Exhibit #13

December 19, 2022

Tumwater School District No. 33
621 Linwood Ave. SW
Tumwater, WA 98512-6847

Attn: Ms. Tanya Baker, Project Manager

Transmitted via email to: *tanya.baker@tumwater.k12.wa.us*

Re: Summary of Geotechnical Engineering Services
District Office Portable
Tumwater, Washington
Project No. 1467012.010.011

Dear Ms. Baker:

This letter summarizes the results of geotechnical engineering services provided by Landau Associates, Inc. (Landau) in support of the District Office Portable project, located at 621 Linwood Avenue Southwest in Tumwater, Washington (site; Figure 1). Geotechnical services were provided in accordance with the scope outlined in Landau's October 14, 2022 proposal.

Project Understanding

Tumwater School District No. 33 (District, project owner) plans to install a portable building east of the existing district office. The portable building will be supported on footings and stem walls. Landau provided geotechnical engineering services to support installation of the portable building.

Subsurface Conditions

On November 14, 2022, Landau's excavating subcontractor advanced three test pits (TP-1 through TP-3) 8.2 to 9.0 feet (ft) below ground surface (bgs). The approximate locations of the test pit excavations are shown on Figure 2.

Subsurface conditions were described using the soil classification system shown on Figure 3, in general accordance with ASTM International (ASTM) standard D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)*. Summary logs of the subsurface soil and groundwater conditions observed in the test pits are presented on Figures 4 through 6.

Soil samples were transported to Landau's geotechnical laboratory for further examination and testing. Natural moisture content determinations were performed on select soil samples in accordance with ASTM standard test method D2216-19, *Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass*. The natural moisture content is shown as "W = xx" (i.e., percentage of dry weight) in the "Test Data" column on Figures 4 through 6.

Grain size, or sieve, analyses were performed on select soil samples in accordance with ASTM standard test method D6913, *Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis*. Samples selected for grain size analysis are designated with a "GS" on Figures 4 through 6. The results of the grain size analyses are presented on Figure 7.

Soil Conditions

Approximately 5 to 6 inches of topsoil was encountered at each exploration location. Fill was observed beneath the topsoil and extended 0.8 to 3 ft bgs. The fill was in a medium dense, moist condition and typically consisted of crushed concrete debris composed of sand and gravel with silt. The concrete debris ranged from 6 to 14 inches in diameter, with smaller pieces measuring less than 1 inch in diameter.

Recessional outwash was observed beneath the fill and extended approximately 9.0 ft bgs. The outwash was in a loose, moist condition and typically consisted of brown to gray sand with silt and sporadic gravel.

Groundwater Conditions

Groundwater was not observed in Landau's November 2022 explorations. The groundwater conditions reported herein are for the specific date and locations indicated and may not be representative of other locations and/or times. Site groundwater conditions will vary depending on local subsurface conditions, weather conditions, and other factors.

Conclusions

Based on the results of Landau's geotechnical field investigation and laboratory testing, the medium dense crushed concrete debris will provide suitable support for the portable building, provided the following recommendations are incorporated into the project design.

Topsoil should be stripped to expose medium dense subgrade soil. Concrete debris larger than 4 inches in diameter should be removed and replaced with compacted structural fill. The exposed subgrade should be compacted to a firm, unyielding condition.

The lightly loaded portable building is anticipated to experience less than 1 inch of settlement if constructed as recommended herein. Similarly loaded foundation elements may experience ½ inch or less of differential settlement over 50-ft spans. Settlement is expected to occur as loads are applied during construction.

Pavement Design

Pavement sections should be constructed on a firm, unyielding subgrade that consists of medium dense crushed concrete debris or recessional outwash. Alternatively, pavement sections may be constructed on properly compacted structural fill that extends to such soils.

Landau used a 20-year design life, a reliability of 85 percent, an initial serviceability index of 4.5, and a terminal serviceability index of 2.5 to calculate pavement thickness. Design recommendations for flexible pavement sections are provided in Table 1.

