

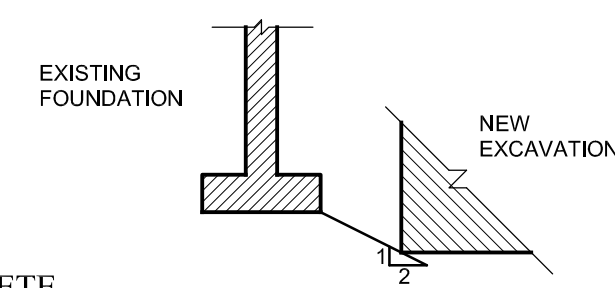
**1) GENERAL INFORMATION**

1. THE INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN DESIGNED AND ANALYZED IN ACCORDANCE WITH THE 2012 ONTARIO BUILDING CODE. CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH THIS AND ALL OTHER APPLICABLE CODES.
2. CONCRETE STRUCTURE DESIGNED IN ACCORDANCE WITH CSA A23.3-04
3. CONTRACTOR IS TO VERIFY/COORDINATE ALL DIMENSIONS PRIOR TO CONSTRUCTION.
4. PROVIDE ADEQUATE PROTECTION OF SURROUNDING AREAS DURING REMOVALS AND DEMOLITION.
5. REMOVE AND DISPOSE OFF SITE ALL DEMOLISHED & EXCAVATED MATERIALS.
6. ALL FOOTINGS TO BEAR ON UNDISTURBED NATIVE MATERIAL WITH MINIMUM ALLOWABLE BEARING OF 100 KPa.
7. CONTRACTOR TO CONFIRM NATIVE MATERIAL SOIL BEARING CAPACITY OF 100 KPa PRIOR TO PLACEMENT OF GRANULAR AND CONCRETE.
8. NO CONCRETE PAD/CONCRETE ELEMENTS ARE TO BE CONSTRUCTED UNTIL WRITTEN APPROVAL OF THE BEARING SURFACES AND PRESSURES IS PROVIDED BY A GEOTECHNICAL ENGINEER THROUGH ON-SITE INVESTIGATION. FAILURE TO COMPLETE THIS WORK COULD RESULT IN THE REMOVAL/REINSTATEMENT.
9. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
10. CONTRACTOR TO PROVIDE ENGINEERED SHOP DRAWINGS FOR SEISMIC DESIGN OF CEILINGS, BULKHEADS, TRANSFORMERS, LIGHT FIXTURES, MECHANICAL, ELECTRICAL, ETC.

**2) EXCAVATION**

**2.1 PROTECT LATERAL STABILITY OF BEARING STRATA UNLESS NOTED:**

DO NOT EXCAVATE BELOW A LINE EXTENDING DOWNWARD FROM ANY BEARING STRATA AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL. (SEE DIAGRAM).



**3) CONCRETE**

**3.1 CONCRETE COVER (CLEAR TO REINFORCING):**

U/S SLAB ON GRADE (AGAINST SOIL)	75mm (3")
SLAB ON GRADE (SIDES & TOP)	50mm (2")

**3.2 REINFORCING STEEL**

**TYPICAL REBAR REQUIREMENTS:**

- LAPS:  
 ≥ 36 BAR DIA.  
 ≥ 600mm (24")

**3.3 CONCRETE MIXES**

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.1. TO GIVE THE FOLLOWING QUALITY FOR ALL CONCRETE AS INDICATED.

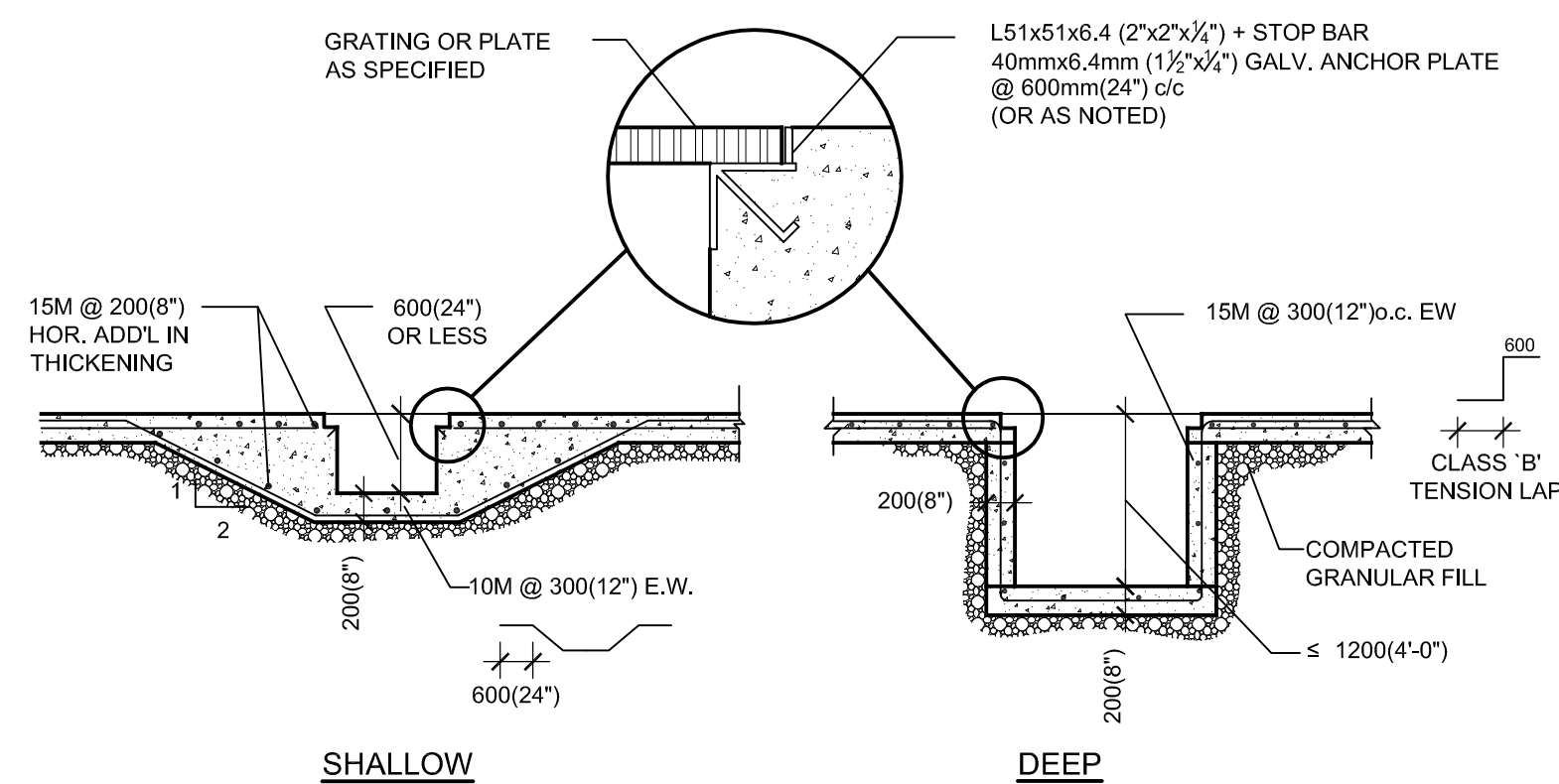
28 DAY LOCATION	STRENGTH	SLUMP	CLASS OF EXPOSURE
SLAB ON GRADE	35 MPa	75mm (3")	C-1
INTERIOR SLAB ON GRADE	25 MPa	75mm (3")	N
FOOTINGS	25 MPa	75mm (3")	N
FOUNDATION WALLS	35 MPa	75mm (3")	C-1
GARAGE ENCLOSURE SLAB	35 MPa	75mm (3")	C-1

\*OBTAIN THESE SLUMPS WITH AID OF SPECIFIED WATER REDUCING AGENT.  
 \*NOTE: ALL CONCRETE EXPOSED TO EXTERIOR CONDITIONS TO HAVE MINIMUM 6% AIR ENTRAINMENT.

