

## C O N S T R U C T I O N   N O T E S

1. CONSTRUCTION REVIEW

- CONTRACTOR ASSUMES COMPLETE RESPONSIBILITY FOR FULL SUPERVISION OF CONSTRUCTION WORK.
- SITE VISITS AND REVIEWS BY THE DESIGN ENGINEER OR REPRESENTATIVE ARE INTENDED FOR THE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE DESIGN CONCEPT. THE SITE REVIEWS DO NOT MEAN THAT THE DESIGN ENGINEER HAS SEEN ALL OF THE CONSTRUCTION OR CONSTRUCTION PROCEDURES.
- REVIEW OF CONSTRUCTION BY THE DESIGN ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS AND FOR MEETING ALL THE REQUIREMENTS OF THE CONSTRUCTION AND CONTRACT DOCUMENTS.
- NOTIFY THE DESIGN ENGINEER 24 HOURS IN ADVANCE OF ANY REQUIRED SITE VISITS.
- THIRD PARTY INSPECTIONS ARE TO BE CARRIED OUT AS PER PROJECT SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE REMOVAL OF FINISHES REQUIRED FOR INSPECTIONS OR TESTING THAT IS COVERED BEFORE INSPECTIONS ARE COMPLETED.

2. SHOP DRAWINGS NOTES

- SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL WORK AND ANY WORK AFFECTING THE STRUCTURE TO THE ARCHITECT. OBTAIN ARCHITECTS AND ENGINEER'S CONSENT BEFORE PROCEEDING WITH THE FABRICATION.
- EACH OF THE FOLLOWING SHOP DRAWINGS MUST BEAR THE SIGNATURE AND STAMP OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE.
  - A. DRAWINGS FOR ANY TEMPORARY WORK
  - B. DRAWINGS FOR ANY STRUCTURAL PARTS DESIGNED BY THE CONTRACTOR'S FORCES, INCLUDING EXTERIOR BUILDING ENVELOPE.
- SHOP DRAWINGS MUST BE REVIEWED AND STAMPED REVIEWED BY THE GENERAL CONTRACTOR BEFORE ISSUING TO THE ARCHITECT. SHOP DRAWINGS NOT STAMPED BY THE GENERAL CONTRACTOR WILL BE REJECTED. ANY DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO NON-COMPLIANCE WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- SUBMIT ALL RELEVANT SHOP DRAWINGS FOR THE STRUCTURAL ENGINEERS REVIEW BEFORE FABRICATION. ALL SHOP DRAWINGS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER LICENSED WITHIN THE APPROPRIATE JURISDICTION.
- GENERAL CONTRACTOR AND SUB-TRADES SHALL INCLUDE TIME IN THEIR SCHEDULE FOR PROPER SHOP DRAWING REVIEW BY CONSULTANTS. CONTRACTORS SHALL ALLOW 5 BUSINESS DAYS TIME FOR REVIEW BY THE STRUCTURAL CONSULTANT, IN ADDITION TO TIME REQUIRED BY OTHER PARTIES.
- SHOP DRAWINGS MUST BE ORIGINAL, AND PRODUCED BY THE RESPECTIVE SUB-TRADES. ANY DRAWINGS SUBMITTED FOR REVIEW WHICH CONTAIN DRAWINGS OR PARTS OF DRAWINGS PRODUCED BY CUNLIFFE & ASSOCIATES WILL BE REJECTED, AND THE CONTRACTOR RESPONSIBLE FOR PRODUCING THE SHOP DRAWINGS SHALL TAKE RESPONSIBILITY FOR ANY RESULTING DELAYS IN CONSTRUCTION.
- THE SHOP DRAWING REVIEW IS NOT AN APPROVAL PROCESS. CUNLIFFE & ASSOCIATES, WILL REVIEW SHOP DRAWINGS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE DESIGN CONCEPT SHOWN ON THE STRUCTURAL DRAWINGS. REVIEW OF SHOP DRAWINGS SHALL NOT MEAN THAT CUNLIFFE & ASSOCIATES, APPROVES THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS. RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING SAME. REVIEW BY CUNLIFFE & ASSOCIATES, SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SHOP DRAWINGS OR OF THEIR RESPONSIBILITY FOR MEETING ALL REQUIREMENTS OF THE CONSTRUCTION AND CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND COORDINATED AT THE JOB SITE, FOR INFORMATION THAT PERTAINS SOLELY TO FABRICATION PROCESSES AND TO TECHNIQUES OF CONSTRUCTION AND INSTALLATION AND FOR COORDINATION OF THE WORK OF ALL SUB-TRADES.

3. CONSTRUCTION PLANNING & SAFETY

- REQUIREMENTS FOR MECH. EQUIPMENT, AND ANY TRADES OR SERVICES AFFECTING THE STRUCTURE, SHALL BE ESTABLISHED IN CONSULTATION WITH CORRESPONDING MANUFACTURERS OR SUPPLIERS AND THE ARCHITECT.
- LOCATION OF CONSTRUCTION JOINTS SHALL BE PLANNED IN ADVANCE
- CUNLIFFE & ASSOCIATES SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION SAFETY MEANS, TECHNIQUES AND CONSTRUCTION PROCEDURES OR TEMPORARY WORK AS REQUIRED BY THE CONTRACTOR TO BUILD AND COMPLETE THE STRUCTURE IN CONFORMITY WITH CONTRACT DOCUMENTS. ALL SUB CONTRACTORS ARE TO RETAIN AN INDEPENDENT STRUCTURAL ENGINEER TO CARRY OUT THE NECESSARY TECHNIQUES TO BE USED TO BUILD AND COMPLETE THE STRUCTURE, ACCORDING TO THE CONTRACT DOCUMENTS AND SAFETY GUIDELINES FROM LOCAL CODES/AUTHORITIES. ALL CONTRACTORS SHALL SUPPLY DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER TO THE DESIGN TEAM FOR REVIEW. GENERAL CONTRACTOR IS TO REVIEW ALL BRACING PLANS TO ENSURE THAT THEY ARE COORDINATED & DO NOT INTERFERE WITH SITE ACTIVITIES. FINAL REMOVAL OF ANY TEMPORARY BRACING IS TO BE DONE ONLY WITH THE WRITTEN APPROVAL OF THEIR DESIGN ENGINEER & A SIGN-OFF LETTER PROVIDED TO THE DESIGN TEAM FOR REVIEW.
- THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION STRESSES AND FOR SUFFICIENT TEMPORARY BRACING TO KEEP THE STRUCTURE PLUMB AND IN TRUE ALIGNMENT AT ALL PHASES OF THE WORK, UNTIL COMPLETION (INCLUDING MASONRY WALLS, FLOOR AND ROOF DECKS, ETC.). ANY BRACING MEMBERS SHOWN ON PLANS ARE THOSE REQUIRED FOR THE FINISHED STRUCTURE, AND MAY NOT BE SUFFICIENT FOR ERECTION PURPOSES.
- ALL CONSTRUCTION WORK FOR TEMPORARY SHORING AND BRACING OF EXISTING STRUCTURE SHALL BE DONE ONLY AFTER PERMISSION HAS BEEN GRANTED BY THE CONSTRUCTION HEALTH AND SAFETY BRANCH OF THE GOVERNING MINISTRY OF LABOUR.
- PROTECT EXISTING BUILDINGS, TREES, FENCING, UTILITIES POLES, CABLES, ACTIVE UNDERGROUND SERVICES AND PAVING ON THE SITE OR ANY ADJOINING PROPERTIES FROM DAMAGE. DAMAGE RESULTING FROM THIS CONSTRUCTION WORK SHALL BE MADE GOOD TO THE APPROVAL OF THE ARCHITECT NO COST TO THE OWNER.
- TRUCKS, CRANES, HOISTS, OR ANY HEAVY EQUIPMENT OR MATERIALS ARE NOT ALLOWED TO ENTER ANY STRUCTURAL FLOOR OR ROOF AREA UNLESS SPECIFICALLY DESIGNED AND DESIGNATED FOR THESE PURPOSES. INSTALL TEMPORARY BARRIERS TO PREVENT ACCIDENTAL OVERLOADING DURING CONSTRUCTION. DESIGN, INSTALL AND MAINTAIN ADEQUATE SHORING SYSTEM AS REQUIRED TO CARRY ANY SUCH TEMPORARY LOADING FROM CONSTRUCTION MATERIALS AND/OR EQUIPMENT.
- NOTIFY ARCHITECT IMMEDIATELY UPON DISCOVERY OF ANY CONSTRUCTION ERROR, OMISSION, DEFECTIVE WORK, ETC., SO THAT THE MOST ECONOMICAL REMEDIAL MEASURES MAY BE DESIGNED AT THE EARLIEST POSSIBLE TIME.
- GENERAL CONTRACTOR SHALL NOTIFY MECHANICAL/ELECTRICAL CONTRACTORS THAT SUPPORT AND THE DESIGN OF SUCH SUPPORTS TO CARRY MECHANICAL/ELECTRICAL EQUIPMENT SHALL BE BY THE MECHANICAL/ELECTRICAL CONTRACTORS. OBTAIN STRUCTURAL ENGINEERS APPROVAL TO CONNECT TO EXISTING/NEW MAIN BUILDING STRUCTURE. DESIGN OF SUPPORTS SHALL BE STAMPED BY A QUALIFIED STRUCTURAL ENGINEER RETAINED BY THE MECHANICAL/ELECTRICAL CONTRACTOR.

## G E N E R A L   N O T E S

- ANY DEVIATION FROM THE CONDITIONS SHOWN ON THESE DRAWINGS MUST BE REPORTED TO THE ENGINEER.
- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF PART 4 OF THE 2024 O.B.C. ONTARIO REGULATION 203/24
- STANDARDS
  - CSA STANDARD A23.3-19 DESIGN OF CONCRETE STRUCTURES
  - CSA STANDARD A23.1-19 CONCRETE MATERIALS & METHODS OF CONCRETE CONSTRUCTION
  - CSA-S16-19 LIMIT STATES DESIGN OF STEEL STRUCTURES
  - CSA STANDARD S304-14 DESIGN OF MASONRY STRUCTURES
  - CSA-O86-19 ENGINEERING DESIGN IN WOOD
- ANY MODIFICATIONS TO EXISTING STRUCTURES ARE TO BE LIMITED TO WORK NOTED ON THESE DRAWINGS. ANY ADDITIONAL OR PROPOSED MODIFICATIONS TO EXISTING STRUCTURES MUST BE APPROVED BY THE ENGINEER
- FOUNDATIONS
  - SLABS ON GRADE TO BE BEAR ON NATURAL UNDISTURBED SOIL, ENGINEERED FILL OR SOUND ROCK.
  - BEARING CAPACITY USED IN THE FOOTING DESIGN IS ASSUMED TO BE SLS= 100 kPa/AULS=150 kPa
  - BEARING SURFACE IS TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
  - STEP FOOTINGS WHERE INDICATED ON PLAN AT THE RATE OF 2 HORIZONTAL TO 1 VERTICAL.
- SLABS ON GRADE
  - SLABS ON GRADE TO BE UNREINFORCED UNLESS NOTED.
  - FOR COMPOSITION & COMPACTION OF FILL SUPPORTING SLABS ON GRADE SEE GEOTECHNICAL ENGINEER.
  - PROVIDE 12 mm ASPHALT IMPREGNATED FIBREBOARD BETWEEN SLABS ON GRADE & FOUNDATION WALLS OR COLUMNS UNLESS NOTED.
  - SAWCUT SLAB ON GRADE TO (1/4 x SLAB DEPTH) 12 HOURS AFTER CONCRETE PLACEMENT.
  - SPACE SAWCUTS ON A 4500 mm x 4500 mm MAXIMUM GRID. AVOID LONG & NARROW SAWCUT PATTERNS. LOCATE SAWCUTS ALONG COLUMN LINES WHERE POSSIBLE. CONTRACTOR IS TO PROVIDE THE ENGINEER WITH DOCUMENTATION SHOWING PROPOSED SAWCUT LOCATIONS FOR APPROVAL UNLESS SAWCUTS LOCATIONS ARE OTHERWISE INDICATED ON THESE DRAWINGS.
- MATERIALS
  - CONCRETE STRENGTH AT 28 DAYS TO BE AS NOTED ON THESE DRAWINGS AND SPECIFICATIONS.
  - REINFORCING STEEL TO BE DEFORMED GRADE 400W WITH Fy= 400 MPa.
  - HOLLOW STRUCTURAL STEEL SECTIONS TO BE ASTM A500 GRADE C OR G40.21 350W CLASS C.
  - ALL 'W', 'C', 'L' & 'WWF' SHAPE STEEL SECTIONS TO BE GRADE G40.21 350W WITH Fy= 350 MPa.
  - ALL OTHER STRUCTURAL STEEL TO BE GRADE G40.21 300W WITH Fy= 300 MPa UNLESS NOTED OTHERWISE.
  - ALL STRUCTURAL STEEL TO RECEIVE 1 SHOP APPLIED COAT OF PRIMER UNLESS NOTED.
  - ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR IS TO BE HOT DIP GALVANIZED UNLESS NOTED.
  - ANCHOR BOLTS TO BE A307.
  - ALL OTHER BOLTS TO BE A325.
  - A325 BOLTS EXPOSED TO EXTERIOR ARE TO BE GALVANIZED U/N.
  - A307 BOLTS EXPOSED TO EXTERIOR ARE TO BE GALVANIZED U/N.
  - CONCRETE BLOCK TO BE H/15/A/M.
  - CONCRETE BLOCK MASONRY MORTAR TO BE 10 MPa TYPE 'S' U/N.
  - CONCRETE BLOCK MASONRY GROUT TO BE 12 MPa "HIGH SLUMP" (200-250 mm SLUMP).
- CONCRETE COVER
  - FOOTINGS 75 mm BOTTOM 50 mm SIDES
  - FOUNDATION WALLS & BEAMS 40 mm UNLESS NOTED OTHERWISE
- REINFORCING STEEL DESIGNATION

8-20M x 1500 T/B

C

8 = NUMBER OF BARS  
20M = SIZE OF BARS  
1500 = LENGTH OF BARS  
T = BAR LOCATION - TOP  
B = BAR LOCATION - BOT  
LENGTH OF BARS DOES NOT INCLUDE HOOKS OR BENDS

10. DOWELS

DOWELS TO FOOTINGS TO BE OF SAME DIAMETER AS THE LOWEST LIFT OF VERTICAL REINFORCING IN COLUMNS, PIERS OR WALLS.

