ADDENDUM No. 02

Cariboo Regional District: Request for Proposals: # 26-003:

Addendum number 02 is issued to the Cariboo Regional District Request for Proposal # 26-003 for the inclusion of a Geotechnical Survey. The updated RFP Timetable is shown in **RED** below.

1. CHANGE 1:

Geotechnical Report Attached

-END of Changes

All other terms and conditions as specified in the Request for Proposal shall remain the same.

Issued on Behalf of the Cariboo Regional District:

Larry Loveng

Manager of Procurement

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OCTO ENGINEERING INC.

Geotechnical Report

Octo Engineering Inc. (Practice #1000113)

Scott Wilson, P.Eng.

Submitted To**:** Cariboo Regional District

Octo File #: A26G-003

Re: 3038 Pigeon Rd 150 MH

Version	Date	Prepared By	Reviewed By	Notes/Revisions
0	2026-02-20	AA	SRW	For use

Reference Documents

1. Canadian Foundation Engineering Manual 5th Ed, Canadian Geotechnical Society, 2023
2. BC Building Code (2024) Part 4
3. Soils of the Lac La Hache-Clinton Area, British Columbia, Report No. 25, British Columbia Soil Survey 1980
4. Site Plan, Exton and Dodge Surveying

Introduction

We understand that the proposed development includes the construction of a new fire hall and new retaining wall. This report presents the results of our geotechnical investigation, with recommendations for design.

During our geotechnical investigation, a backhoe was used to dig test pits. Two test pits were excavated to a depth of 7 feet Below Grade (BG). The locations are shown in Figure 1. At the same time grab soil samples were collected from the test holes for additional testing in our lab. According to the available soil survey [3], the soil was expected to be Glacial Fluvial or till.

Figure 1 -Test Hole locations

TH	*Latitude*	*Longitude*	*Ground Elevation*
1	*52.105574°*	*-121.914967°*	*789m approx.*
2	*52.105427°*	*-121.915209°*	*788m approx.*

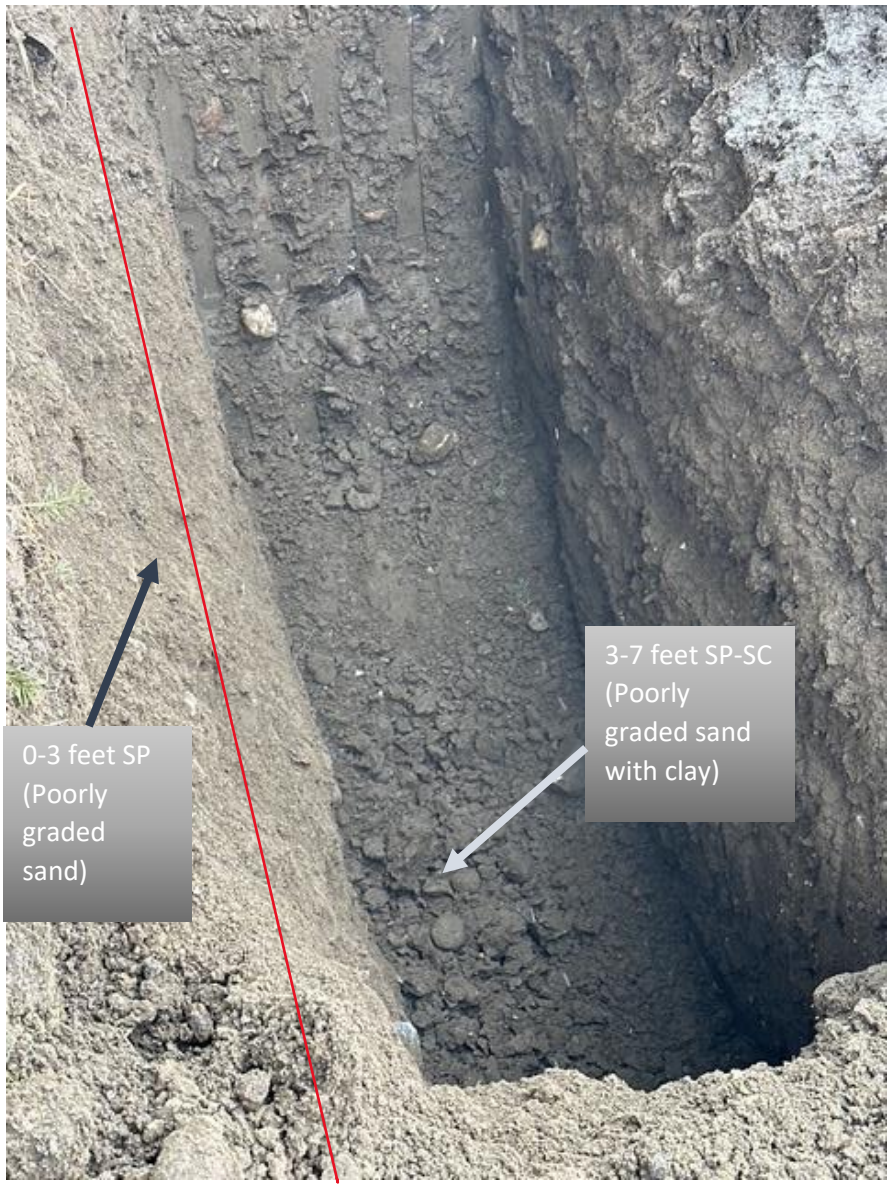
0-3 feet SP (Poorly graded sand)
3-7 feet SP-SC (Poorly graded sand with clay)