READY-MIXED CONCRETE AND CONCRETE PROPORTIONS SHALL BE IN ACCORDANCE WITH CSA A23.1, CLAUSE 12 AND AS FOLLOWS:

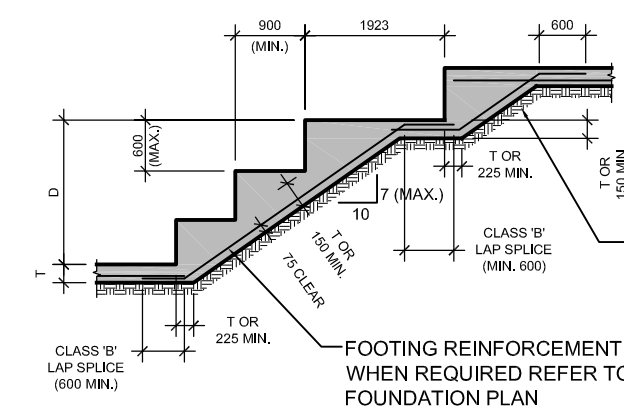
1. IF BLENDED NORMAL PORTLAND CEMENT/CEMENTITIOUS HYDRAULIC SLAG IS USED EXCEPT FOR FLOOR MIXES. SLAG CONTENT SHALL NOT BE MORE THAN 25% OF TOTAL MASS OF CEMENT. TOTAL VOLUME OF CEMENT IN CONCRETE FLOOR MIXES SHALL BE 100% NORMAL PORTLAND CEMENT.
2. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF SPECIFIED QUALITY AND YIELD AND THAT STRENGTH WILL COMPLY WITH CAN/CSA-A23.1-M06.
3. USE OF CALCIUM CHLORIDE NOT PERMITTED.
4. DO NOT CHANGE CONCRETE MIX WITHOUT PRIOR APPROVAL OF CONSULTANT. SHOULD CHANGE IN MATERIAL SOURCE BE PROPOSED, NEW MIX DESIGN TO BE APPROVED BY CONSULTANT.

**3-4 PITS/TRENCHES, PADS AND CURBS U/N:**



**3-5 FOOTINGS STEPS:**

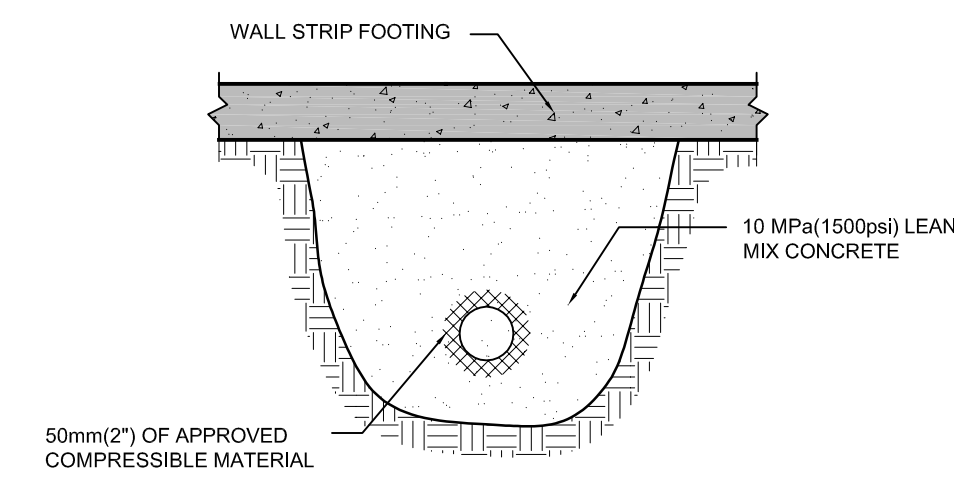
LOCATIONS OF FOOTING STEPS TO BE APPROVED BY ENGINEER IN WRITING PRIOR TO CONSTRUCTION.



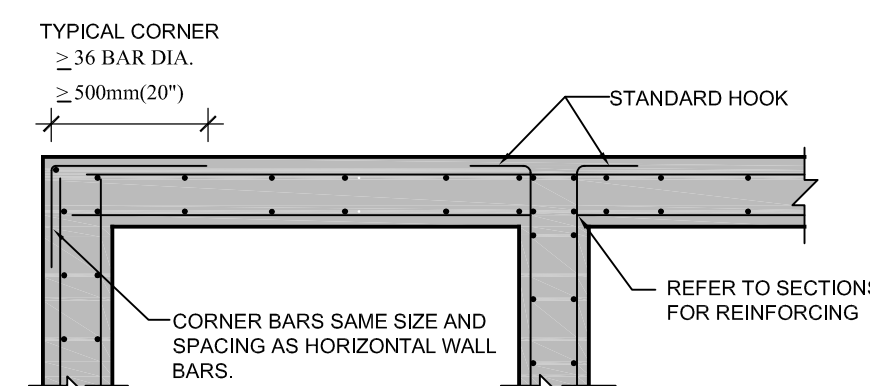
- NOTES:**
1. IF 'D' EXCEEDS 1800 PROVIDE HORIZONTAL SECTIONS OF 1200 MINIMUM LENGTH BETWEEN EVERY SET OF STEPS.
  2. STEPPED FOOTINGS SHALL BE CAST AS A SINGLE UNIT.
  3. 'T' DENOTES FOOTING THICKNESS.

**3-6 PIPE CROSSING BELOW STRIP FOOTING:**

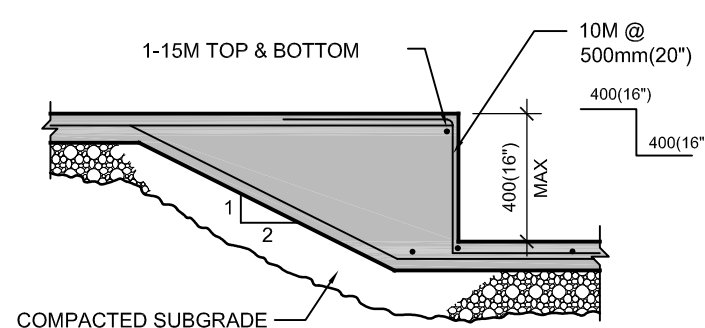
(NOTE: LOCATIONS WHERE PIPES CROSS BELOW FOOTINGS ARE TO BE APPROVED BY ENGINEER IN WRITING PRIOR TO CONSTRUCTION. ENGINEER RESERVES THE RIGHT TO RELOCATE PIPES AS REQUIRED OR LOWER FOOTINGS TO SUIT.)



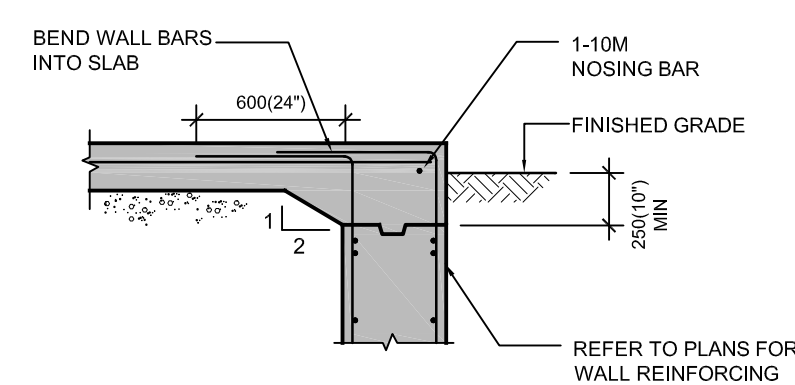
**3-7 HORIZONTAL WALL STEEL DETAIL AT CORNERS U/N:**



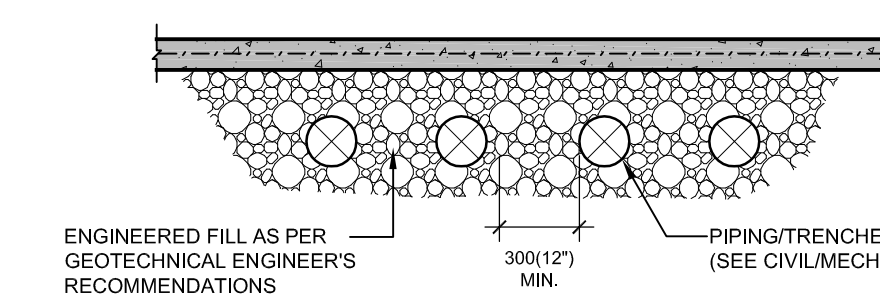
**3-8 SLAB ON GRADE ELEVATION CHANGE U/N:**



