AND PRESSURES GIVEN ARE SPECIFIED (UNFACTORED).
4. REFER TO SECTIONS RELATING TO SPECIALTY STRUCTURAL ELEMENTS OR TEMPORARY WORK BELOW FOR REQUIREMENTS FOR STRUCTURAL DESIGN BY OTHERS.
5. DEFLECTION: THE STRUCTURE HAS BEEN DESIGNED TO LIMIT SHORT-TERM AND LONG-TERM DEFLECTIONS TO GENERALLY ACCEPTED LIMITS OUTLINED IN CANADIAN DESIGN STANDARDS. CONTRACTOR MUST ALLOW FOR SUCH DEFLECTIONS IN THE DESIGN AND CONSTRUCTION OF ALL NON-STRUCTURAL ELEMENTS.
6. **DEFLECTION LIMITS:**
   LIMIT DEFLECTIONS TO LIMITS SPECIFIED BELOW OR 25mm, WHICHEVER IS SMALLER:

ROOF JOISTS:	TOTAL LOAD	SPAN / 240
	SNOW LOAD	SPAN / 360
FLOOR JOISTS:	TOTAL LOAD	SPAN / 240
	LIVE LOAD	SPAN / 360

SPECIALTY STRUCTURAL ELEMENTS - DESIGNED BY OTHERS

1. SPECIALTY STRUCTURAL ELEMENTS SHALL BE DESIGNED AND DETAILED BY THE FABRICATORS OF THOSE ELEMENTS AND THEIR SPECIALTY STRUCTURAL ENGINEERS, INCLUDING THE FOLLOWING:
   - PRECAST CONCRETE
   - MANUFACTURED WOOD PRODUCTS
   - COLD FORMED STEEL STUD FRAMING
   - OPEN WEB STEEL JOISTS
   - STRUCTURAL STEEL CONNECTIONS
   - MISCELLANEOUS METALS, INCLUDING LADDERS AND STEEL STAIRS
   - GUARDS AND HANDRAILS
   - PRE-ENGINEERED STEEL BUILDINGS
   - SEISMIC RESTRAINTS OF NON-STRUCTURAL COMPONENTS AND EQUIPMENT
   - STUD RAILS
2. SPECIALTY STRUCTURAL ELEMENTS SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF THE ONTARIO BUILDING CODE, AND AS NOTED ON STRUCTURAL AND ARCHITECTURAL DRAWINGS.
3. GUARDS AND HANDRAILS SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE CLAUSES 3.4.6.5 & 3.4.6.6, AND 4.1.5.14. IN ADDITION, GLASS IN GUARDS SHALL COMPLY WITH THE ONTARIO BUILDING CODE SUPPLEMENTARY STANDARD SB-13.
4. ENGINEERED SHOP DRAWINGS OF SPECIALTY STRUCTURAL ELEMENTS MUST BE SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE ENGINEERING IN THE PROVINCE OR TERRITORY WHERE THE PROJECT IS LOCATED.
5. SEALED ENGINEERED SHOP DRAWINGS MUST BE SUBMITTED TO THE DESIGN CONSULTANT TEAM FOR REVIEW PRIOR TO FABRICATION.
6. SHOP DRAWINGS MUST BE REVIEWED BY THE GENERAL CONTRACTOR AND COORDINATED WITH OTHER SUB TRADES PRIOR TO SENDING TO CONSULTANTS. SHOP DRAWINGS NOT STAMPED, REVIEWED AND SUFFICIENTLY COORDINATED WILL BE RETURNED NOTED "NOT REVIEWED". ANY RESULTING DELAYS TO THE PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. SHOP DRAWINGS WILL BE REVIEWED FOR CONFORMANCE WITH THE GENERAL DESIGN INTENT. REVIEW DOES NOT IMPLY APPROVAL OF DETAILED DESIGN OR QUANTITIES OUTLINED IN THE SHOP DRAWINGS. THE RESPONSIBILITY FOR THE QUANTITIES AND DETAILED DESIGN OF THE MATERIALS AND COMPONENTS AS REQUIRED TO PROVIDE THE COMPLETE AND SATISFACTORY JOB DESCRIBED IN THE DESIGN DOCUMENTS REMAINS WITH THE CONTRACTOR.
8. COPIES OF REVIEWED ENGINEERED SHOP DRAWINGS MUST BE KEPT ON SITE AND MADE AVAILABLE TO THE BUILDING INSPECTOR TO REVIEW UPON REQUEST.

TEMPORARY WORKS - DESIGNED BY OTHERS

1. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY ON THE CONSTRUCTION SITE AND THE DESIGN, INSTALLATION AND SUPERVISION OF ANY TEMPORARY INSTALLATIONS REQUIRED TO PROVIDE ACCESS, PROTECTION, SUPPORT, OR SERVICES FOR WORKERS EQUIPMENT AND MATERIALS DURING CONSTRUCTION. THIS INCLUDES BUT IS NOT LIMITED TO BRACING, FORMWORK, SHORING, DEWATERING OPERATIONS, LIFTING OPERATIONS.
2. DESIGN AND FIELD REVIEW OF ALL TEMPORARY WORKS MUST BE UNDERTAKEN BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OR TERRITORY WHERE THE PROJECT IS LOCATED AND RETAINED BY THE GENERAL CONTRACTOR OR ONE OF THEIR SUB-CONTRACTORS.
3. DESIGN AND FIELD REVIEW OF ALL TEMPORARY WORKS MUST BE UNDERTAKEN IN ACCORDANCE WITH THE ONTARIO BUILDING CODE, APPLICABLE CODES AND STANDARDS, AND REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION.
4. SEALED ENGINEERING SHOP DRAWINGS OF THE FOLLOWING TEMPORARY WORKS SHALL BE SUBMITTED TO THE CONSULTANT DESIGN TEAM FOR REVIEW:
   - SHORING
   - FORMWORK
   - CRANE BASE(S)
   - HOISTING OR LIFTING OPERATIONS
5. SHOP DRAWINGS WILL BE REVIEWED FOR COMPLIANCE WITH DESIGN INTENT AND SPECIFICATIONS FOR PERMANENT WORKS AND LOADS APPLIED TO PERMANENT WORKS.
6. REVIEW OF SHOP DRAWINGS OF TEMPORARY WORKS DOES NOT IMPLY APPROVAL OR VERIFICATION OF THE DETAILED DESIGN, AND D+M STRUCTURAL LTD. ACCEPTS NO RESPONSIBILITY FOR THE DESIGN, INSTALLATION OR SUPERVISION OF TEMPORARY INSTALLATIONS.

ABBREVIATIONS

WHEN USED, THESE ABBREVIATIONS HAVE THE FOLLOWING MEANINGS:

ARCH.	ARCHITECTURAL
BPL	BASE PLATE
B	BOTTOM
BOT.	BOTTOM
BLL	BOTTOM LOWER LAYER
BUL	BOTTOM UPPER LAYER
C/C	CENTER-TO-CENTER
CL	CENTER-LINE
CONC.	CONCRETE
CONT.	CONTINUOUS
CW	CORE WALL
C/W	COMPLETE WITH
EA.	EACH
EF	EACH FACE
ES	EACH SIDE
EW	EACH WAY
EL.	ELEVATION
ELEC.	ELECTRICAL
FF	FAR FACE
FFL	FINISHED FLOOR LEVEL
FW	FOUNDATION WALL
H	HORIZONTAL
HORIZ.	HORIZONTAL
HDMR	HEAVY DUTY MASONRY REINFORCING
ICF	INSULATED CONCRETE FORMWORK
IF	INSIDE FACE
LB	LOADBEARING
LL	LOWER LAYER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVL	LAMINATED VENEER LUMBER
MAX.	MAXIMUM
MIN.	MINIMUM
MECH.	MECHANICAL
NF	NEAR FACE
N/A	NOT APPLICABLE
NLB	NOT LOADBEARING
NTS	NOT TO SCALE
OF	OUTSIDE FACE
o.c.	ON CENTER
PL	PLATE
SF	STRIP FOOTING
SFD	STEP FOOTING DOWN
SMR	STANDARD MASONRY REINFORCING
SW	SHEAR WALL
T	TOP
TLL	TOP LOWER LAYER
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TUL	TOP UPPER LAYER
TYP.	TYPICAL
U/N	UNLESS NOTED OTHERWISE
UL	UPPER LAYER
U/S	UNDERSIDE
V	VERTICAL
VERT.	VERTICAL
VSC	VERTICAL SLOTTED CONNECTION

FOUNDATIONS

GEOTECHNICAL CONDITIONS

1. ALL FOOTINGS TO BEAR ON APPROVED BEARING SURFACE WITH MINIMUM DESIGN BEARING STRENGTHS NOTED BELOW (OR IN THE FOUNDATION SCHEDULE, IF APPLICABLE).
2. ALL BEARING CONDITIONS MUST BE REVIEWED ON SITE BY THE GEOTECHNICAL ENGINEER TO CONFIRM ADEQUATE BEARING CONDITIONS BEFORE PLACING CONCRETE.
3. REFERENCE GEOTECHNICAL REPORT: GEOTECHNICAL INVESTIGATION, PROPOSED WAREHOUSE DEVELOPMENT BY PATERSON GROUP. REPORT #: PG6674-1, DATED JUNE 22, 2023.