11. REINFORCING STEEL SPLICES

REINFORCING STEEL SPLICES TO BE AS NOTED IN REINFORCING BAR LAP LENGTH TABLE ON S0 U/N.

## REINFORCING BAR LAP LENGTH TABLE

CONCRETE STRENGTH (MPa)	REINFORCING BAR LAP LENGTH (mm)				
	10M	15M	20M	25M	30M
20	475	700	850	1325	1575
25	425	600	750	1200	1400
30	400	550	675	1100	1275
35	375	525	625	1000	1200

FOR SPECIAL CONDITIONS MULTIPLY THE VALUES LISTED ABOVE BY THE FOLLOWING FACTORS:

- EPOXY COATED REINFORCING (X 1.5)
- HORIZONTAL REINFORCING WITH >300 mm CONCRETE BELOW (X 1.3)
- FOR CONDITIONS 1 & 2 OCCURRING SIMULTANEOUSLY (X 1.7)

## CONCRETE BLOCK MASONRY WALLS

## REINFORCING BAR LAP LENGTH TABLE

REINFORCING BAR LAP LENGTH (mm)					
HJR	10M	15M	20M	25M	30M
300	525	750	925	1450	1725

FOR SPECIAL CONDITIONS MULTIPLY THE VALUES LISTED ABOVE BY THE FOLLOWING FACTORS:

- EPOXY COATED REINFORCING (X 1.5)
- HORIZONTAL REINFORCING WITH >300 mm GROUT BELOW (X 1.3)
- FOR CONDITIONS 1 & 2 OCCURRING SIMULTANEOUSLY (X 1.7)

12. LOADS

- ALL LOADS & FORCES INDICATED ON THESE DRAWINGS ARE UNFACTORED WORKING LOADS UNLESS NOTED.

13. CONCRETE BLOCK MASONRYALL LOAD BEARING (INTERIOR & EXTERIOR) WALLS190 mm CONCRETE BLOCK

VERT: 1-15M @ 400 o/c (WALL HEIGHT 4400-5800 mm)  
HORIZ: 15M @ 1200 + XHL2 @ 200 o/c

LEGEND

S-STANDARD 9 GAUGE LONGITUDINAL & CROSS WIRES  
XH-EXTRA HEAVY 4.88 mm LONGITUDINAL WIRES 4.88 mm CROSS WIRES  
L-LADDER TYPE REINFORCEMENT  
T-TRUSS TYPE REINFORCEMENT

- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR TYING MASONRY TO BACK UP WALLS
- ALL LOAD BEARING CONCRETE BLOCK MASONRY WALL SECTIONS EQUAL TO OR LESS THAN 800 mm IN LENGTH TO BE FULLY GROUTED AND REINFORCED WITH 20M VERTICAL @ 200 o/c & XHL2 @ 200 o/c
- ALL LOAD BEARING CONCRETE BLOCK MASONRY WALLS TO BE FULLY GROUTED BELOW GRADE.
- SHEARWALLS - SEE NOTES ON PLANS FOR ADDITIONAL REINFORCING AND GROUTING OTHER THAN INDICATED ABOVE
- REINFORCE CELLS @ END OF WALLS AT INTERSECTING WALLS & BESIDE OPENINGS.
- GROUT MASONRY SOLID BELOW BEARING BASE PLATES FOR 500mm MIN.
- PROVIDE A CONCRETE BOND BEAM COURSE c/w 1-20M CONT. USING LOW WEB BLOCKS AT THE TOP OF WALLS, ROOF AND AT EACH FLOOR LEVEL U/N. GROUT COURSE SOLID. EXTERIOR WALLS TO HAVE CONTINUOUS BOND BEAMS AT ALL FLOOR LEVELS.
- PROVIDE 1-20M CORNER BAR (925 BEND x 925 BEND) AT AT CONCRETE BOND BEAM COURSES @ BLOCK WALL INTERSECTIONS.
- PROVIDE "CLEAN CUTS" AT BOTTOM OF CELLS TO BE GROUTED TO ENSURE PROPER LAP LENGTH AND THAT CELL IS FILLED SOLIDLY. MAXIMUM GROUT LIFT IS 3 meters. GROUT TO HAVE 250mm SLUMP
- EMBEDMENT OF MASONRY DOWELS IN CONCRETE STRUCTURE BELOW CONCRETE BLOCK WALLS TO BE AS FOLLOWS:  
15M DOWELS = 600 mm EMBEDMENT - 1300 Lg. DOWEL  
20M DOWELS = 800 mm EMBEDMENT - 1700 Lg. DOWEL
- JOINT CONTROL JOINTS SPACED MAXIMUM 9000 mm, MAXIMUM VENEER CONTROL JOINT SPACED AT 12000 mm MAXIMUM. COORDINATE LOCATION OF JOINTS WITH ARCHITECT & ENGINEER

14. LEGEND

B = BOTTOM  
BBP1 = BEAM (OR OWS) BEARING PLATE NUMBER  
CONT = CONTINUOUS  
DP = DEPTH  
DWL = DOWELS  
EE = EACH END  
EF = EACH FACE  
EL = ELEVATION  
ES = EACH SIDE  
EW = EACH WAY  
(ex) = EXISTING  
F1 = PAD FOOTING NUMBER  
GB1 = GRADE BEAM NUMBER  
H = HORIZONTAL  
(H) = HOOKED BAR  
MP1 = MASONRY PIER NUMBER  
O/C = ON CENTER  
U/N = TOP  
V = UNLESS NOTED OTHERWISE  
WF1 = WALL FOOTING NUMBER

## DRAWING LIST

S0 GENERAL NOTES

S1 SCHEDULES &amp; DETAILS

S2 GROUND FLOOR PLAN

S3 GROUND FLOOR PLAN WITH ROOF FRAMING

S4 SECTIONS &amp; DETAILS

S5 SECTIONS &amp; DETAILS

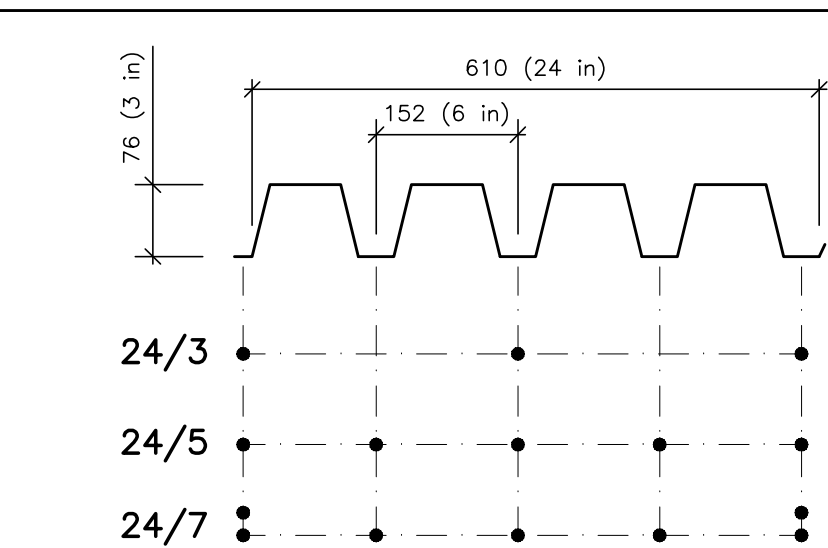
S6 SECTIONS &amp; DETAILS

S7 SCHOOL SIGN DETAILS

**HILTI PRODUCT INSTALLATION REQUIREMENTS:**  
THE CONTRACTOR THAT WILL BE INSTALLING ANY HILTI PRODUCT SHALL BE TRAINED & CERTIFIED BY HILTI CANADA'S REPRESENTATIVE ON THE ACCEPTABLE INSTALLATION PROCEDURES FOR THE SPECIFIC HILTI PRODUCT BEING USED. THE CONTRACTOR IS TO PRESENT PROOF OF THIS TRAINING UPON REQUEST OF DEPARTMENTAL REPRESENTATIVE.  
-ALL HILTI HAS ANCHORS TO BE HAS-B-105 UNLESS NOTED.

**HILTI HIT-HY ANCHOR INSTALLATION REQUIREMENTS:**  
**OPTION 1:**  
USE SAFE SET TECHNOLOGY TO CLEAR DRILLED HOLES.  
**OPTION 2:**  
USE APPROPRIATE HILTI APPROVED INSTALLATION TECHNIQUES:

- DRILL HOLE AT REQUIRED EMBEDMENT DEPTH.
- BLOW OUT HOLE WITH COMPRESSED AIR TWICE.
- BRUSH OUT DUST AND DEBRIS TWICE.
- BLOW OUT HOLE WITH COMPRESSED AIR TWICE.

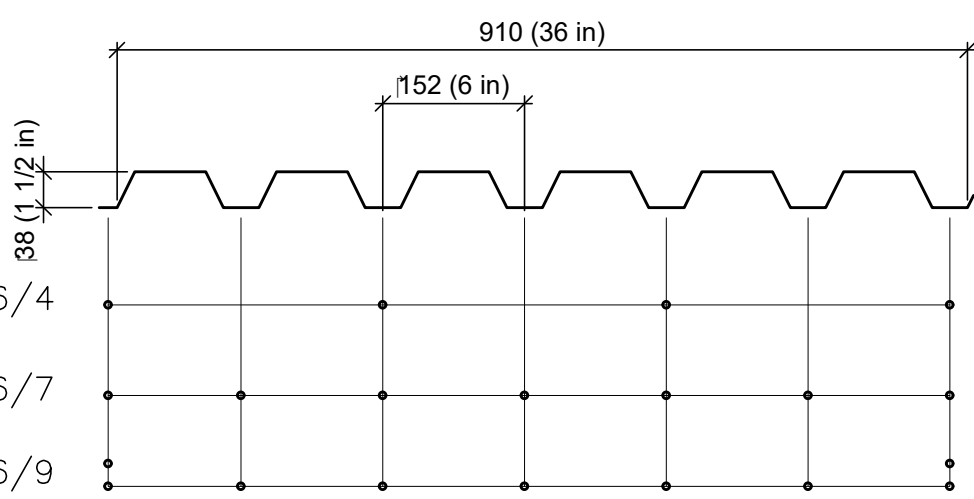


## TYPICAL FASTENER PATTERNS @ SUPPORT FOR 76 THK STEEL DECK

STEEL DECK NOTES: TYPICAL ROOF DECK (SEE PLAN ALSO)  
1. 76 x 0.91 ACOUSTIC INTERLOCKING (CANAM OR EQUIVALENT)  
2. HILTI SLC01 FASTENERS IN SIDE LAPS @ 100 o/c  
3. HILTI X-HSN24 FASTENERS TO SUPPORTING STEEL STRUCTURE 24/7 FASTENER PATTERN (SEE ABOVE)  
4. FASTENER SPACING AROUND PERIMETER & OPENINGS TO BE 150 o/c  
5. DECK BE 3 SPAN MINIMUM  
6. STEEL DECK IS NOT TO BE USED FOR SUPPORT OF ARCH'L, MECH'L OR ELEC'L ITEMS. USE STEEL STRUCTURE FOR SUPPORT.

THE INSTALLER THAT WILL BE USING THE TOOLS TO ATTACH THE DECK FASTENERS SHALL BE TRAINED & CERTIFIED BY FASTENER MANUFACTURER'S REPRESENTATIVE ON THE GENERAL USE OF POWDER ACTUATED TECHNOLOGY AND FASTENING GUIDELINES FOR THE ATTACHMENT OF STEEL DECK.

**HILTI FASTENER REQUIREMENTS:**  
-FOR USE ON OPEN WEB STEEL JOISTS OR COLD ROLLED SECTIONS WITH STEEL TOP FLANGE BETWEEN 1/8"-3/8" (3 - 10 MM) THICK, USE HILTI X-HSN24 FASTENERS. FOR STRUCTURAL STEEL TOP FLANGES EQUAL TO OR THICKER THAN 1/4" (6MM), USE HILTI X-EMP-19 L15 FASTENERS. VERIFY PERFORMANCE AND INSTALLABILITY WITH THE FASTENER MANUFACTURER REPRESENTATIVE BY PERFORMING TEST FASTENINGS PRIOR TO INSTALLATION OF DECKING.  
-SIDELAP CONNECTORS TO CONNECT STEEL DECK UNITS AT OVERLAPS: HILTI SLC01 FOR GAUGES 18-26 OR THE HILTI SLC02 FOR GAUGES 16-22.



## TYPICAL FASTENER PATTERNS @ SUPPORT FOR 38 THK STEEL DECK

STEEL DECK NOTES: NEW RAMP ROOF DECK (SEE PLAN ALSO)

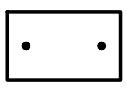
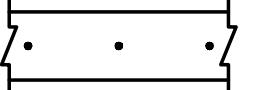
- 38 x 0.91 OVERLAPPING (CANAM P-3606 OR EQUIVALENT)
- HILTI SLC01 OR SLC02 FASTENERS IN SIDE LAPS @ 100 o/c SEE HILTI FASTENER REQUIREMENTS BELOW.
- 36/9 FASTENER PATTERN (SEE ABOVE)
- HILTI X-HSN24 OR X-EMP-19 FASTENERS TO SUPPORTING MEMBERS. SEE HILTI FASTENER REQUIREMENTS BELOW.
- FASTENER SPACING AROUND PERIMETER & OPENINGS TO BE 150 o/c
- DECK BE 3 SPAN MINIMUM
- STEEL DECK IS NOT TO BE USED FOR SUPPORT OF ARCH'L, MECH'L OR ELEC'L ITEMS. USE STEEL STRUCTURE FOR SUPPORT.