Figure 2 - TH 1

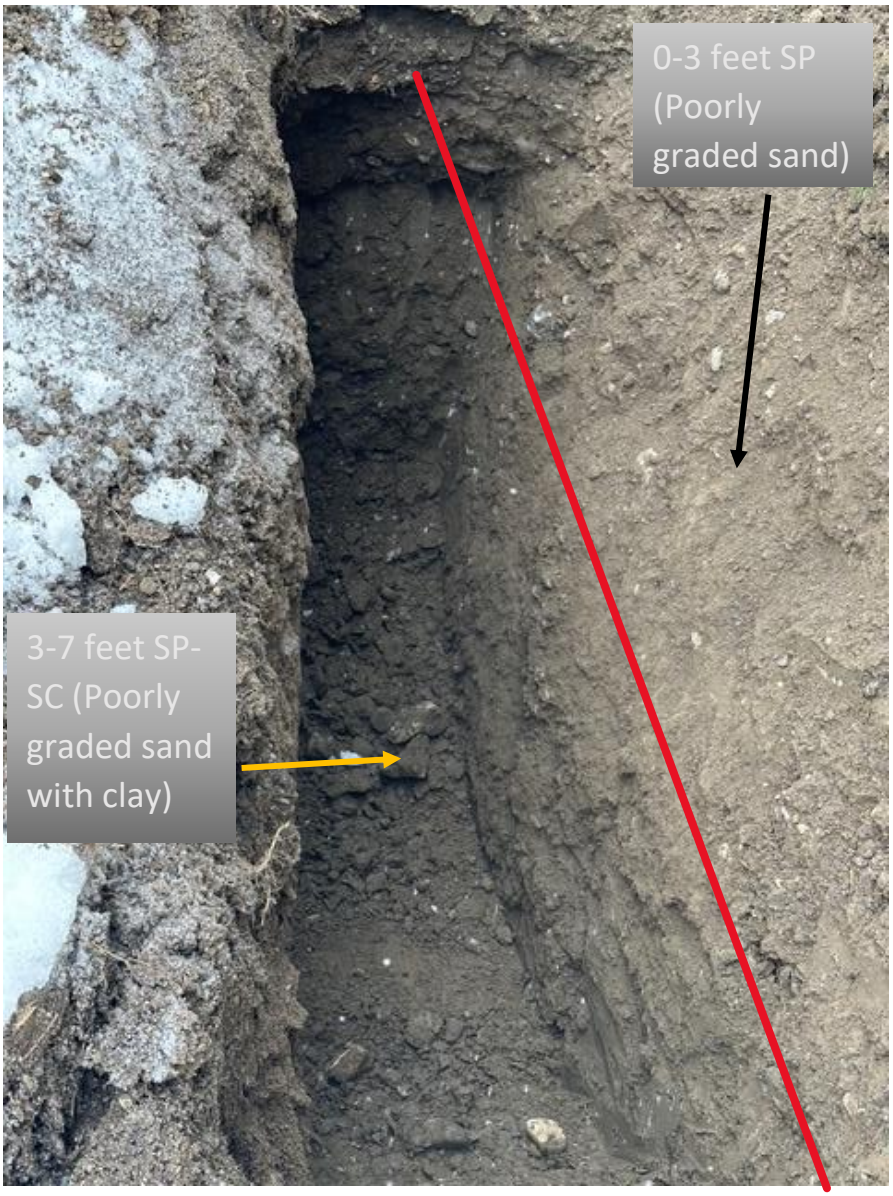
0-3 feet SP (Poorly graded sand)
3-7 feet SP-SC (Poorly graded sand with clay)