   SERVICEABILITY LIMIT STATE (SLS): 150 kPa
   ULTIMATE LIMIT STATE (ULS): 225 kPa
4. PROVIDE MINIMUM FROST COVER TO UNDERSIDE OF FOUNDATIONS AS RECOMMENDED IN GEOTECHNICAL REPORT OR LISTED BELOW (WHICHEVER IS GREATER):

   PERIMETER OF HEATED BUILDING: 5'-0"
   ISOLATED EXTERIOR FOOTINGS: 7'-0"

EXCAVATION

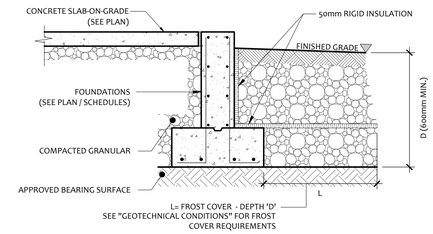
1. PROTECT SUBGRADE FROM FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION. DO NOT POUR CONCRETE ON FROZEN GROUND OR GROUND THAT HAS FROZEN.
2. PRIOR TO ANY EXCAVATION OR PILING OPERATION, VERIFY LOCATION OF EXISTING SERVICES AND TAKE ALL NECESSARY MEASURES TO PROTECT AND MAINTAIN SERVICES. NOTIFY OWNER AND ENGINEER IF ANY SERVICES NOT SHOWN ON CIVIL PLANS OR OTHERWISE EXPECTED ARE ENCOUNTERED. DO NOT PROCEED FURTHER UNTIL DIRECTED.
3. CARE MUST BE TAKEN TO AVOID UNDERMINING EXISTING BUILDING FOUNDATIONS OR UNDERGROUND SERVICES.
4. IF EXISTING BUILDING FOUNDATIONS OR UNDERGROUND SERVICES ARE PRESENT WITHIN OR ADJACENT TO THE WORK AREA, CONFIRM LOCATION AND DEPTH BEFORE PROCEEDING WITH EXCAVATION.
5. UNLESS OTHERWISE OUTLINED IN GEOTECHNICAL REPORT, DO NOT EXCAVATE BELOW A LINE EXTENDING DOWNWARD FROM EXISTING FOUNDATIONS AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL.
6. SIDES AND BASE OF EXCAVATION MUST BE FREE OF WATER AND LOOSE OR REMOLDED MATERIAL BEFORE PLACING CONCRETE.
7. IF DEWATERING OPERATIONS ARE REQUIRED, DESIGN AND COORDINATE DEWATERING OPERATIONS TO PREVENT DAMAGE AND/OR SETTLEMENT OF ADJACENT FOUNDATIONS.

FOUNDATIONS CONTINUED

BACKFILLING

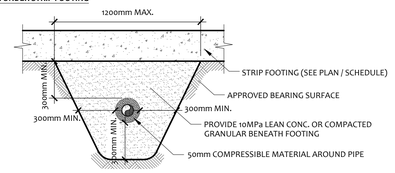
1. RE-USE OF EXISTING MATERIAL IS SUBJECT TO REVIEW AND ACCEPTANCE BY THE PROJECT GEOTECHNICAL ENGINEER.
2. ENSURE 75% OF CONCRETE DESIGN STRENGTH HAS BEEN ATTAINED PRIOR TO BACKFILLING AGAINST STRUCTURES.
3. ENSURE ADEQUATE LATERAL SUPPORT IS PROVIDED TO FOUNDATION WALL PRIOR TO BACKFILLING.
4. BACKFILL TO FOUNDATION WALLS AND WITHIN BUILDING FOOTPRINT AS RECOMMENDED IN GEOTECHNICAL REPORT. IF NOT NOTED, BACKFILL WITH OPSS GRANULAR B TYPE 2 MATERIAL IN LIFTS NOT EXCEEDING 300mm, COMPACTED TO MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). FINAL LIFT BELOW SLAB-ON-GRADE TO BE 200mm OF OPSS GRANULAR A, COMPACTED TO MINIMUM 98% SPMDD.

ALTERNATE FROST PROTECTION



MECHANICAL INTERFERENCES

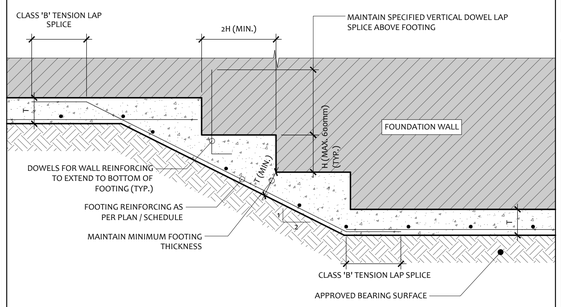
PIPE PERPENDICULAR UNDER STRIP FOOTING



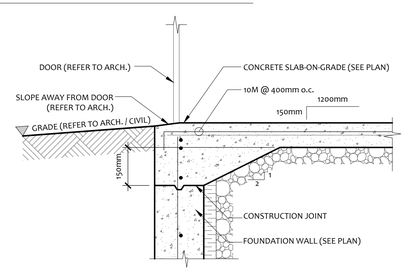
NOTE:
PIPE NOT TO CROSS BELOW CONCENTRATED POINT LOAD ABOVE. ALL PIPES CROSSING BELOW STRIP FOOTING TO BE REVIEWED BY ENGINEER PRIOR TO PLACING.

STEPPED FOOTINGS

STEPPED FOOTING ON SOIL



SLAB-ON-GRADE AND FOUNDATION WALL AT DOOR



CONCRETE

GENERAL

1. ALL CONCRETE WORK, INCLUDING MATERIALS, MIXING, PLACING, CURING AND FORMWORK SHALL BE IN ACCORDANCE WITH CSA A23.1.
2. TESTING OF CONCRETE AND CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH CSA A23.2.
3. FALSEWORK AND FORMWORK SHALL BE IN ACCORDANCE WITH CSA S269.1 (R2019).
4. UNLESS NOTED OTHERWISE, ALL EXPOSED CORNERS SHALL BE FINISHED WITH 20mm CHAMFER.
5. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZES AND LOCATIONS OF ALL EQUIPMENT BASES, HOUSEKEEPING PADS, PITS, SUMPS, TRENCHES, DEPRESSIONS, CURBS, CHAMFERS AND SLOPES NOT SHOWN ON STRUCTURAL DRAWINGS.
6. MAINTAIN MINIMUM SLAB THICKNESS INDICATED AT SLOPES, DEPRESSIONS AND CHANGES IN ELEVATION UNLESS NOTED OTHERWISE.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE DEFORMED STEEL BARS IN ACCORDANCE WITH CSA G30.18, GRADE 400R.
2. WHERE SPECIFIED, EPOXY COATING SHALL BE IN ACCORDANCE WITH ASTM A775.
3. WELDED STEEL WIRE MESH SHALL BE IN ACCORDANCE WITH CSA G30.5 (FLAT SHEETS ONLY).
4. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED, PLACED AND SUPPORTED IN ACCORDANCE WITH THE REINFORCING STEEL INSTITUTE OF CANADA MANUAL OF STANDARD PRACTICE AND CSA A23.3, UNLESS NOTED OTHERWISE.
5. DO NOT ELIMINATE OR DISPLACE REINFORCING TO ACCOMMODATE HARDWARE. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM STRUCTURAL ENGINEER BEFORE PLACING CONCRETE.
6. UNLESS INDICATED OTHERWISE, REINFORCING TO BE EXTENDED INTO ADJACENT CONCRETE ELEMENTS AND DEVELOPED WITH A STANDARD HOOK OR LAP SPLICE.
7. PROVIDE DOWELS TO MATCH REINFORCING IN ALL PIERS, COLUMNS, WALLS AND CURBS. PROVIDE CLASS 'B' TENSION LAP SPLICE UNLESS NOTED OTHERWISE AND FULLY EMBED. / DEVELOP REINFORCING.
8. REINFORCING SHALL BE EFFECTIVELY CONTINUOUS AT ALL CORNERS AND INTERSECTIONS. HOOK AND SPLICE AS REQUIRED.
9. STANDARD HOOKS SHALL BE USED UNLESS NOTED OTHERWISE.
10. SPLICE REINFORCING AS INDICATED ON STRUCTURAL DRAWINGS OR OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.
11. BARS MARKED AS CONTINUOUS SHALL BE DEVELOPED BY CLASS 'B' TENSION LAP SPLICE IN ACCORDANCE WITH CSA A23.3.
12. WHERE TENSION LAPS ARE SPECIFIED, PROVIDE MINIMUM CLASS 'B' TENSION LAP SPLICE IN ACCORDANCE WITH CSA A23.3.
13. ALL SPLICES IN CORE AND SHEAR WALLS TO BE MINIMUM 1.5 x BASIC DEVELOPMENT LENGTH.
14. MINIMUM WIRE MESH LAPS SHALL BE 150mm.
15. INSTALL ADHESIVE / EPOXY ANCHORS TO MANUFACTURER'S RECOMMENDATIONS. ALLOW TO REACH FULL DESIGN CAPACITY PRIOR TO LOADING.