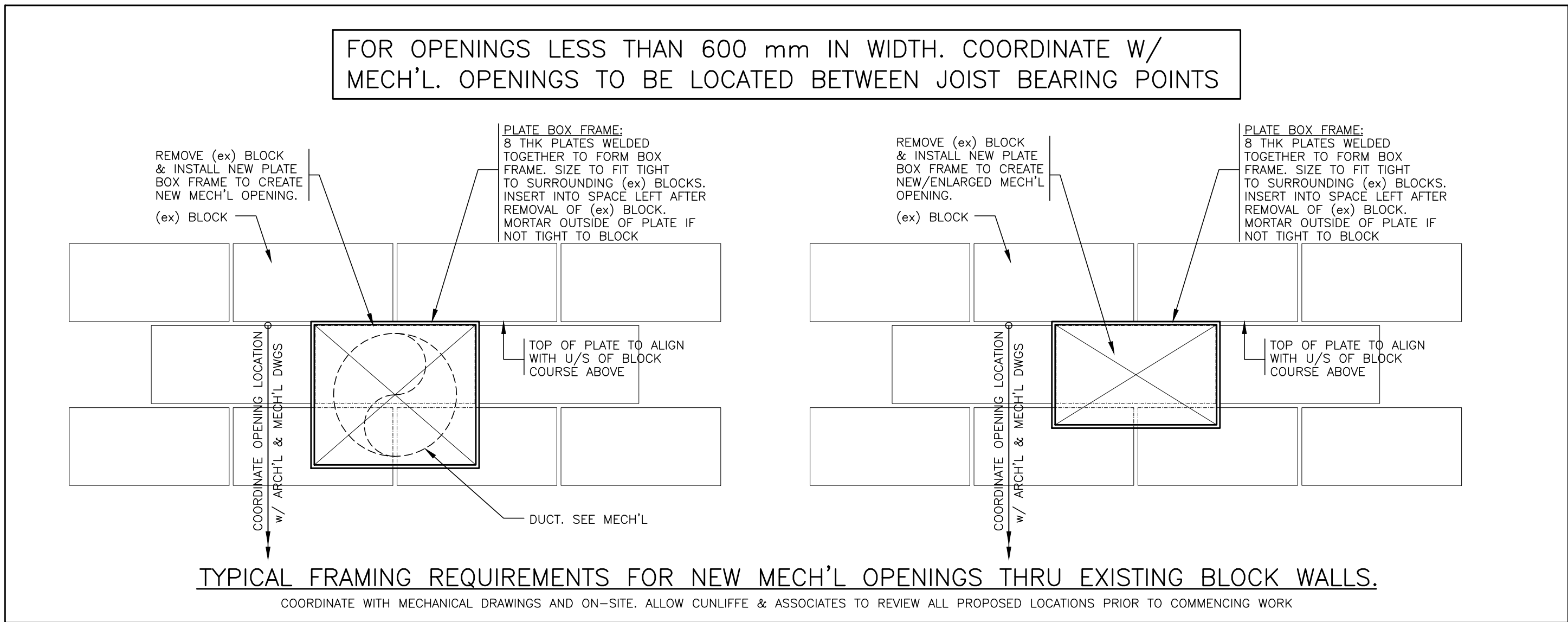
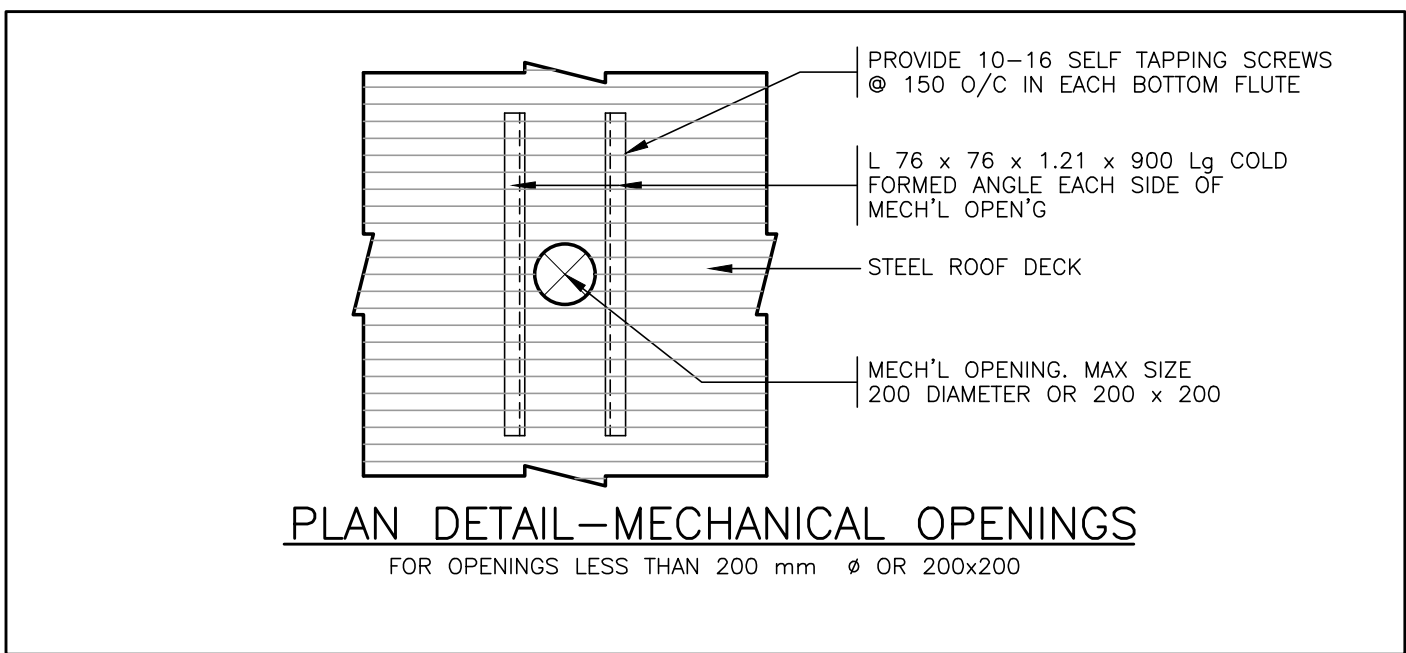
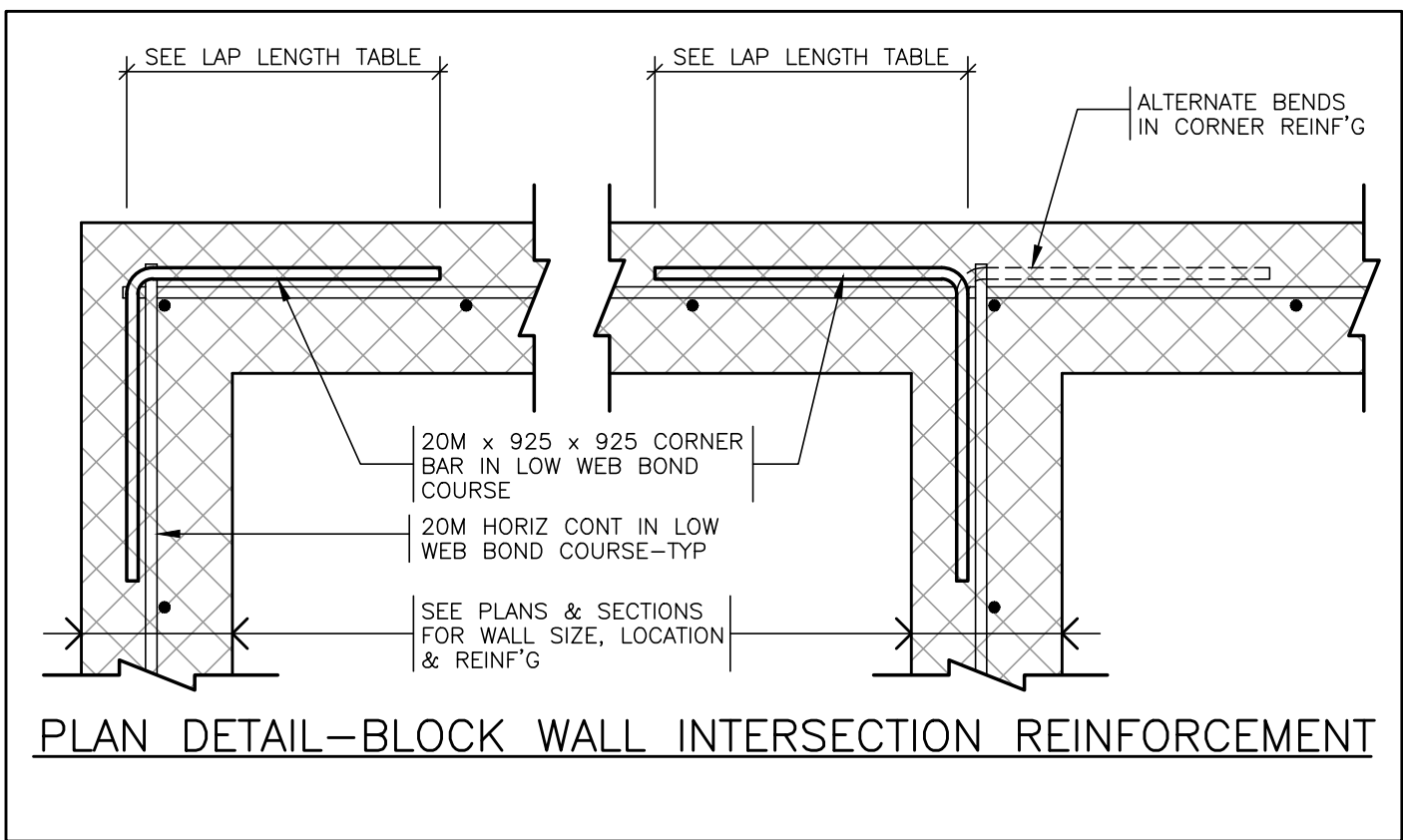
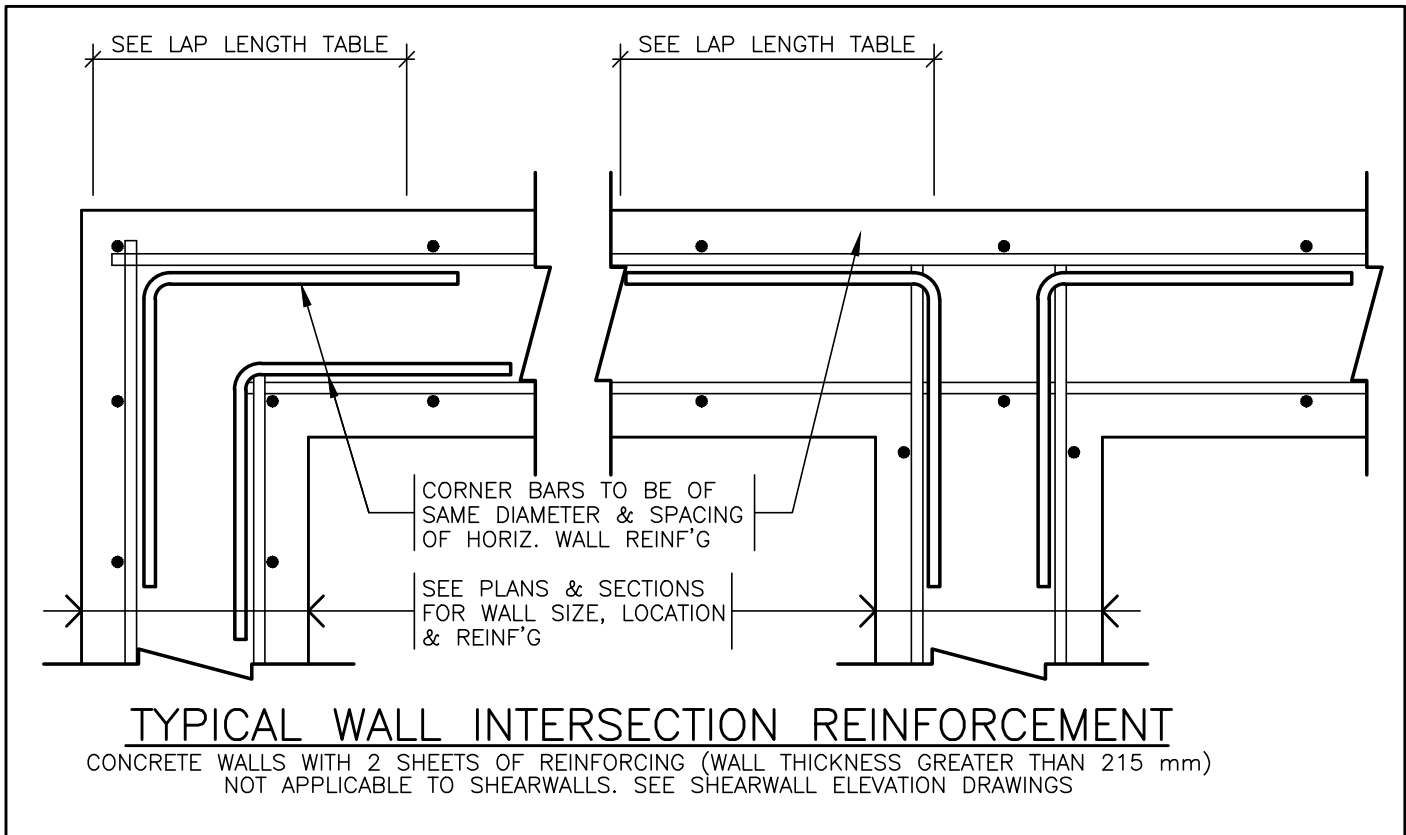
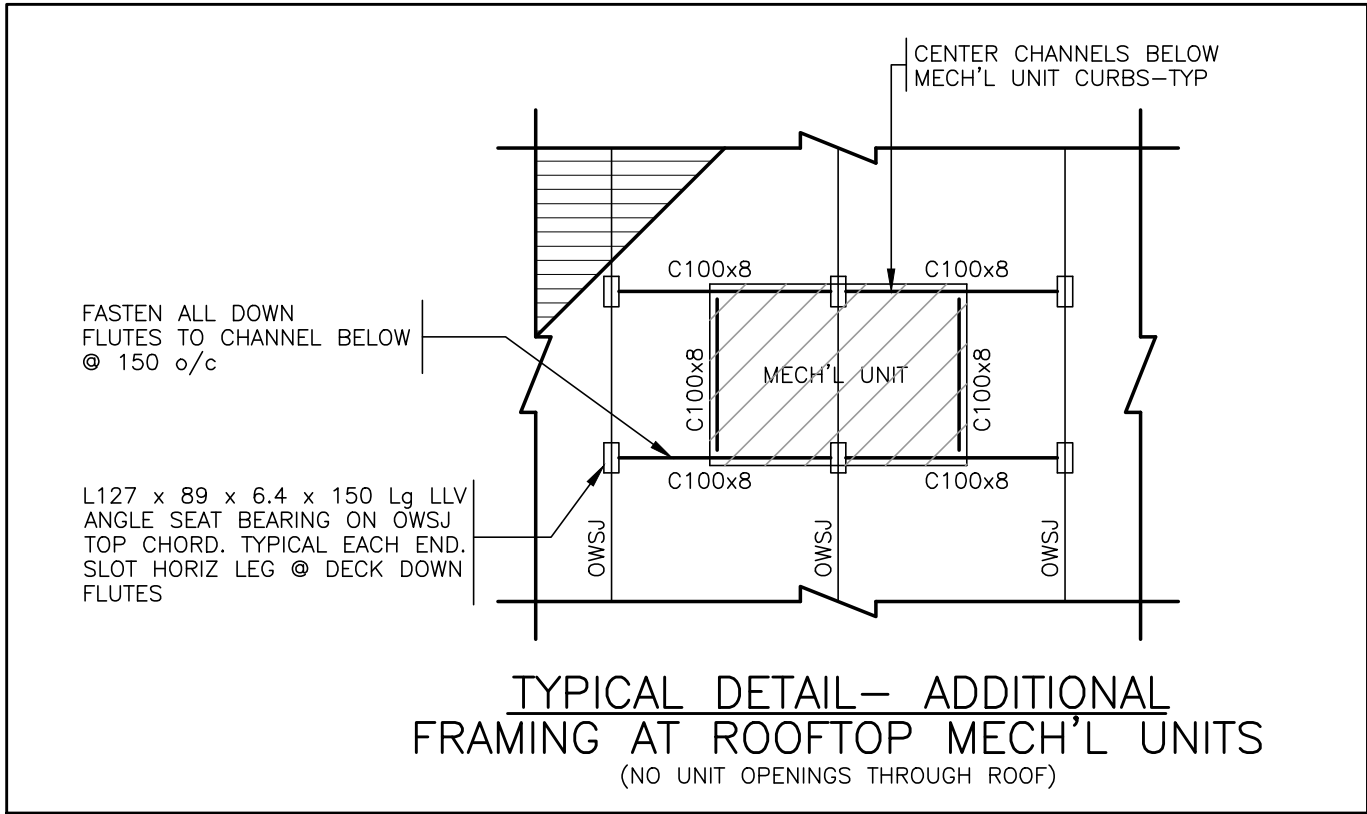
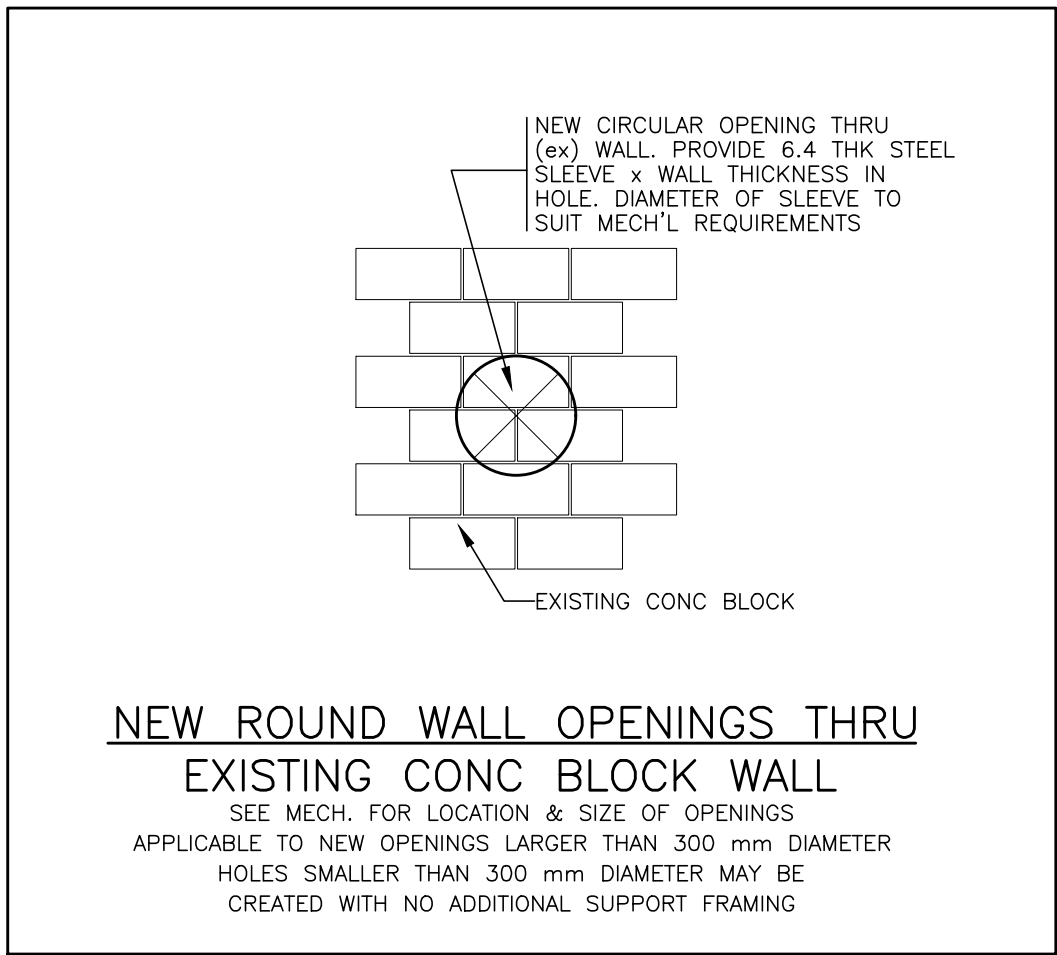
THE INSTALLER THAT WILL BE USING THE TOOLS TO ATTACH THE DECK FASTENERS SHALL BE TRAINED & CERTIFIED BY FASTENER MANUFACTURER'S REPRESENTATIVE ON THE GENERAL USE OF POWDER ACTUATED TECHNOLOGY AND FASTENING GUIDELINES FOR THE ATTACHMENT OF STEEL DECK.


