

**STRUCTURAL NOTES**

**General Notes:**  
These structural notes supplement the drawings. Any discrepancy found among the drawings, these notes, and the site conditions shall be reported to the Engineer, who shall correct such discrepancy in writing. Any work done by the Contractor after discovery of such discrepancy shall be done at the Contractor's risk. The Contractor shall verify and coordinate the dimensions among all drawings prior to proceeding with any work or fabrication. The Contractor is responsible for all bracing and shoring during construction.

All construction shall conform to the applicable portions of the latest edition of the International Building Code except where noted.

**Design Criteria:**

1. Live Load	=	250 PSF, Approx. equal to 2' Soil Surcharge @ Driveway Above
2. Soil	=	Loads per PanGEO report No. 19-062, Dated Mar. 28, 2022
	=	35 to 55 PCF Active Pressure, based on slope of backfill
	=	400 PCF, Passive Pressure

**Steel:**

- All steel piles shall be ASTM A992, Fy=50 Ksi, except as noted.
- Welding shall be by AWS certified welders with E70 electrodes in accordance with AWS D1.1-75.
- All steel members and parts shall be shop painted with two coats of red oxide primer after fabrication.

**Carpentry:**

- Lagging shall be ground contact pressure treated #2 Hem-Fir material.

**Soldier Pile Installation Sequence**

- Drill holes for soldier pile.
- Place soldier piles in hole properly aligned and spaced.
- Excavate and chip out concrete adjacent to steel soldier pile to allow for placement of timber lagging.
- Place timber lagging and attach to steel piles.
- Continue with excavation, chipping, and lagging placement.

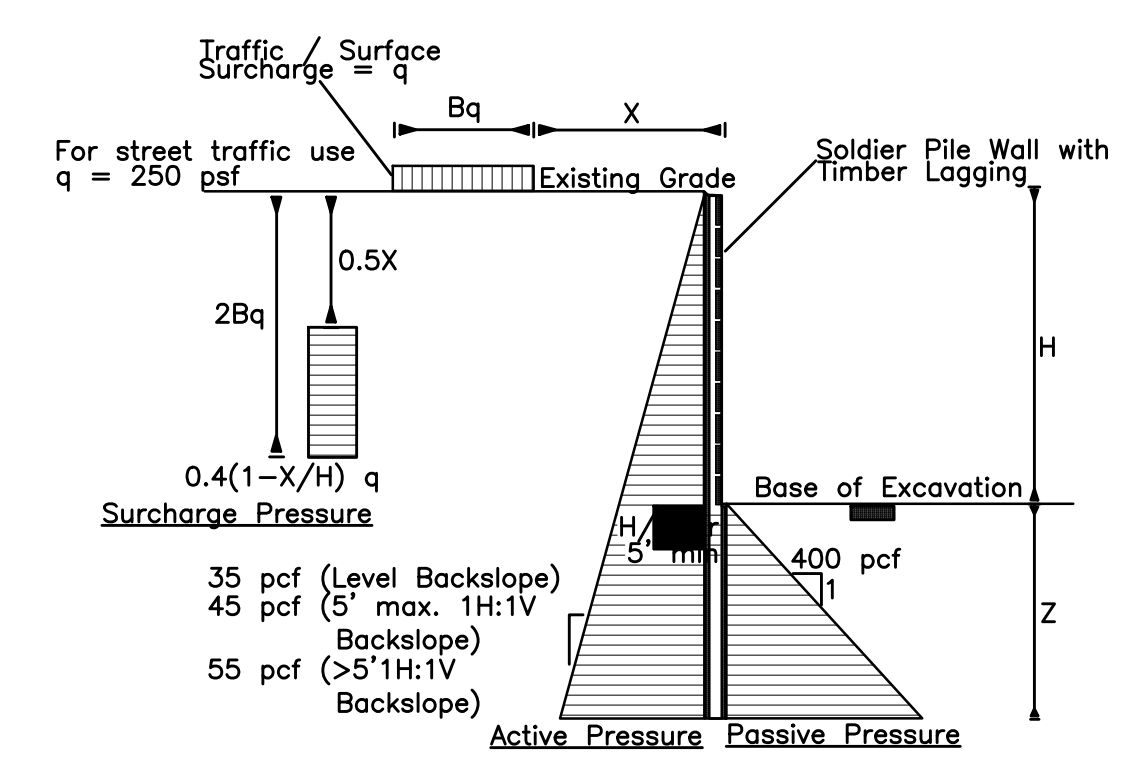
**CAUTION**  
CONTRACTOR TO FIELD VERIFY ALL CONDITIONS AND ALL ELEVATIONS.

**DRAWING DISCREPANCIES**  
The contractor shall alert MC Squared, Inc. of any discrepancies found on the drawings, such as missing data, typos, or any other items that do not make good sense.

**DRAWING DIMENSIONS**  
The structural drawings are not dimensioned. The architectural plans should be followed for dimensions between grid lines, length and width of building, and floor to floor heights. The structural drawings are only dimensioned for the structural details.