Table 1. Recommended Asphalt Pavement Design Sections

Pavement Section Type[(a)]	ESALs	Asphalt Pavement Thickness (inches)	Crushed Surfacing Thickness (inches)
Parking lot	50,000	2.5	6

(a) Based on the assumption that pavement sections will be founded on a subbase consisting of medium dense crushed concrete debris or recessional outwash. Pavement sections also may be constructed on properly compacted structural fill that extends to such soils.
ESALs = equivalent single-axle loads

Base course material should be compacted to at least 95 percent of the maximum dry density, determined in accordance with ASTM standard test method D1557, *Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3)).* Compacted base course should meet the requirements for Crushed Surfacing Base Course in Section 9-03.9(3) of the Washington State Department of Transportation's 2023 *Standard Specifications for Road, Bridge, and Municipal Construction* (hereafter, *2023 WSDOT Standard Specifications*). To facilitate fine grading of the surface, the upper 2 inches of crushed surfacing could consist of crushed surfacing top course. Prevention of road-base saturation is essential for pavement durability; efforts should be made to limit the amount of water entering the base course.

Asphalt concrete should consist of Class B aggregate material or hot-mix asphalt, class ½-inch and PG58S-22 binder that conforms to the requirements in Section 5-04 of the *2023 WSDOT Standard Specifications.* The asphalt should be compacted to at least 91 percent of the Rice density.

Infiltration

Design infiltration rates were calculated using the results of Landau's geotechnical laboratory tests (Figure 7) and the soil grain size method in the City of Tumwater's 2022 *Drainage Design and Erosion Control Manual*. Correction factors were applied to account for plugging of soils (Fplugging = 0.7), the test method (Ftesting = 0.4), and the influence of facility geometry (Fgeometry= 0.9). Because hydrologic group A soils are mapped at the site (University of California Davis, accessed December 6, 2022), Landau used the simplified approach to calculate the design infiltration rates in Table 2. These rates are appropriate for design of small-scale or low-impact development facilities (e.g., trenches and bioswales); they are not suitable for larger stormwater systems (e.g., vaults and ponds).

Table 2. Design Factored Infiltration Rates

Material/Soil	Design Infiltration Rate (in/hr)
Crushed concrete fill	3.3
Native sand with silt	6.2

in/hr = inches per hour

Use of This Letter

Landau Associates has prepared this letter for the exclusive use of Tumwater School District No. 33 for specific application to the District Office Portable project in Tumwater, Washington. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Reuse of the information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that, within the limitations of scope, schedule, and budget, its services have been provided in a manner consistent with that level of skill and care ordinarily exercised by members of the profession currently practicing in the same locality, under similar conditions as this project. Landau Associates makes no other warranty, either express or implied.

Closing

We trust that this letter provides you with the information needed to proceed with the project. If you have questions or comments, or if we can be of further service, please contact Lance Levine at 360.791.3178 or at llevine@landauinc.com.

LANDAU ASSOCIATES, INC.

Lance Levine, PE
Senior Engineer

12-19-2022

Steven R. Wright, PE
Principal

LGL/SRW/mcs
[\\OLYMPIA1\PROJECTS\1467\012.010 DISTRICT OFFICE PORTABLE\R\DISTRICT OFFICE PORTABLE GEOTECHNICAL LETTER 12.19.2022.DOCX]

Attachments: Figure 1. Vicinity Map
Figure 2. Site and Exploration Location Plan
Figure 3. Soil Classification System and Key
Figures 4–6. Logs of Test Pits TP-1 through TP-3
Figure 7. Grain Size Distribution