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-SIDELAP CONNECTORS TO CONNECT STEEL DECK UNITS AT OVERLAPS: HILTI SLC01 FOR GAUGES 18-26 OR THE HILTI SLC02 FOR GAUGES 16-22.



FOOTING SCHEDULE		
MARK	SIZE	REINF'G
WF1	800 x 250 DP	3-15M @ CONT
CONCRETE COVER TO REINFORCING AS FOLLOWS: 75 mm FROM BOTTOM OF FOOTING 50 mm FROM SIDE OF FOOTINGS		

BEAM BEARING PLATE SCHEDULE		
MARK	SIZE	ANCHORS
BBP1	180 x 300 x 16 THK PLATE	2-15M x 400 Lg WELDABLE REBAR
BBP2	180 x 12 THK CONT PLATE	1-15M x 400 Lg WELDABLE REBAR @ 600 o/c
<b>NOTES:</b> 1. BEAMS SUPPORTED ON BEAM BEARING BASE PLATES TO EXTEND ONTO PLATE A MINIMUM OF 80% OF LENGTH OF PLATE IN DIRECTION OF BEAM UNLESS NOTED OTHERWISE ON PLAN. 2. ANCHORS ARE TO BE CENTERED ON PLATE & SPACED AT 200 o/c TO ALIGN WITH CORE VOIDS IN BLOCK UNLESS OTHERWISE NOTED 3. ENSURE BEAM POCKETS IN MASONRY WALLS ARE BUILT-IN WITH MASONRY OR GROUTED SOLID. 4. ENSURE WALLS ARE GROUTED AT LEAST 3 COURSES BELOW BEAM BEARING PLATES.		
<div><div></div><div></div></div> <div>BBP1BBP2</div>		





**UPPER CANADA**  
DISTRICT SCHOOL BOARD


3	REISSUED FOR TENDER	MAY 13/26
2	ISSUED FOR BUILDING PERMIT & TENDER	MAY 1/26
1	ISSUED FOR 66% REVIEW	MAR 20/26
No.	Revision Description	Date

1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MATERIAL RELEVANT TO THE PROJECT.

3. ADDITIONAL INFORMATION MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE DRAWINGS IN THE CONTRACT DOCUMENT.

4. DO NOT SCALE DRAWINGS

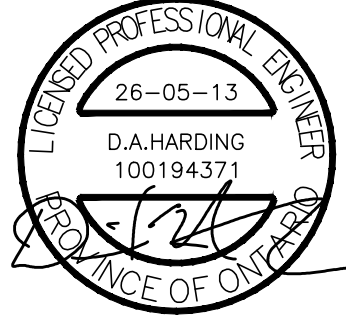


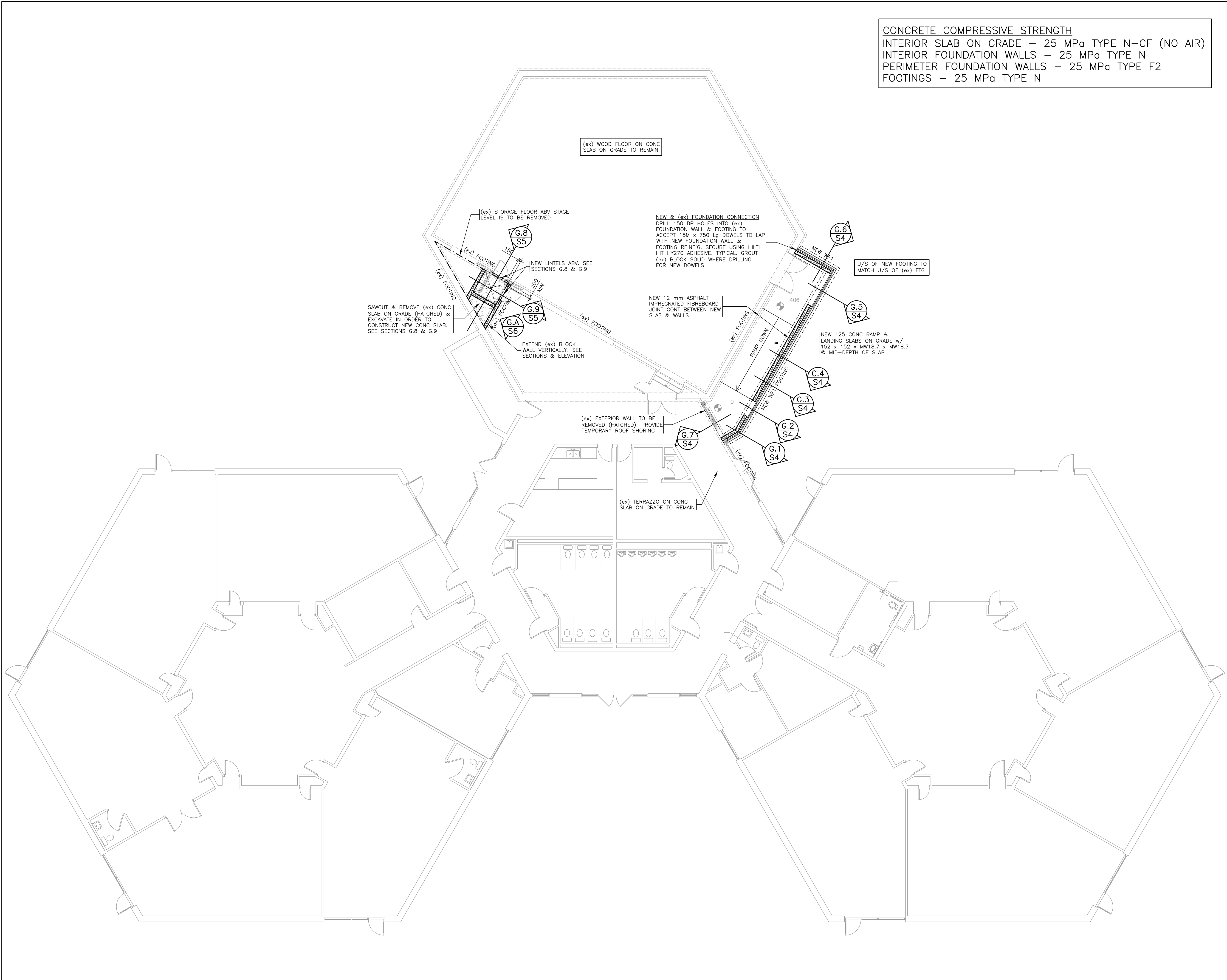
**CUNLIFFE & ASSOCIATES**  
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W: www.cunliffe.ca

PROJECT  
FRONT OF YONGE ROOF REPLACEMENT


ARCHITECT  
N45 ARCHITECTURE INC.

DRAWING TITLE  
SCHEDULES & DETAILS

DRAWN RW	REVIEWED DH	SCALE NOT TO SCALE
ENGINEERS SEAL 		PROJECT No. 28-017
		SHEET No. <b>S1</b>




CONCRETE COMPRESSIVE STRENGTH  
INTERIOR SLAB ON GRADE – 25 MPa TYPE N-CF (NO AIR)  
INTERIOR FOUNDATION WALLS – 25 MPa TYPE N  
PERIMETER FOUNDATION WALLS – 25 MPa TYPE F2  
FOOTINGS – 25 MPa TYPE N



UPPER  
CANADA  
DISTRICT SCHOOL BOARD

3	REISSUED FOR TENDER	MAY 13/26
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4. DO NOT SCALE DRAWINGS		




CUNLIFFE & ASSOCIATES  
CONSULTING STRUCTURAL ENGINEERS  
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W: www.cunliffe.ca

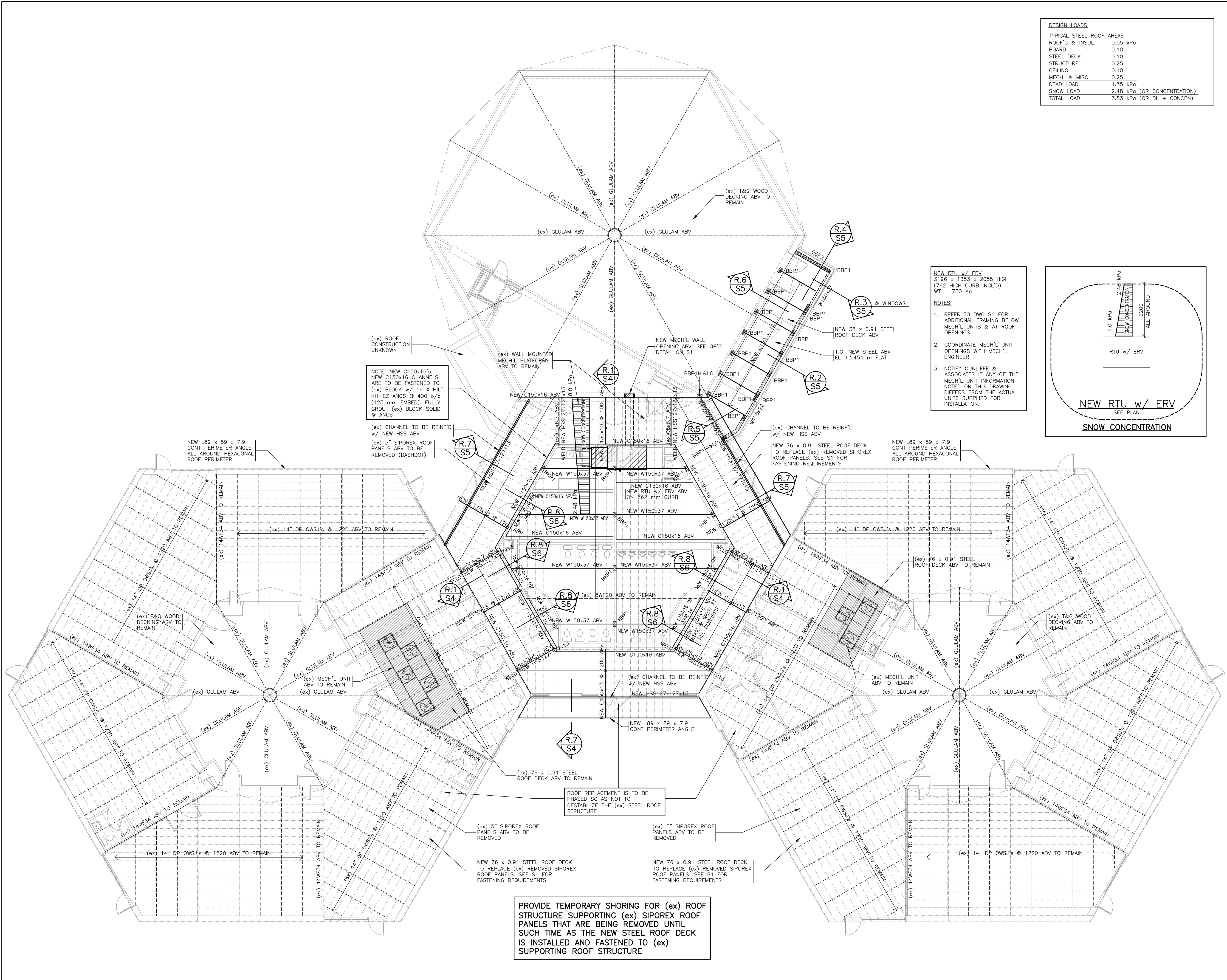
PROJECT  
FRONT OF YONGE ROOF REPLACEMENT

ARCHITECT  
N45 ARCHITECTURE INC.