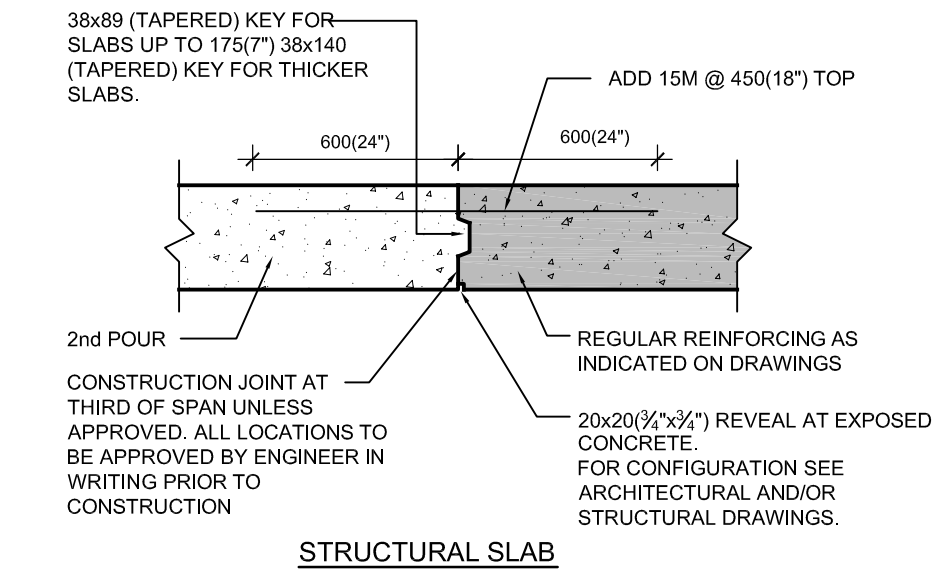
**3-9 SLAB ON GRADE AT DOORS:**



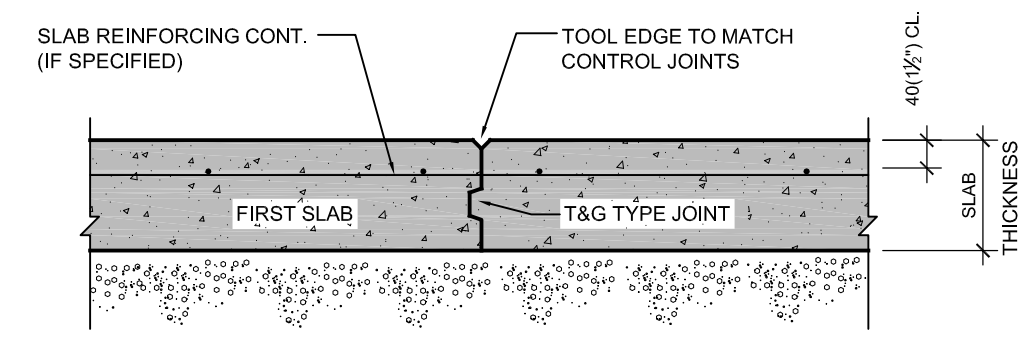
**3-10 UNDERSLAB/UNDERGROUND PIPING TRENCHES**



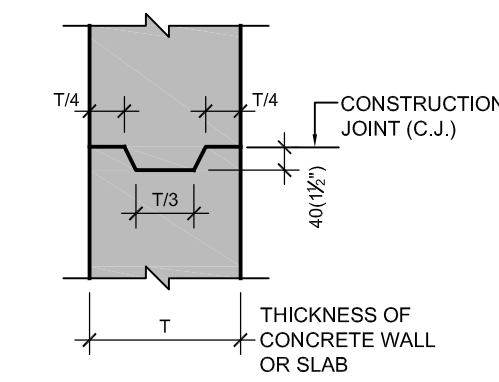
**3-11 CONSTRUCTION JOINTS**



- NOTES:**
1. WHERE BARS ARE EPOXY COATED INCREASE BAR LENGTHS BY 20%.
  2. FOR TRANSFER BEAMS OR BEAMS GREATER THAN 900 DEEP, LOCATION AND DETAIL OF CONSTRUCTION JOINT TO BE APPROVED BY ENGINEER. IT SHALL BE ASSUMED JOINTS ARE NOT PERMITTED FOR TENDERING PURPOSES.
  3. CONCRETE SLABS SHALL BE CONCRETED IN SECTIONS NOT EXCEEDING 560m<sup>2</sup> (6000 ft<sup>2</sup>) IN AREA. EACH POUR SHALL BE BOUNDED BY A VERTICAL BULKHEAD OR ABUTTING CONSTRUCTION. PROVIDE ADDITIONAL REINFORCING AS PER DETAILS ON TYPICAL DETAILS DRAWING.