TABLE 1 REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	INSPECTION FREQUENCY		REMARKS
			Continuous	Periodic	
<b>SOILS</b>					
GEOTECHNICAL INVESTIGATIONS	TABLE 1705.6				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6			X	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6			X	TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		X		BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	TABLE 1705.6			X	
<b>DRIVEN DEEP FOUNDATION ELEMENTS</b>					
VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS	TABLE 1705.7		X		BY THE GEOTECHNICAL ENGINEER
DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED	TABLE 1705.7		X		OBSERVATION BY GEOTECHNICAL ENGINEER
INSPECT DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	TABLE 1705.7		X		
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT AND DAMAGE TO FOUNDATION ELEMENT	TABLE 1705.7		X		
FOR STEEL ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.2	TABLE 1705.7				
FOR CONCRETE ELEMENTS AND CONCRETE-FILLED ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3	TABLE 1705.7				
FOR SPECIALTY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE	TABLE 1705.7				

TABLE 2 REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	INSPECTION FREQUENCY		REMARKS
			Continuous	Periodic	
<b>FABRICATORS</b>					
	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
FABRICATORS	1704.2.5.1				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
<b>STEEL</b>					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5	ASC 360 N2		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS APPROVAL BASED ON NATIONALLY RECOGNIZED ACCREDITING AUTHORITY
<b>TABLE 3 REQUIRED TESTING FOR SPECIAL INSPECTIONS</b>					
SYSTEM or MATERIAL	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	TESTING FREQUENCY		REMARKS
			Continuous	Periodic	
<b>GEOTECHNICAL</b>					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	1803				TESTING PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6			X	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION	1705.6	VARIABLES: CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	BY THE GEOTECHNICAL ENGINEER
<b>TABLE 4 STRUCTURAL OBSERVATION</b>					
SYSTEM or MATERIAL	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	INSPECTION FREQUENCY		REMARKS
			Continuous	Periodic	
AS REQUIRED BY THE BUILDING OFFICIAL	1704.6				
SEISMIC RESISTANCE	1704.6.1			X	SEE COMMENTARY



**1 SOIL PRESSURE DISTRIBUTION**  
1/2" = 1'-0"

**MC<sup>2</sup> SQUARED**  
INCORPORATED  
STRUCTURAL & CIVIL ENGINEERS

1235 EAST 4TH AVE.  
SUITE 101  
OLYMPIA, WA 98506  
T (360) 754-9339  
F (360) 352-2044

www.mc2-inc.com

DATE	REVISION	REV

Sheet Contents  
**Structural Notes & Details**  
Project: **Soldier Pile Wall Middle Lot**  
9617 S.E. 64th St.  
Mercer Island, WA  
Altman, Benjamin

Designed By: JAG  
Drawn By: CLH, GHM  
Checked By: JMC  
Date: 05-04-22

Professional Engineer Seal for Jesse M. Chase, State of Washington, License No. 47564, Structural Engineer. Date: 05-04-22.

Project Number: 2022-0034  
Sheet Number: **S1.0**  
1 of 3



# PORTION OF NE1/4 OF SECTION 30, TOWNSHIP 24N, RANGE 5E, WM

## ALTMAN PARCEL A



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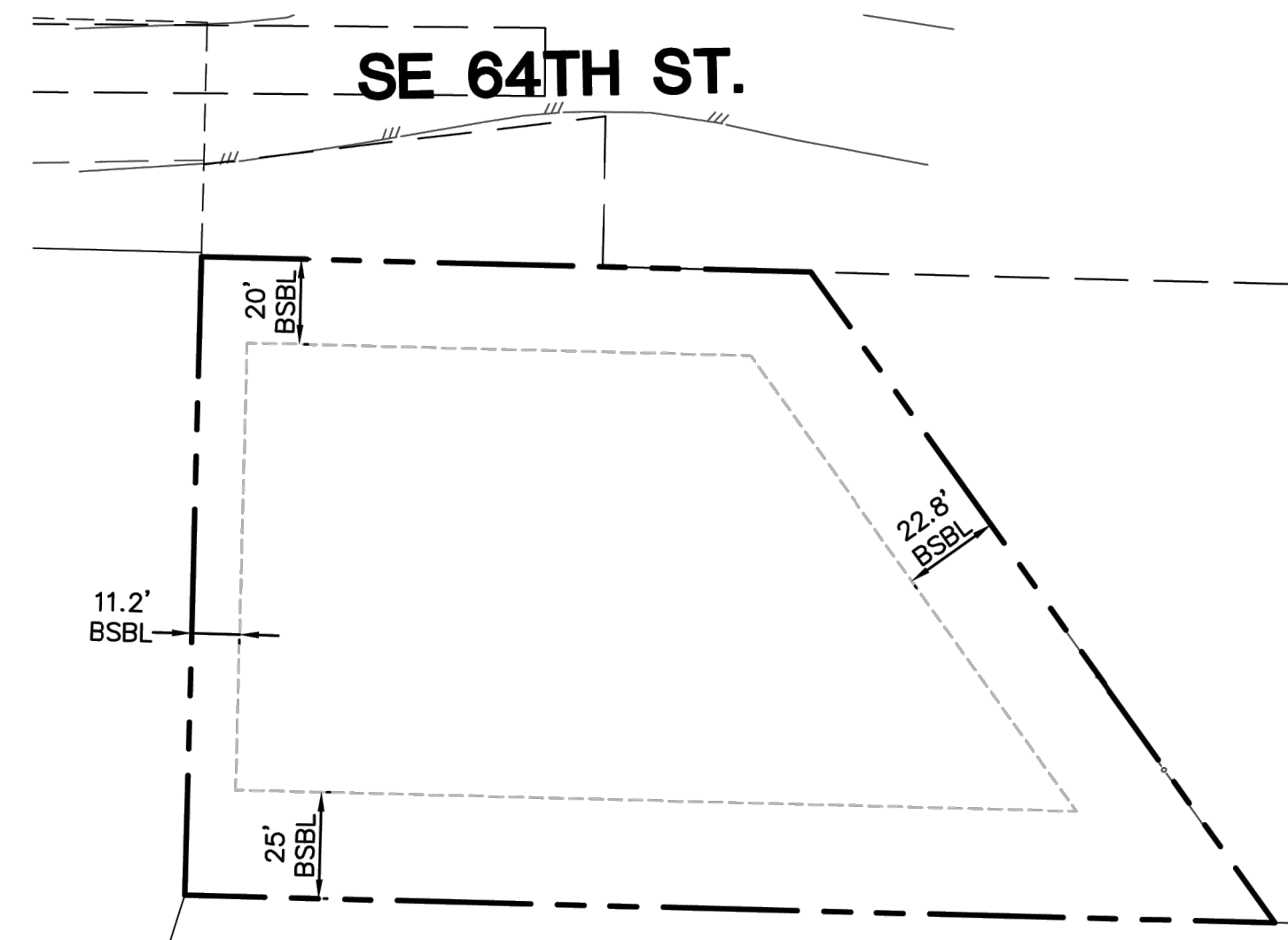
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NO.	DATE	REVISION

