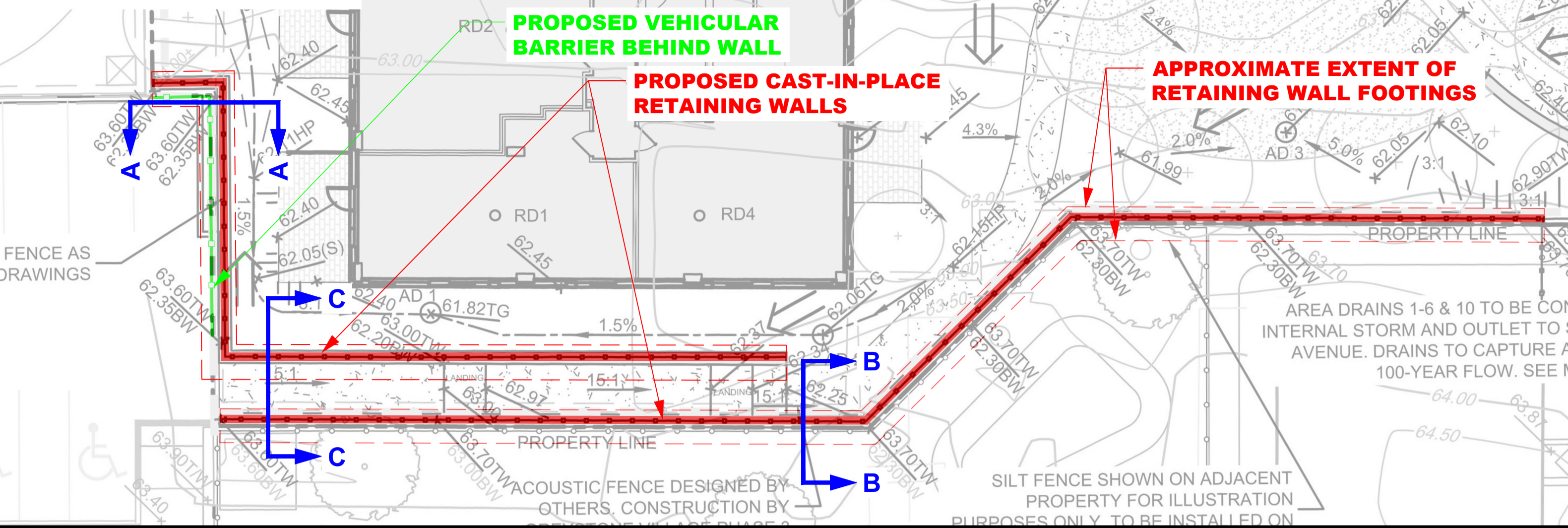