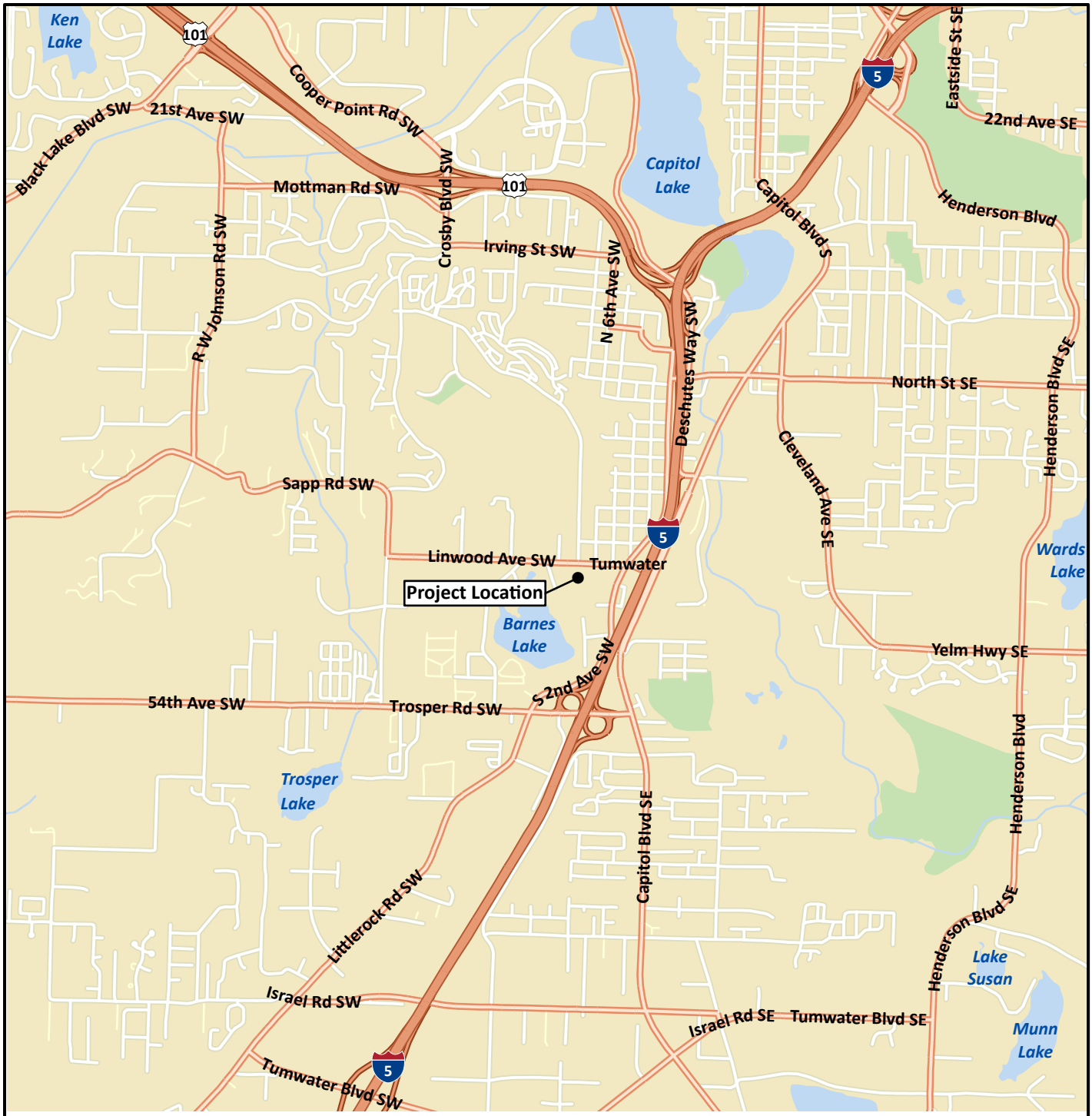
References

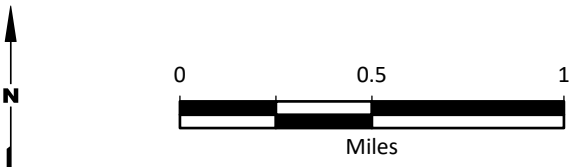
ASTM. 2017. Annual Book of ASTM Standards. In: *Soil and Rock(I).* West Conshohocken, PA: ASTM International.

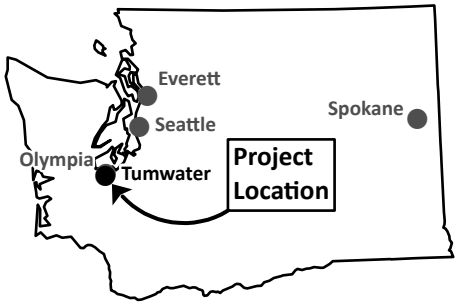
City of Tumwater. 2022. *Drainage Design and Erosion Control Manual*. July.

University of California Davis. "Soil Survey Website." Accessed December 6, 2022. Available online at: https://casoilresource.lawr.ucdavis.edu/gmap/.

WSDOT. 2022. *M41-10: Standard Specifications for Road, Bridge, and Municipal Construction.* 2023 Edition. Washington State Department of Transportation. September 14.







Data Source: Esri.