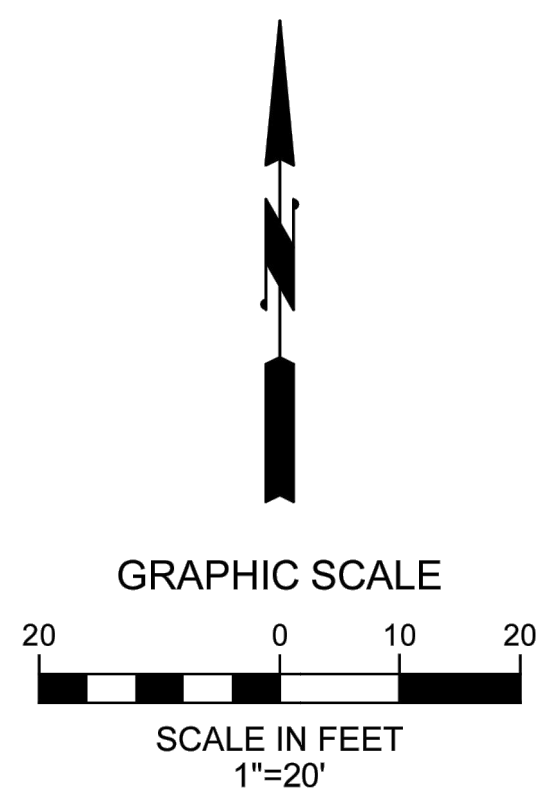
### LEGEND

- |   |   |   |   |
|---|---|---|---|
| ⊕ | FOUND MONUMENT IN CASE                    | ⊕ | FOUND REBAR/CAP AS NOTED                        |
| ○ | UTILITY POLE W/ UNDERGROUND (UG) CONDUIT  | ⊕ | UTILITY POLE W/ LIGHT, UG CONDUIT & TRANSFORMER |
| ⊕ | UTILITY POLE W/ LIGHT (LP)                | ⊕ | UTILITY POLE (PP)                               |
| ⊕ | POWER POLE GUY ANCHOR (GUY)               | ⊕ | TELEPHONE MANHOLE (TMH)                         |
| ⊕ | SANITARY SEWER MANHOLE (SSMH)             | ⊕ | POWER METER (EM)                                |
| ⊕ | FIRE HYDRANT (FH)                         | ⊕ | WATER METER (WM)                                |
| ⊕ | WATER VALVE (WV)                          | ⊕ | CATCH BASIN (CB)                                |
| ⊕ | MAILBOX (MB)                              | ⊕ | SIGN  |
| ⊕ | GAS METER (GM)                            | ⊕ | GAS VALVE (GV)                                  |
| ⊕ | APPROX. GAS LINE LOCATION                 | ⊕ | APPROX. WATER LINE LOCATION                     |
| ⊕ | APPROX. SANITARY SEWER LINE LOCATION      | ⊕ | APPROX. STORM DRAIN LINE LOCATION               |
| ⊕ | APPROX. TELECOMMUNICATIONS (TEL) LOCATION | ⊕ | APPROX. OVERHEAD POWER & TEL LOCATION           |
| ⊕ | EXISTING ASPHALT PAVING                   | ⊕ | EXISTING CONCRETE                               |
| ⊕ | EXISTING GRAVEL                           | ⊕ | DECIDUOUS TREE TO REMAIN                        |
| ⊕ | CONIFEROUS TREE TO REMAIN                 | ⊕ | DECIDUOUS TREE TO BE REMOVED                    |
| ⊕ | CONIFEROUS TREE TO BE REMOVED             | ⊕ | PROPOSED STORM DRAIN                            |
| ⊕ | PROPOSED SANITARY SIDE SEWER              | ⊕ | PROPOSED WATER SERVICE                          |
| ⊕ | PROPOSED ASPHALT PAVING                   | ⊕ | PROPOSED CONCRETE                               |

