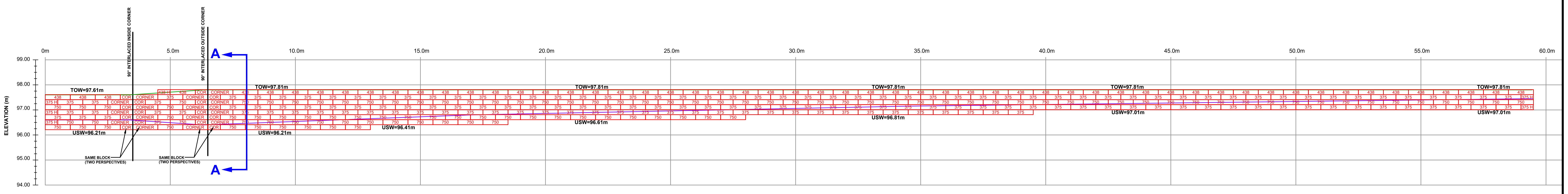
PROFILE VIEW:

SCALE 1:100

ISSUED FOR REVIEW



APPROVED
By Allison Hamlin at 12:51 pm, Jun 02, 2022

NOTES:

1. 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.
2. THIS DESIGN IS BASED ON THE FOLLOWING SOIL PROPERTIES:

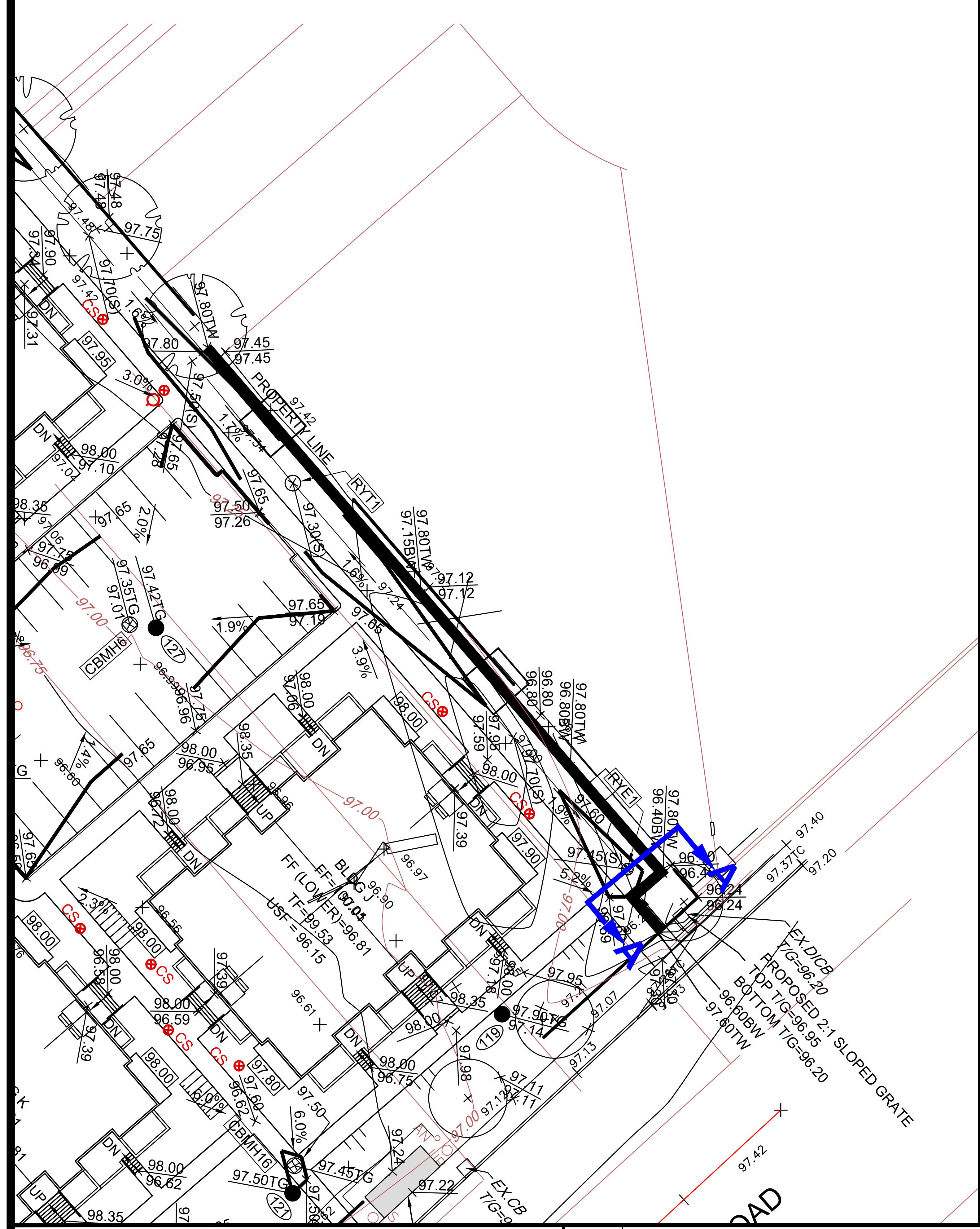
PROPERTY	RETAINED FILL	FOUNDATION MEDIUM
FRICTION ANGLE - ϕ	38°	33°
UNIT WEIGHT - γ	21 kN/m3	17 kN/m3
COHESION - C	0	5 kPa
SOIL TYPE	OPSS GRANULAR B TYPE II	STIFF SILTY CLAY