Figure 3 - TH 2

Discussion

The site is away from any known geohazard area, with a slope <10% climbing away from the Pigeon Road. The grab samples were sieve tested in accordance with ASTM C136 and with results below:

Test Hole	Description	USCS Class	Interpreted origin	Properties
1	-Poorly graded Sand (0-38"), - Poorly graded sand with clay (38-84")	SP or, SP-SC	glaciofluvial	Moist, Dense.
2	-Poorly graded Sand (0-38"), - Poorly graded sand with clay (38-84")	SP or, SP-SC	glaciofluvial	Moist, Dense.

The sieve results are attached.

Recommendations

- A suitable allowable soil bearing capacity for spread footings is 150 kPa SLS (or 225 kPa ULS). Use a minimum footing width of 600mm for strip footings and 900mm for pad footings.
- Using these bearing capacities, we estimate that the settlement of a footing placed on native ground will be less than 25mm.
- Provide at least 300 mm of soil cover over interior footings for confinement and at least 1.2 m cover for frost protection and confinement over exterior, perimeter footings measured from the base of the footing to the adjacent final ground or slab surface.
- For seismic design use site class D per Table 4.1.8.4.-A of BCBC.
- Protect foundation soil and footings from freezing during construction. Do not pour foundation concrete on frozen soil and protect foundations from freezing after they have been poured.
- A geotechnical engineer should be engaged to inspect the bearing surfaces prior to being covered by fill.
- Use a modulus of Subgrade Reaction of 100 MPa/m for Slab-on-Grade design.
- For Parking areas (if used), after stripping and proof-rolling the subgrade to 95% SPMDD, the following minimum pavement structures are recommended:

	Parking Areas	Heavy Duty Parking Areas & Access Roads
Hot-Mix Asphalt Surface	65mm	40mm
Asphalt Base Layer	-	70mm
20mm minus base course (crushed gravel)	100mm	100mm
75mm minus sub-base course (pit-run sand & gravel)	475mm	475mm

Asphalt should be compacted to at least 97% Marshall Density. Base & Sub-Base gravels should be compacted to 100% SPMDD.