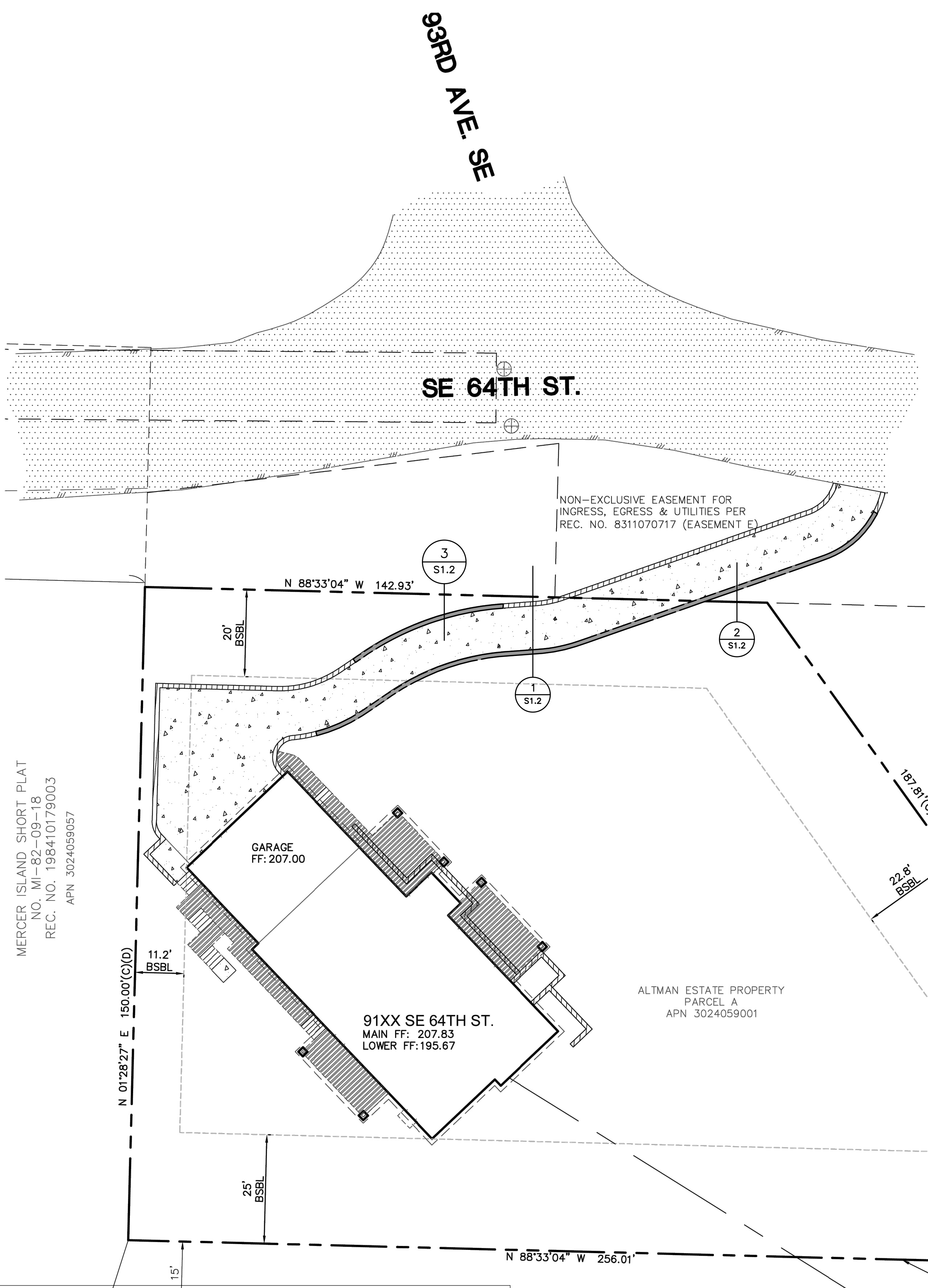
- ABBREVIATIONS**
- |        |                  |
|--------|------------------|
| 12"B   | BIRCH            |
| 12"CY  | CHERRY           |
| 12"D   | DECIDUOUS        |
| 12"M   | MAPLE            |
| 12"C   | CEDAR            |
| 12"F   | FIR              |
| BFNC   | WOOD FENCE       |
| CLFNC  | CHAIN LINK FENCE |
| EX     | EXISTING         |
| LOC.   | LOCATION         |
| (REM.) | REMOVE           |



