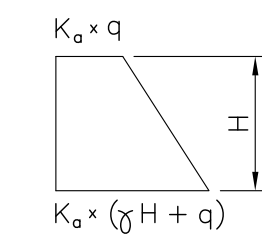


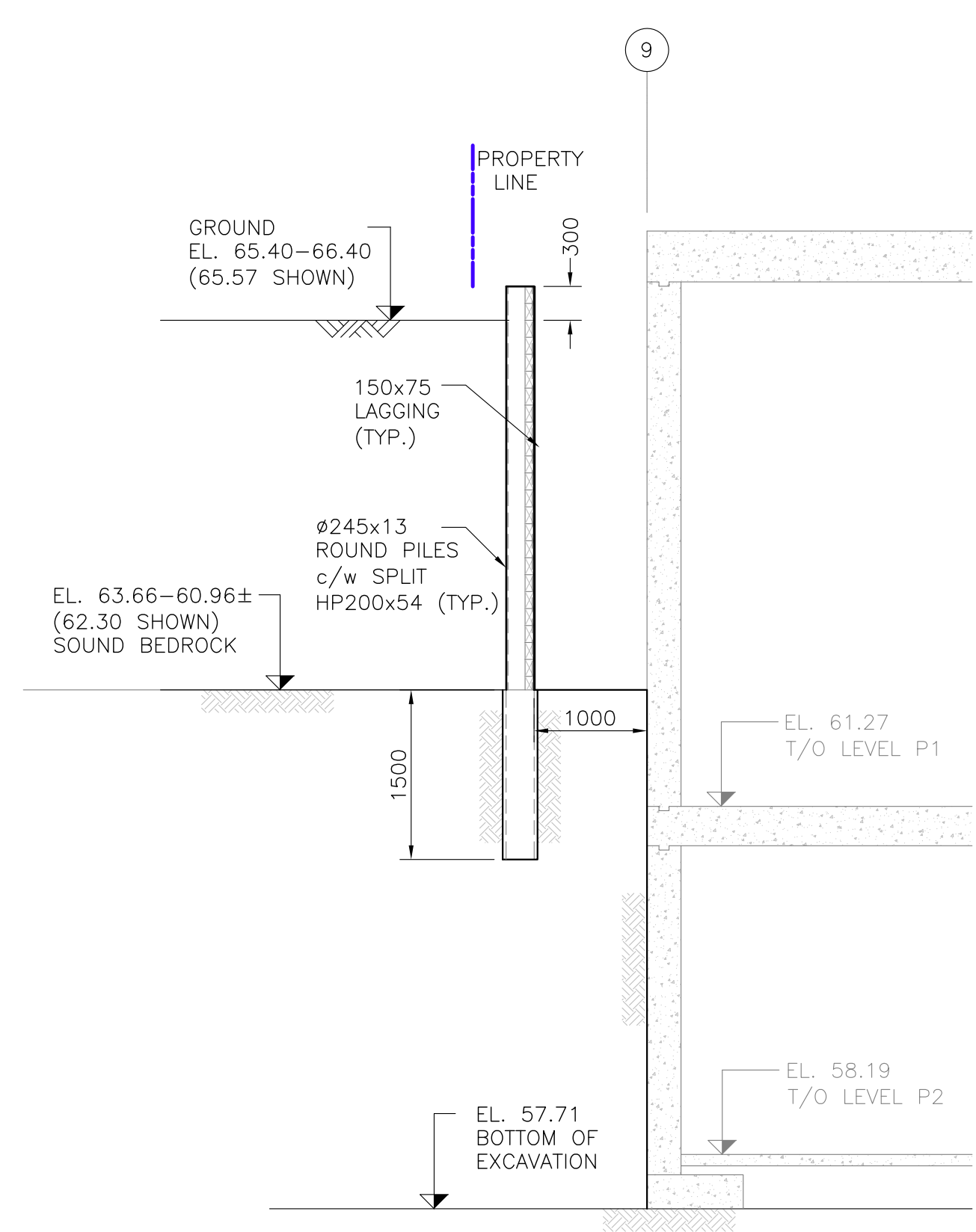
THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE DURING CONSTRUCTION.