- Structural fill for road subgrade and building areas should consist of pit run sand and gravel with less than 5% passing the No. 200 sieve. Structural fill should be placed in loose lifts no greater than 300 mm thick and compacted to 95% and 100% Standard Proctor (ASTM D698) Standard Proctor maximum dry density (SPMDD), in road and building areas, respectively. All granular materials should meet Master Municipal Specifications and should be tested and approved by a geotechnical engineer prior to delivery of the site.
- Permanent cut and fill slopes if required for the proposed development should be limited to a maximum slope of 2H:1V.
- Retaining walls must be designed to resist lateral soil pressures. To prevent hydrostatic pressures that may build up in the backfill, retaining walls should be backfilled with at least a 450 mm wide zone of free draining backfill. The free draining zone should extend to within 600mm of the final grade. The free draining backfill should be hydraulically connected to the footing drain system. Native granular (SP or SP-SC) soil used as backfill should be designed with the following parameters:

	Structural Fill	Native soil (SP or SP-SC)
Unit Weight (kN/m^3)	23	20
Angle of Internal Friction, Φ	37°	35°
*Coeff. Of Active Earth Pressure, K_a	0.255	0.275
*Coeff. Of Passive Earth Pressure, K_p	4.00	3.70
Coeff. Of Earth Pressure at Rest, K_o	0.40	0.42
Unfactored friction coefficient (footing against soil)	0.55	0.5

*To be increased by the EoR if the backfill slopes up away from the wall.

For retaining walls that are designed to allow rotation, active earth pressure may be used for the design. For rigidly tied structures, the at-rest pressure should be used, unless the wall can deflect enough (approx. 0.05% of the wall height) to mobilize the active pressure.

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Sieve Analysis ASTM C136

DATE:	Feb 19 2026				
Octo File #:	A26G-003			TESTED BY:	AA
SAMPLE #	TH 1 (Top 0-38")				
SAMPLE:	Air dried				
Sieve Number	**Diameter (mm)**	**Soil Retained (g)**	**Accumulative Retain (gm)**	**% Mass Retain**	**% Passing**
#4	4.75	95.0	95.0	8.0236	91.9764
#10	2	113.0	208.0	17.5676	82.4324
#20	0.850	80.0	288.0	24.3243	75.6757
#40	0.425	138.0	426.0	35.9797	64.0203
#60	0.250	211.0	637.0	53.8007	46.1993
#100	0.150	248.0	885.0	74.7466	25.2534
#140	0.106	153.0	1038.0	87.6689	12.3311
#200	0.075	89.0	1127.0	95.1858	4.8142
Pan	0.00	57.0	1184.0	100.0000	
% gravel	retained on #4	8.02			
% sand		87.16			
% fines	pass # 200	4.81			
Cu	4.04	Cc	0.81		
Cu		**4.04**			
Cc		**0.81**			
USCS Classification:		**SP (Poorly graded sand)**			
		Cu = D60/D10	4.04	D60 (mm)	0.385521
		Cc = D30^2/D10* D6	0.81	D30 (mm)	0.172661
				D10 (mm)	0.095487