MATERIAL PROPERTIES ARE BASED ON SITE EVALUATION BY PATERSON GROUP AND DISCUSSIONS WITH CONTRACTOR. SEISMIC LOADING WAS EVALUATED ACCORDING TO THE CURRENT CANADIAN HIGHWAY BRIDGE DESIGN CODE WITH A PEAK GROUND ACCELERATION VALUE OF 0.305.

3. RETAINING WALL DESIGN 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 HERE IN 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.
4. PRECAST UNITS SHALL BE GRANDE RETAINING WALL UNITS MANUFACTURED UNDER LICENSE FROM PERMACON.
5. THE WALL BASE SHALL CONSIST OF A MINIMUM OF 300mm OF OPSS GRANULAR B TYPE II. THE GRANULAR BEDDING LAYER SHOULD EXTEND AT LEAST 300mm BEYOND THE FRONT BLOCK FACE AND A MINIMUM OF 300mm BEYOND THE REAR BLOCK FACE. THE BASE SHALL BE SMOOTHED TO ENSURE COMPLETE CONTACT OF RETAINING WALL UNIT WITH BASE. SURFACE OF GRANULAR BASE MAY BE DRESSED WITH FINER AGGREGATE TO AID LEVELING. ENSURE GRADATION OF DRESSING MATERIAL IS SUCH AS TO PRECLUDE LOSS OF FINES INTO BASE. THE THICKNESS OF DRESSING LAYER SHOULD NOT EXCEED 3 TIMES THE MAXIMUM PARTICLE SIZE USED.
6. WALL IS DESIGNED WITH A MIN. 200mm TOE EMBEDMENT WITH A GRANULAR BEDDING LAYER EXTENDING A MINIMUM 300mm BEYOND THE FACE, AND A MINIMUM 200mm BEYOND THE HEEL OF THE BASE BLOCK.
7. 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 . WHERE GRANULAR BEDDING WILL NOT BE SUFFICIENT, THE USE OF CONCRETE BEDDING MAY BE REQUIRED AND WILL BE PROVIDED AS SITE INSTRUCTIONS.
8. BACKFILL MATERIAL SHALL BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO USE AND SHOULD CONSIST OF OPSS GRANULAR B TYPE II B 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% OF SPMDD. MOISTURE CONTENT SHOULD BE CONTROLLED AND MAINTAINED WITHIN -3 TO +4 PERCENT OF OPTIMUM.
9. MAINTAIN TEMPORARY GRADES TO DIVERT SURFACE WATER AWAY FROM THE RETAINING WALL EXCAVATION. SLOPE FINAL BACKFILL TO PROVIDE POSITIVE DRAINAGE AND TO ELIMINATE PONDING.
10. EXCAVATION SIDE SLOPE SHOULD BE PROTECTED TEMPORARILY DURING CONSTRUCTION FROM PRECIPITATION EVENTS BY PLACEMENT OF TARPS.
11. ALL RETAINING WALL RELATED INSPECTIONS (BEARING SURFACE, COMPACTION, BLOCK INSTALLATION, 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.
12. ANY CUTTING OF BLOCKS TO SUIT SITE CONDITIONS OR WALL DESIGN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
13. INSTALL 100mmØ 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
14. USE MASONRY ADHESIVE RECOMMENDED BY THE SUPPLIER FOR THE TOP THREE COURSES
15. ALIGNMENT OF THE BOTTOM WALL UNIT COURSE SHOULD BE PLANNED TO CONSIDER A NOMINAL 50mm AUTOMATIC SETBACK WILL OCCUR EVERY SECOND COURSE INCREMENT.