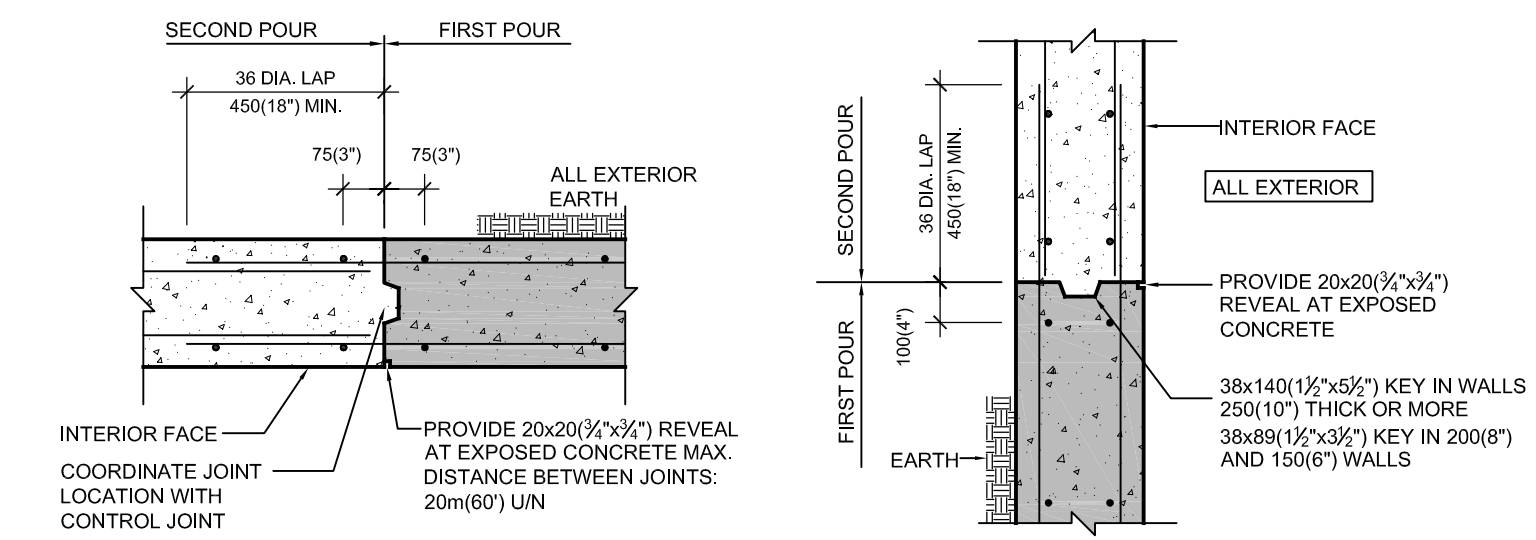


CONSTRUCTION JOINT IN SLAB ON GRADE TONGUE AND GROOVE JOINT



CONSTRUCTION JOINT KEY DETAIL

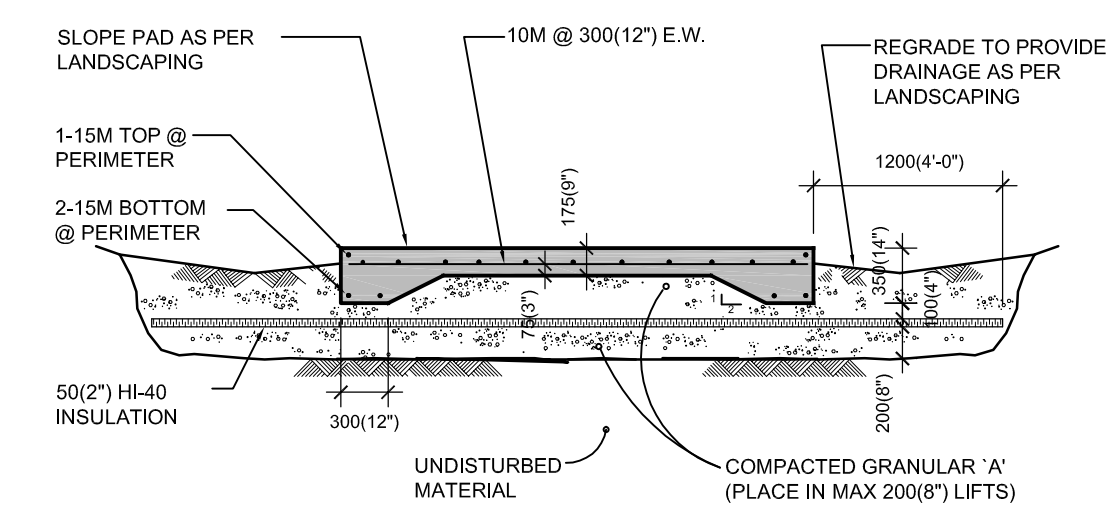
**CONSTRUCTION JOINTS IN WALLS**



VERTICAL JOINT

HORIZONTAL JOINT

**3-12 EXTERIOR GARBAGE PAD**



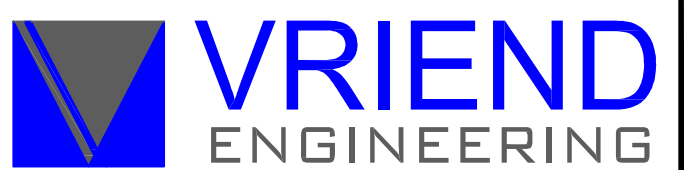
NOTE: PROVIDE EXTERIOR GARAGE PAD AS REQUIRED. REFER TO ARCH. DWGS FOR LOCATIONS/DIMENSIONS.

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PROFESSIONAL SEAL: NORTH ARROW:

CLIENT:



PROJECT TITLE:  
**ENTERPRISE RENT-A-CAR**

PALLADIUM DRIVE,  
 OTTAWA, ONTARIO

SHEET TITLE:  
**GENERAL NOTES & DETAILS**

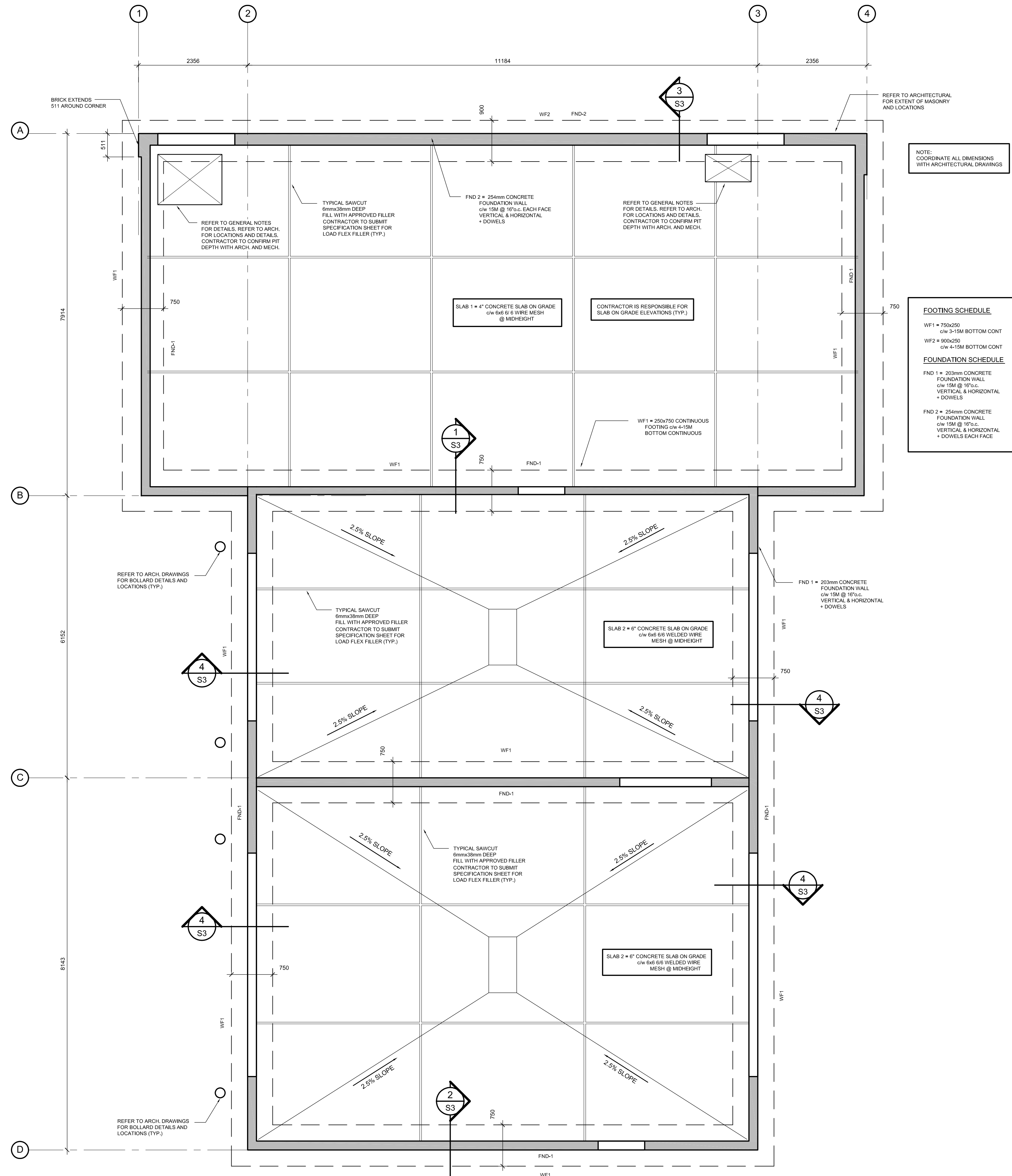
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SCALE: AS SHOWN	SHEET No. <b>S0</b>
PROJECT No. S221-18	