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District Office Portable Tumwater, Washington	**Vicinity Map**	Figure 1

Legend

TP-1 Approximate Test Pit Location and Designation

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Google Maps 2022

0 75 150

Scale in Feet

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District Office Portable
Tumwater, Washington

Site and Exploration Location Plan

Figure
2

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS [2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50%	"GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50%	"very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30%	"gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15%	"with gravel," "with sand," "with silt," etc.
	≤ 5%	"with trace gravel," "with trace sand," "with trace silt," etc., or not noted.

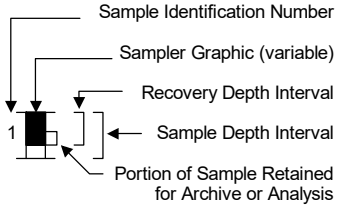
4. Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key

SAMPLER TYPE & METHOD

Graphic	Code	Description
☒	a	3.25-in OD, 2.42-in ID Split Spoon
⧓	b	2.00-in OD, 1.50-in ID Split Spoon
◧	c	Shelby Tube
◪	d	Grab Sample
◨	e	Single-Tube Core Barrel
◨	f	Double-Tube Core Barrel
☒	g	2.50-in OD, 2.00-in ID WSDOT
☒	h	3.00-in OD, 2.37-in ID Mod. Calif.
☒	i	Other - See text if applicable
	1	300-lb Hammer, 30-inch Drop
	2	140-lb Hammer, 30-inch Drop
	3	Pushed Sample
	4	Vibrocore (Rotosonic/Geoprobe)
	5	Other - See text if applicable
	6	Piston Extraction

SAMPLE NUMBER & INTERVAL



Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

Groundwater

▽ Approximate water level at time of drilling (ATD)

▼ Approximate water level at time after drilling/excavation/well

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Soil Classification System and Key

Figure 3

TP-1

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): Not Measured Excavated By: Howards Const. & Excvtg. Logged By: LGL	
0							5 inches of sod and topsoil (loose, moist) **(TOPSOIL)**	Groundwater not encountered.
		S-1	d	W = 11 GS		SP-SM	Brown and gray, very gravelly, fine to coarse SAND with silt and concrete debris up to 12 inches in diameter (medium dense, moist) **(FILL)**	
2		S-2	d			SP-SM	Brown, fine to medium SAND with silt (medium dense, moist) **(RECESSIONAL OUTWASH)**	
4							Grades to gray	
6		S-3	d					
8								
10								
12								

Test Pit Completed 11/14/22
Total Depth of Test Pit = 8.2 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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District Office Portable Tumwater, Washington	Log of Test Pit TP-1	Figure 4

TP-2

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): Not Measured Excavated By: Howards Const. & Excvtg. Logged By: LGL	
0							5 inches of sod and topsoil (loose, moist) **(TOPSOIL)**	Groundwater not encountered.
						GP-GM	Brown and gray, very sandy, fine to coarse GRAVEL with silt, cobbles, and concrete debris up to 14 inches in diameter (medium dense, moist) **(FILL)**	
2		S-1	d	W = 10 GS				
						SP-SM	Brown, fine to medium SAND with silt (loose to medium dense, moist) **(RECESSIONAL OUTWASH)**	
4		S-2	d				Grades to gray and medium dense	
6								
		S-3	d					
8								
10								
12								

Test Pit Completed 11/14/22
Total Depth of Test Pit = 8.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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Log of Test Pit TP-2

Figure 5

TP-3

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: Tracked Excavator Ground Elevation (ft): Not Measured Excavated By: Howards Const. & Excvtg. Logged By: LGL	
0							6 inches of sod and topsoil (loose, moist) **(TOPSOIL)**	Groundwater not encountered.
		S-1	d			SP-SM	Brown and gray, gravelly, fine to coarse SAND with silt and concrete debris up to 6 inches in diameter (medium dense, moist) **(FILL)**	
						SP-SM		
2		S-2	d	W = 12 GS			Brown, fine to medium SAND with silt (medium dense, moist) **(RECESSIONAL OUTWASH)**	
4							Grades to gray	
6								
8		S-3	d				Grades to fine to coarse and with gravel	
10								
12								