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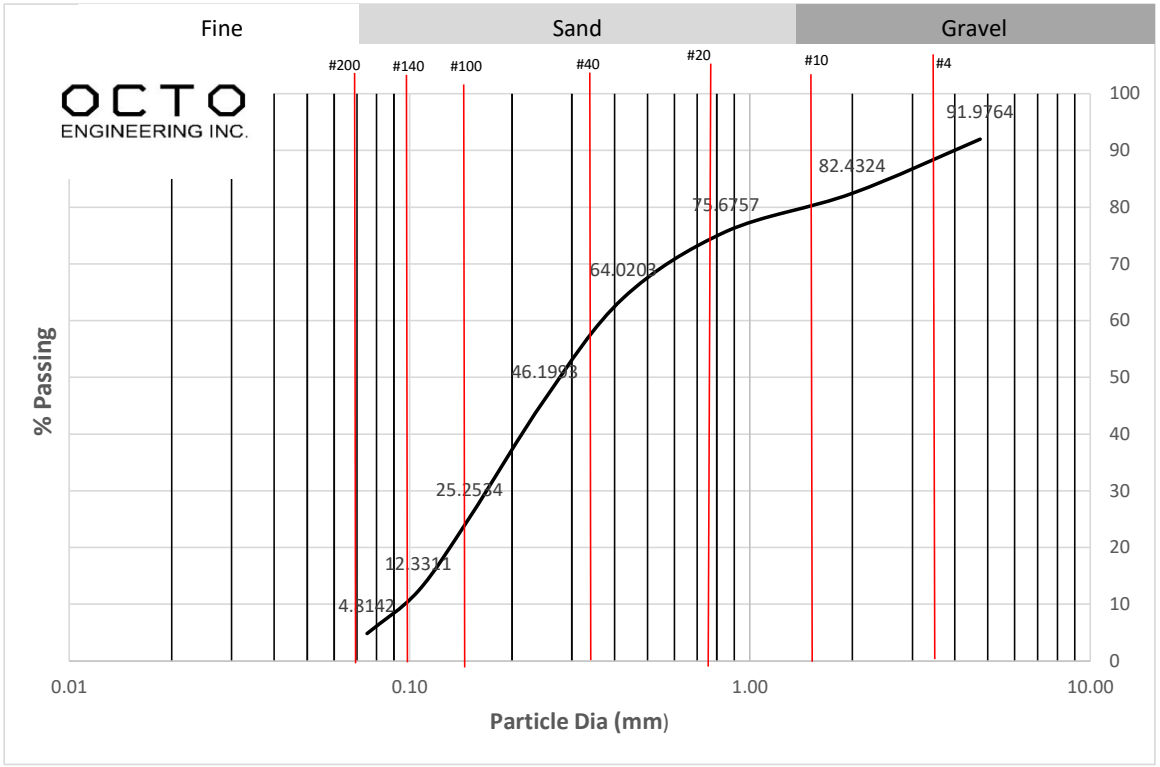

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Sieve Analysis ASTM C136

DATE:	Feb 19 2026				
Octo File #:	A26G-003			TESTED BY:	AA
SAMPLE #	TH 1 (Bottom 38"-84")				
SAMPLE:	Air dried				
Sieve Number	**Diameter (mm)**	**Soil Retained (g)**	**Accumulative Retain (gm)**	**% Mass Retain**	**% Passing**
#4	4.75	110.0	110.0	8.6682	91.3318
#10	2	129.0	239.0	18.8337	81.1663
#20	0.850	153.0	392.0	30.8905	69.1095
#40	0.425	129.0	521.0	41.0559	58.9441
#60	0.250	191.0	712.0	56.1072	43.8928
#100	0.150	196.0	908.0	71.5524	28.4476
#140	0.106	108.0	1016.0	80.0630	19.9370
#200	0.075	124.0	1140.0	89.8345	10.1655
Pan	0.00	129.0	1269.0	100.0000	
% gravel	retained on #4	8.67			
% sand		81.17			
% fines	pass # 200	10.17			
Cu	7.80	Cc	0.91		
Cu		**7.80**			
Cc		**0.91**			
USCS Classification:		**SP-SC (Poorly graded sand with clay)**			
		Cu = D60/D10	7.80	D60 (mm)	0.469147
		Cc = D30^2/D10* D6	0.91	D30 (mm)	0.160051
				D10 (mm)	0.060151