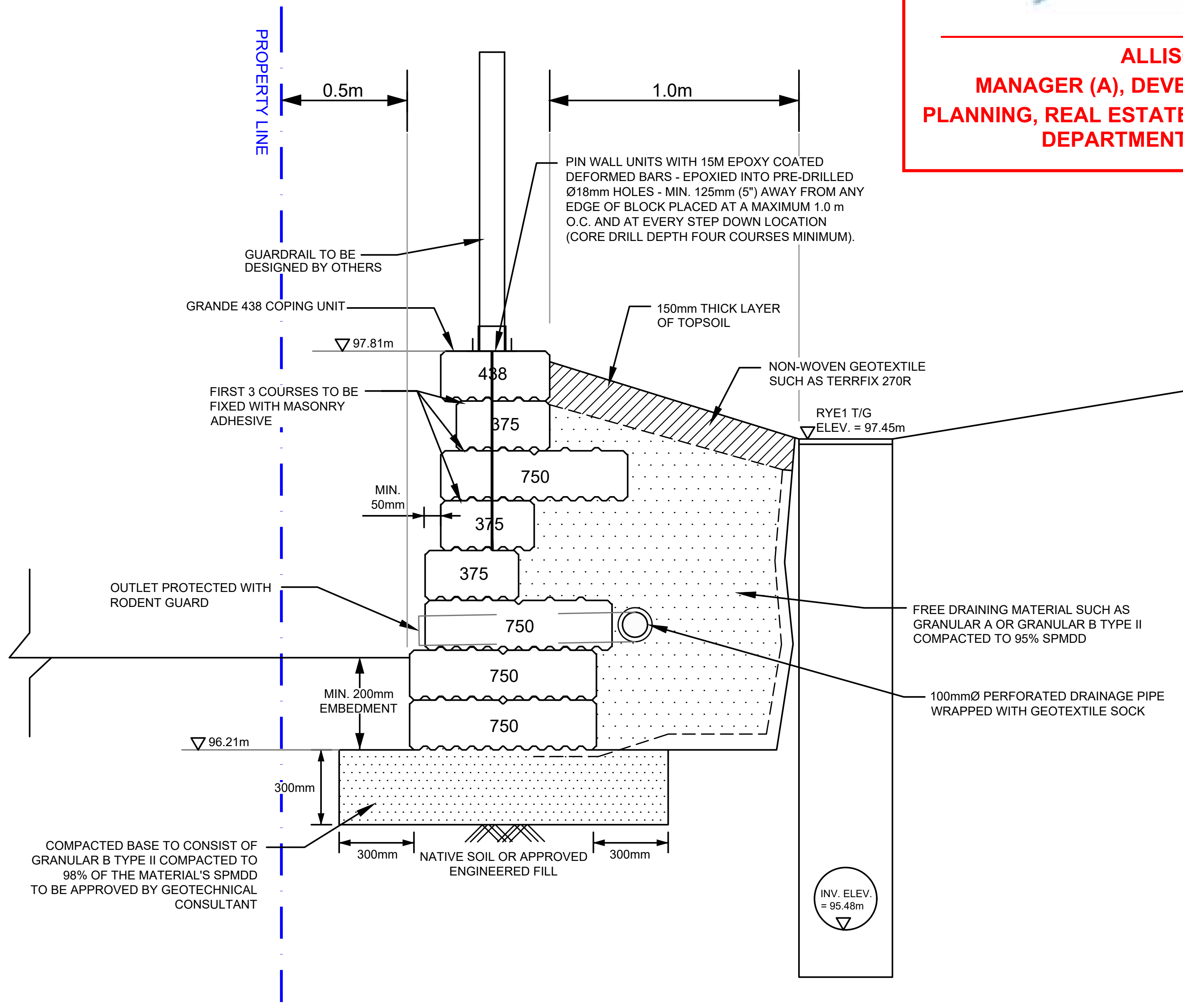
GRADING PLAN:

SCALE 1:300



CROSS SECTION A-A:

SCALE 1:20



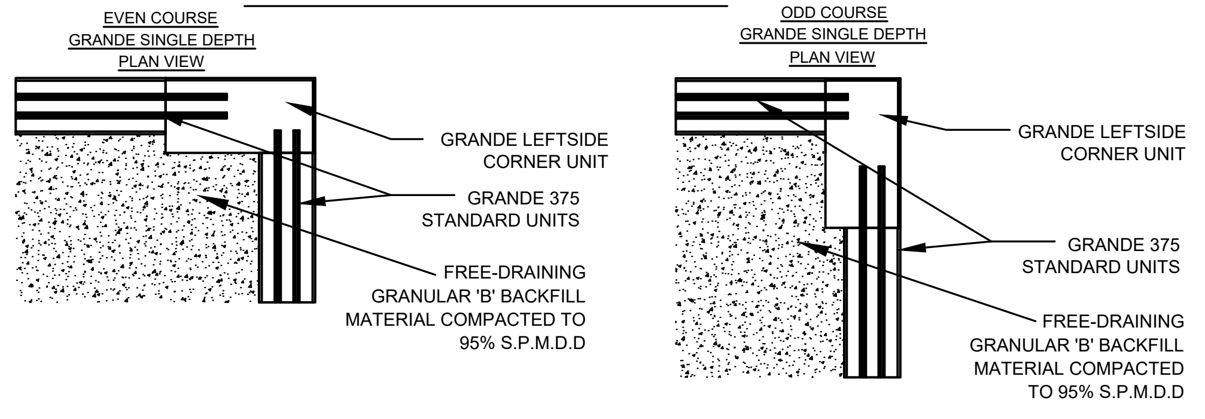
AHamlin

ALLISON HAMLIN
MANAGER (A), DEVELOPMENT REVIEW WEST
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

OUTSIDE CORNER DETAIL:

N.T.S.

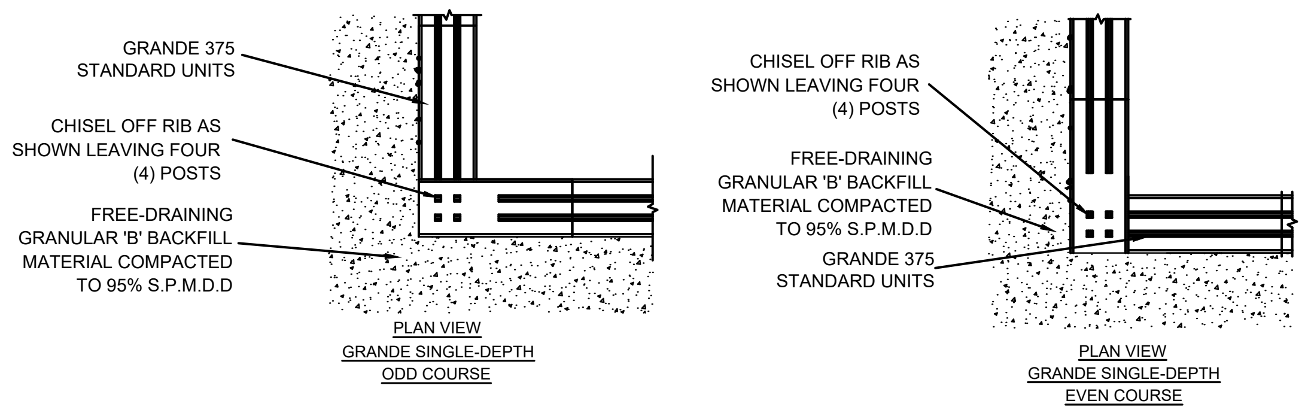
GRANDE SINGLE-DEPTH
PLAN VIEW - OUTSIDE CORNER



INSIDE CORNER DETAIL:

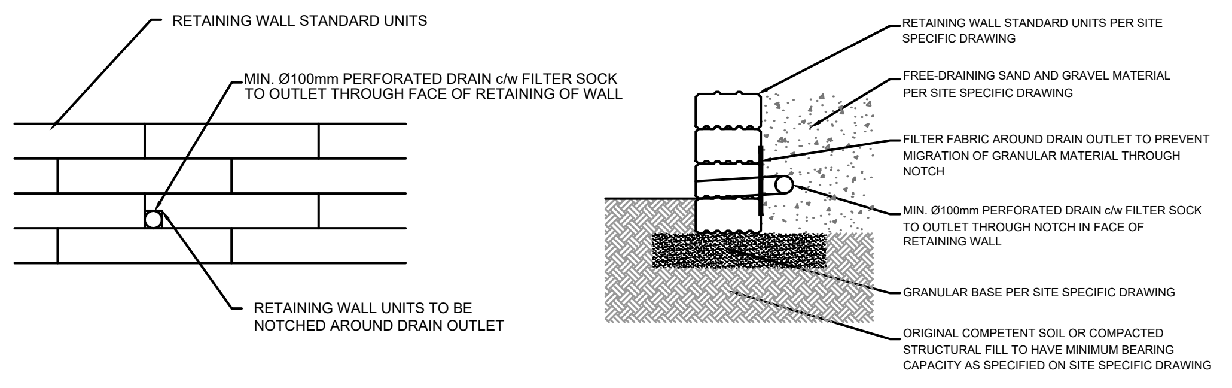
N.T.S.

GRANDE SINGLE-DEPTH
PLAN VIEW - INSIDE CORNER

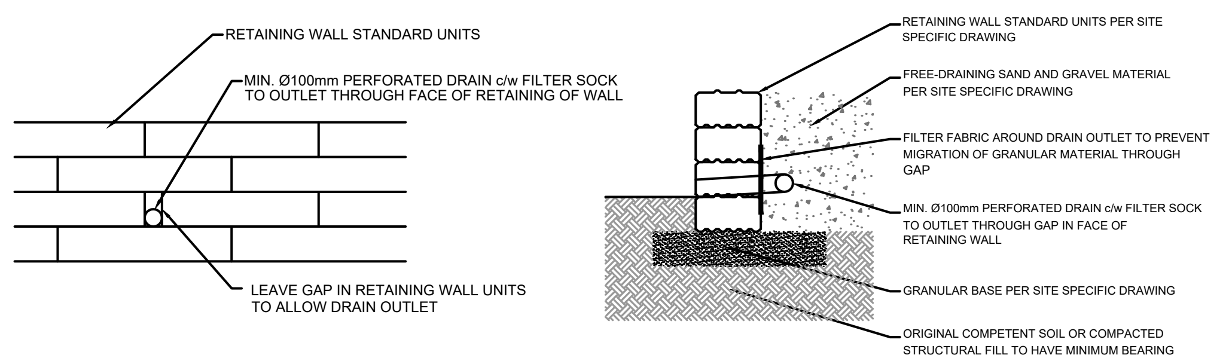


DRAINAGE DETAIL

SCALE - N.T.S



OPTION # 1



OPTION # 2

patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
2	TO LABEL THE STAMPS FROM A GEOTECHNICAL AND STRUCTURAL PERSPECTIVES, AS PER THE CITY REQUEST	26/05/2022	FA
1	AS PER REVISED GRADING PLAN	02/03/2022	JV

CLARIDGE HOMES

PROPOSED RETAINING WALL
5331 FERNBANK ROAD
OTTAWA, ONTARIO

Title:
GRANDE WALL DESIGN

Stamp:
LICENSED PROFESSIONAL ENGINEER
26/05/2022
J. R. VILLENEUVE
100504344
PROVINCE OF ONTARIO
STRUCTURAL

Stamp:
LICENSED PROFESSIONAL ENGINEER
26/05/2022
F. I. ABOU-SEIDO
100156744
PROVINCE OF ONTARIO
GEOTECHNICAL

Scale: AS SHOWN
Drawn by: NFRV
Checked by: JV
Approved by: FA
Date: 02/2022

File No.: PG5683
Drawing No.: PG5683-2
Revision No.: 2

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