Test Pit Completed 11/14/22
Total Depth of Test Pit = 9.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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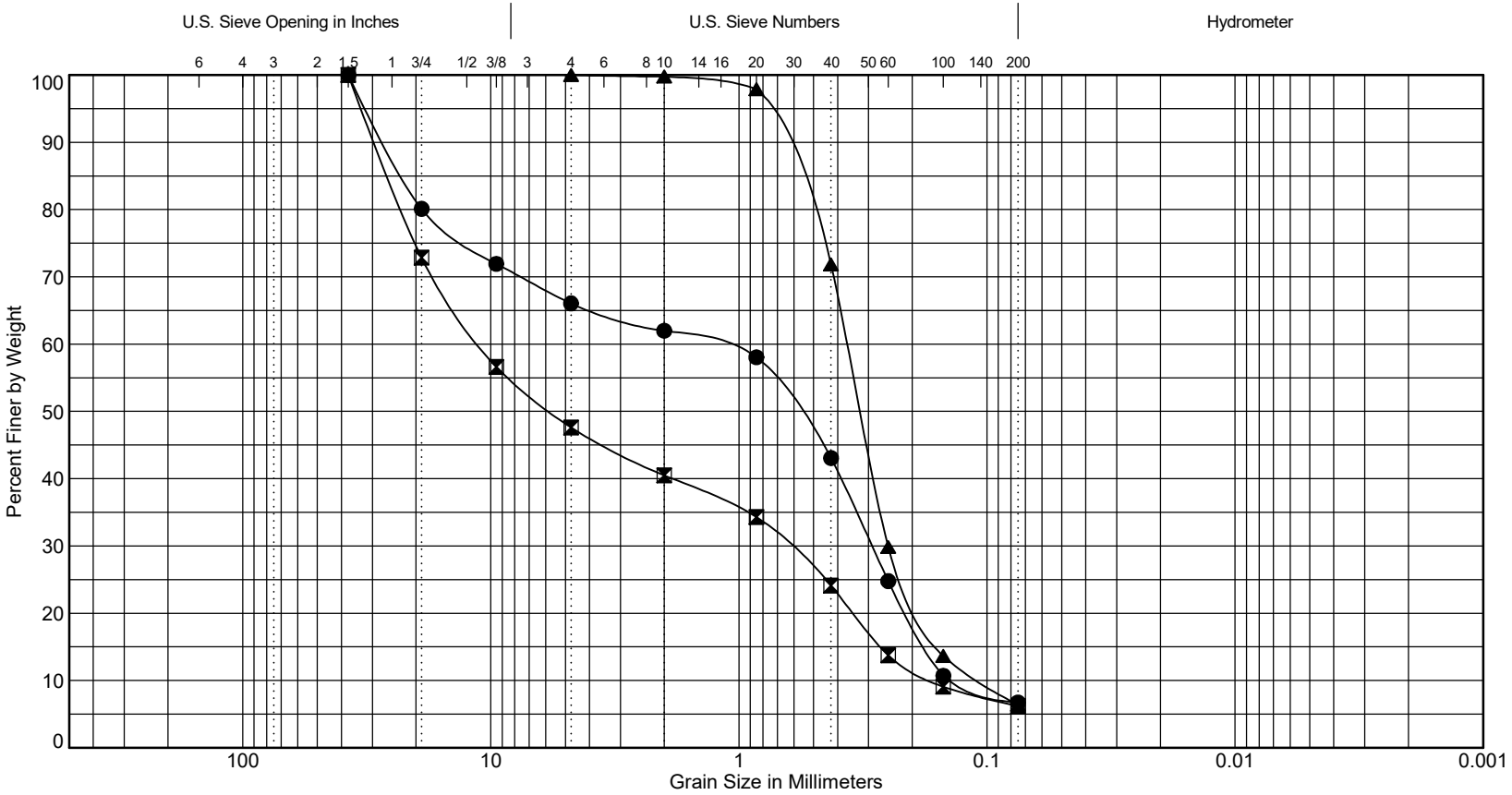
Tumwater, Washington

Log of Test Pit TP-3

Figure 6



Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

Symbol	Exploration Number	Sample Number	Depth (ft)	Natural Moisture (%)	Soil Description	Unified Soil Classification
●	TP-1	S-1	1.3	11	Very gravelly, fine to coarse SAND with silt	SP-SM
⊠	TP-2	S-1	1.8	10	Very sandy, fine to coarse GRAVEL with silt	GP-GM
▲	TP-3	S-2	2.5	12	Fine to medium SAND with silt	SP-SM

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Tumwater, Washington

Grain Size Distribution

Figure 7