**BUILDING PAD DIAGRAM**  
1" = 50'



**GRAPHIC SCALE**  
SCALE IN FEET  
1"=20'



### PROJECT SITE DATA - R

OWNER: ESTATE OF JAMES  
SITE ADDRESS: 91XX SE 64TH ST  
TAX ACCT. NO.: 30240  
TOTAL LOT AREA: 29,92

### PROJECT CONTACT LIST

OWNER: ESTATE OF JAMES  
CONTACT: BENJAMIN  
PHONE: (206) 352-2044

PROJECT CONTACT: PLAN TO PERFORM  
9311 SE 36TH ST  
MERCER ISLAND, WA  
CONTACT: GENE CHASE  
PHONE: (206) 352-2044

CIVIL ENGINEER: LITCHFIELD ENGINEERING  
12840 81ST AVE  
KIRKLAND, WA  
CONTACT: KEVIN  
PHONE: (425) 338-1111

SURVEYOR: INFORMED LAND SURVEYING  
3215 S. 12TH ST  
TACOMA, WA  
CONTACT: EVA  
PHONE: (253) 465-1111

### UTILITY CONTACT LIST:

SANITARY SEWER: CITY OF TACOMA (206) 251-2222

WATER: CITY OF TACOMA (206) 251-2222

ELECTRIC: PUGET SOUND POWER & LIGHT (206) 835-1111

GAS: PUGET SOUND NATURAL GAS (206) 835-1111

TELEPHONE: CENTURYLINK (206) 398-1111

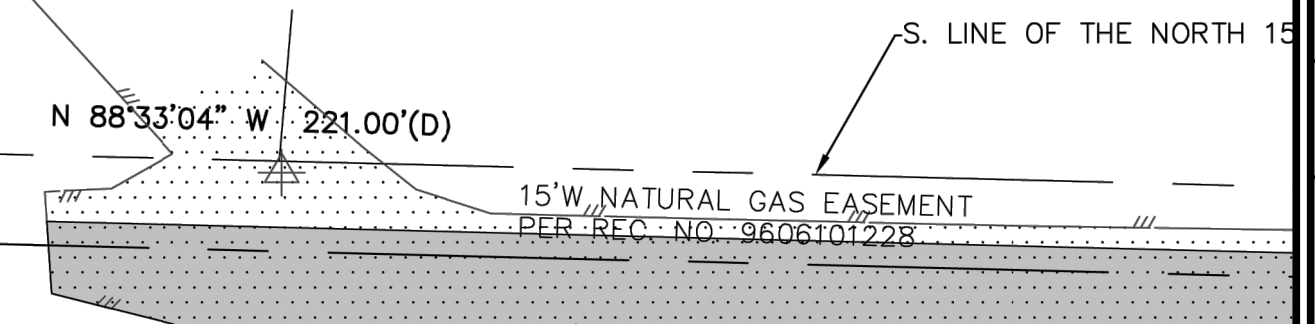
Sheet Contents  
**Site Plan**  
 Project: Soldier Pile Wall Middle Lot  
 9617 S.E. 64th St.  
 Mercer Island, WA  
 Altman, Benjamin

Designed By: JAG  
Drawn By: CLH, GHM  
Checked By: JMC  
Date: 05-04-22

Project Number: 2022-0034  
Sheet Number: S1.1  
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SITEPLAN PER panGEO INC.