CONCRETE COVER

1. CONCRETE COVER TO REINFORCING BARS SHALL BE AS FOLLOWS OR AS NOTED ON THE DRAWINGS (WHICHEVER IS GREATER):

FOUNDATIONS - CAST AGAINST SOIL:	75 mm	
FOUNDATIONS - NOT CAST AGAINST SOIL:	50 mm	
WALLS:	40 mm	
SLABS:	25 mm	(U/N ON PLAN)
PIERS:	40 mm	(TO TIES)

2. IN AREAS REQUIRING OR SUPPORTING 2- OR 3-HOUR FIRE RESISTANCE RATINGS, ENSURE THAT CONCRETE COVER TO REINFORCING BARS ALSO SATISFIES THE FOLLOWING MINIMUM REQUIREMENTS:

SLAB BOTTOM STEEL (ABOVE 2 HR FIRE RATED AREAS):	25mm	
SLAB BOTTOM STEEL (ABOVE 3HR FIRE RATED AREAS):	32mm	
COLUMNS / WALLS:	50mm	(TO TIES)

3. AT CLASS C-XL AND CLASS C-1 CONCRETE ELEMENTS, PROVIDE 60mm COVER TO BEAMS, SLABS AND WALLS.
4. MAINTAIN SPECIFIED CONCRETE COVER AT ALL SLOPES, DEPRESSIONS, CORNERS AND CHANGES IN ELEVATION / THICKNESS.

CONCRETE MIXES

1. UNLESS NOTED OTHERWISE, PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CSA A23.1 TO ACHIEVE THE FOLLOWING PERFORMANCE CHARACTERISTICS:

LOCATION	28-DAY STRENGTH	EXPOSURE CLASS	ENTRAINED AIR CONTENT
SLAB-ON-GRADE (EXTERIOR)	32 MPa	C-2	5 - 8%
SLAB-ON-GRADE (INTERIOR)	25 MPa	N / N-CF	-
FOOTINGS	25 MPa	N	-
FOUNDATION WALLS	25 MPa	F-2	4 - 7%
PIERS	25 MPa	C-1	5 - 8%
EXTERIOR COLUMNS / PIERS	25 MPa	F-2	4 - 7%
INTERIOR COLUMNS / PIERS	25 MPa	N	-
SUSPENDED SLABS	25 MPa	N	-
CONCRETE ON STEEL DECK	25 MPa	N	-
STAIRS AND LANDINGS	25 MPa	N	-
PAVEMENTS & SIDEWALKS	32 MPa	C-2	5 - 8%
RETAINING WALLS	35 MPa	C-1	5 - 8%
ALL OTHER WALLS	25 MPa	N	
OTHER	25 MPa	N	-

2. CONCRETE STRENGTHS NOTED ON SPECIFIC PLANS OR SCHEDULES TAKE PRECEDENCE OVER ABOVE VALUES.
3. CONCRETE SHALL BE TYPE GU OR GUb PORTLAND CEMENT UNLESS SPECIFIED OTHERWISE.
4. IF BLENDED PORTLAND CEMENT / SLAG IS USED, SLAG CONTENT SHALL NOT BE MORE THAN 25% OF TOTAL MASS OF CEMENT.
5. STAIRS AND LANDINGS IN PARKING AREAS SHALL HAVE CORROSION INHIBITOR INCORPORATED IN CONCRETE MIX.
6. USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
7. NON-SHRINK CEMENTITIOUS GROUT SHALL BE AN APPROVED PRE-MIXED PROPRIETARY PRODUCT. COMPRESSIVE STRENGTH AT 28-DAYS = 50 MPa.
8. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR EXPOSED CONCRETE FINISHES.
9. SUBMIT CONCRETE MIX DESIGNS FOR REVIEW.

D+M STRUCTURAL ENGINEERING

D+M Structural Ltd.
110-333 Preston Street, Ottawa, ON, K1S 5N4
Phone: (613) 651-9490

#	DATE	DESCRIPTION
1	2024 07 19	ISSUED FOR PERMIT

STAMP:

LICENSED PROFESSIONAL ENGINEER
R. D. MUNDEN
100089717
2024 07 19
PROVINCE OF ONTARIO

NORTH ARROW:

PROJECT NAME AND ADDRESS:

BOONE PLUMBING
1560 STARTOP RD.

DRAWING NAME:

GENERAL NOTES AND DETAILS

DESIGNED BY: S. NELLURI / R. MUNDEN

DRAWN BY: J. LABBÉ

START DATE:

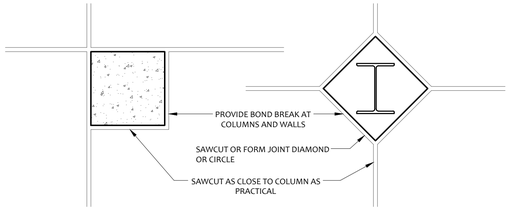
D+M PROJECT #: 23-017

S-000

CONCRETE CONTINUED

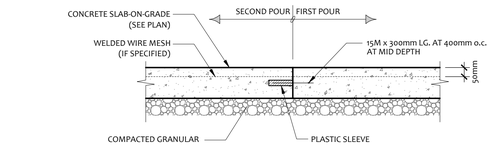
SLAB-ON-GRADE

1. SLAB-ON-GRADE TO BE PLACED ON COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. COMPACTION TESTS ON FILL MATERIAL TO BE CARRIED OUT PRIOR TO SLAB-ON-GRADE PLACEMENT.
2. PROVIDE SAWCUTS MAX. 25 TIMES THE SLAB THICKNESS AND NOT MORE THAN 4.5m SPACING. CUT ⅓ DEPTH OF SLAB AND FILL WITH FLEXIBLE JOINT FILLER.
3. SAWCUT SLAB-ON-GRADE AS SOON AS CONCRETE HAS SUFFICIENTLY SET TO AVOID RAVELLING THE EDGE (APPROX. 8-24 HOURS AFTER CONCRETE PLACEMENT).
4. PROVIDE BOND BREAK BETWEEN SLAB AND VERTICAL SURFACES USING ASPHALT IMPREGNATED FIBREBOARD OR HEAVY DUTY POLYETHYLENE.
5. DO NOT PLACE SLAB-ON-GRADE IN ONE CONTINUOUS POUR IN LENGTHS EXCEEDING 30m EITHER DIRECTION, UNLESS OTHERWISE NOTED ON PLAN.
6. CONTRACTOR TO SUBMIT PROPOSED SAWCUT PATTERNS / LOCATIONS TO ENGINEER FOR REVIEW. SAWCUTS TO BREAK AT COLUMNS AND CORNERS AND BE AS SQUARE AS POSSIBLE.
7. MAINTAIN MINIMUM SPECIFIED THICKNESS AT ALL DEPRESSIONS AND CHANGES IN ELEVATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL EXTENTS AND LOCATIONS OF FINISHES AND DEPRESSIONS.
8. WHERE CONCRETE FIBRES ARE SPECIFIED FOR SLAB-ON-GRADE REINFORCING, MIN. DOSAGE RATE TO BE 1.8 kg/m³ OF TUF-STRAND SF MACRO SYNTHETIC FIBRES BY EUCLID CHEMICALS - UNLESS NOTED OTHERWISE.
9. WHERE WIRE MESH IS SPECIFIED FOR SLAB-ON-GRADE REINFORCING, MIN. SIZE OF MESH TO BE 152x152 MW 18.7 x 18.7.

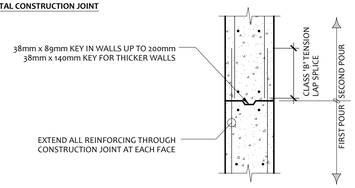


CONSTRUCTION JOINTS

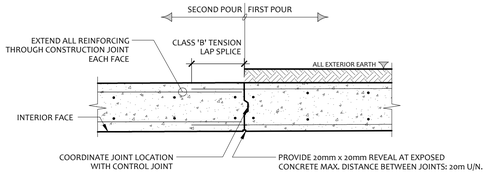
CONSTRUCTION JOINT IN SLAB-ON-GRADE



HORIZONTAL CONSTRUCTION JOINT



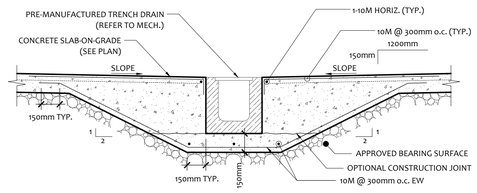
VERTICAL CONSTRUCTION JOINT



NOTES:

1. PROVIDE CONSTRUCTION JOINTS AS INDICATED ON STRUCTURAL DRAWINGS.
2. CONTRACTOR SHALL SUBMIT DETAILS OF PROPOSED CONSTRUCTION JOINT LOCATIONS NOT INDICATED ON DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW.
3. CONTRACTOR TO SUBMIT PROPOSED CONSTRUCTION JOINT LOCATIONS TO ENGINEER FOR REVIEW PRIOR TO POURING.