**GENERAL NOTES:**

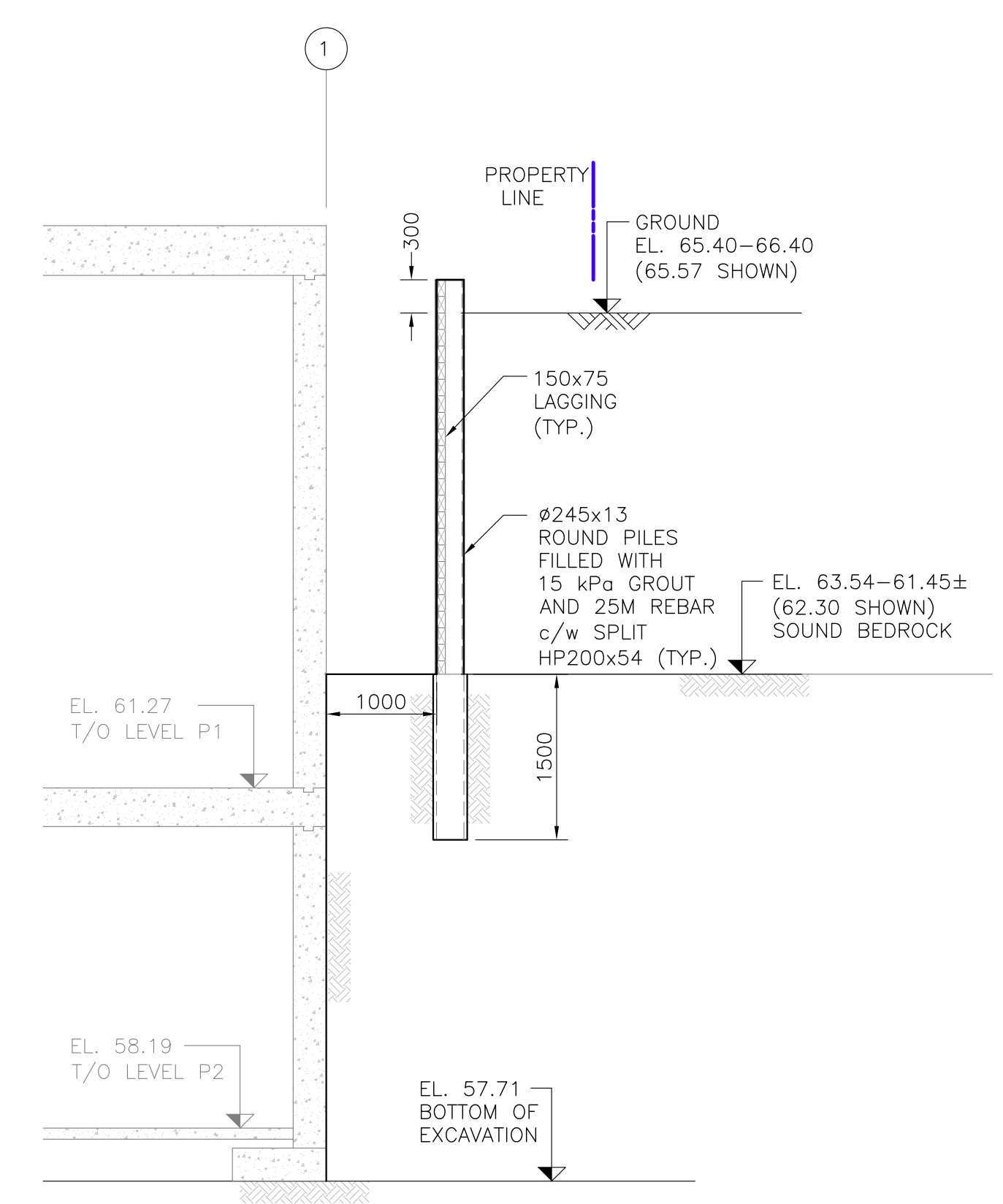
- DIMENSIONS ARE SHOWN IN MILLIMETRES.
- BOTTOM OF EXCAVATION TO BE CONFIRMED BY ARCHITECT AND STRUCTURAL DESIGNER.
- CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS AND CONDITIONS ON SITE. ANY DISCREPANCY SHALL BE REPORTED TO ENGINEER.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MATERIAL RELEVANT TO PROJECT. ANY DEVIATION FROM CONDITIONS SHOWN ON THIS DRAWING MUST BE REPORTED TO ENGINEER.
- LOADING:
 