DRAWING TITLE  
GROUND FLOOR PLAN

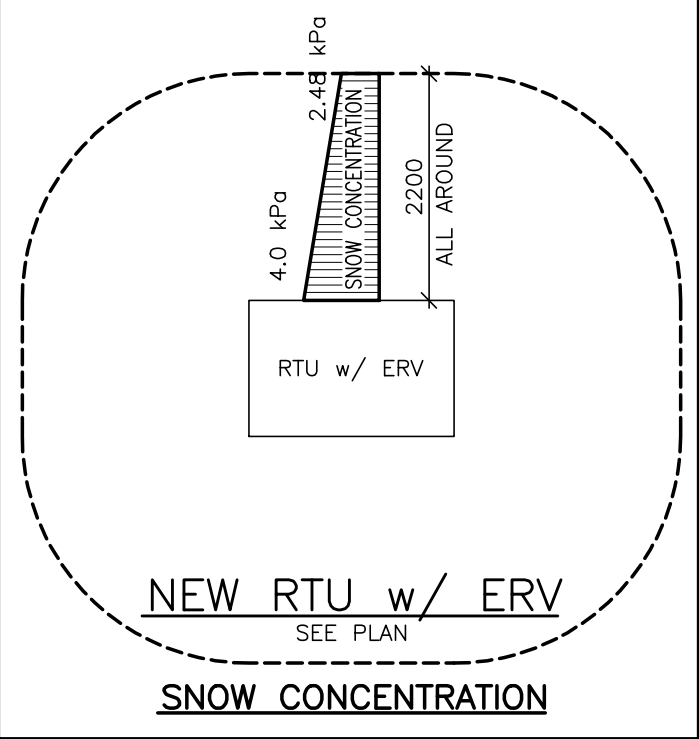
DRAWN RW	REVIEWED DH	SCALE 1:100
ENGINEERS SEAL 		PROJECT No. 28-017
		SHEET No. S2






DESIGN LOADS:	
TYPICAL STEEL ROOF AREAS	
ROOF'g & INSUL.	0.55 kPa
BOARD	0.10
STEEL DECK	0.10
STRUCTURE	0.25
CEILING	0.10
MECH. & MISC.	0.25
DEAD LOAD	1.35 kPa
SNOW LOAD	2.48 kPa (OR CONCENTRATION)
TOTAL LOAD	3.83 kPa (OR DL + CONCEN)


- NEW RTU w/ ERV  
3196 x 1353 x 2055 HIGH  
(762 HIGH INCL'D)  
WT = 750 Kg
- NOTES:
1. REFER TO DWG S1 FOR ADDITIONAL FRAMING BELOW MECH'L UNITS & AT ROOF OPENINGS
  2. COORDINATE MECH'L UNIT OPENINGS WITH MECH'L ENGINEER
  3. NOTIFY CUNLIFFE & ASSOCIATES IF ANY OF THE MECH'L UNIT INFORMATION NOTED ON THIS DRAWING DIFFERS FROM THE ACTUAL UNITS SUPPLIED FOR INSTALLATION.





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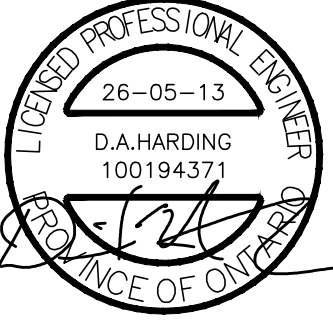


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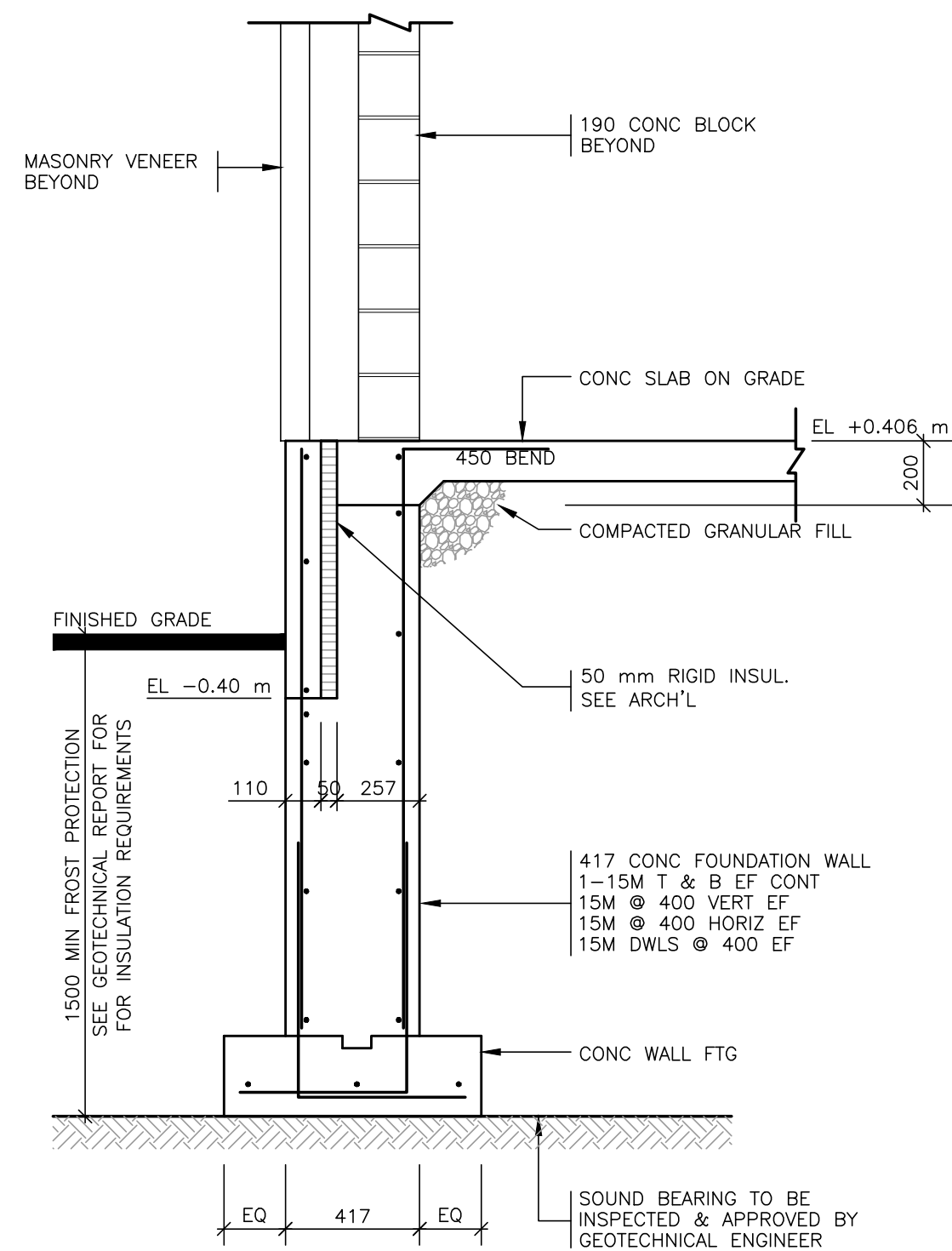
PROJECT  
FRONT OF YONGE ROOF REPLACEMENT

ARCHITECT  
N45 ARCHITECTURE INC.