TYPICAL TRENCH DRAIN



STEEL

GENERAL

1. ALL STRUCTURAL STEEL DESIGN, FABRICATION AND CONSTRUCTION SHALL COMPLY WITH CSA S16 AND CANADIAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STANDARD PRACTICE.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING MATERIAL STANDARDS (UNLESS NOTED OTHERWISE):

TYPE	SPECIFICATION & GRADE
HOT-ROLLED SECTIONS (EXCEPT PLATES AND CHANNELS)	CSA G40.21 - GRADE 350 W OR ASTM A992, A572 GRADE 50
HOT-ROLLED SECTIONS (PLATES AND CHANNELS)	CSA G40.21 - GRADE 300 W
HOLLOW STEEL SECTIONS (HSS)	ASTM A500 - GRADE C
COLD FORMED STEEL SECTIONS	ASTM A607 - GRADE 50
CONNECTION BOLTS	ASTM A325 - BEARING TYPE
ANCHOR RODS	ASTM F1554 - GRADE AS PER BASEPLATE SCHEDULE

3. ALL STEEL WORK SHALL BE GIVEN ONE COAT OF APPROVED PRIMER (UNLESS GALVANIZED OR TO RECEIVE SPRAY-APPLIED FIREPROOFING).
4. FIELD AND SHOP CONNECTIONS SHALL BE WELDED OR HIGH TENSILE BOLTED (ASTM A325).
5. WELDING SHALL CONFORM TO CSA W59 AND BE UNDERTAKEN BY A FABRICATOR APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1.
6. ALL EXPOSED WELDS SHALL BE CONTINUOUS AND BE GROUND SMOOTH.
7. ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE GALVANIZED.
8. STRUCTURAL STEEL MEMBERS SHALL NOT BE SPLICED UNLESS APPROVED BY THE STRUCTURAL ENGINEER IN WRITING.
9. WHERE STRUCTURAL STEEL MEMBERS SPECIFIED ON THE STRUCTURAL DRAWINGS ARE UNAVAILABLE TO THE CONTRACTOR, THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE MEMBERS HAVING ALL SECTION PROPERTIES EQUAL TO OR BETTER THAN THAT OF THE SPECIFIED MEMBERS AT NO ADDITIONAL COST. CONTACT ENGINEER FOR ACCEPTANCE OF ANY AND ALL SUBSTITUTIONS.
10. HSS SECTIONS TO BE GALVANIZED SHALL BE APPROPRIATELY HEAT TREATED.
11. DESIGN STEEL TO STEEL CONNECTIONS FOR FORCES AND MOMENTS INDICATED ON DRAWINGS. IF CONNECTION FORCES ARE NOT INDICATED, DESIGN CONNECTIONS TO SUPPORT REACTION FROM MAXIMUM UNIFORMLY DISTRIBUTED LOAD THAT CAN BE SAFELY SUPPORTED BY BEAM IN BENDING.

STEEL DECK

1. STEEL DECK SHALL BE 38mm DEEP, BASE STEEL DESIGN THICKNESS AS INDICATED ON PLANS (MINIMUM 0.76mm, WITH DECK FLUTES AT 152mm SPACING, FORMED FROM SHEET STEEL CONFORMING TO CSSBI 10M/12M (AS APPLICABLE), MINIMUM GRADE 230.
2. UNLESS NOTED OTHERWISE, DECK SHALL HAVE A ZINC COATING TO ASTM A653M WITH ZINC THICKNESS CORRESPONDING TO Z275 (G90).
3. STEEL DECK UTILIZED FOR COMPOSITE FLOOR SLABS SHALL HAVE EMBOSSED WEBS.
4. STEEL DECK DESIGNATED AS ACOUSTIC DECK SHALL HAVE PERFORATED WEBS.
5. STEEL DECK SHALL BE INSTALLED CONTINUOUSLY OVER A MINIMUM OF THREE SPANS WHEREVER POSSIBLE.
6. DECK CONNECTIONS TO SUPPORTING STRUCTURE SHALL BE AS INDICATED ON PLANS. IF NOT NOTED, DECK CONNECTIONS SHALL BE AS FOLLOWS:

   FLOORS: HILTI X-HSN 24 OR HILTI X-ENP-19 FASTENERS (AS SPECIFIED BELOW BASED ON BASE STEEL THICKNESS) AT EVERY FLUTE (MAX. 150mm o.c.) AND HILTI S-SLC 01 M HWH SIDE LAP CONNECTORS @ MAX. 300mm o.c.

   ROOFS: HILTI X-HSN 24 OR HILTI X-ENP-19 FASTENERS (AS SPECIFIED BELOW BASED ON BASE STEEL THICKNESS) AT ALTERNATE FLUTES (MAX. 300mm o.c.) AND HILTI S-SLC 01 M HWH SIDE LAP CONNECTORS @ MAX. 600mm o.c.

   - WHERE BASE STEEL THICKNESS IS BETWEEN 3.2mm AND 9.51mm, HILTI X-HSN 24 FASTENERS ARE SUITABLE.
   - WHERE BASE STEEL THICKNESS IS GREATER THAN 6.4mm, HILTI X-ENP-19 FASTENERS ARE SUITABLE.
7. ALL WELDS SHALL BE PRIME PAINTED BY DECK CONTRACTOR.
8. STEEL DECK CLOSURES AND ACCESSORIES SHALL BE SUPPLIED AND INSTALLED BY THE DECK CONTRACTOR.
9. STEEL DECK CONTRACTOR SHALL REINFORCE ALL DECK OPENINGS 450mm OR SMALLER.
10. WEDGE THE FLUTES OF THE STEEL ROOF DECK UNDER WOOD SLEEPERS AND/OR PRE-MANUFACTURED ROOF CURBS TO PREVENT CRUSHING.
11. NO MECHANICAL OR ELECTRICAL EQUIPMENT OR ACCESSORIES SHALL BE HUNG FROM THE STEEL DECK.

PRE-ENGINEERED STEEL BUILDING

1. STRUCTURE INDICATED ON THESE DRAWINGS HAS BEEN DESIGNED IN CONJUNCTION WITH BUTLER MANUFACTURING PRE-ENGINEERED STEEL SUPERSTRUCTURE DESIGN, AS INDICATED ON DRAWINGS FOR CONSTRUCTION PERMIT, SEALED ON FEBRUARY 29TH, 2024.

MASONRY

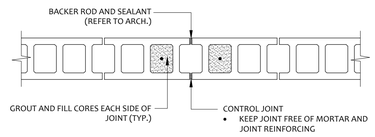
GENERAL

1. ALL MASONRY WORK SHALL CONFORM TO THE ONTARIO BUILDING CODE AND CSA S304 (DESIGN OF MASONRY STRUCTURES) AND CSA A371 (MASONRY CONSTRUCTION FOR BUILDINGS).
2. ALL CONCRETE MASONRY UNITS SHALL CONFORM TO CSA A165 SERIES AND AS FOLLOWS:
   CLASSIFICATION: H / 15 / A / M
3. GROUT SHALL CONFORM TO CSA A179 AND AS FOLLOWS:
   TYPE: COARSE GROUT, NON-SHRINK
   MINIMUM STRENGTH: 15 MPa AT 28 DAYS
   SLUMP: 200mm - 250mm
4. FILL ALL CELLS CONTAINING ANCHORS OR REINFORCING WITH GROUT.
5. MORTAR SHALL CONFORM TO CSA A179, TYPE S (MIN. STRENGTH = 12.4 MPa).
6. REINFORCE MASONRY AS INDICATED.
7. VERTICAL REINFORCING SHALL BE PLACED IN THE CENTRE OF GROUTED CORES.
8. VERTICAL AND BOND BEAM REINFORCING SHALL BE LAPPED AND HOOKED. PROVIDE CLASS 'B' TENSION LAP SPLICE UNLESS NOTED OTHERWISE AND FULLY EMBED / DEVELOP REINFORCING.
9. MINIMUM REINFORCING (UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS):

THICKNESS	LOAD-BEARING WALLS	NON LOAD-BEARING WALLS
140mm	SMR EVERY COURSE 15M @ 800mm o.c. VERT.	SMR ALT. COURSES 10M @ 800mm o.c. VERT.
190mm	HDMR EVERY COURSE 15M @ 800mm o.c. VERT.	HDMR ALT. COURSES 15M @ 1200mm o.c. VERT.
240mm	HDMR EVERY COURSE 15M @ 600mm o.c. VERT.	HDMR ALT. COURSES 15M @ 1000mm o.c. VERT.
290mm	HDMR EVERY COURSE 20M @ 600mm o.c. VERT.	HDMR ALT. COURSES 15M @ 800mm o.c. VERT.

10. PROVIDE ADDITIONAL 15M VERT. IN GROUT FILLED CORES EACH SIDE OF EVERY OPENING EXCEEDING 1000mm IN ANY DIMENSION AND AT EVERY CORNER, END OF WALL, OR OTHER DISCONTINUITY.
11. FIRST TWO COURSES OF MASONRY SHOULD BE GROUTED SOLID.
12. PROVIDE FULLY GROUTED BOND BEAMS AT THE TOP OF EVERY WALL AND AT EVERY FLOOR:
    NON-LOADBEARING WALLS: MIN. 1 COURSE DEEP, REINFORCED WITH MIN. 1-20M
    LOADBEARING WALLS: MIN. 2 COURSES DEEP, REINFORCED WITH MIN. 1-20M
13. PROVIDE LATERAL SUPPORTS (DEFLECTION CLIPS) AT THE TOP OF ALL MASONRY WALLS AS INDICATED IN TYPICAL DETAILS OR UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.
14. PROVIDE LINTELS OVER ALL OPENINGS OR RECESSES IN MASONRY WALLS EXCEEDING 400mm IN WIDTH, AS INDICATED IN TYPICAL DETAILS OR ON STRUCTURAL DRAWINGS.
15. CENTER BEARING PLATES OR WALL PLATES ON BEAM CENTERLINE AND CENTERLINE OF WALL (UNLESS INDICATED OTHERWISE).
16. PLACE BEARING PLATES AND SHELF ANGLES BACK MINIMUM 12mm FROM FACE OF WALL.
17. PROVIDE +/-20mm GROUT UNDER ALL BEARING PLATES.