15' W NATURAL GAS EASEMENT  
PER REC. NO. 9606T01228



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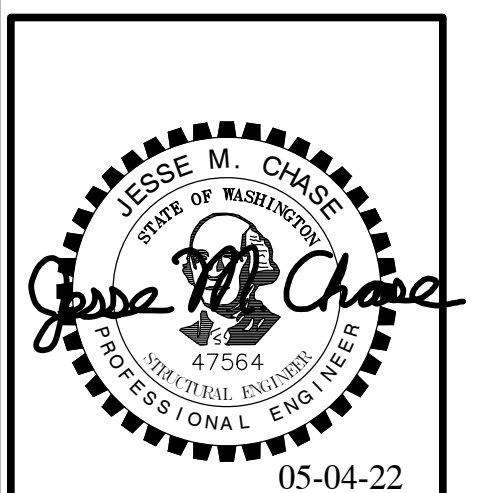
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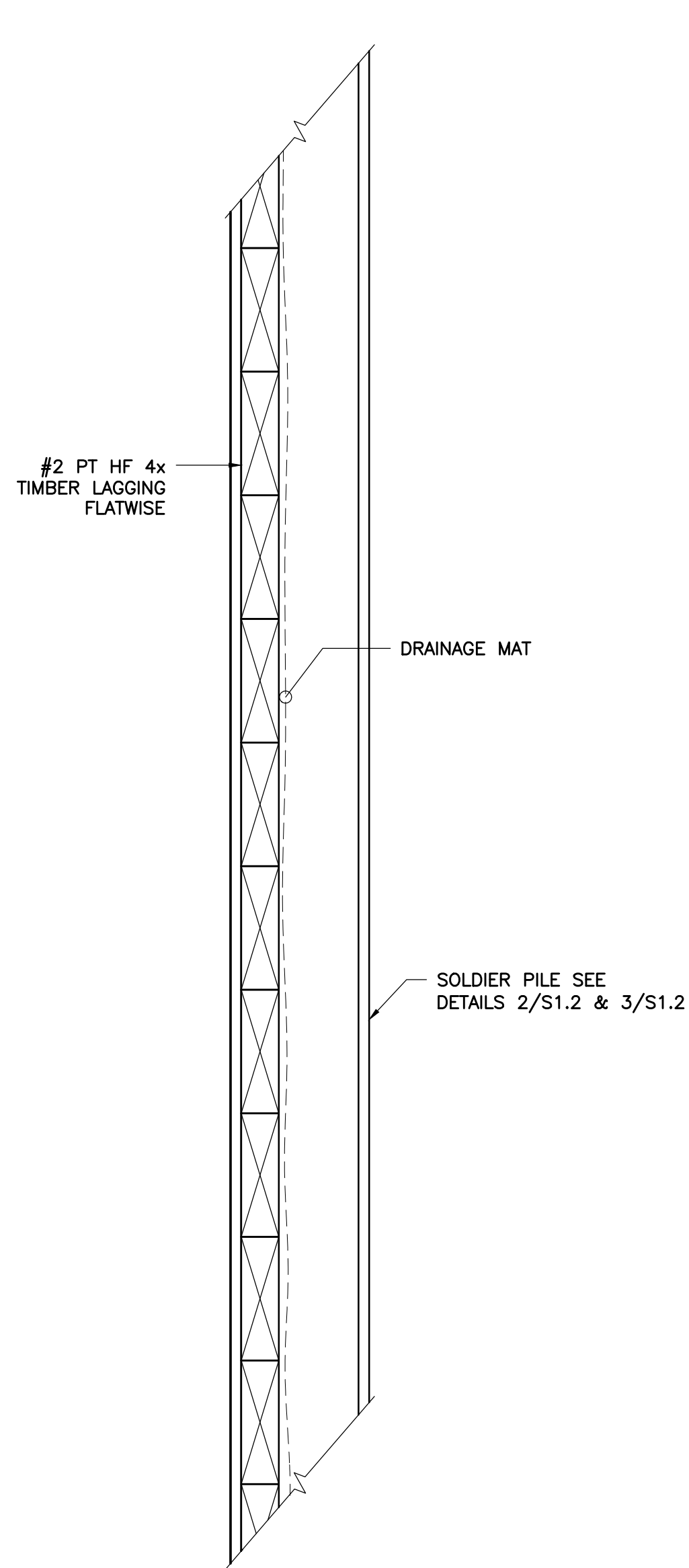
REV	REVISION	DATE

Sheet Contents  
**Soldier Pile Wall Details**  
Project  
**Soldier Pile Wall Middle Lot**  
9617 S.E. 64th St.  
Mercer Island, WA  
Altman, Benjamin

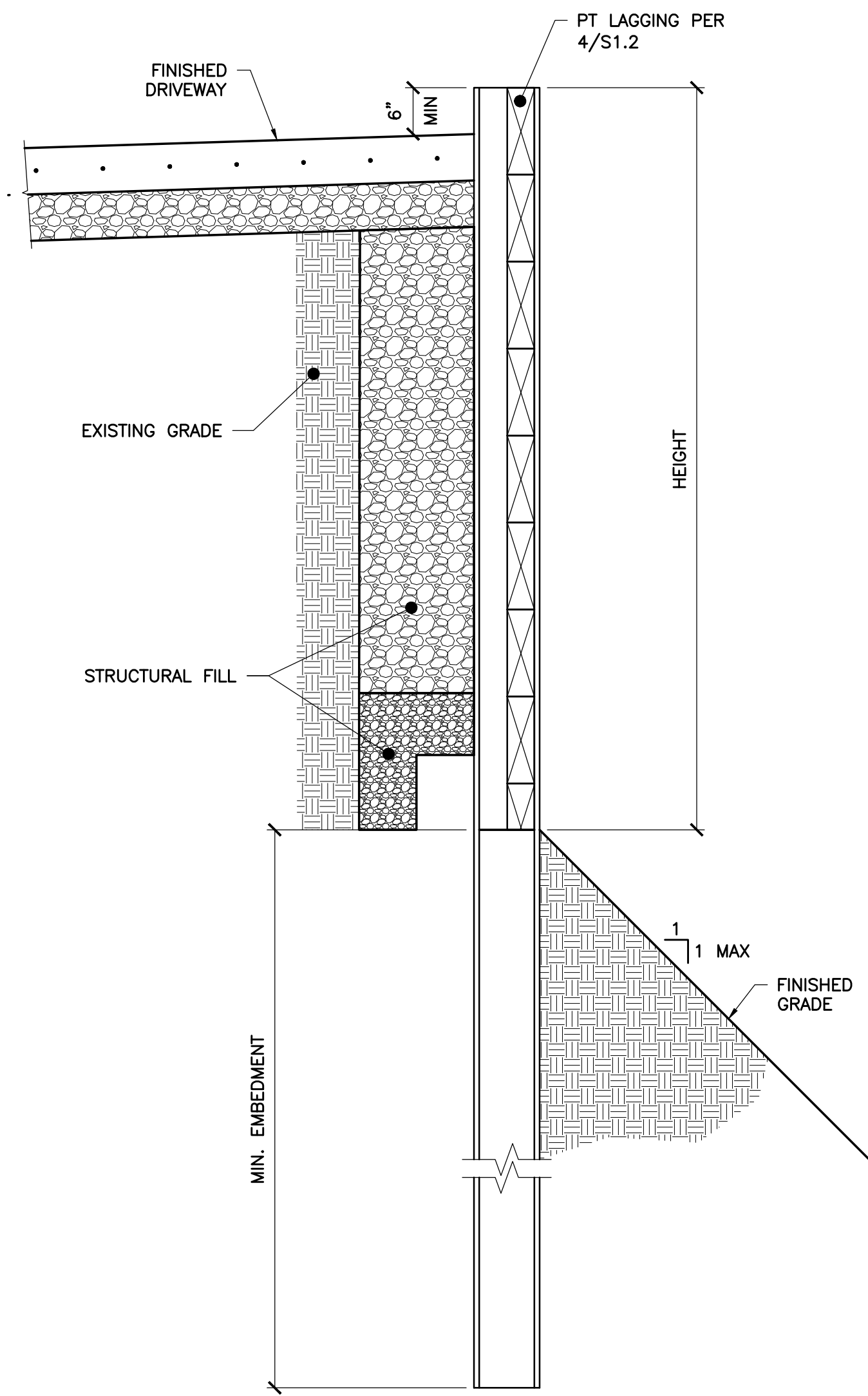
Designed By	JAG
Drawn By	CLH, GHM
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Date	05-04-22