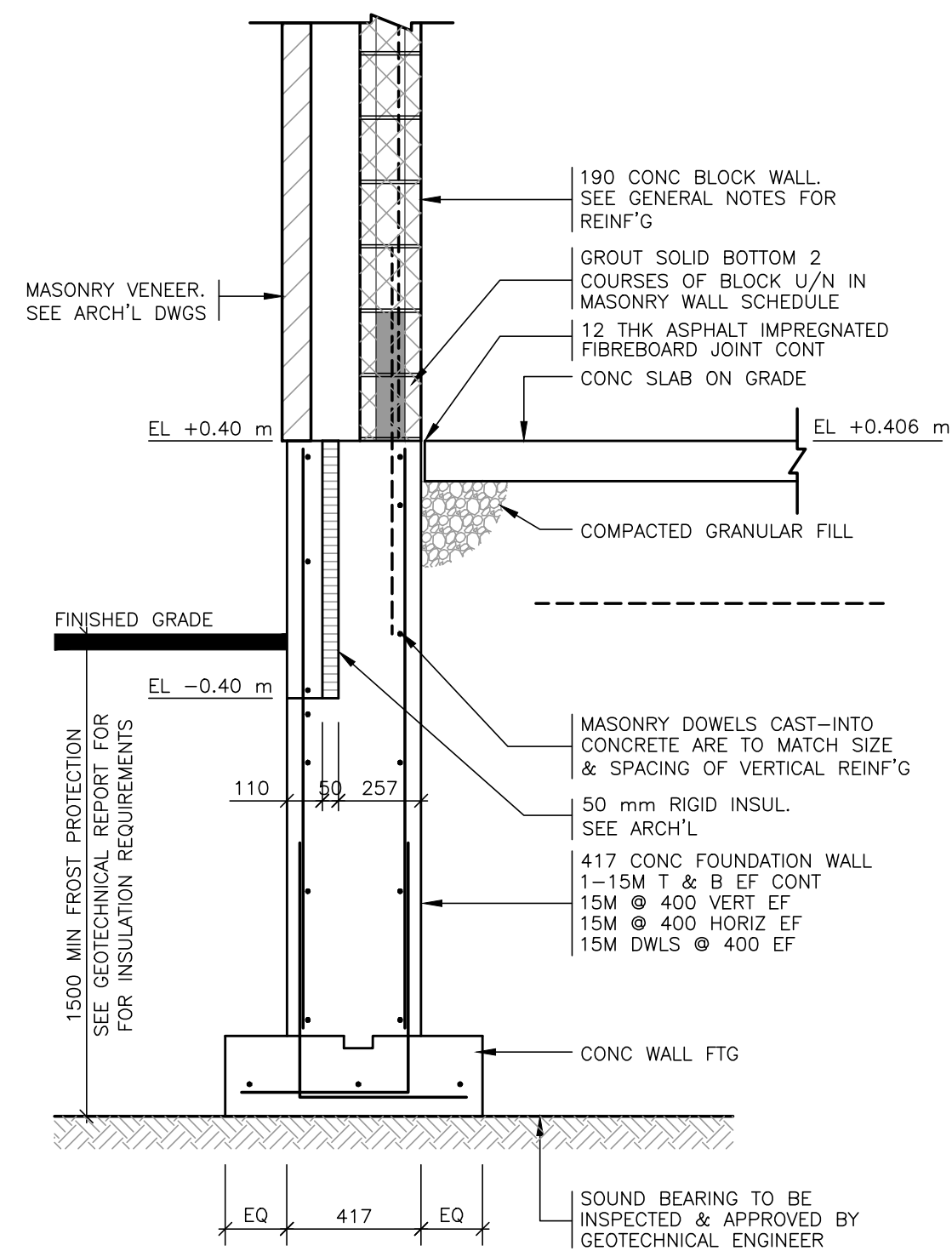
DRAWING TITLE  
GROUND FLOOR PLAN  
WITH ROOF FRAMING

DRAWN RW	REVIEWED DH	SCALE 1:100
ENGINEERS SEAL 		PROJECT No. 28-017
		SHEET No. S3

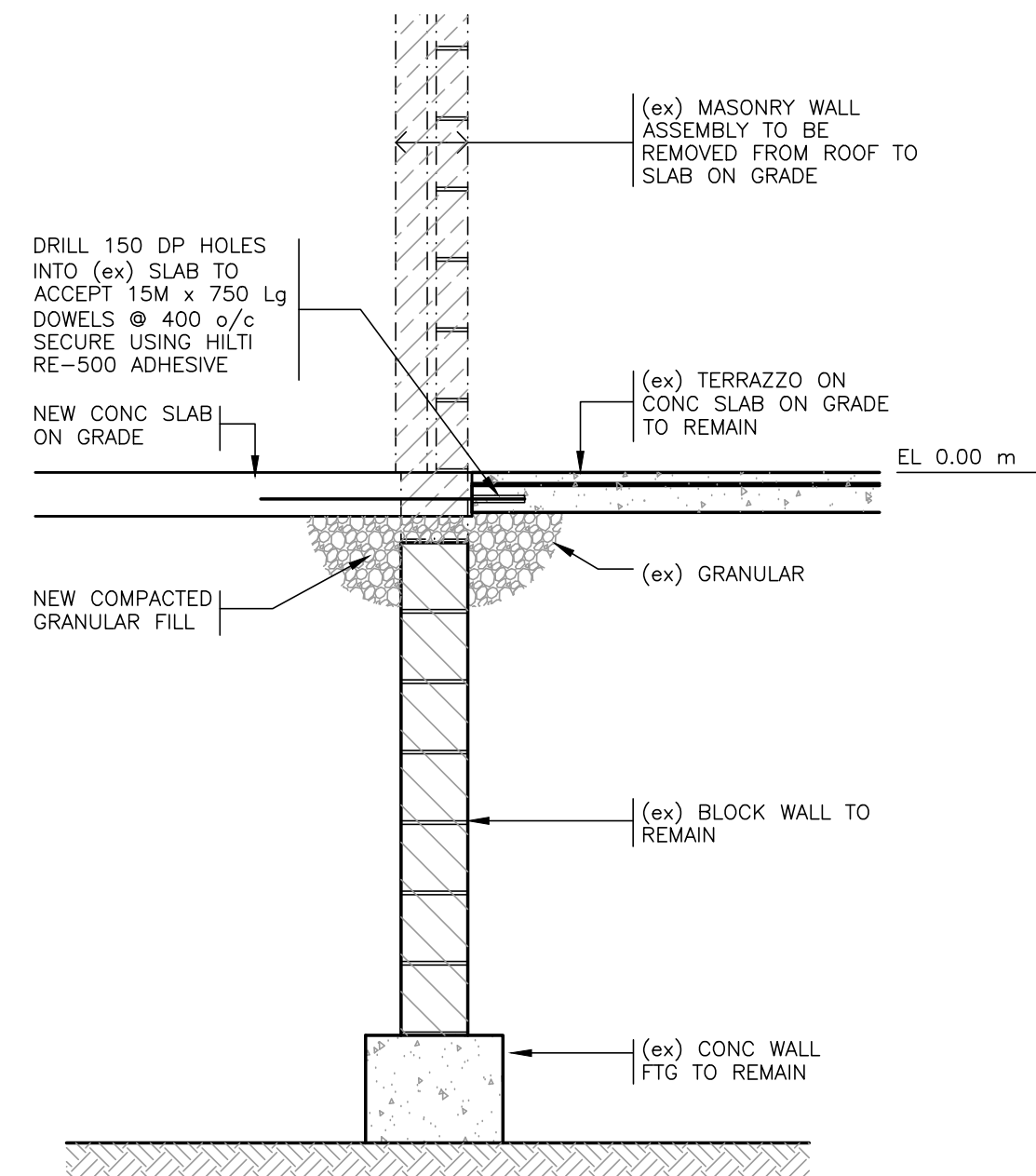




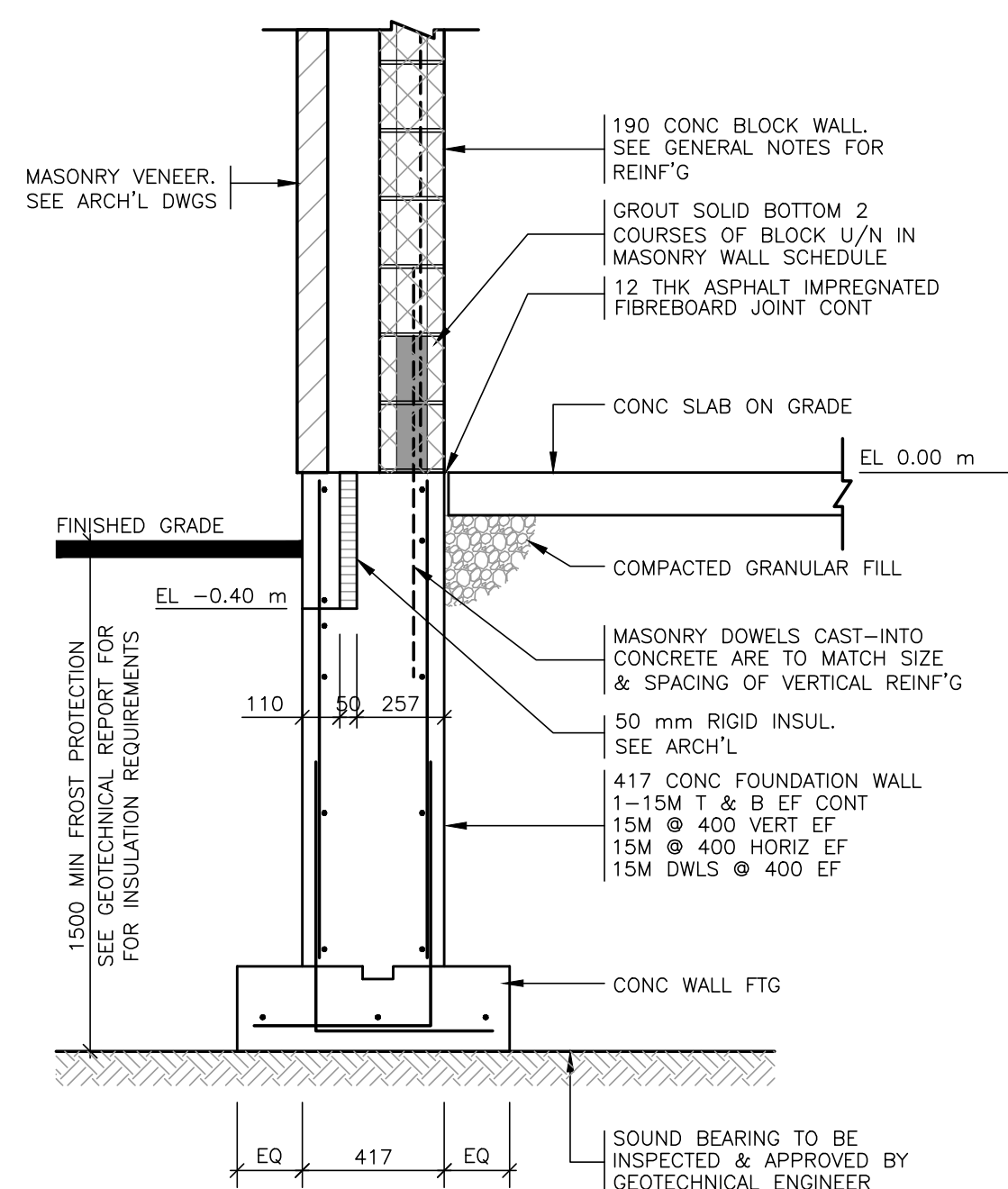
**G.5**  
**S2** SECTION  
1 : 20



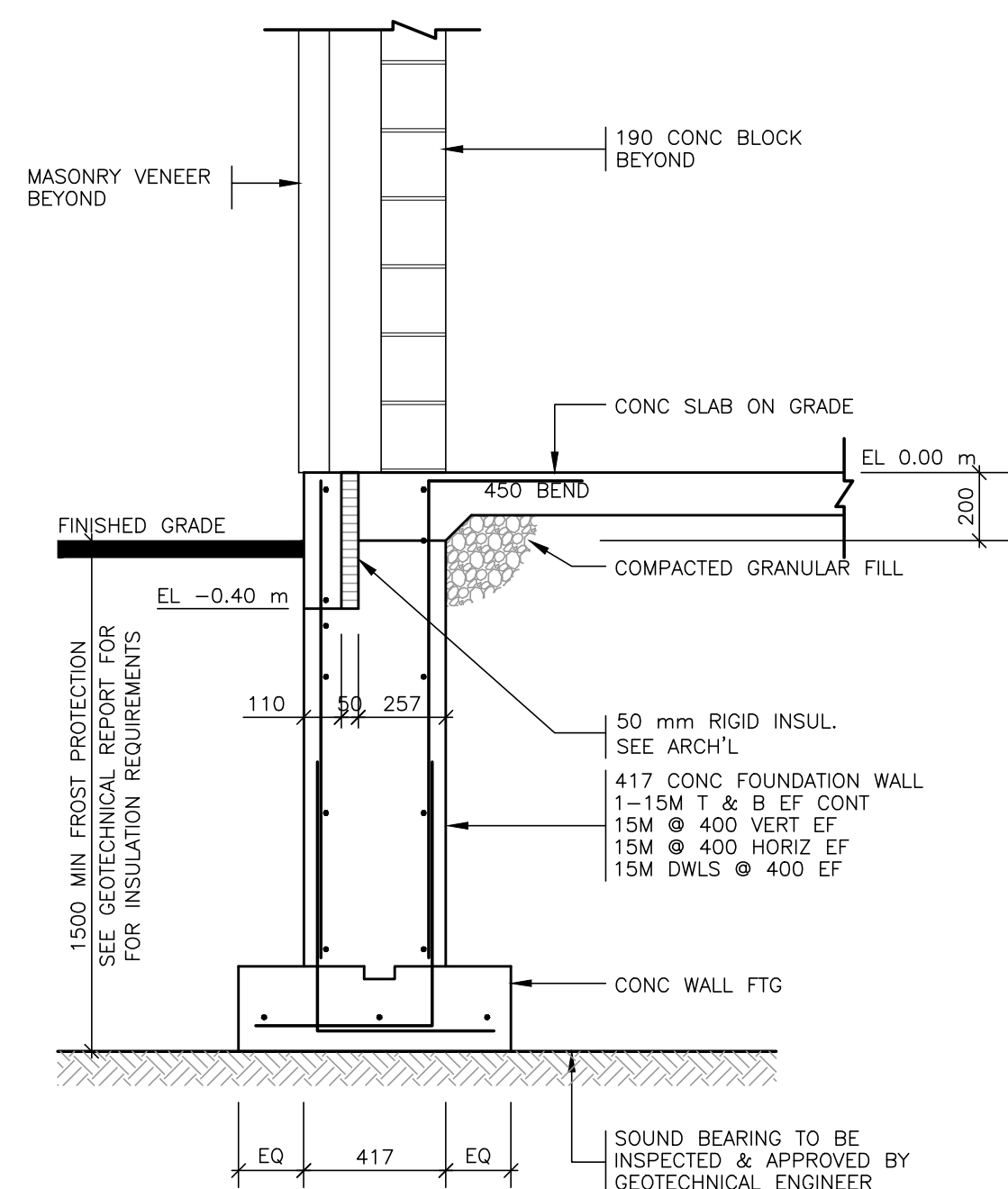
**G.6**  
**S2** SECTION  
1 : 20



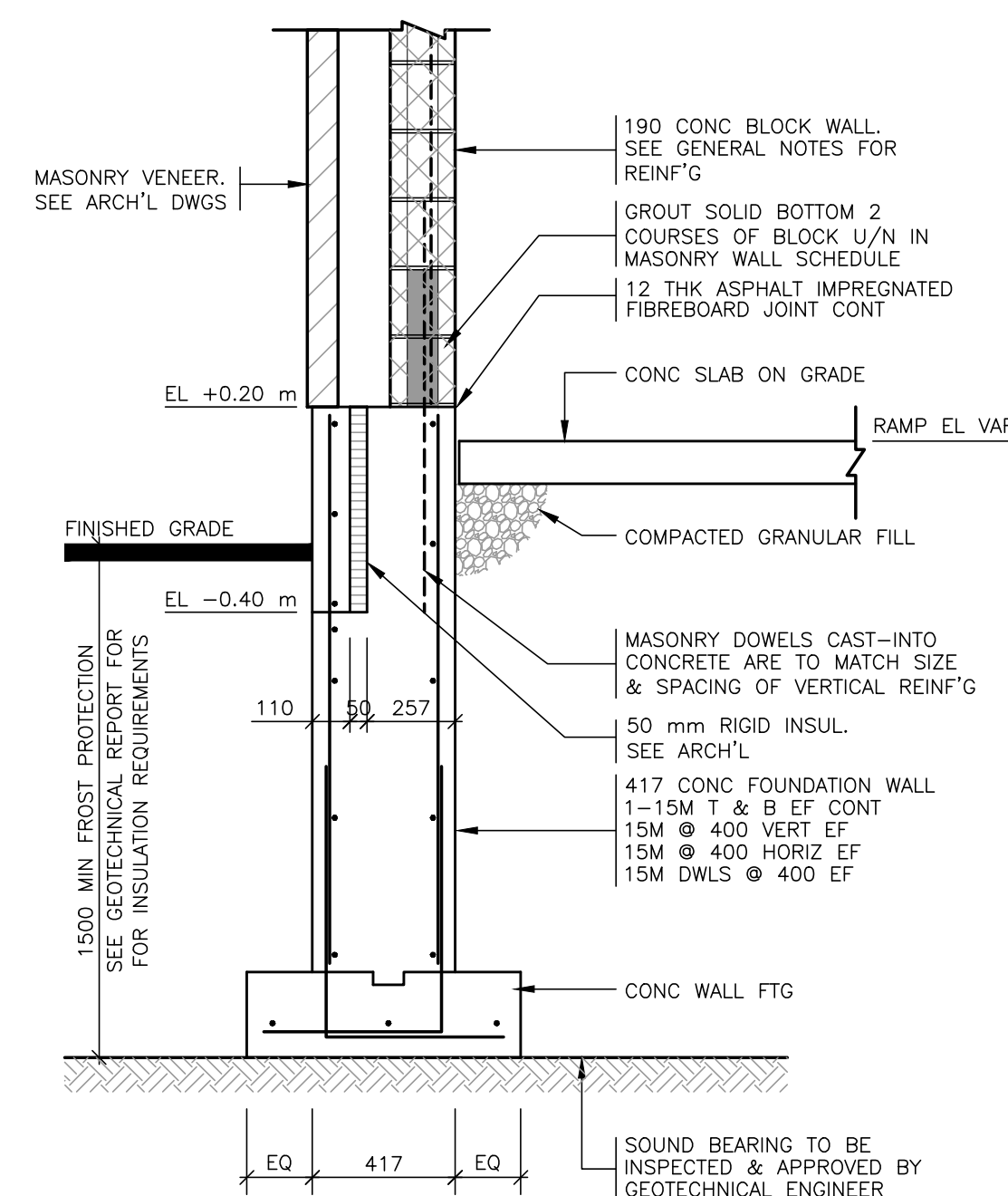
**G.7**  
**S2** SECTION  
1 : 20



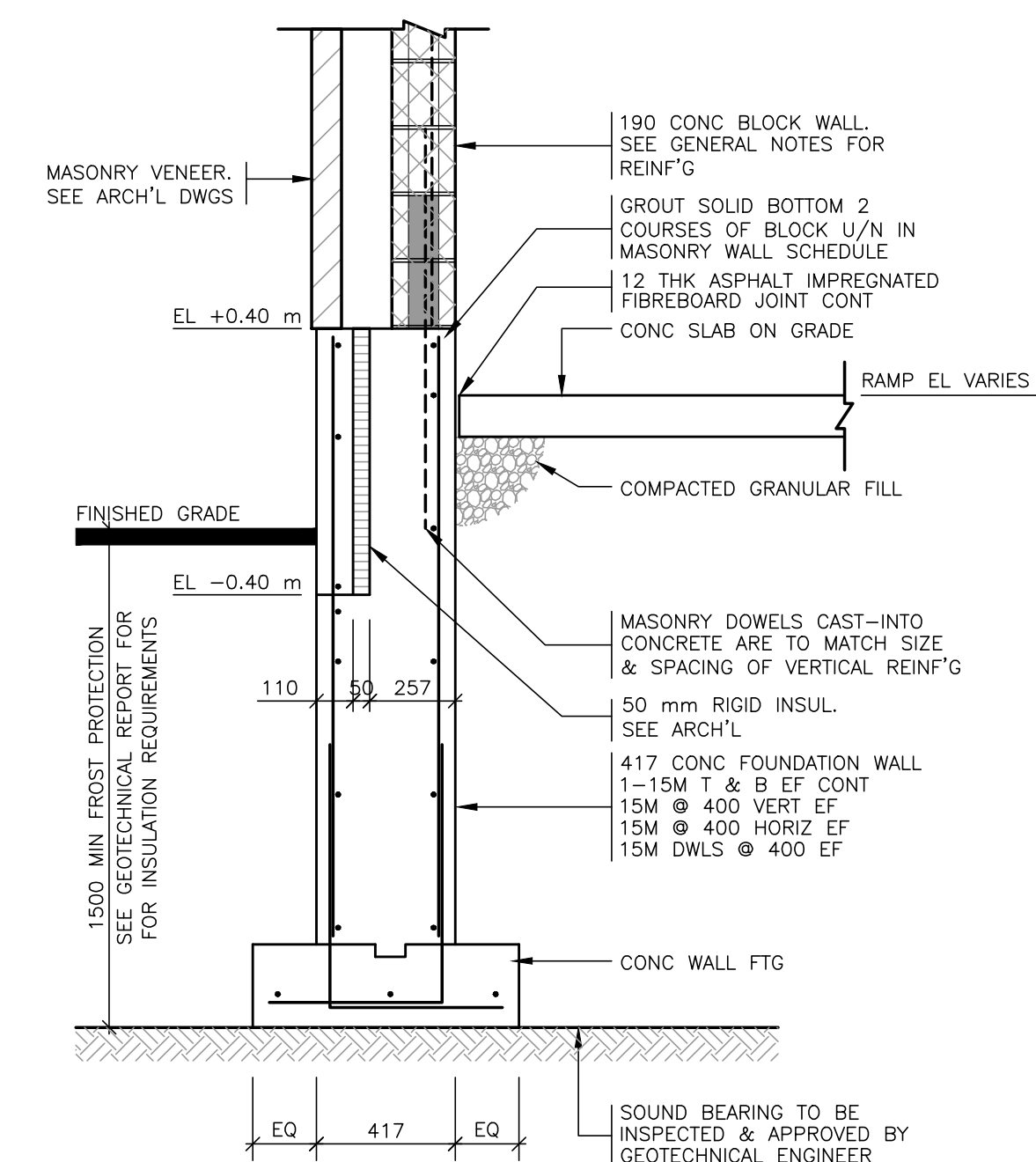
**G.1**  
**S2** SECTION  
1 : 20



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



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



**G.4**  
**S2** SECTION  
1 : 20

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PROJECT  
**FRONT OF YONGE ROOF REPLACEMENT**

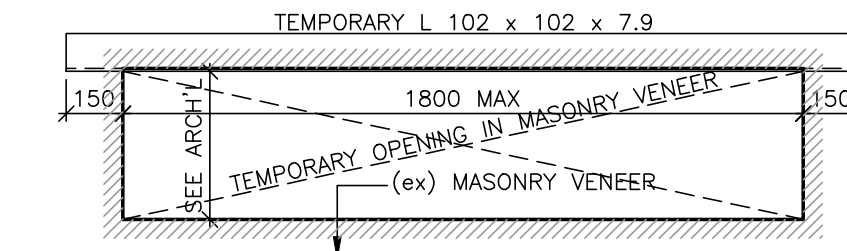
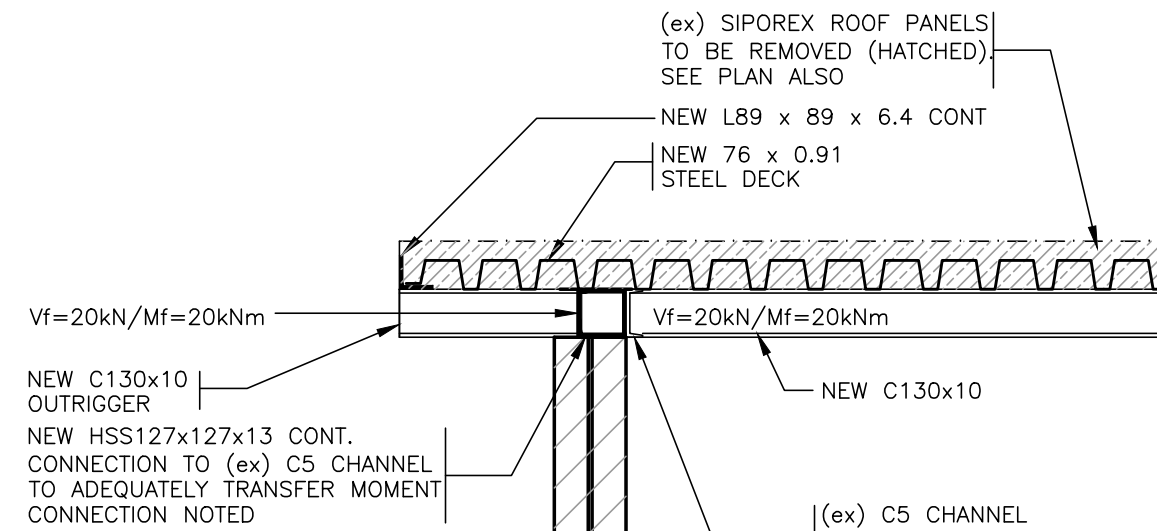
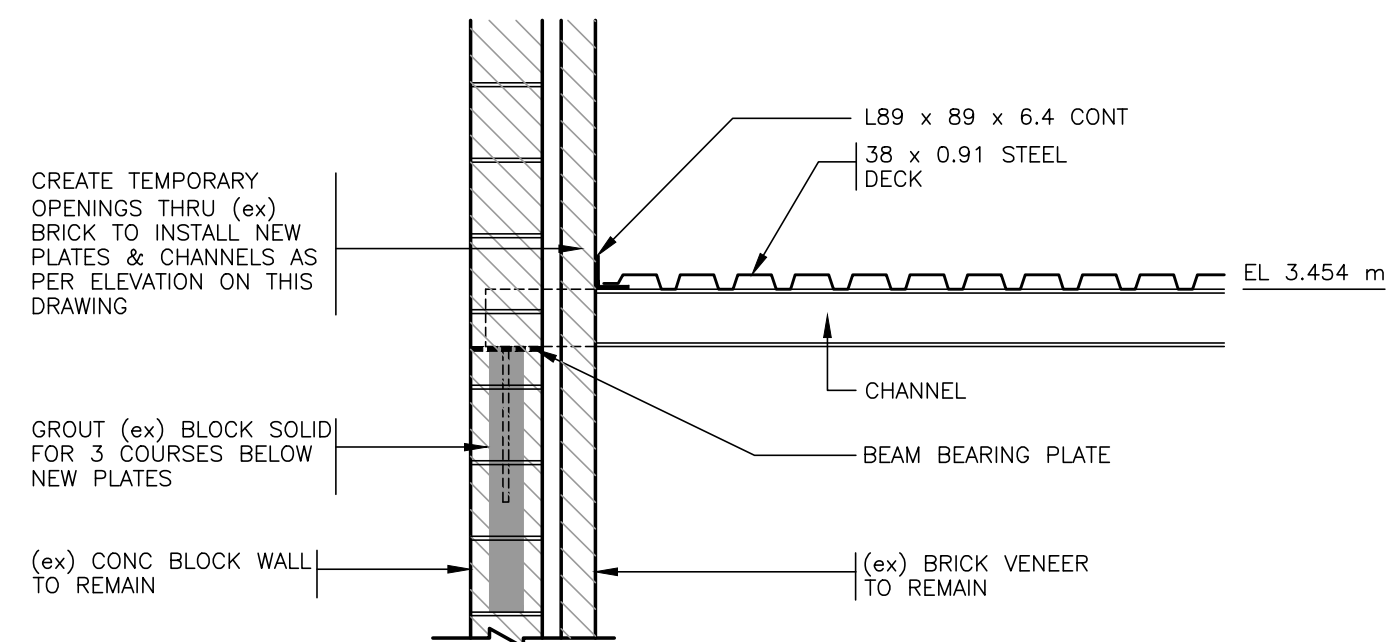
ARCHITECT  
**N45 ARCHITECTURE INC.**

DRAWING TITLE  