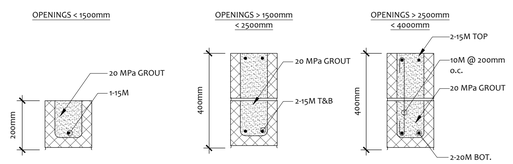
MOVEMENT JOINTS IN MASONRY BLOCK WALL



NOTES:

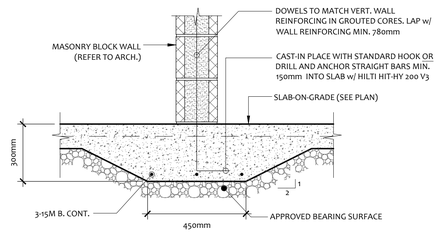
- BOND BEAM AT TOP OF WALL TO BE CONTINUOUS (NO MOVEMENT JOINTS).
- PROVIDE MOVEMENT JOINT AT 7.6m SPACING MAX.

MASONRY LINTELS (NON-LOADBEARING MASONRY WALLS)



PROVIDE 200mm MINIMUM BEARING AT SUPPORTS

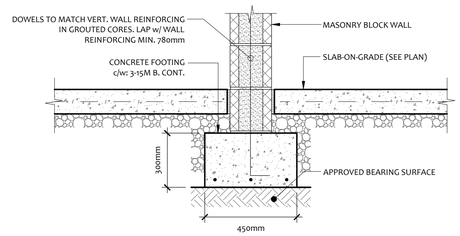
SLAB THICKENING AT NON-LOADBEARING MASONRY BLOCK WALL



NOTES:

- REFER TO ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS AND WALL THICKNESS.
- DO NOT LOCATE CONSTRUCTION OR CONTROL JOINTS IN SLAB (ORIENTED PARALLEL TO WALL) WITHIN 1000mm OF WALL.
- WALL REINFORCING AS NOTED ELSEWHERE.

FOUNDATION AT NON-LOADBEARING MASONRY BLOCK WALL



D+M STRUCTURAL ENGINEERING

D+M Structural Ltd.
110-333 Preston Street, Ottawa, ON, K1S 5N4
Phone: (613) 651-9490

#	DATE	DESCRIPTION
1	2024 07 19	ISSUED FOR PERMIT

STAMP:

LICENSED PROFESSIONAL ENGINEER
R. C. MUNDEN
100085717
2024 07 19
PROVINCE OF ONTARIO

NORTH ARROW:

PROJECT NAME AND ADDRESS:

BOONE PLUMBING
1560 STARTOP RD.

DRAWING NAME:

GENERAL NOTES AND DETAILS

DESIGNED BY: S. NELLURI / R. MUNDEN

DRAWN BY: J. LABBÉ

START DATE:

D+M PROJECT #: 23-017

S-001

SCHEDULES

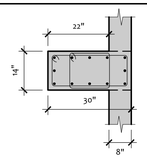
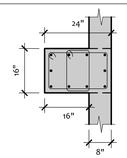
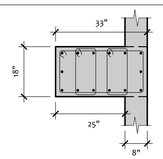
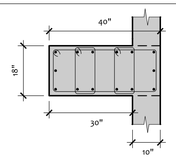
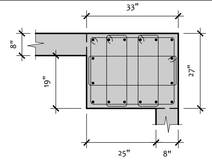
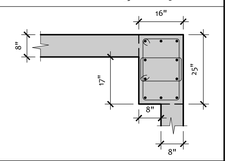
FOOTING SCHEDULE

MARK	SIZE (LxW)	THICKNESS (THK)	REINFORCING	BEARING CAPACITIES (kPa)	
				SLS	ULS
F1	7'-0" x 7'-0"	14"	10-15M T.E.W. 12-15M B.E.W.	150	225
F2	7'-8" x 7'-8"	16"	10-15M T.E.W. 12-15M B.E.W.	150	225
F3	7'-8" x 7'-8"	14"	10-15M T.E.W. 12-15M B.E.W.	150	225
F4	8'-8" x 8'-8"	16"	12-15M T.E.W. 12-15M B.E.W.	150	225
F5	5'-0" x 5'-0"	14"	8-15M T.E.W. 8-15M B.E.W.	150	225
F6	9'-0" x 9'-0"	14"	12-15M T.E.W. 14-15M B.E.W.	150	225
F7	11'-0" x 11'-0"	16"	16-15M T.E.W. 16-15M B.E.W.	150	225
F8	4'-0" x 4'-0"	12"	8-15M B.E.W.	150	225
SF1	2'-0"	12"	3-15M BOT.	150	225
SF2	5'-10"	12"	15M @ 8" o.c. T.E.W. 15M @ 8" o.c. B.E.W.	150	225
SF3	2'-8"	12"	3-15M BOT.	150	225
SF4	SEE PLAN FOR DIMENSIONS	12"	15M @ 8" o.c. T.E.W. 15M @ 8" o.c. B.E.W.	150	225

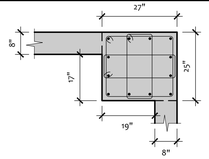
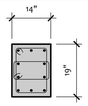
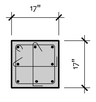
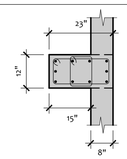
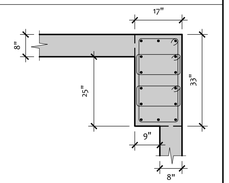
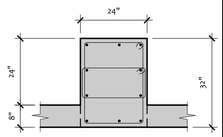
NOTES:

1. PROVIDE HOOKED DOWELS TO MATCH VERTICAL REINFORCING IN WALL / PIER ABOVE c/w CLASS 'B' TENSION LAP SPLICE.
2. LOCATE FOOTINGS AS SHOWN ON PLAN.

PIER SCHEDULE

MARK	SIZE (LxW)	REINFORCING
P1	30" x 14"	12-20M VERTS. 2-10M TIES @ 12" o.c. 
P2	24" x 16"	10-20M VERTS. 2-10M TIES @ 12" o.c. 
P3	33" x 18"	14-20M VERTS. 3-10M TIES @ 12" o.c. 
P3A	40" x 18"	14-20M VERTS. 3-10M TIES @ 12" o.c. 
P4	33" x 27"	16-20M VERTS. 4-10M TIES @ 12" o.c. 
P5	25" x 16"	10-20M VERTS. 2-10M TIES @ 12" o.c. 

PIER SCHEDULE CONTINUED

MARK	SIZE (LxW)	REINFORCING
P6	27" x 25"	12-20M VERTS. 3-10M TIES @ 12" o.c. 
P7	19" x 14"	10-20M VERTS. 2-10M TIES @ 12" o.c. 
P8	17" x 17"	8-20M VERTS. 3-10M TIES @ 12" o.c. 
P9	23" x 12"	10-20M VERTS. 2-10M TIES @ 12" o.c. 
P10	33" x 17"	14-20M VERTS. 3-10M TIES @ 12" o.c. 
P11	32" x 24"	10-20M VERTS. 2-10M TIES @ 12" o.c. 

NOTES:

1. PLACE ADDITIONAL TIE GROUP AT TOP OF PIER.

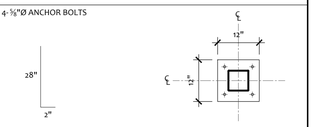
STEEL COLUMN SCHEDULE

MARK	SIZE (LxWxTHK.)	NOTES
C1	HSS 152x152x6.4	

MASONRY LINTEL SCHEDULE

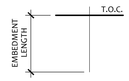
MARK	SIZE (LxWxTHK.)	NOTES
ML-1	190mm x 380mm DP. (2-COURSE DEEP)	2-15M TOP 2-15M BOT. 

STEEL BASEPLATE SCHEDULE

MARK	SIZE (LxW)	REINFORCING
BPL	REFER TO BUTLER DRAWINGS	REFER TO BUTLER DRAWINGS FOR NUMBER AND DIAMETER OF ANCHORS w/ SEISMIC HEAD 
BPL1	12" x 12" x ¾" THK.	4-⅝"Ø ANCHOR BOLTS 

NOTES:

1. LENGTH OF ANCHORS IS EMBEDMENT LENGTH. FABRICATOR TO PROVIDE ADDITIONAL LENGTH AS APPROVED FOR THREADS / NUTS / TOLERANCES ETC.