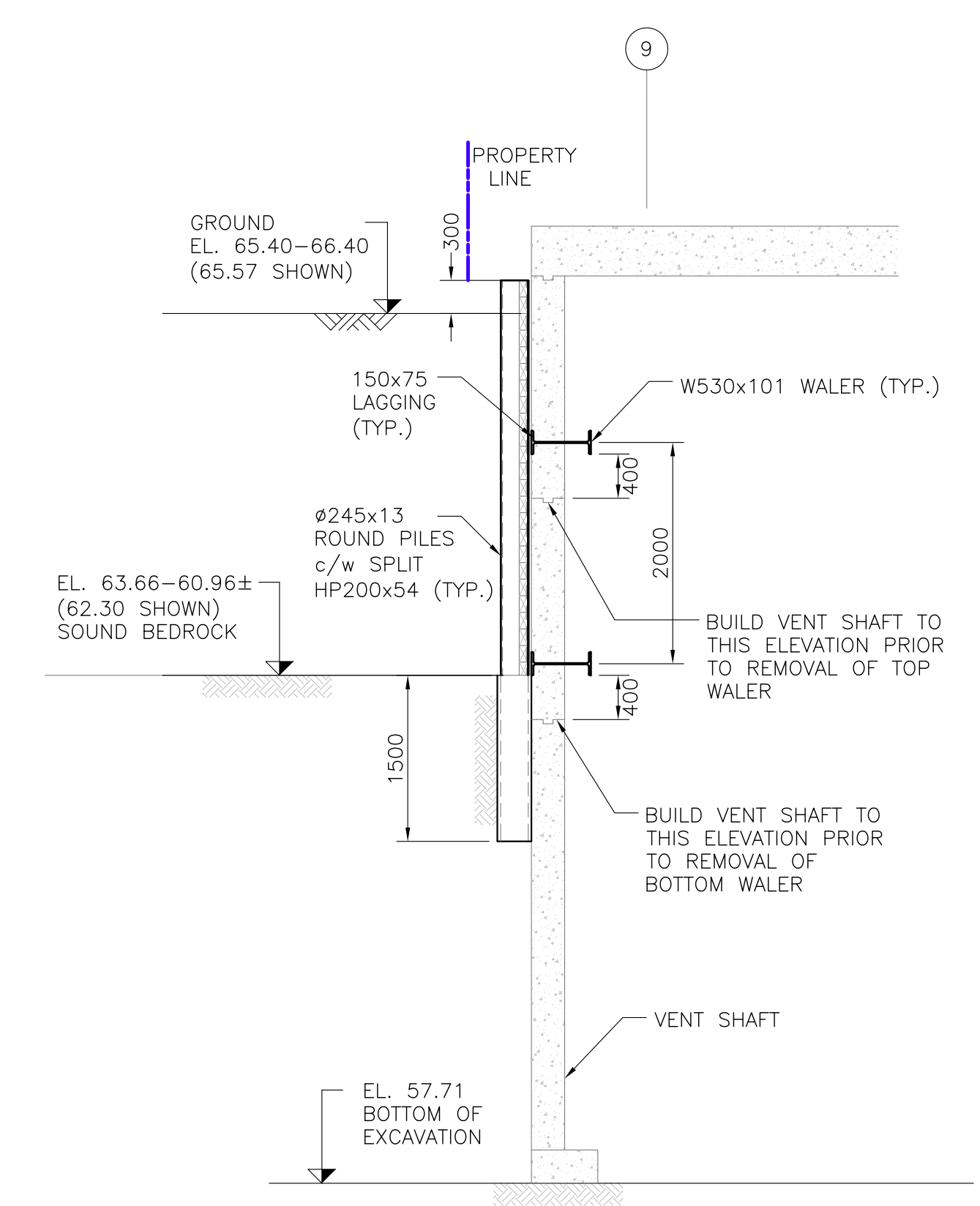
$K_a = 0.33$   
 $\gamma = 20 \text{ kN/m}^3$   
 $q = 12 \text{ kPa}$
- MATERIALS:
  - STEEL: - CAN/CSA S16-09
  - .....ROLLED SECTIONS
  - .....G40.21-44W(300W)
  - LAGGING: .....
  - .....HARDWOOD
- EXCAVATE AND INSTALL LAGGING IN 4' (1.2m) DEEP SECTIONS. BACKFILL WITH GRANULAR MATERIAL BEHIND LAGGING. WEDGE LAGGING TIGHTLY IN PLACE.
- ALL WELDING TO BE DONE ACCORDING TO CSA W59-13 BY A CERTIFIED PROFESSIONAL.
- MONITORING: RECORD PILE LENGTHS, AND ELEVATIONS AND REPORT TO ENGINEER. MONITOR ALIGNMENT OF PILES AT EXTERIOR GRADE LEVEL, MEASUREMENTS TO BE TAKEN BEFORE EXCAVATION COMMENCES AND AT WEEKLY INTERVALS THEREAFTER. RECORD MEASUREMENTS AND REPORT TO ENGINEER.
- DESIGN IN CONFORMANCE WITH
  - ONTARIO BUILDING CODE 2012.
  - OPSS 539, NOV. 2009
  - OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATION FOR CONSTRUCTION PROJECTS ISSUE DATE APRIL 2012.
- FOR GEOTECHNICAL INFORMATION PLEASE SEE REPORTS PG4163-1 REV.1 DATED OCT. 3, 2017 AND PG4202-1 REV. 4 BY PATTERSON GROUP DATED JULY 6, 2018.