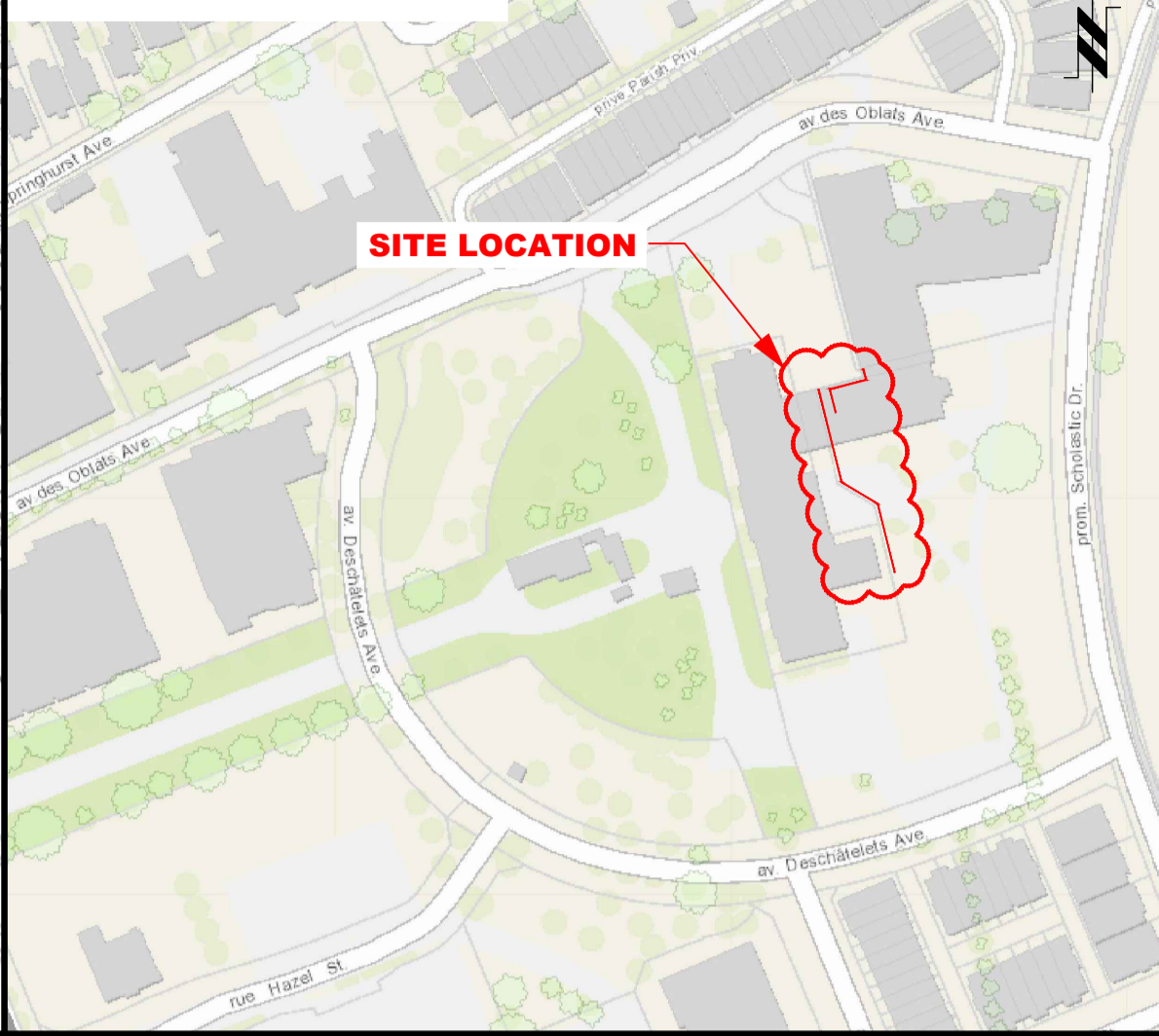
# GRADING PLAN:

SCALE 1:150



# KEY PLAN:

SCALE 1:2000



### NOTES:

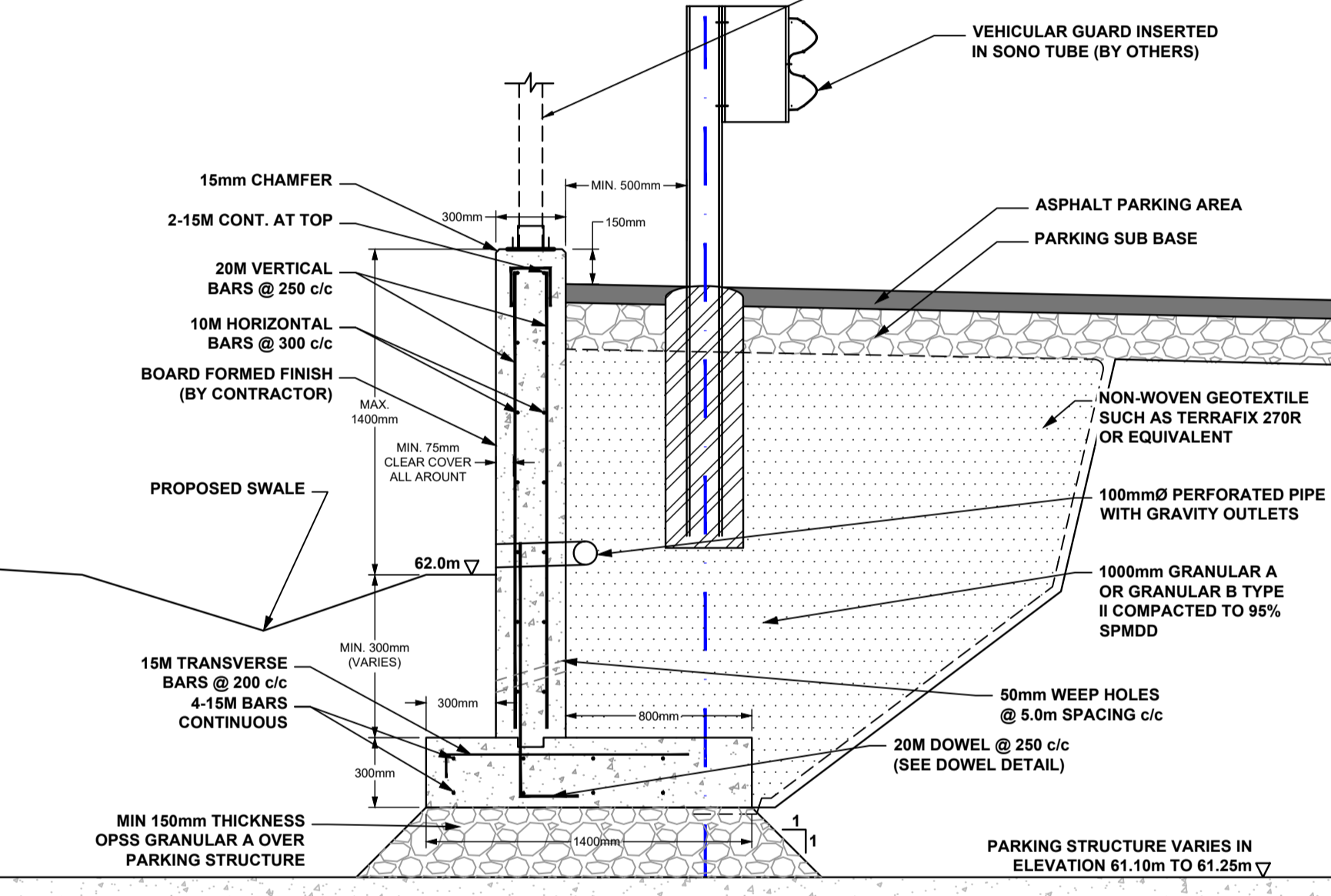
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR UTILITY CLEARANCES AND CONSTRUCTION SITE SAFETY. PATERSON GROUP SHALL NOT BE RESPONSIBLE FOR MEANS OR METHODS OF CONSTRUCTION OR FOR SAFETY OF WORKERS OR OF THE PUBLIC.
- THIS DESIGN IS BASED ON THE FOLLOWING SOIL PROPERTIES:
 

PROPERTY	RETAINED FILL	FOUNDATION MEDIUM
SOIL TYPE	GRANULAR B TYPE II	SILTY CLAY
FRICTION ANGLE - $\phi$	38°	33°
UNIT WEIGHT - $\gamma$	22 kN/m <sup>3</sup>	18 kN/m <sup>3</sup>
COHESION - C	0 kPa	5 kPa