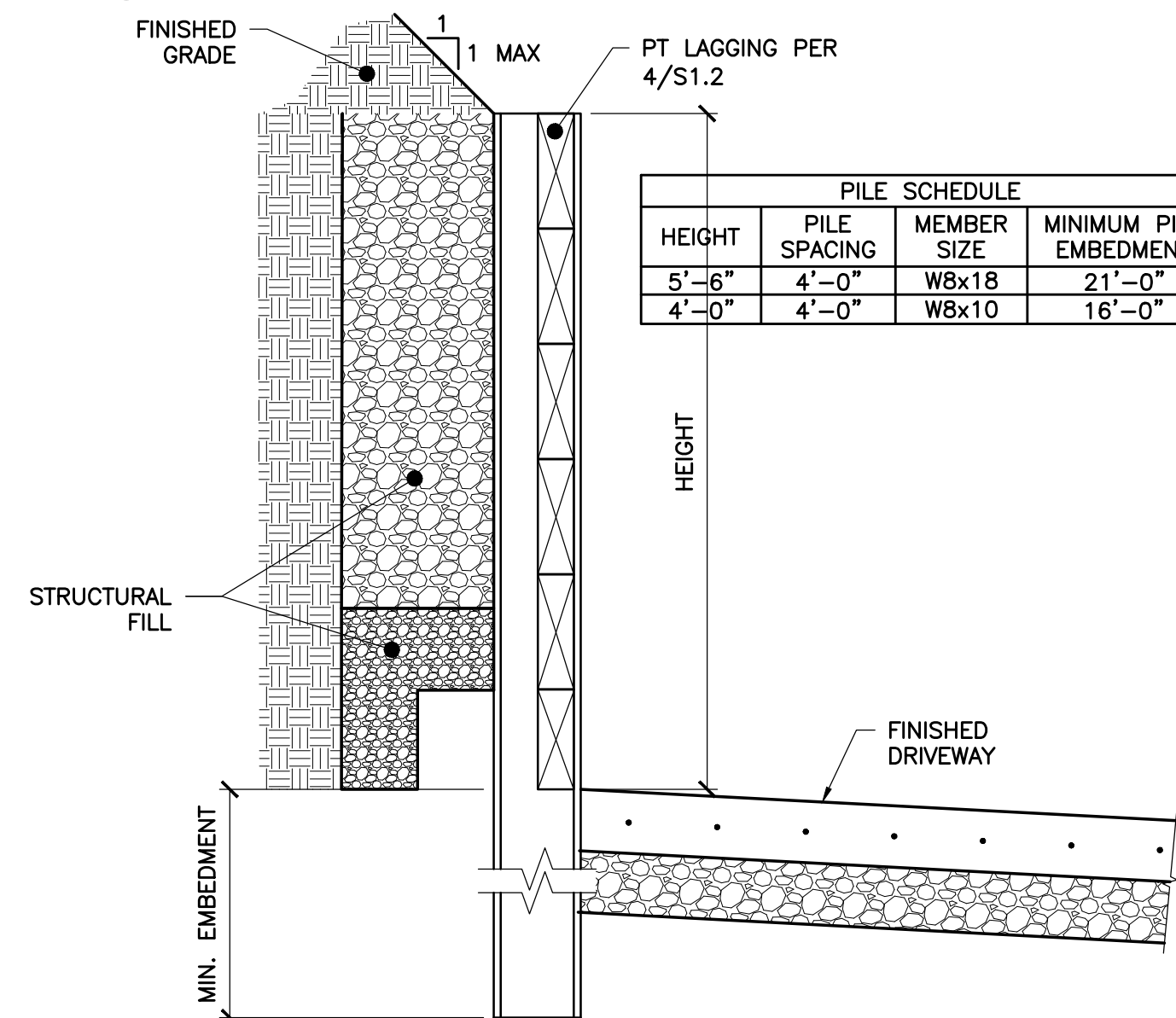
Project Number	2022-0034
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**4** TIMBER LAGGING  
1" = 1'-0"