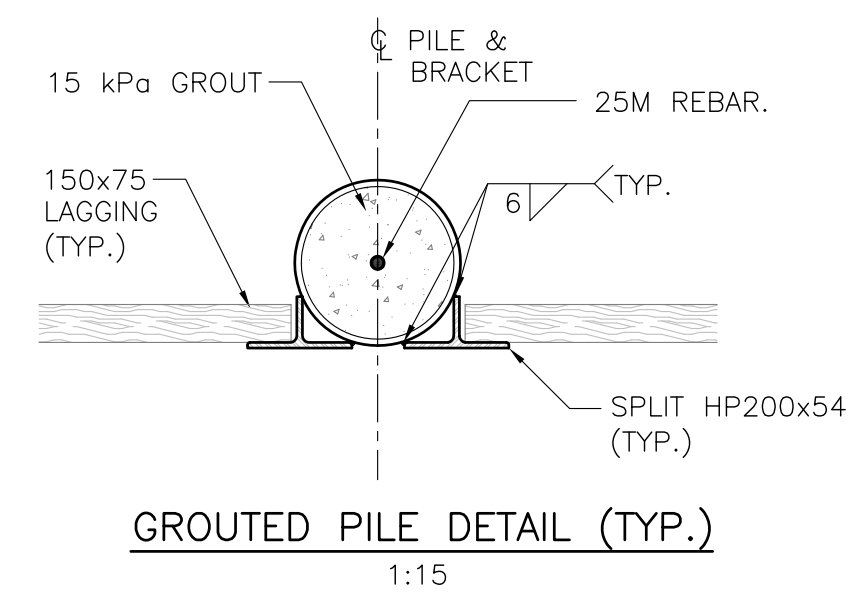
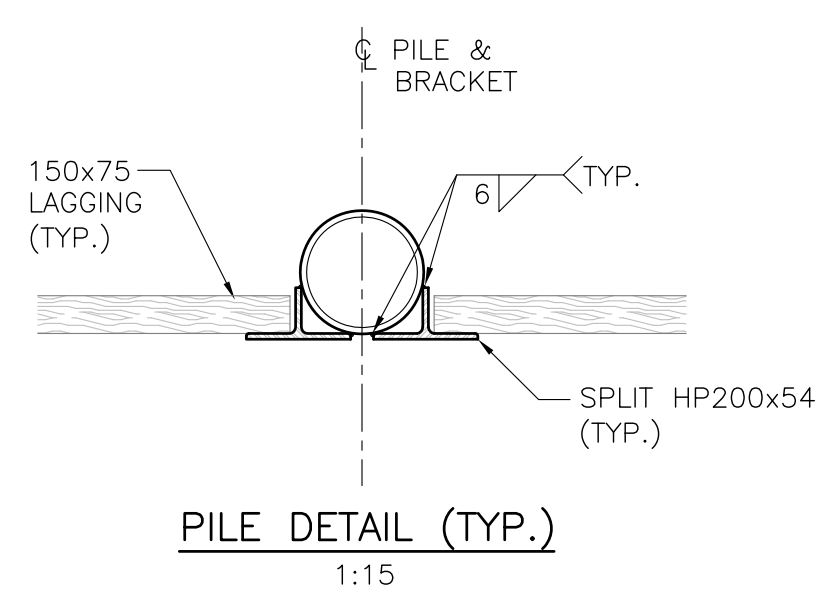
1a  
1:50