**STRUCTURAL LUMBER**

1. ALL TIMBER CONSTRUCTION TO BE IN ACCORDANCE WITH THE 2012 ONTARIO BUILDING CODE, LATEST REVISIONS.
2. ALL STRUCTURAL LUMBER TO BE SPF #2 OR BETTER UNLESS OTHERWISE NOTED ON DRAWINGS. 'STUD' GRADE IS NOT ACCEPTABLE FOR BEARING WALLS, LINTELS AND POSTS.
3. PLYWOOD ROOF SHEATHING TO BE CONSTRUCTION GRADE, EXTERIOR GRADE, GOOD-ONE-SIDE SOFTWOOD PLYWOOD SOFTWOOD PLYWOOD TO CAN/CSA O151-M1978 OR DOUGLAS FIR PLYWOOD TO CAN/CSA 0121-M1978.
4. DESIGN-RATED OSB, TYPES 1, 2 AND 3 CERTIFIED FOR ENGINEERING USES TO CAN/CSA 0437.0-93 AND CAN/CSA 0452.0-94.
5. PROPRIETARY (ENGINEERED PRODUCTS AS SPECIFIED ON THE PLANS. SUBSTITUTIONS FROM THE SPECIFIED PRODUCTS BY WRITTEN APPROVAL OF THE ENGINEER ONLY.
6. ALL BEARING WALLS ARE TO HAVE HORIZONTAL BLOCKING AT SHEATHING JOINTS.
7. ALL BEAMS REQUIRE RESTRAINT AGAINST LATERAL DISPLACEMENT AND ROTATION AT THE POINTS OF BEARING.
8. FOR BUILT-UP BEAMS, IT IS ASSUMED THAT EACH PLY IS A SINGLE CONTINUOUS MEMBER, FASTENED TOGETHER SECURELY AT INTERVALS NOT EXCEEDING 4 TIMES THE DEPTH AND THAT EACH PLY IS EQUALLY LOADED.
9. BUILT-UP RECTANGULAR COMPRESSION MEMBERS SHALL CONSIST OF INDIVIDUAL MEMBERS OF EQUAL LENGTH FASTENED TOGETHER USING NAILS, LAG SCREWS OR BOLTS.
10. WHEN USED, NAILS SHALL PENETRATE THROUGH AT LEAST OF 3/4" OF THE THICKNESS OF THE LAST INDIVIDUAL PIECE, THE NAILS SHALL BE DRIVEN FROM EITHER FACE OF THE BUILT-UP MEMBER ALONG THE LENGTH.
11. WHEN INDIVIDUAL PIECES OF THE BUILT-UP MEMBER ARE WIDER THAN 3 TIMES THEIR THICKNESS, THERE SHALL BE AT LEAST 2 ROWS OF FASTENERS ACROSS THE MEMBER WIDTH.

**FORMWORK**

1. VERIFY LINES, LEVELS AND WALL CENTRES BEFORE PROCEEDING WITH FORMWORK AND ENSURE DIMENSIONS AGREE WITH DRAWINGS.
2. CONSTRUCT FORMS TO PRODUCE FINISHED CONCRETE CONFORMING TO SHAPE, DIMENSIONS, LOCATIONS AND LEVELS INDICATED WITHIN TOLERANCES REQUIRED BY CSA A23.1-04/A23.2-04 ALIGN FORM JOINTS AND MAKE WATERTIGHT. KEEP FORM JOINTS TO MINIMUM. LOCATE HORIZONTAL FORM JOINTS FOR EXPOSED WALLS TO APPROVAL OF ARCHITECT. CLEAN FORMWORK IN ACCORDANCE WITH CSA A23.1-04/A23.2-04, BEFORE PLACING CONCRETE.
3. FORM CHASES, SLOTS, OPENINGS, DRIPS, RECESSES EXPANSION AND CONTROL JOINTS AS INDICATED.
4. LEAVE FORMWORK IN PLACE FOR 48 HOURS MINIMUM PERIOD OF TIME AFTER PLACING CONCRETE. AFTER FORM REMOVAL COVER AND PROTECT CONCRETE FOR REMAINDER OF THE INITIAL CURING PERIOD. USE INSULATED TARPS FOR COLD WEATHER OPERATION.
5. OBTAIN ENGINEER'S PERMISSION BEFORE FRAMING OPENINGS NOT INDICATED IN CONCRETE SLABS, WALLS, PIERS AND FOOTINGS.



NOTE: COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS

**FOOTING SCHEDULE**

WF1 = 750x250  
c/w 3-15M BOTTOM CONT

WF2 = 900x250  
c/w 4-15M BOTTOM CONT

**FOUNDATION SCHEDULE**

FND 1 = 203mm CONCRETE FOUNDATION WALL  
c/w 15M @ 18" O.C.  
VERTICAL & HORIZONTAL  
+ DOWELS

FND 2 = 254mm CONCRETE FOUNDATION WALL  
c/w 15M @ 18" O.C.  
VERTICAL & HORIZONTAL  
+ DOWELS EACH FACE

1 PLAN: FOUNDATION  
SCALE: 1:50

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CLIENT:



PROJECT TITLE:  
**ENTERPRISE RENT-A-CAR**

PALLADIUM DRIVE,  
OTTAWA, ONTARIO

SHEET TITLE:  
**FOUNDATION PLAN**

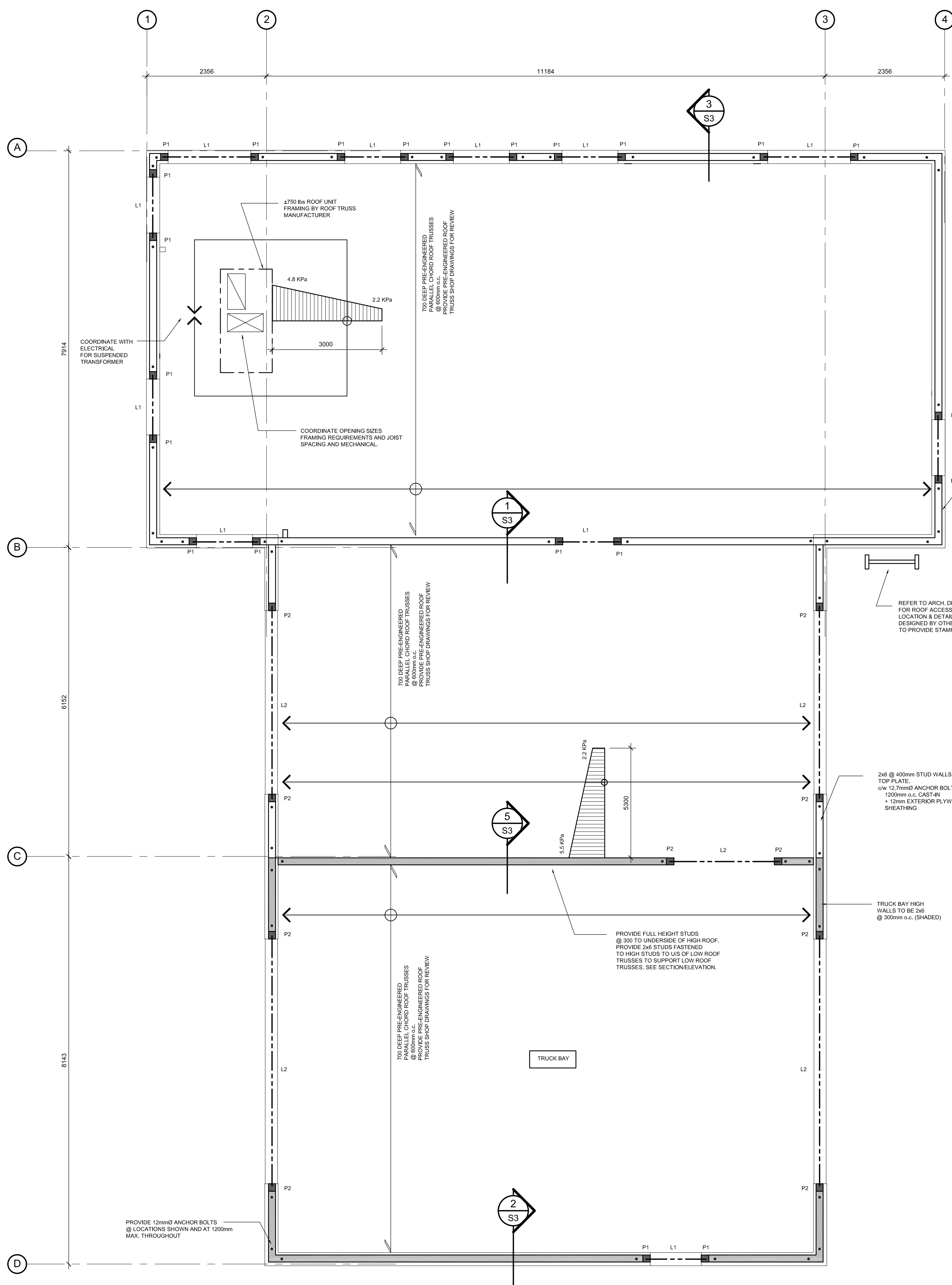
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SCALE: AS SHOWN	SHEET No. <b>S1</b>
PROJECT No. S221-18	

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**DESIGN LOADS (ROOF)**  
ROOFING = 0.5 kPa  
ROOF JOIST + BEAM = 0.7 kPa  
WISC = 0.25 kPa  
  
DEAD LOAD = 1.45 kPa  
SNOW LOAD = 2.2 kPa  
+ SNOW DRIFTING  
  
**ROOF DIAPHRAGM**  
12.5mm CSP PLYWOOD SHEATHING BLOCKED AT PANEL POINTS, 50mm NAILS @ 50mm AROUND PANEL PERIMETER AND 300mm AT INTERIOR JOINTS.  
PLYWOOD SHEATHING HAS BEEN DESIGNED FOR DIAPHRAGM ACTION TO TRANSMIT HORIZONTAL LOADS (WIND AND/OR SEISMIC) TO THE WOOD PERIMETER WALLS IN ACCORDANCE WITH THE 2012 OBC.



