



GEORESOURCES

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4809 Pacific Hwy. E. | Fife, Washington 98424 | 253.896.1011 | www.georesources.rocks

September 27, 2022

Jody Miller Construction
PO Box 44628
Tacoma, Washington 98448
(253) 405-1490
jody@jodymillerconstruction.com
CC: Azure Green Consultants

Soils Report Addendum:
Infiltration Testing
Proposed Redevelopment
204 – 4th Street Southwest
Puyallup, Washington
PN: 5745001631, -32, -41
Doc ID: JodyMillerConst.4thStSW.SRa

INTRODUCTION

This *Addendum* to our soils report summarizes the results of our in-situ infiltration testing performed at 204 – 4th Street Southwest in Puyallup, Washington. The site consists of a three adjacent tax parcels.

On September 23, 2022, we performed two small-scale Pilot Infiltration Tests (PITs) in accordance with the 2019 Ecology Manual at two locations at the site. The location of our PITs is shown on Figure 1. Our PITs were performed at about 1.0 to 1.5 feet below existing grades in the silty sand which we had initially provided a preliminary design infiltration rate of 0.5 inches per hour based on grain size analysis in our *Soils Report* dated August 5, 2022. The exploration logs of our PITs are included in Appendix A.

During our PITs, we measured an infiltration rate of 8.0 inches per hour. Applying correction factors of 0.5 for test method, 0.3 for site variability and 0.9 for maintenance gives a design infiltration rate of 1.0 inch per hour. We over excavated the PIT and observed a restrictive layer at about 2.7 feet below existing grades. Groundwater was observed at 2.5 feet below existing grades in PIT-2. No groundwater was observed in PIT-1 during the over excavation.

LIMITATIONS

We have prepared this report for use by Jody Miller Construction, Azure Green Consultants, and other members of the design team, for use in the design of a portion of this project. The data used in preparing this report and this report should be provided to prospective contractors for their bidding or estimating purposes only. Our report, conclusions and interpretations are based on our subsurface explorations, data from others and limited site reconnaissance, and should not be construed as a warranty of the subsurface conditions.

Variations in subsurface conditions are possible between the explorations and may also occur with time. A contingency for unanticipated conditions should be included in the budget and schedule. Sufficient monitoring, testing and consultation should be provided by our firm during construction to confirm that the conditions encountered are consistent with those indicated by the explorations, to

provide recommendations for design changes should the conditions revealed during the work differ from those anticipated, and to evaluate whether earthwork and foundation installation activities comply with contract plans and specifications.

The scope of our services does not include services related to environmental remediation and construction safety precautions. Our recommendations are not intended to direct the contractor's methods, techniques, sequences or procedures, except as specifically described in our report for consideration in design.

If there are any changes in the loads, grades, locations, configurations or type of facilities to be constructed, the conclusions and recommendations presented in this report may not be fully applicable. If such changes are made, we should be given the opportunity to review our recommendations and provide written modifications or verifications, as appropriate.



We have appreciated working for you on this project. Please do not hesitate to call at your earliest convenience if you have any questions or comments.

Respectfully submitted,
GeoResources, LLC



Seth Taylor Mattos

Seth T. Mattos, LEG
Associate



Andrew Schnitger, EIT
Staff Engineer

AES:STM/aes


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Attachments: Figure 1: Site & Exploration Map
Appendix A - Subsurface Explorations

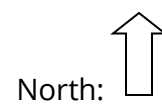


Notes:

An excerpt from the Pierce County Public GIS

 Approximate location of PITs

Scale: Not to scale



Site & Exploration Map

Proposed Redevelopment
 204 - 4th Street Southwest
 Puyallup, Washington
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Appendix A

Subsurface Explorations

SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOL	GROUP NAME
COARSE GRAINED SOILS More than 50% Retained on No. 200 Sieve	GRAVEL More than 50% Of Coarse Fraction Retained on No. 4 Sieve	CLEAN GRAVEL	GW	WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL
			GP	POORLY-GRADED GRAVEL
		GRAVEL WITH FINES	GM	SILTY GRAVEL
			GC	CLAYEY GRAVEL
	SAND More than 50% Of Coarse Fraction Passes No. 4 Sieve	CLEAN SAND	SW	WELL-GRADED SAND, FINE TO COARSE SAND
			SP	POORLY-GRADED SAND
		SAND WITH FINES	SM	SILTY SAND
			SC	CLAYEY SAND
FINE GRAINED SOILS More than 50% Passes No. 200 Sieve	SILT AND CLAY Liquid Limit Less than 50	INORGANIC	ML	SILT
			CL	CLAY
	SILT AND CLAY Liquid Limit 50 or more	ORGANIC	OL	ORGANIC SILT, ORGANIC CLAY
		INORGANIC	MH	SILT OF HIGH PLASTICITY, ELASTIC SILT
			CH	CLAY OF HIGH PLASTICITY, FAT CLAY
		ORGANIC	OH	ORGANIC CLAY, ORGANIC SILT
HIGHLY ORGANIC SOILS			PT	PEAT

NOTES:

1. Field classification is based on visual examination of soil in general accordance with ASTM D2488-90.
2. Soil classification using laboratory tests is based on ASTM D2487-90.
3. Description of soil density or consistency are based on interpretation of blow count data, visual appearance of soils, and or test data.

SOIL MOISTURE MODIFIERS:

- Dry- Absence of moisture, dry to the touch
- Moist- Damp, but no visible water
- Wet- Visible free water or saturated, usually soil is obtained from below water table



Unified Soils Classification System

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Pilot Infiltration Test PIT-1

Location: North portion of site

Approximate Elevation: 42'

Depth (ft)	Soil Type	Soil Description
0 - 0.5	-	Topsoil
0.5 - 2.7	SM	Brown silty SAND (loose, moist to wet)
2.7 - 4.0	SM	Gray, orange iron oxide stained silty SAND (loose to medium dense, moist)

PIT performed at 1.0 feet below existing grades.
Measured 8 inches per hour.
PIT overdug to 4.0 feet below ground surface.
No caving observed at the time of excavation.
No groundwater seepage observed.

Pilot Infiltration Test PIT-2

Location: East portion of site

Approximate Elevation: 42'

Depth (ft)	Soil Type	Soil Description
0 - 0.5	-	Topsoil
0.5 - 2.7	SM	Brown to black poorly graded silty SAND (loose, moist to wet)
2.7 - 3.0	SM	Gray, orange iron oxide stained silty SAND (loose to medium dense, moist)

PIT performed at 1.5 feet below existing grades.
Measured 8 inches per hour.
PIT overdug to 3.0 feet below ground surface.
No caving observed at the time of excavation.
Static groundwater observed at 2.5 feet below existing grades during overdig.

Logged by: AES

Excavated on: September 23, 2022



PIT Logs

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Sep 2022

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