**SECTIONS & DETAILS**

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ENGINEERS SEAL	PROJECT No. 28-017	SHEET No. <b>S4</b>



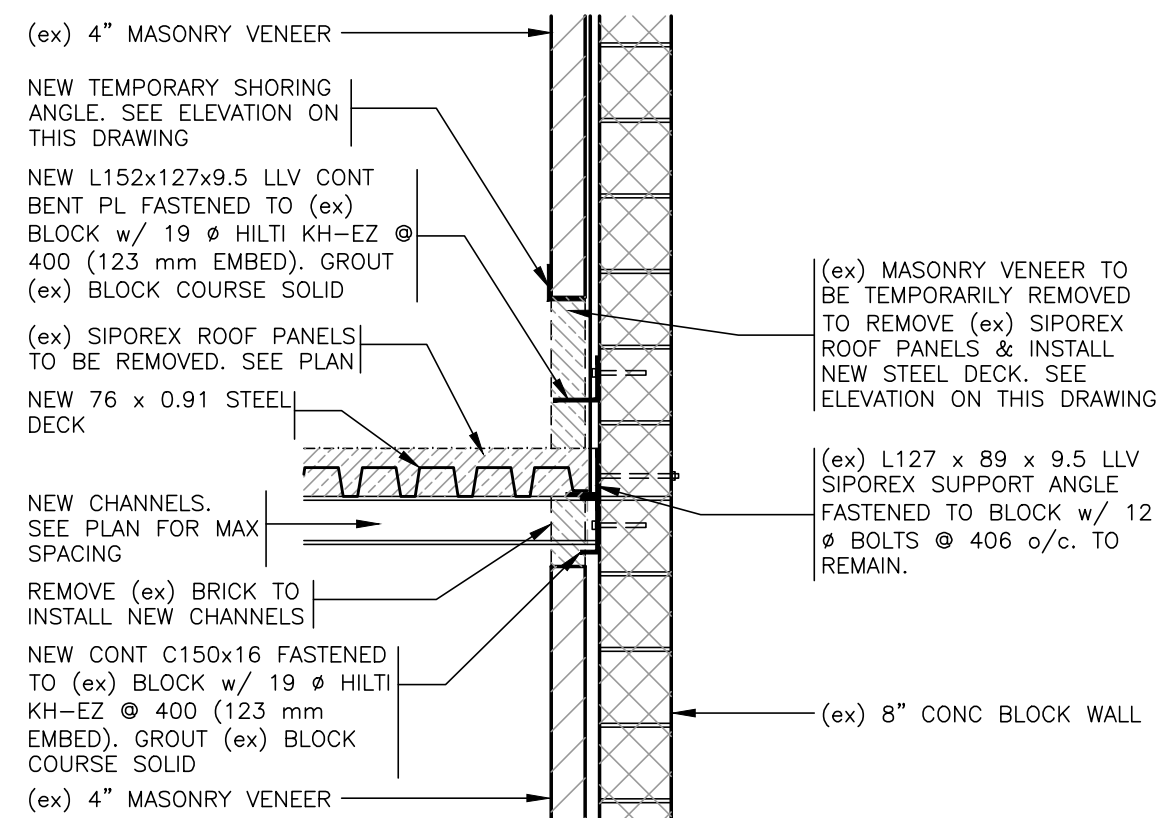




- SEQUENCE OF OPERATIONS**
1. REMOVE MORTAR FROM HORIZONTAL MASONRY JOINT AT HEAD OF TEMPORARY WALL OPENING TO FACILITATE REMOVAL OF (ex) SIPOREX ROOF PANELS & INSTALLATION OF STEEL DECK.
  2. INSTALL HORIZONTAL ANGLE LEG INTO JOINT UNTIL VERTICAL LEG IS FLUSH AGAINST EXTERIOR FACE OF VENEER.
  3. REMOVE VENEER BELOW ANGLE AS NECESSARY TO UNDERTAKE REMOVAL & CONSTRUCTION WORK.
  4. PROVIDE NEW WALL FLASHING & REINSTATE MASONRY VENEER AS PER ARCH'L DWGS.
  5. REMOVE ANGLE.
  6. REPAIR MORTAR JOINTS AFTER INSTALLATION.
  7. REPEAT SEQUENCE ABOVE UNTIL COMPLETED.

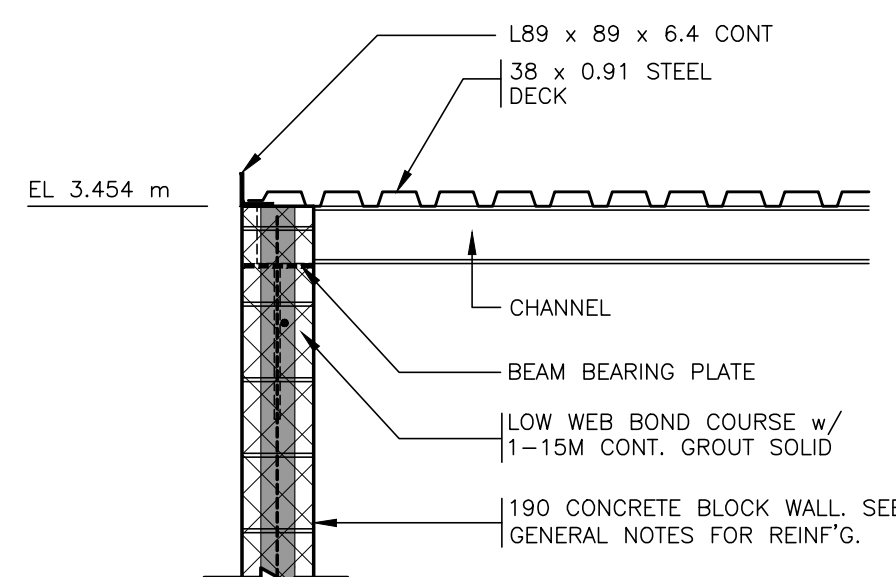
### ELEVATION-TEMPORARY MASONRY SUPPORT ANGLE AT EXTERIOR OF BRICK VENEER

THE ABOVE DETAIL COVERS GENERAL CONDITIONS. DETAILS FOR TEMPORARY SHORING FOR SPECIAL CONDITIONS (i.e. CORNERS) ARE TO BE DESIGNED, DETAILED AND REVIEWED ON SITE BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO.