NOTE:  
COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS

**WOOD PERIMETER WALL SCHEDULE**  
WALL STUDS = 2"x4" @ 400mm o.c.  
NOTE:  
TRUCK BAY HIGH WALLS TO BE 2x6 @ 300mm o.c. (SHADED) AS SHOWN ON PLAN  
  
SHEATHING = 12.5mm CSP PLYWOOD (BLOCKED @ PANEL POINTS)  
NAILING 75mm COMMON NAILS @ 100mm o.c. AROUND PANEL EDGES AND 300mm o.c. @ INTERIOR STUDS  
  
**WOOD POST SCHEDULE**  
P1 = 3-2x6 (2 JACK, 1 KING)  
P2 = 4-2x6 (1 JACK, 1 KING)  
  
**WOOD LINTEL SCHEDULE**  
L1 = 3 - 1 1/2" x 9 1/2" LVL  
L2 = 3 - 1 1/2" x 14" LVL



1 PLAN: GROUND FLOOR/ROOF  
SCALE: 1:50

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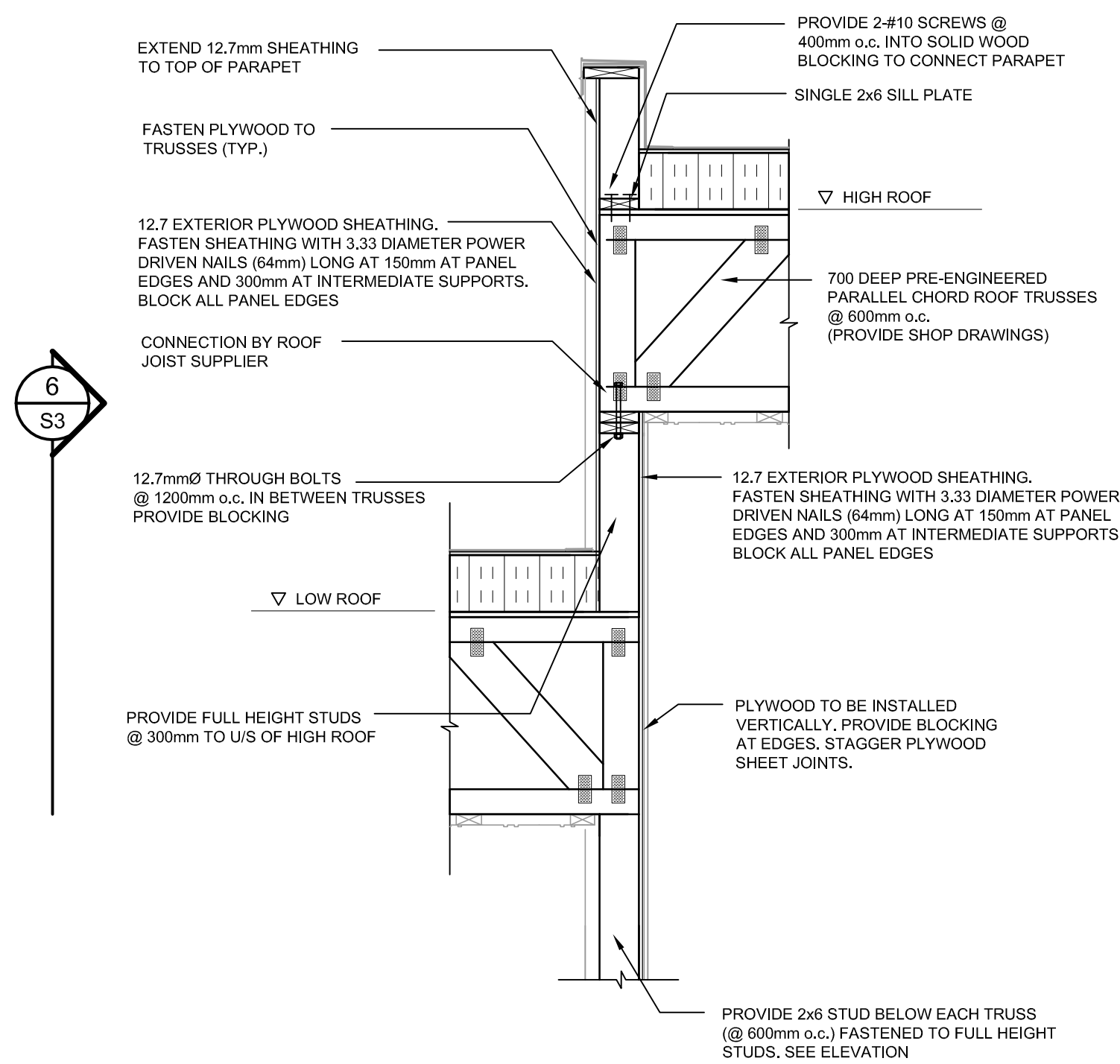
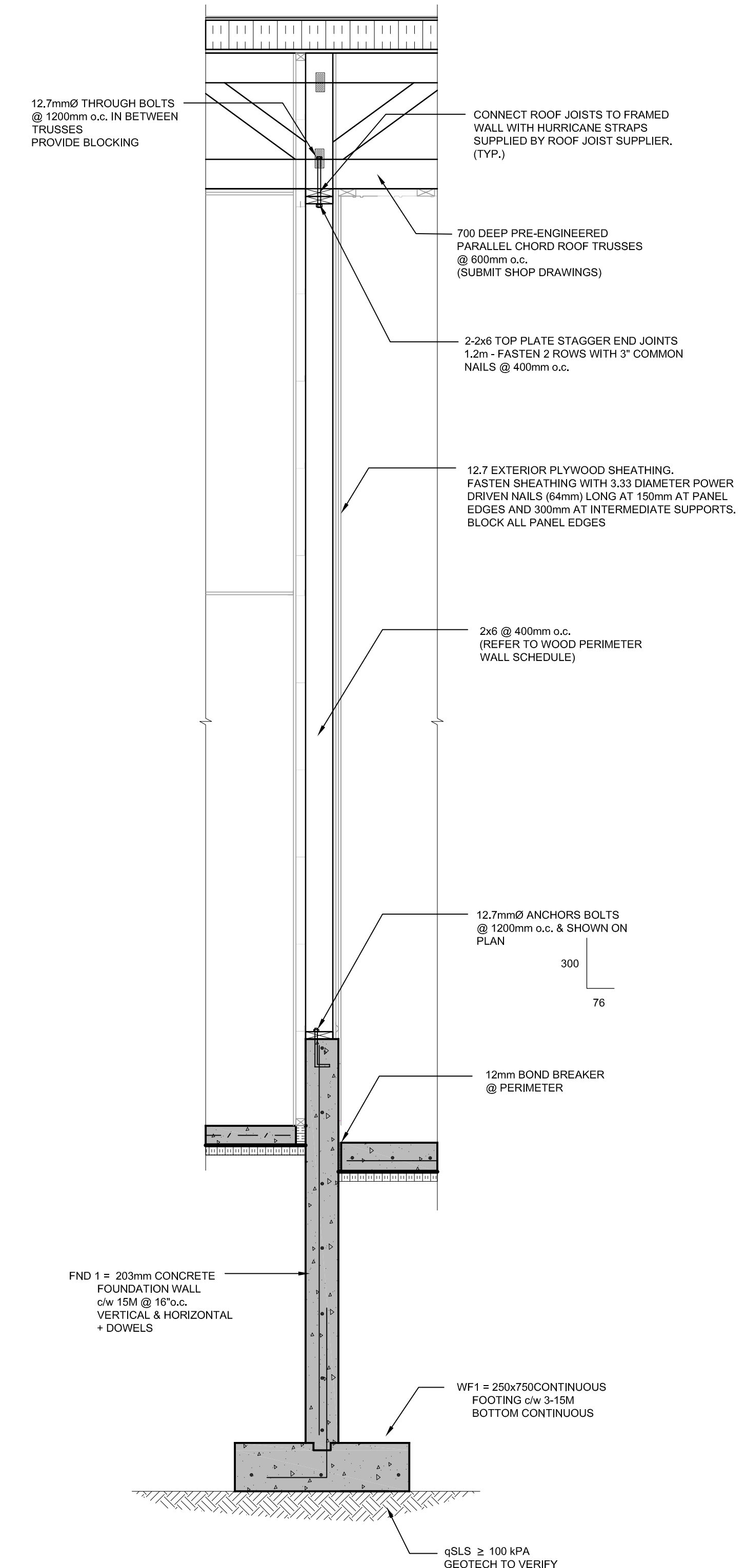
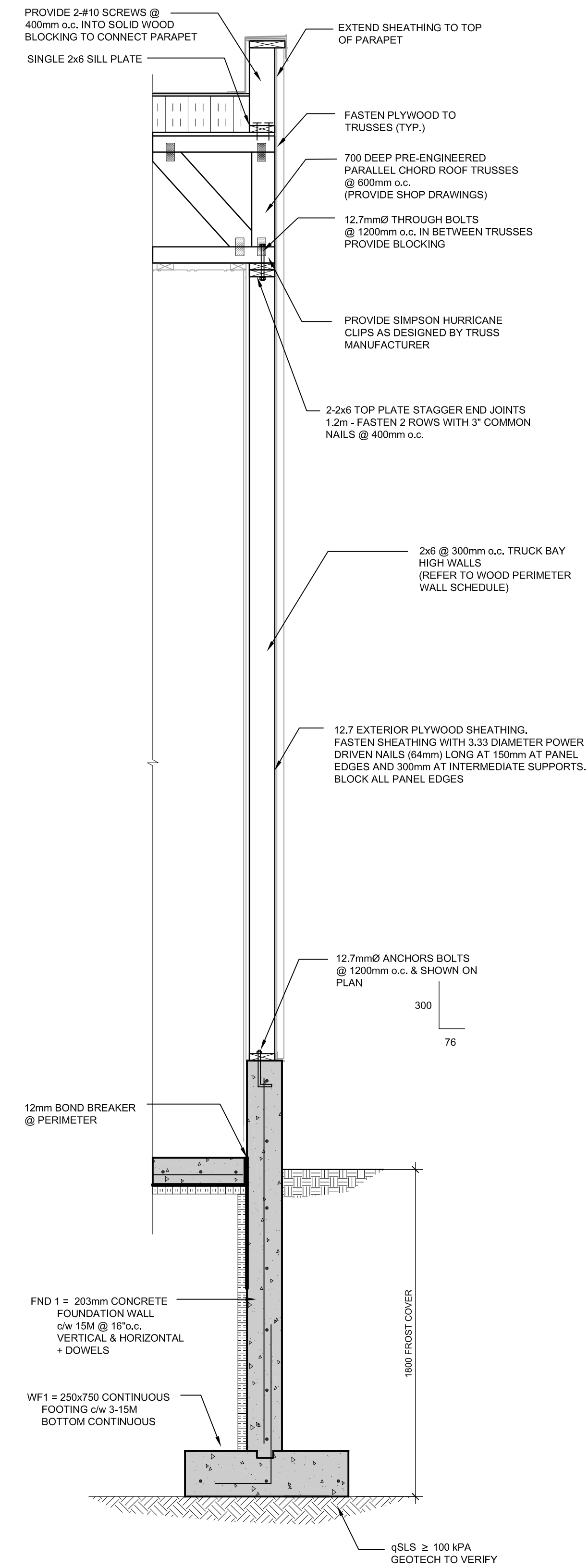
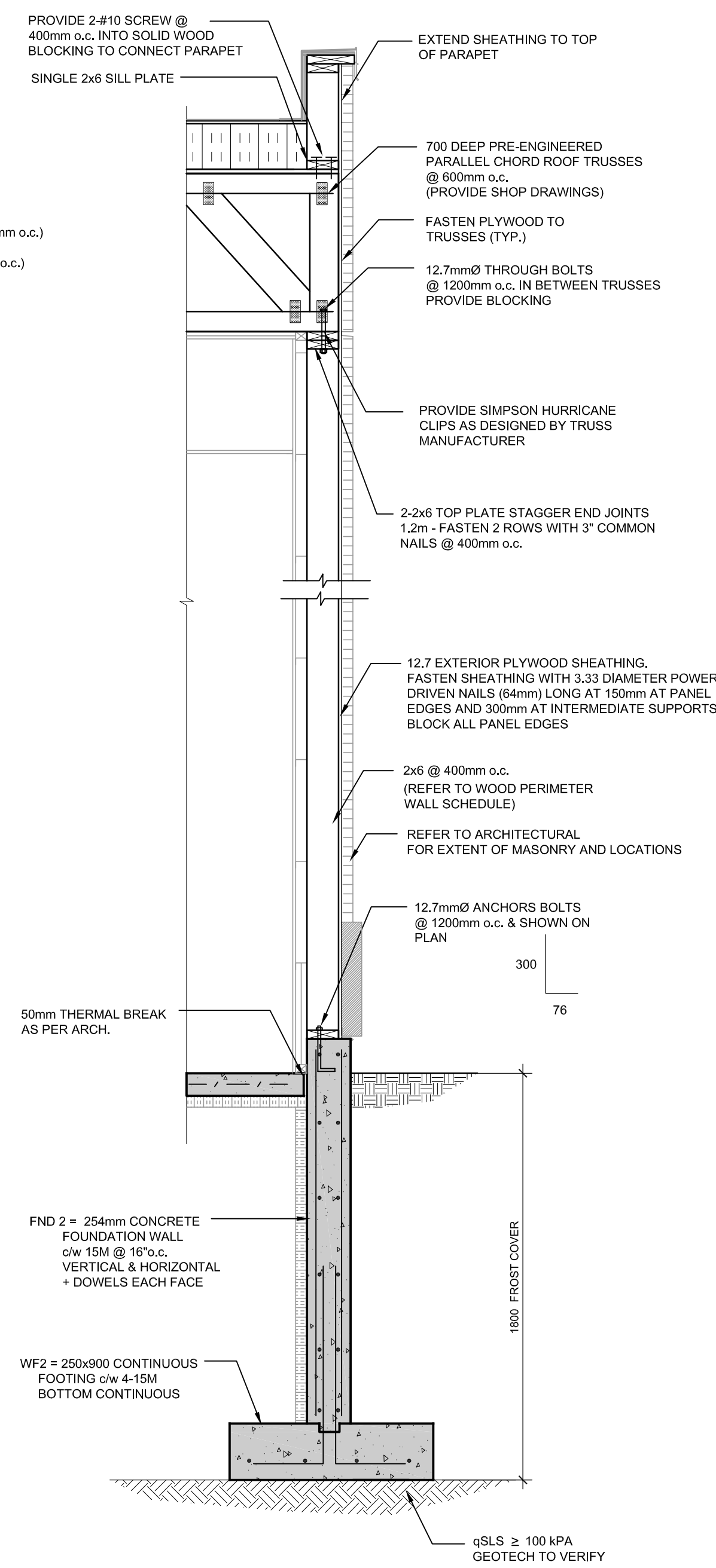
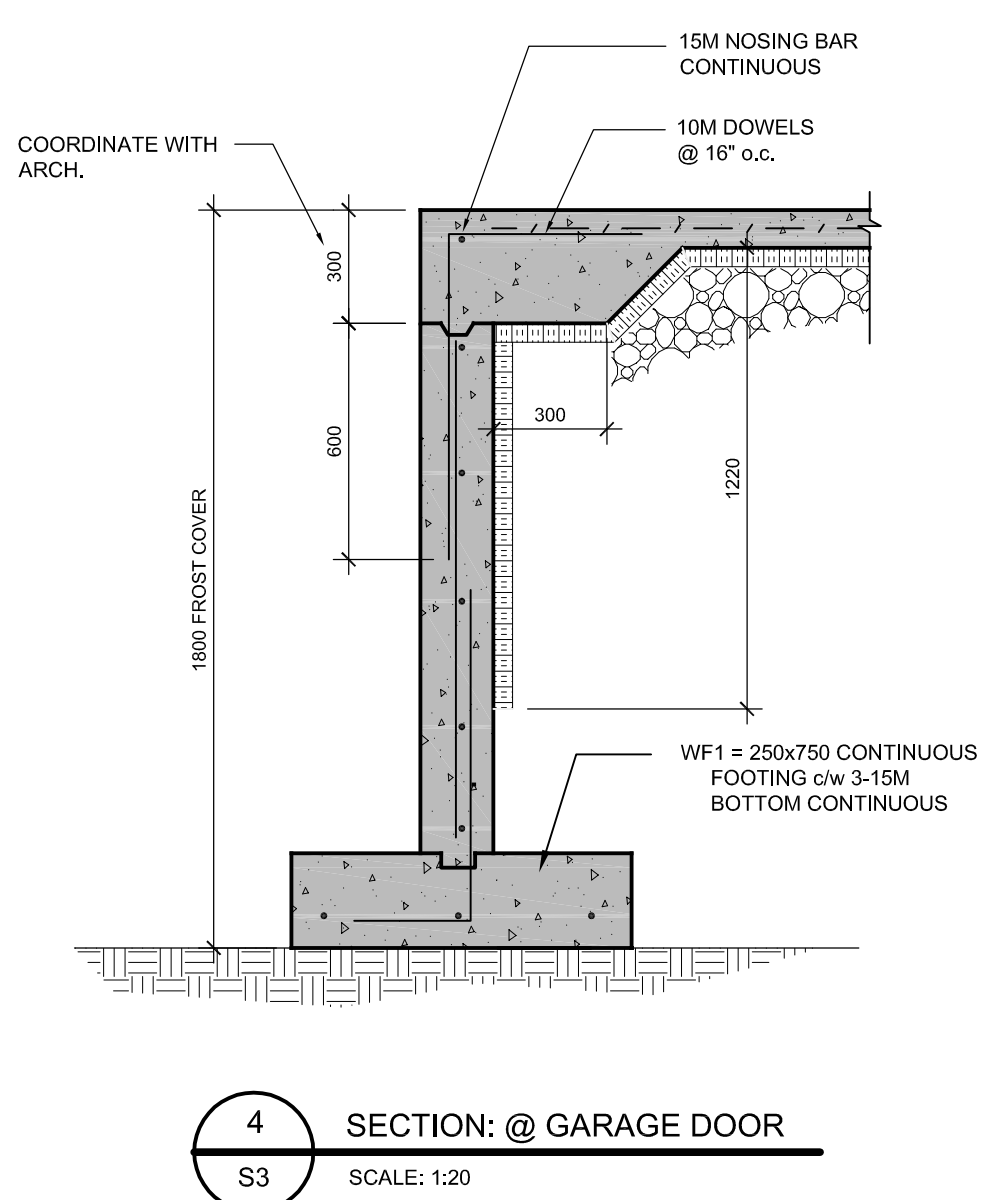
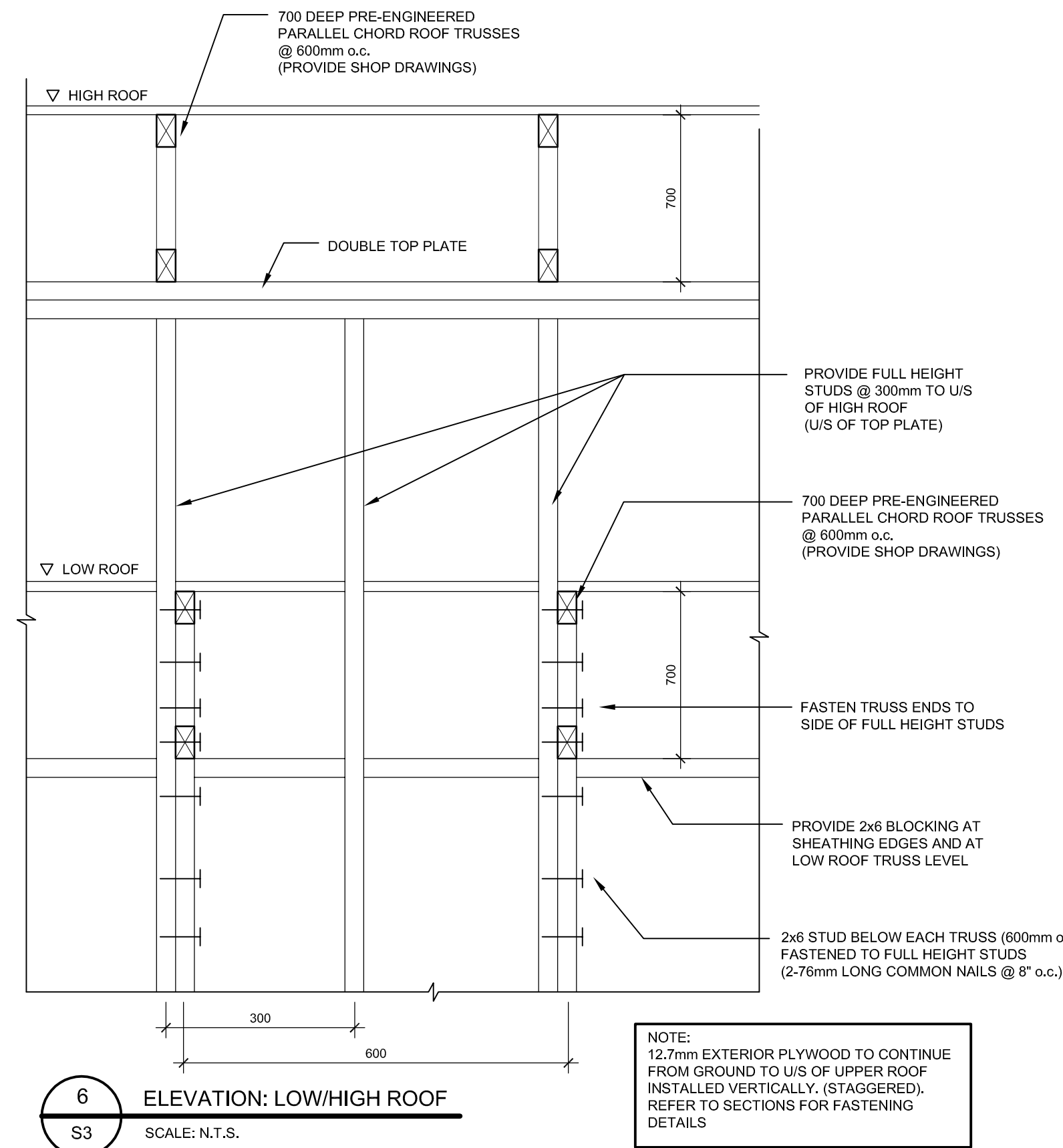
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PROJECT TITLE:  
**ENTERPRISE RENT-A-CAR**  
  
PALLADIUM DRIVE,  
OTTAWA, ONTARIO

SHEET TITLE:  
**GROUND FLOOR/ROOF PLAN**

DRAWN: A.V.	CHECKED: J.V.
SCALE: AS SHOWN	SHEET No. <b>S2</b>
PROJECT No. S221-18	



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CLIENT:



PROJECT TITLE:  
**ENTERPRISE RENT-A-CAR**

PALLADIUM DRIVE,  
OTTAWA, ONTARIO

SHEET TITLE:  
**SECTIONS & DETAILS**

DRAWN: A.V.	CHECKED: J.V.
SCALE: AS SHOWN	SHEET No. <b>S3</b>
PROJECT No. S221-18	