2. ALL ANCHORS TO BE CAST-IN.
3. PROVIDE +/- 25mm THICK GROUT BED BELOW BASE PLATE U/N.

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STAMP:

NORTH ARROW:

PROJECT NAME AND ADDRESS:

BOONE PLUMBING

1560 STARTOP RD.

DRAWING NAME:

GENERAL NOTES AND DETAILS

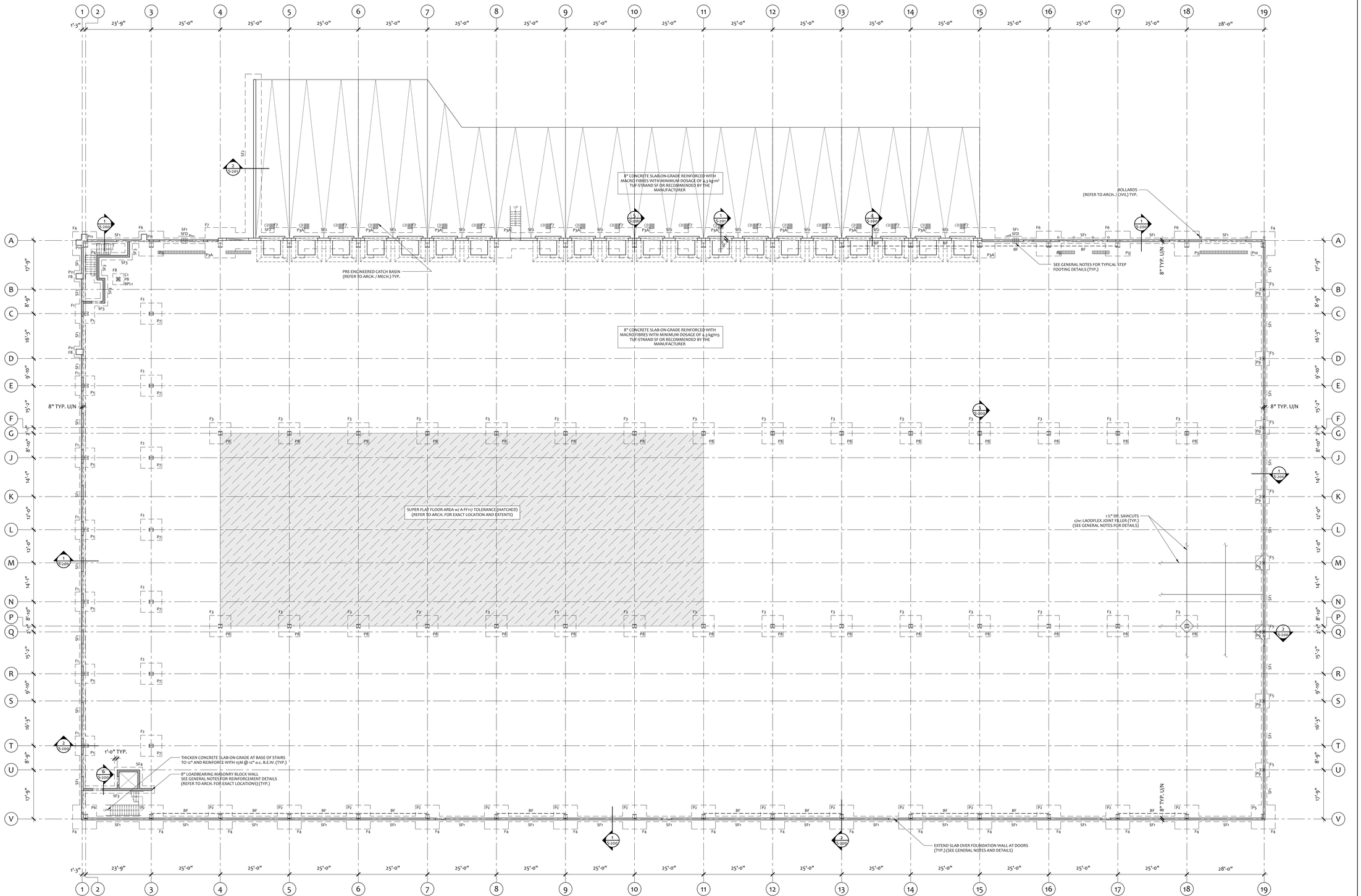
DESIGNED BY: S. NELLURI / R. MUNDEN

DRAWN BY: J. LABBÉ

START DATE:

D+M PROJECT #: 23-017

S-002



FOUNDATION / GROUND FLOOR PLAN

SCALE: 1/16" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
R. D' MUNDEN
100085717
2024 07 19
PROVINCE OF ONTARIO

NORTH ARROW:

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BOONE PLUMBING

1560 STARTOP RD.

DRAWING NAME:

FOUNDATION / GROUND FLOOR PLAN

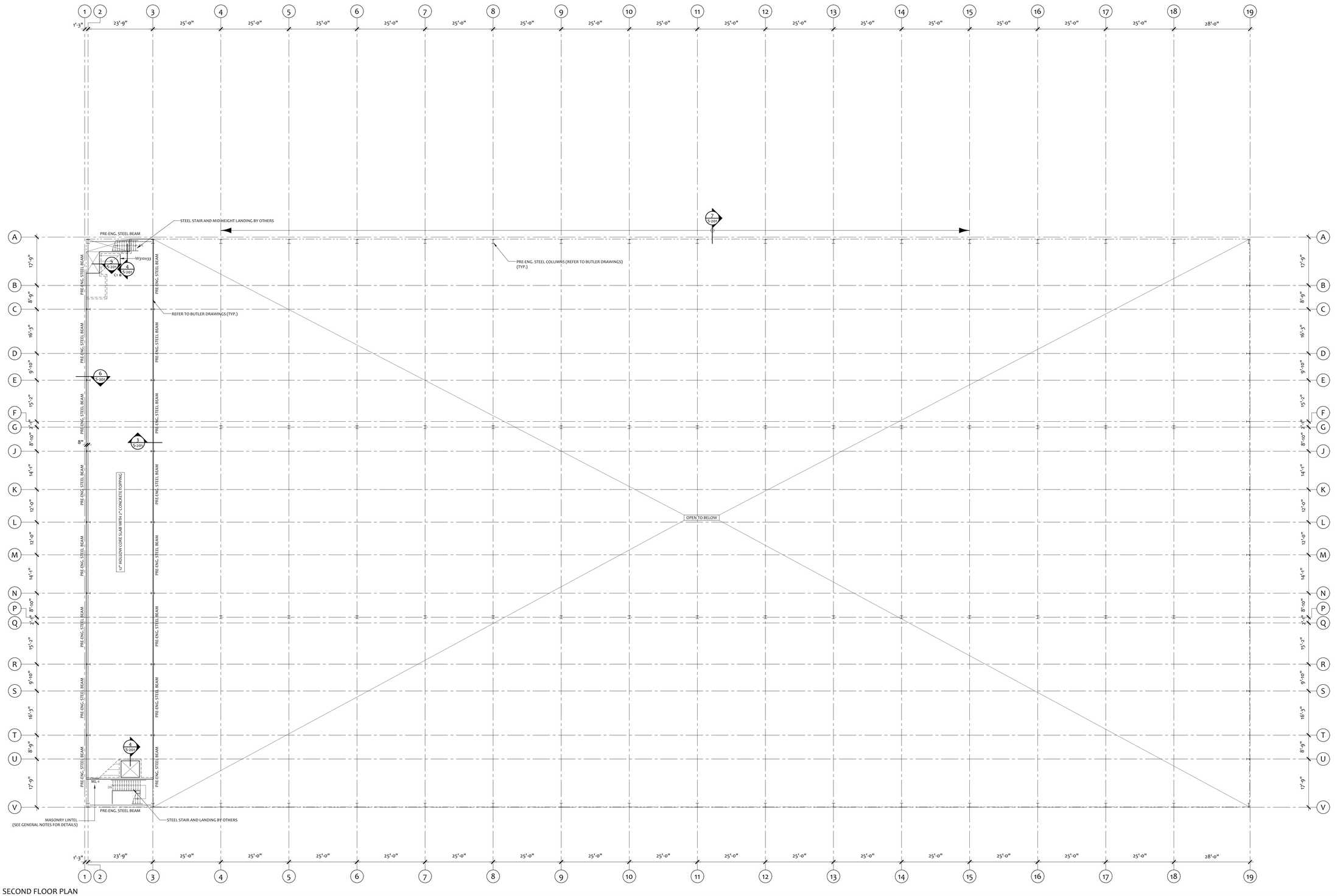
DESIGNED BY: S. NELLURI / R. MUNDEN

DRAWN BY: J. LABBÉ

START DATE:

D+M PROJECT #: 23-017

S-100



SECOND FLOOR PLAN

SCALE: 1/16" = 1'-0"

D+M STRUCTURAL ENGINEERING

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R. O'. MUNDEN
100085717
2024 07 19
PROVINCE OF ONTARIO

NORTH ARROW:

PROJECT NAME AND ADDRESS:

BOONE PLUMBING

1560 STARTOP RD.

DRAWING NAME:

SECOND FLOOR PLAN

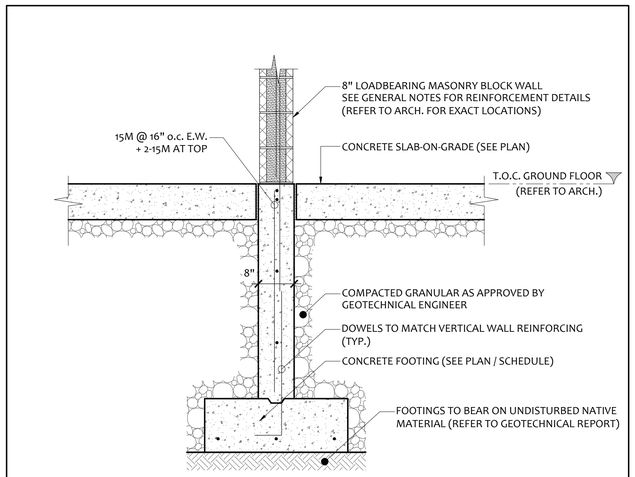
DESIGNED BY: S. NELLURI / R. MUNDEN

DRAWN BY: J. LABBÉ

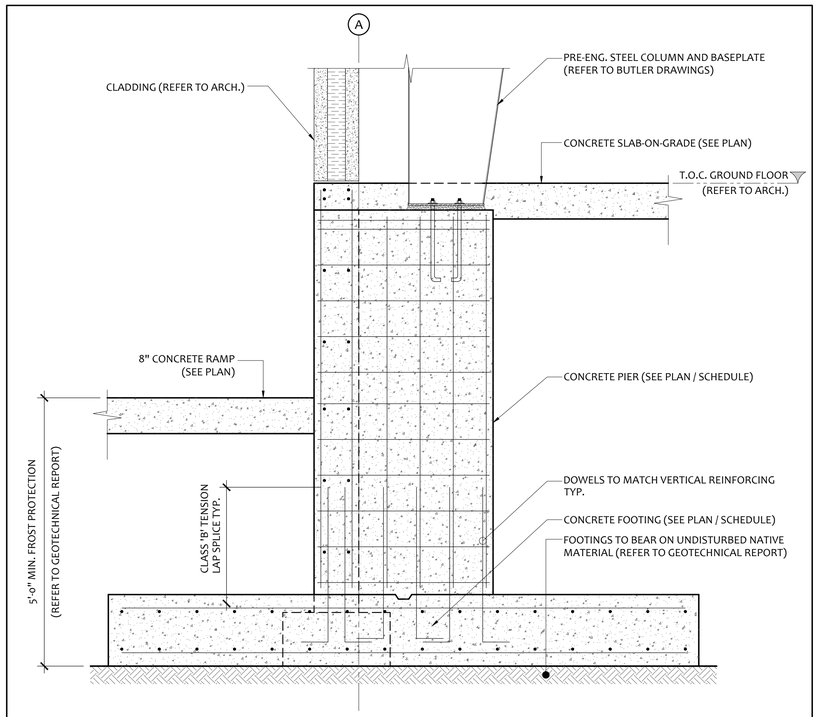
START DATE:

D+M PROJECT #: 23-017

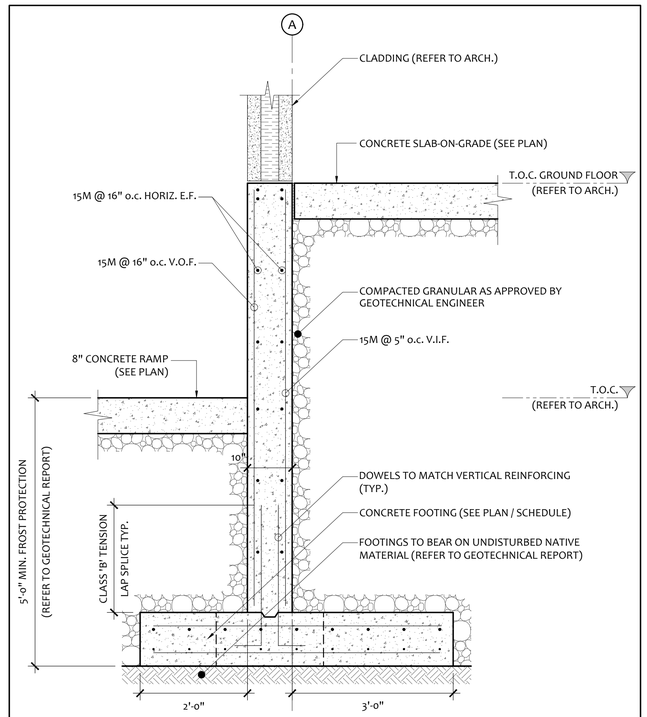
S-101



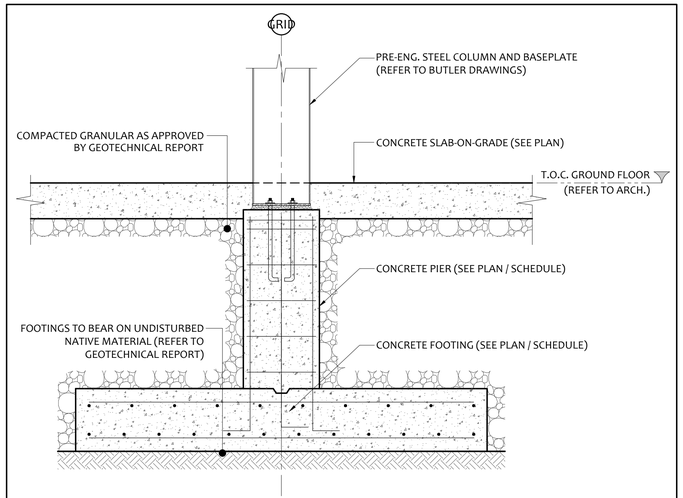
6 S-200 SECTION: AT LOADBEARING MASONRY WALL
SCALE: 3/4"= 1'-0"



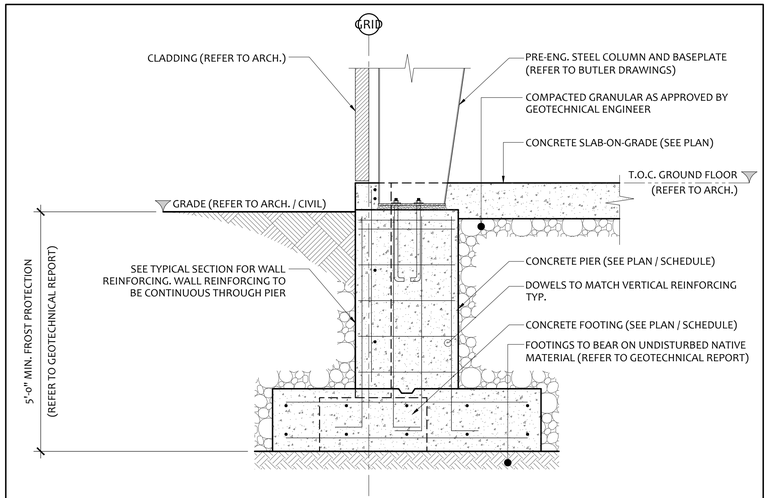
5 S-200 SECTION: TYPICAL 10" FOUNDATION WALL
SCALE: 3/4"= 1'-0" (AT PRECAST PANELS)



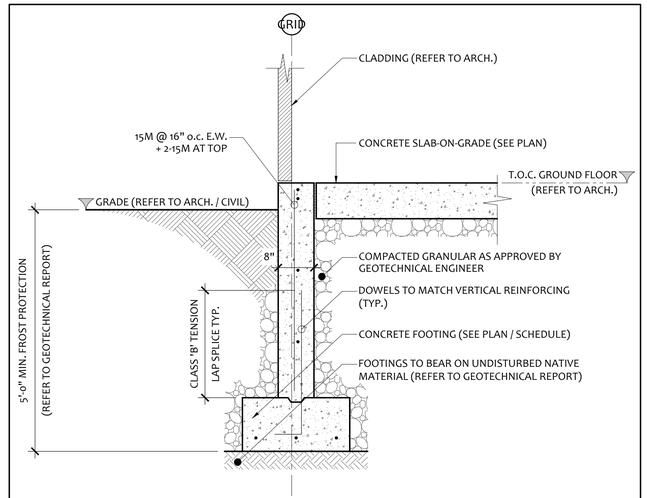
4 S-200 SECTION: TYPICAL 10" FOUNDATION WALL
SCALE: 3/4"= 1'-0" (AT PRECAST PANELS)



3 S-200 SECTION: TYPICAL INTERIOR PIER
SCALE: 3/4"= 1'-0"



2 S-200 SECTION: EXTERIOR PIER AT 8" THICK FOUNDATION WALL
SCALE: 3/4"= 1'-0" (AT IMP)



1 S-200 SECTION: TYPICAL 8" FOUNDATION WALL
SCALE: 3/4"= 1'-0" (AT IMP)

D+M STRUCTURAL ENGINEERING

D+M Structural Ltd.
110-333 Preston Street, Ottawa, ON, K1S 5N4
Phone: (613) 651-9490

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1	2024 07 19	ISSUED FOR PERMIT

STAMP:

LICENCE PROFESSIONAL ENGINEER
R.I.C. MUNDEN
100085717
2024 07 19
PROVINCE OF ONTARIO

NORTH ARROW:

PROJECT NAME AND ADDRESS:

BOONE PLUMBING
1560 STARTOP RD.