MATERIAL PROPERTIES ARE BASED ON SITE EVALUATION BY PATERSON GROUP AND DISCUSSIONS WITH THE CONTRACTOR. SEISMIC LOADING WAS EVALUATED ACCORDING TO THE CURRENT CANADIAN HIGHWAY BRIDGE DESIGN CODE WITH A PEAK GROUND ACCELERATION VALUE OF 0.281.
- RETAINING WALL IS DESIGNED WITH A GLOBAL STABILITY FACTOR GREATER THAN 1.5 UNDER STATIC CONDITIONS AND 1.1 UNDER SEISMIC CONDITIONS. WALL GEOMETRY AND GRADE ELEVATIONS ABOVE AND BELOW THE WALL SHOULD CONFORM WITH THE GRADING PLAN PROVIDED HEREIN. IF ACTUAL SITE GRADES VARY SIGNIFICANTLY FROM THOSE SHOWN OR IF THE BACK SLOPE DOES NOT CONFORM, INSTALLATION SHALL NOT PROCEED UNTIL THE DESIGN IS VERIFIED OR MODIFIED IN THE APPLICABLE AREA.
- THE CONDITIONS WILL BE EVALUATED BY THE GEOTECHNICAL ENGINEER DURING PREPARATION FOR WALL CONSTRUCTION IN EACH AREA TO CONFIRM THE SUBSURFACE PROFILE INDICATED BY THE GEOTECHNICAL REPORT WITHIN THE FOOTPRINT OF THE PROPOSED WALL.
- BACKFILL MATERIAL SHALL BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO USE AND SHOULD CONSIST OF OPSS GRANULAR B TYPE II FOLLOWED BY SUITABLE BACKFILL MATERIAL. ALL FILL WITHIN A 1H:1V ZONE UP AND BACK FROM THE HEEL SHOULD ALSO BE COMPACTED. BACKFILL SHALL BE PLACED IN MAXIMUM 300mm LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% SPMDD. MOISTURE CONTENT SHOULD BE CONTROLLED AND MAINTAINED WITHIN -3 TO +4 PERCENT OF OPTIMUM.
- MAINTAIN TEMPORARY GRADES TO DIVERT SURFACE WATER AWAY FROM THE RETAINING WALL EXCAVATION. SLOPE FINAL BACKFILL TO PROVIDE POSITIVE DRAINAGE AND TO ELIMINATE PONDING.
- EXCAVATION SIDE SLOPE SHOULD BE PROTECTED TEMPORARILY DURING CONSTRUCTION FROM PRECIPITATION EVENTS BY PLACEMENT OF TARPS.
- ALL RETAINING WALL RELATED INSPECTIONS (BEARING SURFACE, COMPACTION, REBAR INSPECTION, CONCRETE TESTING, ETC.) MUST BE COMPLETED BY PATERSON GROUP. ONCE THE WALL CONSTRUCTION IS COMPLETED AND REVIEWED BY PATERSON DURING CONSTRUCTION, A CERTIFICATE LETTER WILL BE ISSUED BY PATERSON GROUP.
- INSTALL 100mm $\phi$  PERFORATED PIPE SUBDRAIN WRAPPED WITH GEOTEXTILE SOCK BEHIND THE RETAINING WALL. PROVIDE CLEAR STONE SURROUND TO PROTECT PIPE FROM CLOGGING AND PROVIDE OUTLETS THROUGH THE WALL TO DRAINAGE DITCH OR GROUND SURFACE AT MINIMUM INTERVALS OF 15.0m
- CONCRETE WORK TO BE CONFORM TO CSA A23.3.
- ALL EXPOSED EDGES OF CONCRETE MEMBERS SHOULD BE CHAMFERED 15 mm.
- VERTICAL CONTROL JOINTS TO BE INCLUDED IN THE CONCRETE ACROSS THE ENTIRE HEIGHT OF THE FRONT OF THE WALL AT MAXIMUM SPACING OF 2.4m.
- SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO POURING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER.
- ENGINEER TO VERIFY ALL BLOCK OUTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING REQUIREMENTS PRIOR TO POURING.
- ALL REINFORCEMENT SHOULD CONSIST OF GRADE 60 REINFORCEMENT.
- REINFORCEMENT COVERAGE SHOULD BE A MINIMUM OF 75 mm.
- CONCRETE SHOULD CONSIST OF MINIMUM 35MPa COMPRESSIVE STRENGTH CONCRETE WITH 5-8% AIR ENTRAINMENT.
- SAMPLING AND TESTING OF CONCRETE SHOULD BE IN ACCORDANCE TO CSA A23.2.
- INSPECTOR SHOULD BE NOTIFIED IF ANY WATER IS TO BE ADDED IN FIELD.
- CONCRETE MIXES USED FOR CONCRETE SURFACES PERMANENTLY EXPOSED TO VIEW SHALL NOT INCLUDE DELETERIOUS MATERIAL WHICH MAY CAUSE FINISHED SURFACE IRREGULARITIES. CONCRETE FINISHES PERMANENTLY EXPOSED TO VIEW SHALL BE PLACED AND FINISHED ACCORDING TO CSA A23.3.
- PATERSON SHOULD COMPLETE A MATERIAL AND TESTING PROGRAM TO REVIEW BEARING SURFACE, REINFORCEMENT PLACEMENT, CONCRETE TESTING AND BACKFILL PLACEMENT AS REQUIRED DURING THE CONSTRUCTION ACTIVITIES.