1b  
1:50



1c  
1:50



**APPROVED**  
By Laurel McCreight at 8:57 am, Mar 01, 2019

*Derrick Moodie*  
**DERRICK MOODIE**  
MANAGER  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



4	12/10/18	AS PER CITY COMMENTS	B.U.
3	30/08/18	AS PER CLIENT REVIEW	B.U.
2	27/08/18	AS PER CLIENT REVIEW	B.U.
1	16/08/18	AS PER CITY REVIEW	B.U.

No.	Date	Revision	By:
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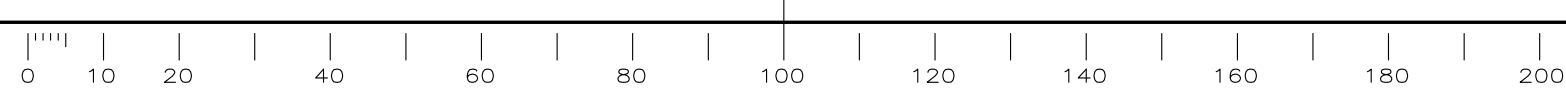
**REMISZ**  
Consulting Engineers Ltd.  
57 Auriga Dr. Suite 102  
Ottawa, ON, K2E 9B2  
tel.: (613) 225-1162  
fax: (613) 225-4529

Client  
**HOMESTEAD LAND HOLDINGS**

Project  
**851 RICHMOND ROAD  
EXCAVATION PROTECTION SYSTEM**

Drawing  
**SECTIONS AND DETAILS**

Designed	B.U.	Date	AUGUST 2018
Drawn	S.L.	Scale	AS SHOWN
Checked	R.P.	Sheet	2 OF 3
Project No.	2018-050-1	Dwg. No.	S-02



frame 790x505 mm