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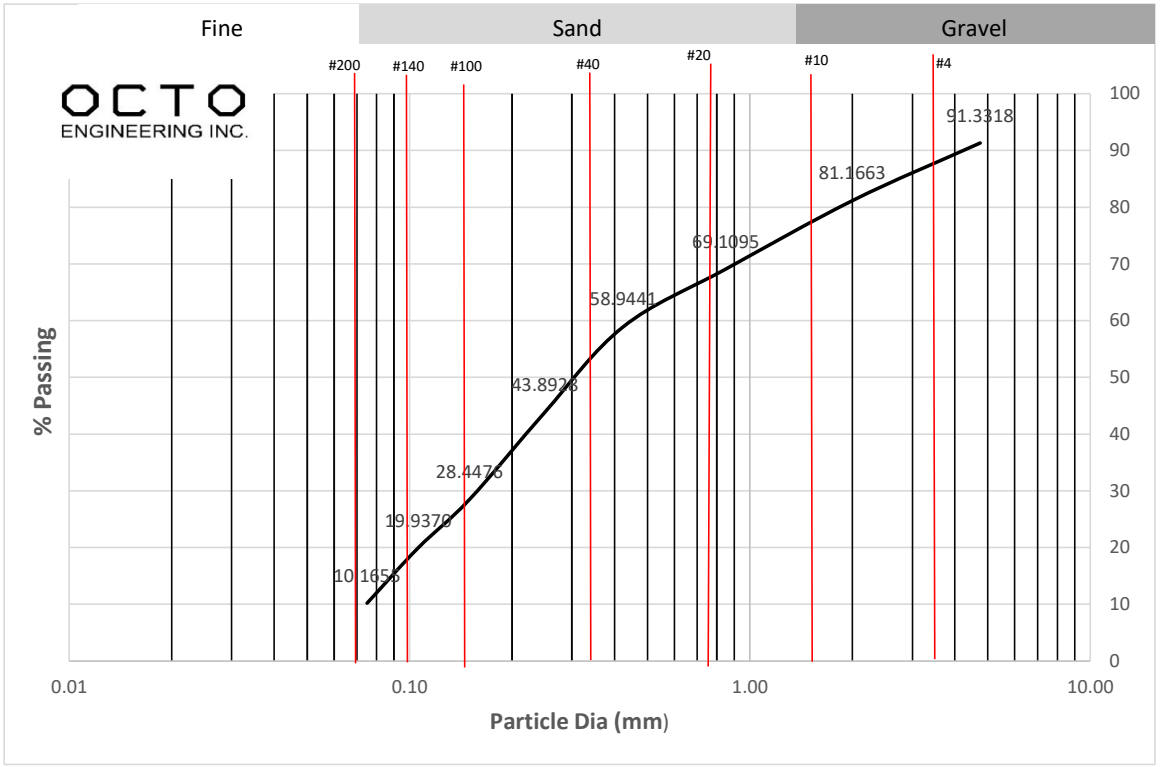

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Sieve Analysis ASTM C136

DATE:	Feb 19 2026				
Octo File #:	A26G-003			TESTED BY:	AA
SAMPLE #	TH 2 (Top 0- 36")				
SAMPLE:	Air dried				
Sieve Number	**Diameter (mm)**	**Soil Retained (g)**	**Accumulative Retain (gm)**	**% Mass Retain**	**% Passing**
#4	4.75	97.0	97.0	7.5604	92.4396
#10	2	125.0	222.0	17.3032	82.6968
#20	0.850	153.0	375.0	29.2284	70.7716
#40	0.425	156.0	531.0	41.3874	58.6126
#60	0.250	220.0	751.0	58.5347	41.4653
#100	0.150	261.0	1012.0	78.8776	21.1224
#140	0.106	120.0	1132.0	88.2307	11.7693
#200	0.075	96.0	1228.0	95.7132	4.2868
Pan	0.00	55.0	1283.0	100.0000	
% gravel	retained on #4	7.56			
% sand		88.15			
% fines	pass # 200	4.29			
Cu	4.75	Cc	0.79		
Cu		**4.75**			
Cc		**0.79**			
USCS Classification:		**SP (Poorly graded sand)**			
		Cu = D60/D10	4.75	D60 (mm)	0.473494
		Cc = D30^2/D10* D6	0.79	D30 (mm)	0.193640
				D10 (mm)	0.099656