DRAWING NAME:

FOUNDATION / GROUND FLOOR PLAN

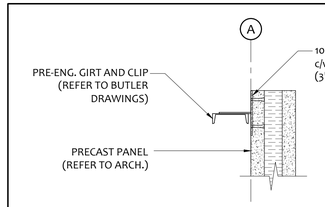
DESIGNED BY: S. NELLURI / R. MUNDEN

DRAWN BY: J. LABBÉ

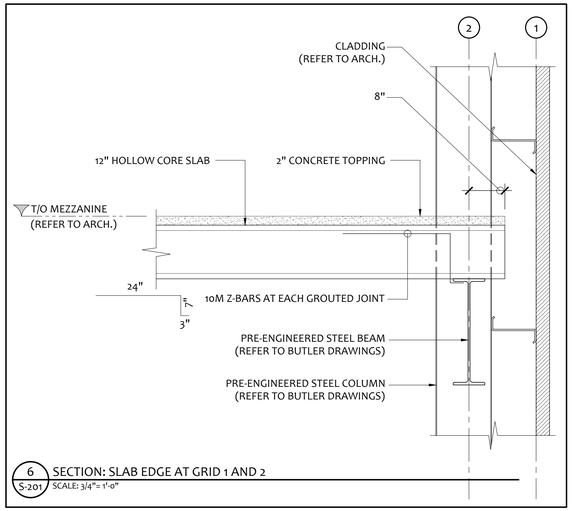
START DATE:

D+M PROJECT #: 23-017

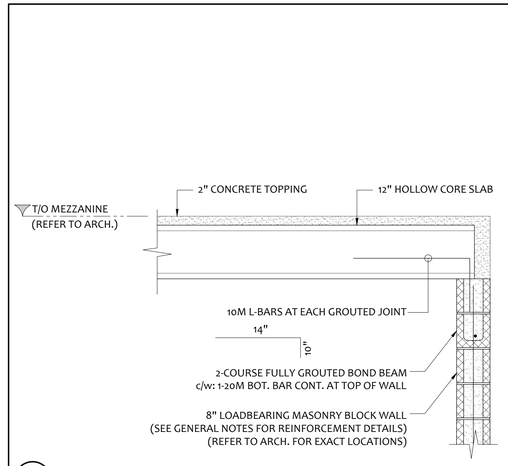
S-200



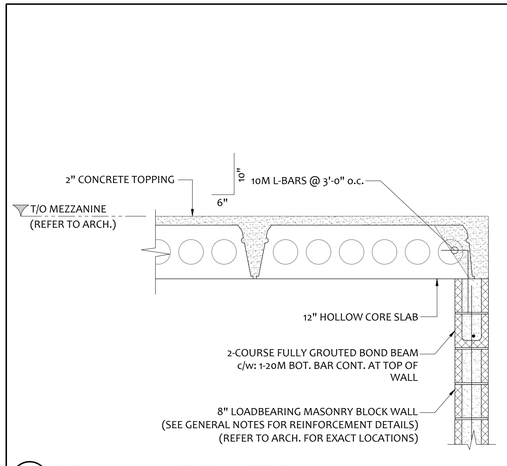
7 S-201 SECTION: EMBEDMENT PLATE AT PRECAST
SCALE: 3/4"= 1'-0"



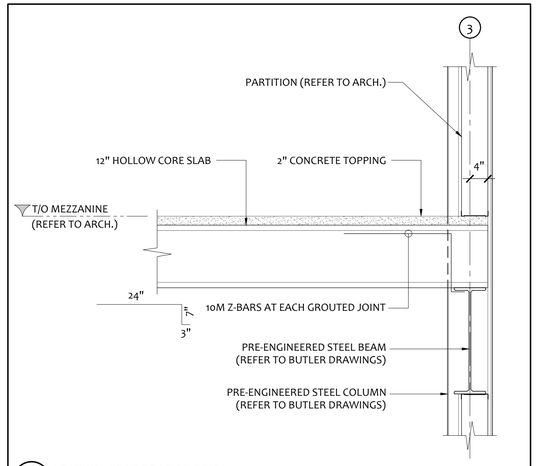
6 S-201 SECTION: SLAB EDGE AT GRID 1 AND 2
SCALE: 3/4"= 1'-0"



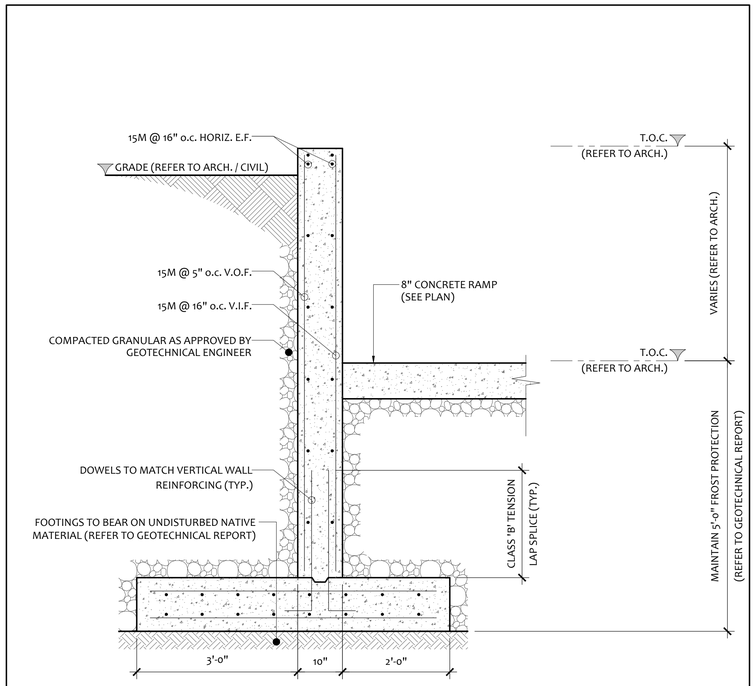
5 S-201 SECTION: HOLLOW CORE AT CONCRETE BLOCK WALL (PERPENDICULAR TO WALL)
SCALE: 3/4"= 1'-0"



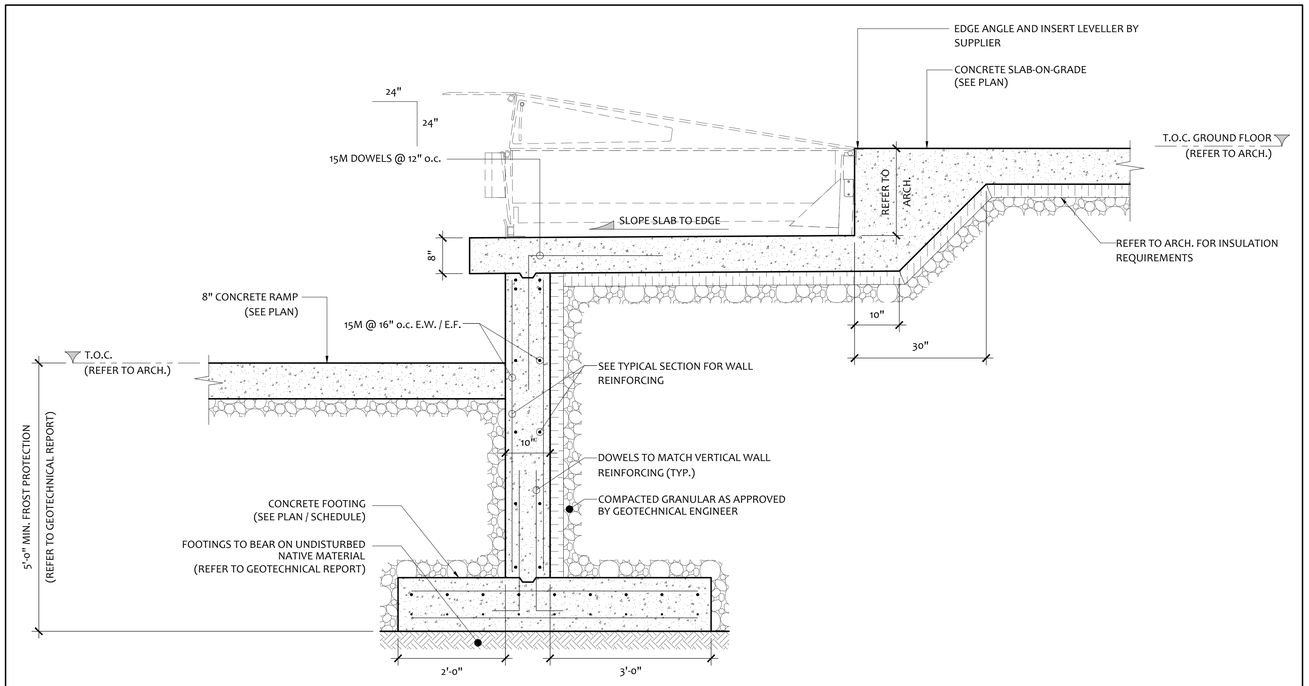
4 S-201 SECTION: HOLLOW CORE AT CONCRETE BLOCK WALL (PARALLEL TO WALL)
SCALE: 3/4"= 1'-0"



3 S-201 SECTION: SLAB EDGE AT GRID 3
SCALE: 3/4"= 1'-0"



2 S-201 SECTION: FOUNDATION AT RETAINING WALL
SCALE: 3/4"= 1'-0"



1 S-201 SECTION: TYPICAL LOADING DOCK
SCALE: 3/4"= 1'-0"

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