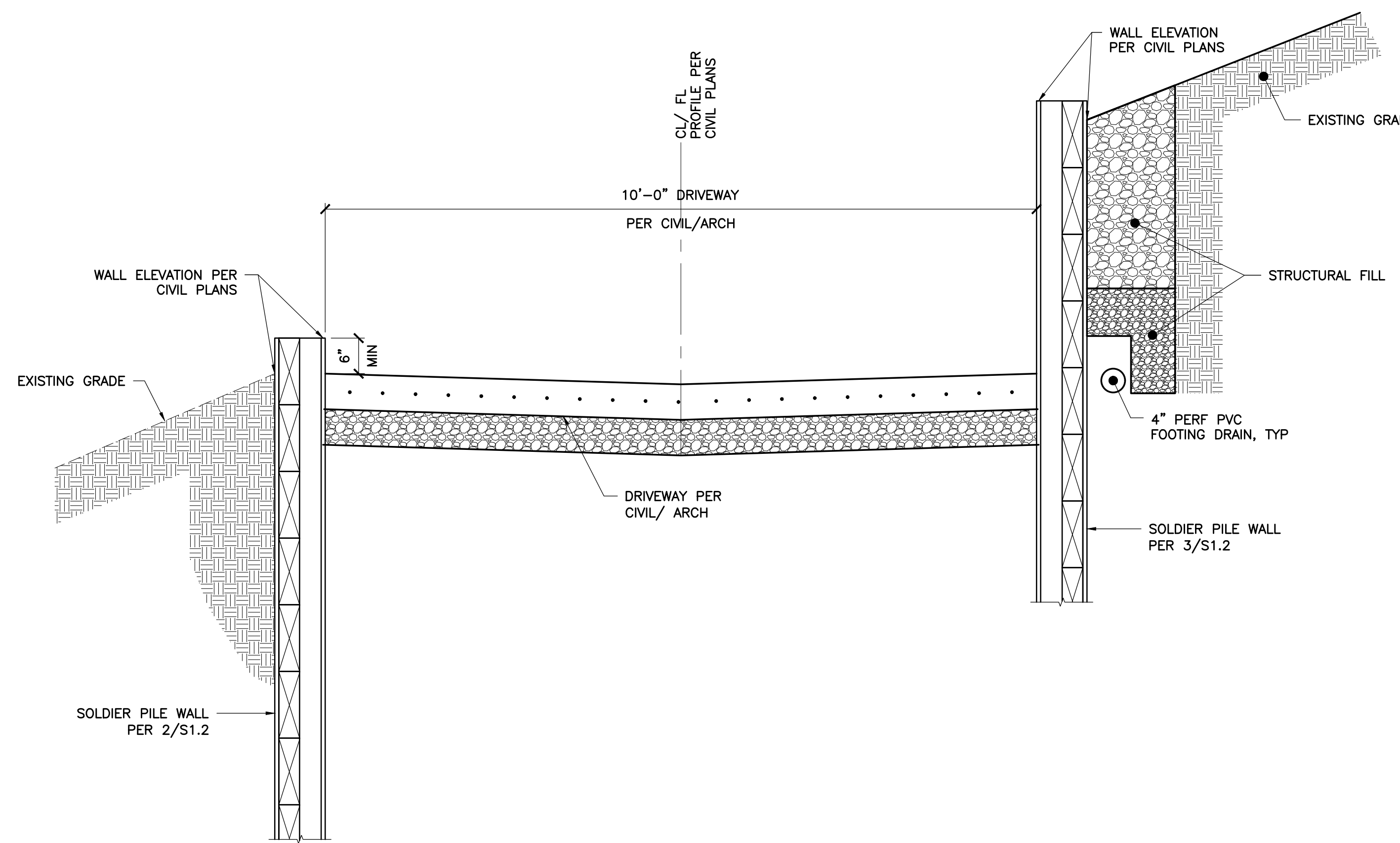
**2** LOWER WALL SECTION  
3/4" = 1'-0"



**3** UPPER WALL SECTION  
3/4" = 1'-0"

PILE SCHEDULE			
HEIGHT	PILE SPACING	MEMBER SIZE	MINIMUM PILE EMBEDMENT
8'-0"	4'-0"	W10x100	39'-0"
6'-6"	4'-0"	W10x77	37'-0"
5'-0"	4'-0"	W10x77	34'-0"

PILE SCHEDULE			
HEIGHT	PILE SPACING	MEMBER SIZE	MINIMUM PILE EMBEDMENT
5'-6"	4'-0"	W8x18	21'-0"
4'-0"	4'-0"	W8x10	16'-0"



**1** DRIVEWAY SECTION  
3/4" = 1'-0"