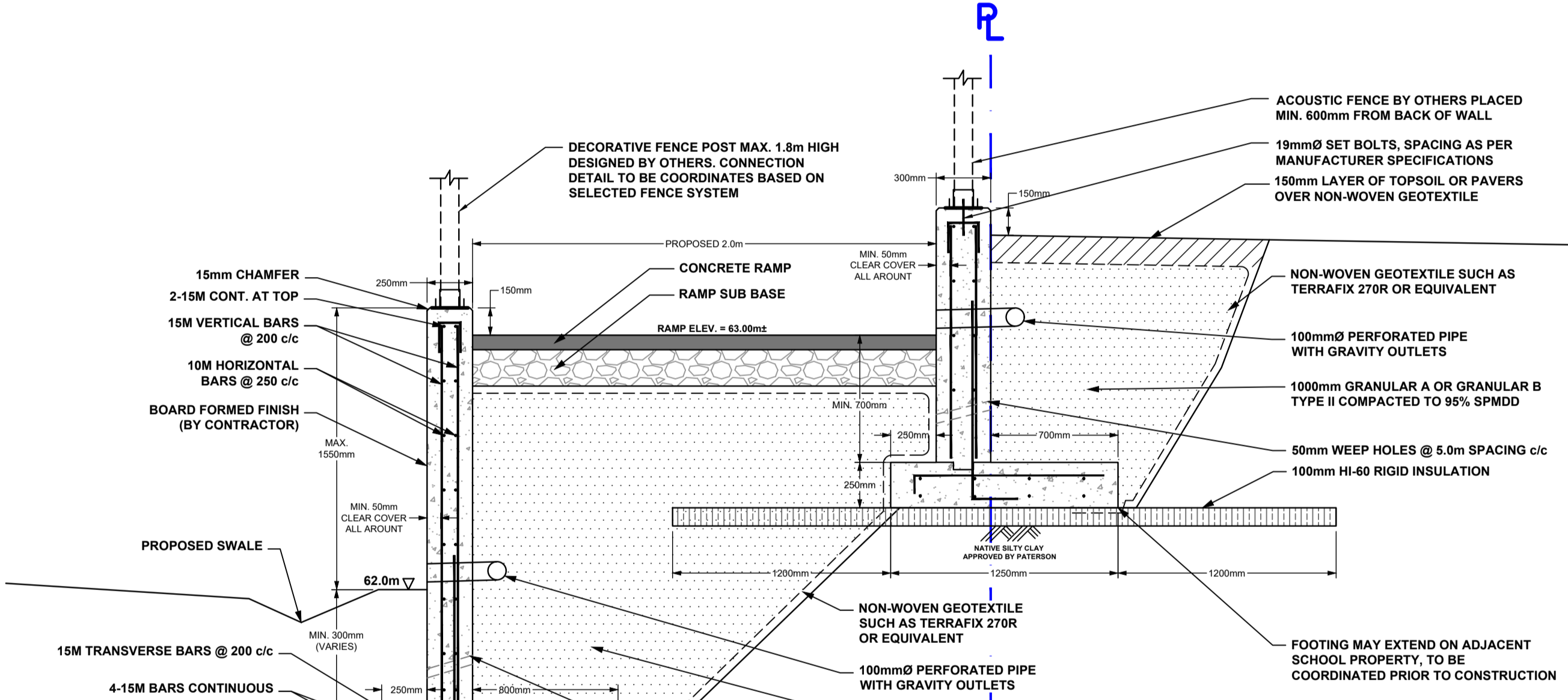
# CROSS SECTION A-A:

SCALE 1:25



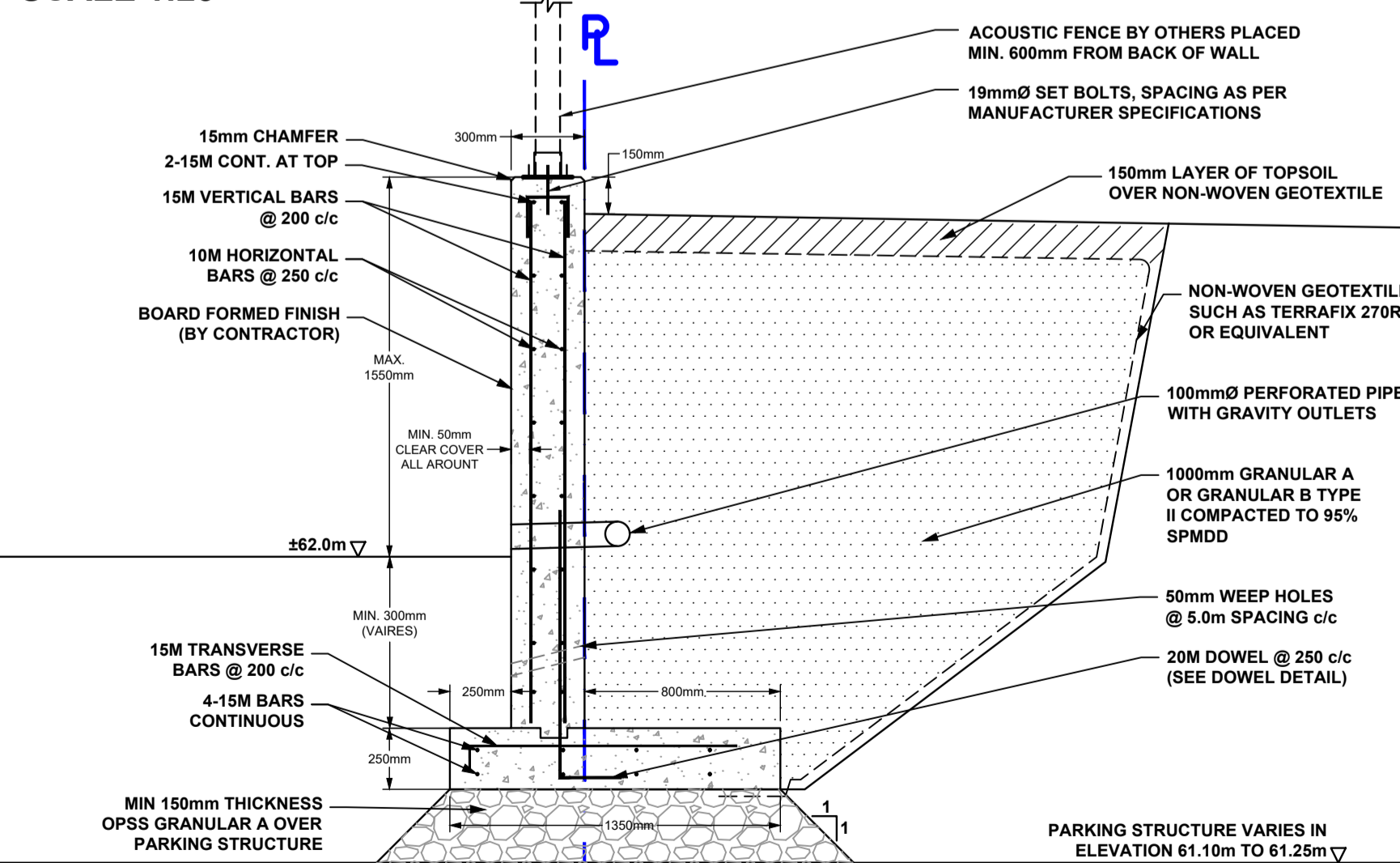
# CROSS SECTION C-C:

SCALE 1:25



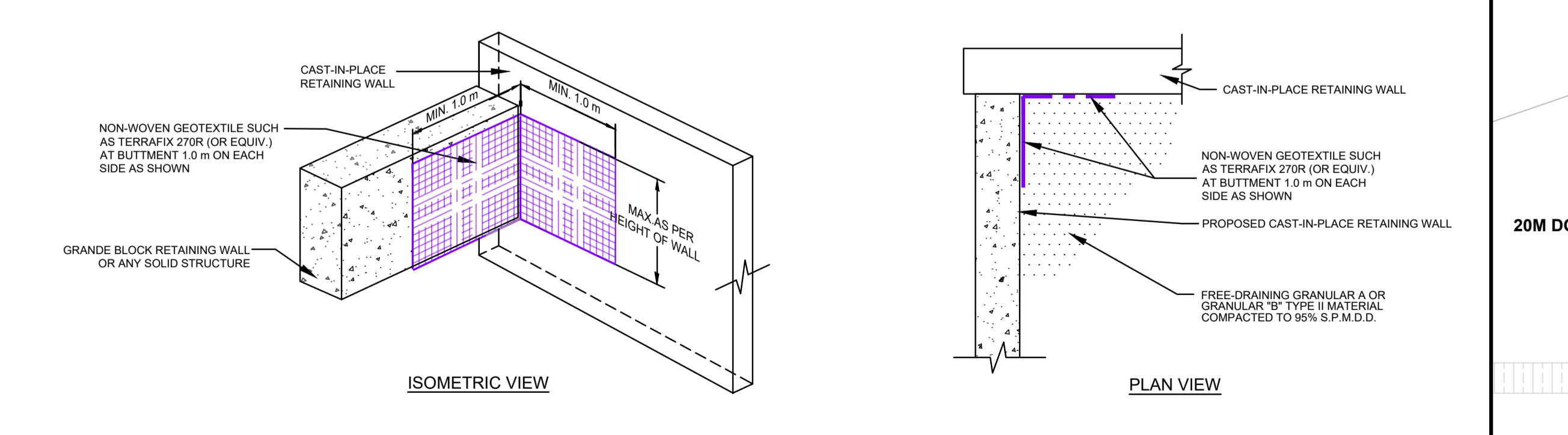
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SCALE 1:25



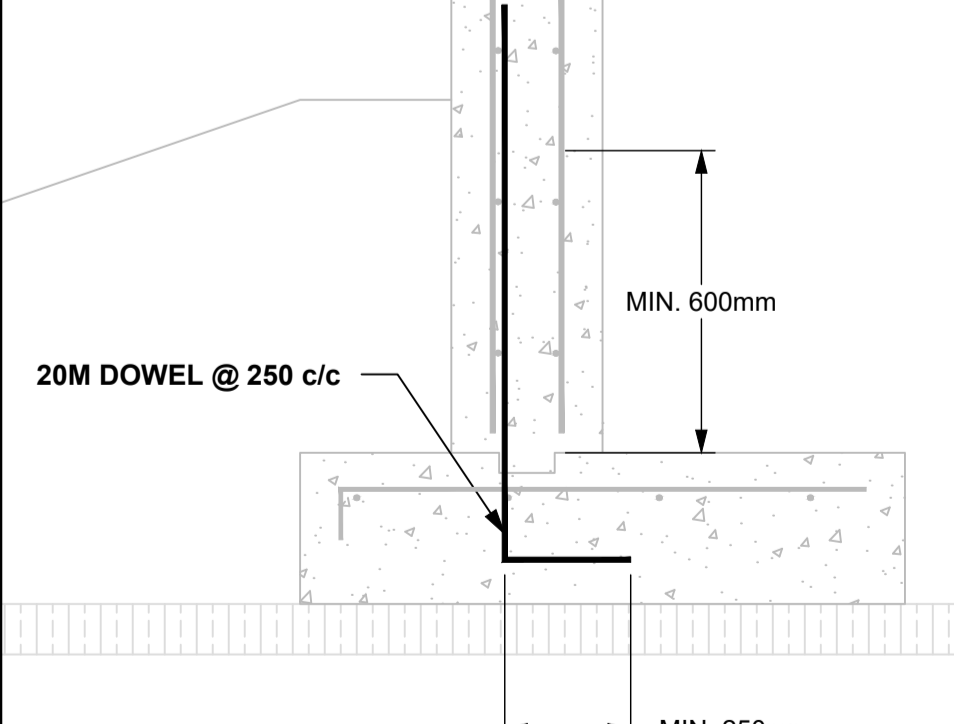
# ABUTMENT DETAIL:

N.T.S.



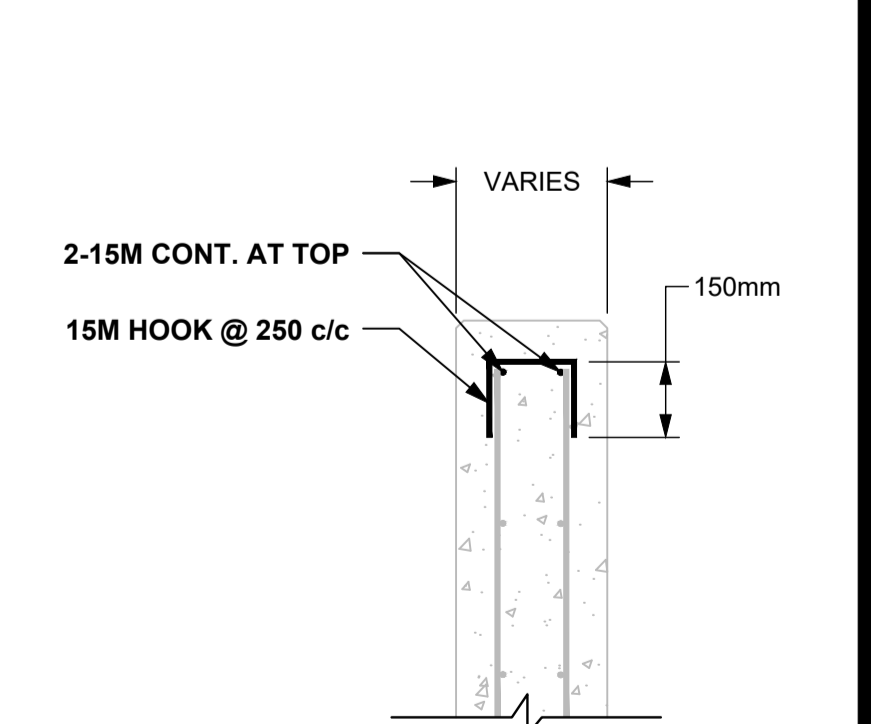
# DOWEL DETAIL:

SCALE 1:15



# HOOK DETAIL:

SCALE 1:15



**ISSUED FOR REVIEW**

**PATERSON GROUP**

9 AURIGA DRIVE  
OTTAWA, ON  
K2E 7T9  
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL
3	AS PER UPDATED GRADING PLAN	25/04/2025	SD
2	AS PER CLIENT COMMENTS	09/10/2024	SD
1	AS PER CLIENT COMMENTS	07/10/2024	SD

REGIONAL GROUP

**GREYSTONE VILLAGE - PHASE 3 - PROPOSED RETAINING WALLS**

225 SCHOLASTIC DRIVE

OTTAWA, ONTARIO

Title: **CAST-IN-PLACE RETAINING WALL DESIGN**

Stamp:

Scale: AS SHOWN	File No.: PG5383
Drawn by: NFRV	Drawing No.:
Checked by: JV	<b>PG5383-2</b>
Approved by: FA	Revision No.: 3
Date: 10/2024	