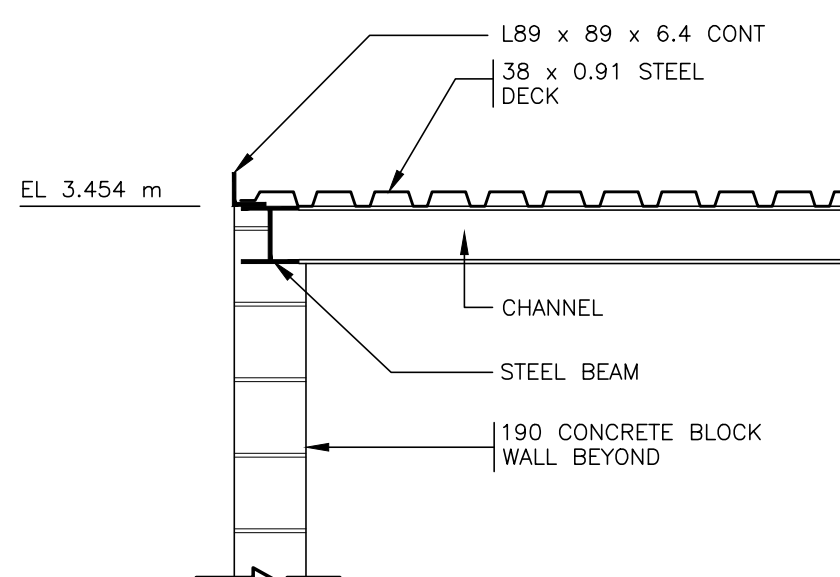


**R.6**  
**S3** SECTION  
1 : 20

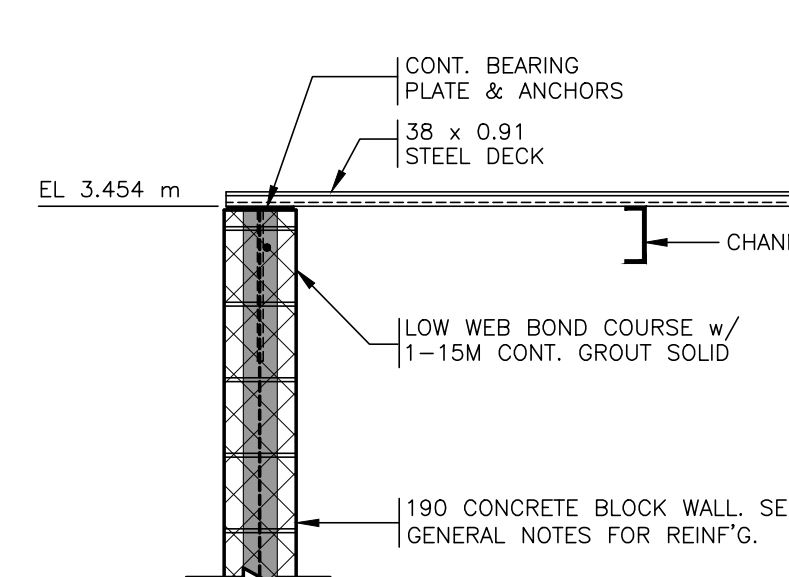
**R.7**  
**S3** SECTION  
1 : 20



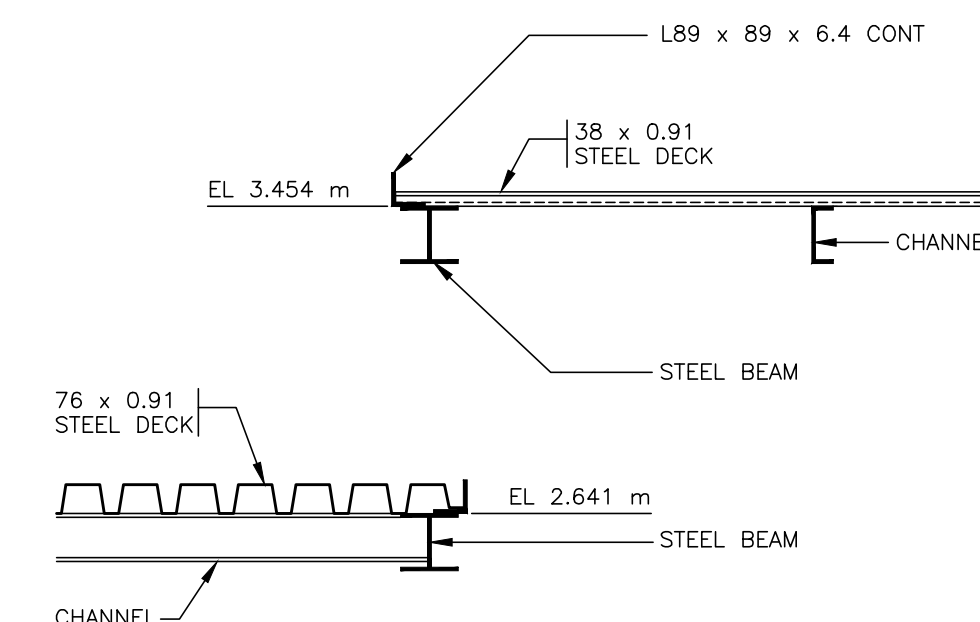
**R.2**  
**S3** SECTION  
1 : 20



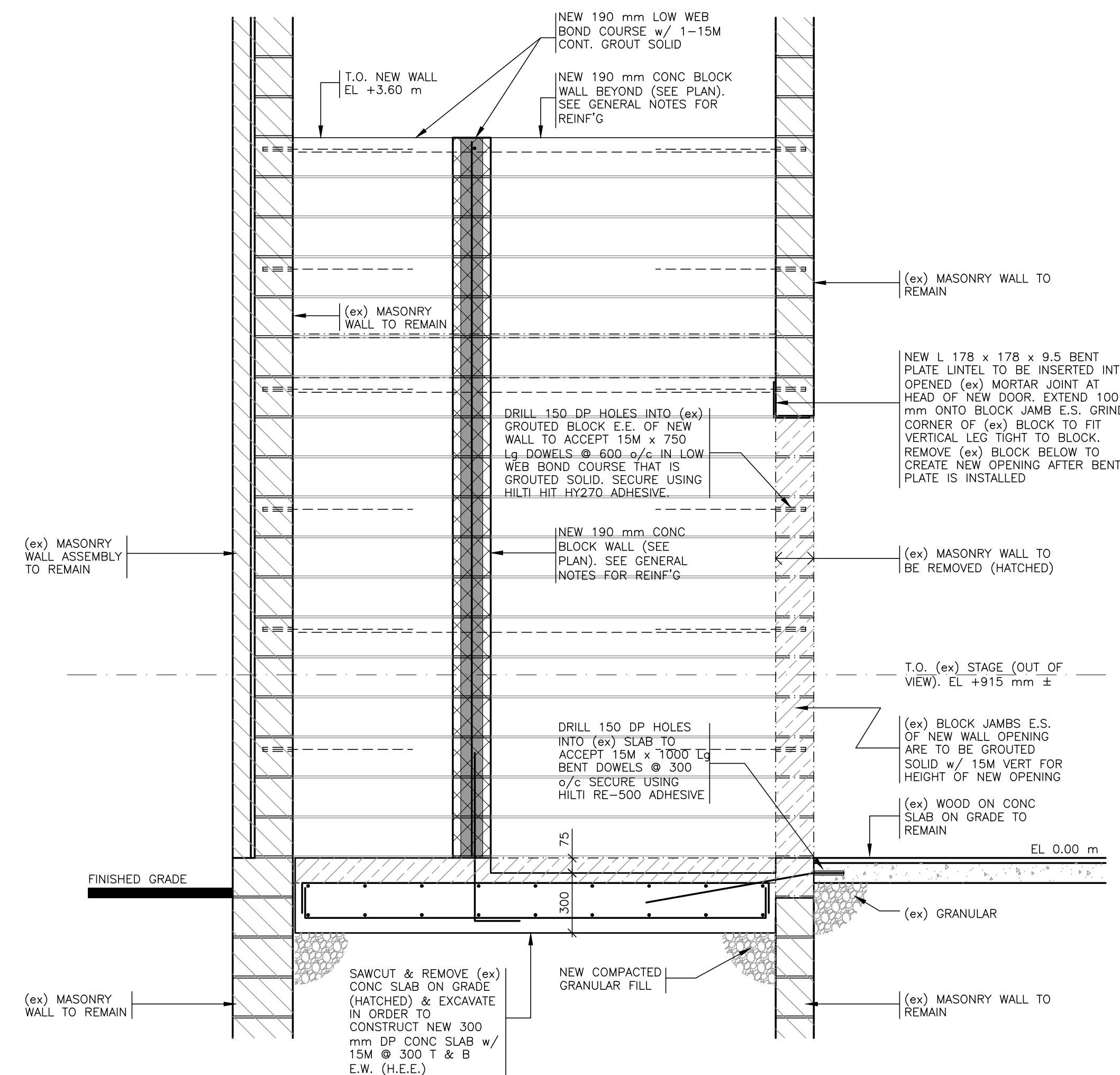
**R.3**  
**S3** SECTION  
1 : 20



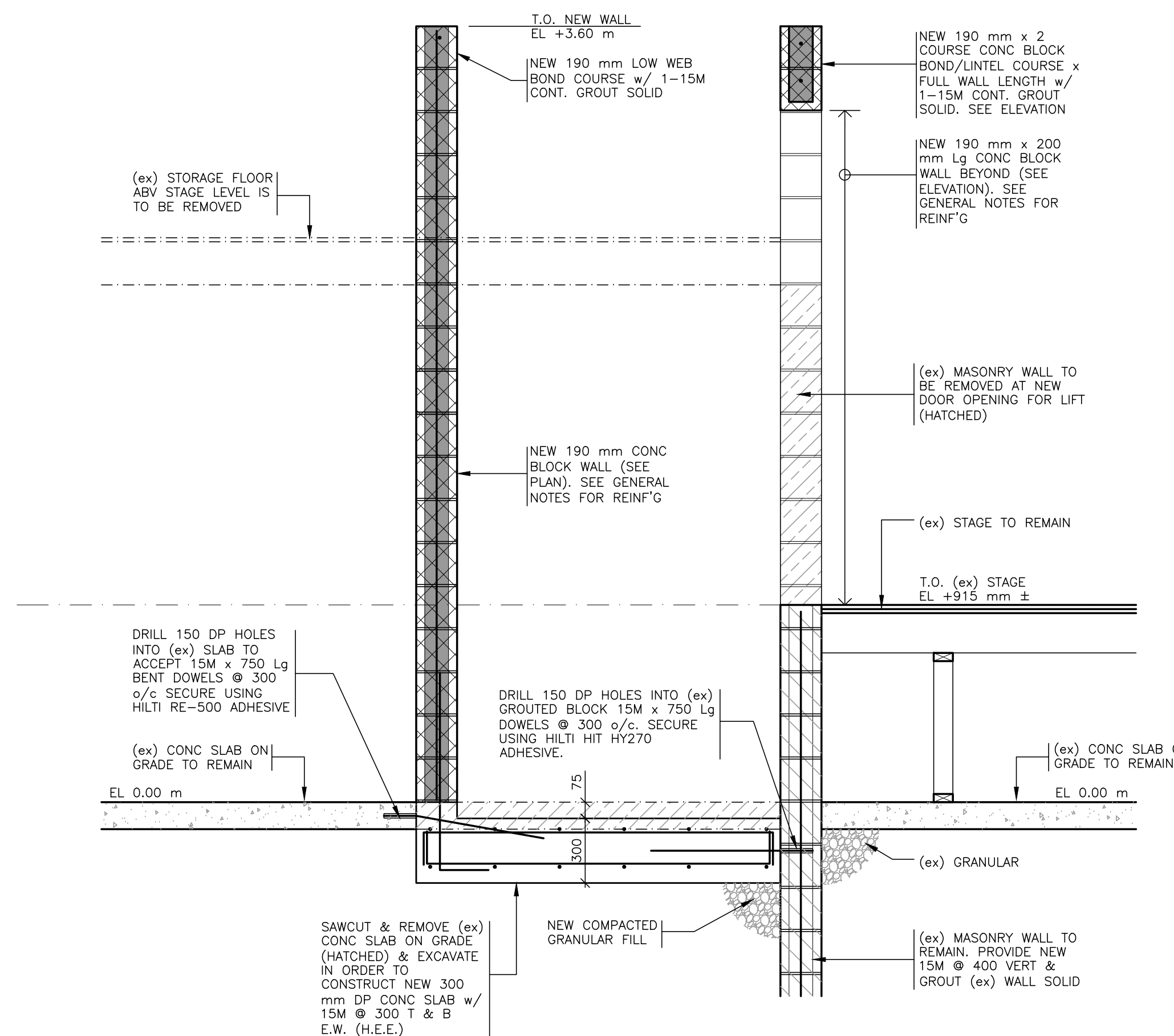
**R.4**  
**S3** SECTION  
1 : 20



**R.5**  
**S3** SECTION  
1 : 20



**G.8**  
**S2** SECTION  
1 : 20



**G.9**  
**S2** SECTION  
1 : 20

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PROJECT  
**FRONT OF YONGE ROOF REPLACEMENT**

ARCHITECT  
**N45 ARCHITECTURE INC.**

DRAWING TITLE  
**SECTIONS & DETAILS**

DRAWN RW	REVIEWED DH	SCALE AS NOTED
ENGINEERS SEAL		PROJECT No. 28-017



SHEET No.  
**S5**




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DRAWING TITLE

SECTIONS & DETAILS



26-05-13  
D.A. HARDING  
100194371  
PROVINCE OF ONTARIO

SHEET No.  
**S6**