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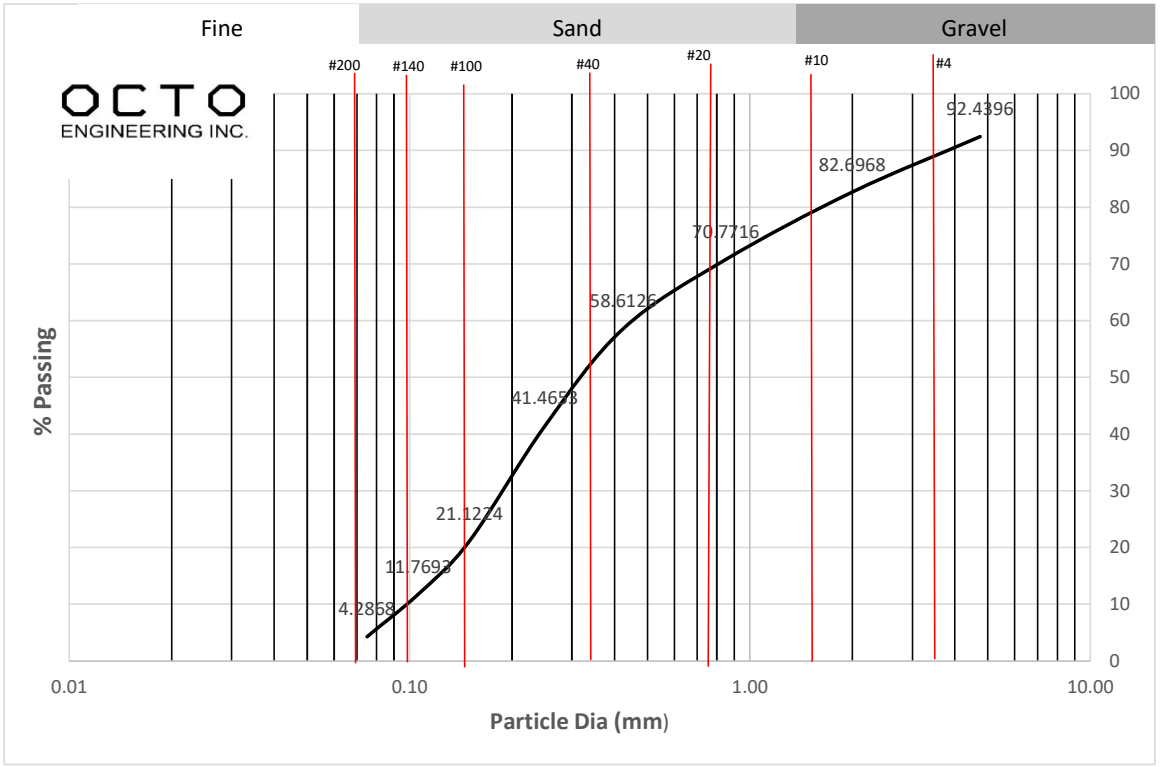

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Sieve Analysis ASTM C136

DATE:	Feb 19 2026				
Octo File #:	A26G-003			TESTED BY:	AA
SAMPLE #	TH 2 (Bottom 36"-84")				
SAMPLE:	Air dried				
Sieve Number	**Diameter (mm)**	**Soil Retained (g)**	**Accumulative Retain (gm)**	**% Mass Retain**	**% Passing**
#4	4.75	99.0	99.0	6.4706	93.5294
#10	2	153.0	252.0	16.4706	83.5294
#20	0.850	135.0	387.0	25.2941	74.7059
#40	0.425	299.0	686.0	44.8366	55.1634
#60	0.250	218.0	904.0	59.0850	40.9150
#100	0.150	205.0	1109.0	72.4837	27.5163
#140	0.106	139.0	1248.0	81.5686	18.4314
#200	0.075	128.0	1376.0	89.9346	10.0654
Pan	0.00	154.0	1530.0	100.0000	
% gravel	retained on #4	6.47			
% sand		83.46			
% fines	pass # 200	10.07			
Cu	8.38	Cc	0.85		
Cu		**8.38**			
Cc		**0.85**			
USCS Classification:		**SP-SC (Poorly graded sand with clay)**			
		Cu = D60/D10	8.38	D60 (mm)	0.530184
		Cc = D30^2/D10* D6	0.85	D30 (mm)	0.168537
				D10 (mm)	0.063244

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