St. Lawrence Testing & Inspection Co. Ltd.
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814 Second Street W., Phone (613) 938-2521
E-mail: slt@ontarioeast.net Fax (613) 938-7395

March 31, 2021

Mr. Scott Winch
City Wye'd Electric Ltd.
140 Reis Rd.
Kanata, ON
K0A 1L0

RE: Proposed New Building, 140 Reis Rd., Kanata, ON
Geotechnical Subsurface Investigation
Report No. 21C413

Dear Mr. Winch:

In accordance with verbal and e-mail correspondence received from you, this report is submitted, outlining the results of a geotechnical subsurface investigation carried out at 140 Reis Rd. in Kanata, ON.

A) DESCRIPTION OF FIELD WORK

Prior to drilling, service locates were done.

Drilling and sampling were done on March 11, 2021 using a CME 55 track drill from Eastern Ontario Diamond Drilling of Hawkesbury, ON. Supervision was by the undersigned geotechnical engineer.

A total of 2 boreholes were put down on diagonal corners of the proposed building. The borehole locations are shown on the plan attached to the report. The borehole elevations were referenced to a geodetic benchmark.

The boreholes were advanced by split spoon sampling. Standard Penetration tests were carried out along with the split spoon sampling. The samples were

placed in glass jars for later detailed lab examination and lab gradation tests. The results are found in the attached borehole logs and gradation data sheets.

B) STRATIGRAPHY

The stratigraphy is somewhat different at each borehole. Borehole 1 has 250mm of topsoil at the surface and was underlain by a brown, moist, loose sand and gravel with silt. This became compact below 1.2m. Sampler and auger refusal were noted on bedrock at 2.11m below the surface.

Borehole 2 had 410mm of gravel at the surface. This was underlain by the brown, moist, loose sand and gravel with silt. This became dense below 1.1m. A layer of cobbles was noted at 1.37m. We hit sampler refusal in the cobbles at 1.70m below grade. We then augered to refusal at 2.34m on the bedrock.

We noted that the water table at Borehole 1 was at 1.1m below the surface at the conclusion of drilling.

For the specific stratigraphy at each borehole, the borehole logs should be referred to.

C) GEOTECHNICAL DISCUSSION

1) General

It is our understanding that it is proposed to put up a one story building at this site such as shown on the attached sketch.

2) Foundations

The building can be supported on normal spread footings using a bearing capacity of 200 KPa S.L.S. and 300 KPa U.L.S. at or below 1.5m below the surface. The seismic factor is Site Class C.

3) Slab on Grade

A normal slab on grade can be designed.

The topsoil should be removed throughout. The base gravel should consist of 150mm of Granular "A" compacted to 95% Standard Proctor Density. Where additional gravel is needed, such as adjacent to the foundation wall, this can be Granular "A" or Granular "B" Type 2 and compacted in maximum 200mm lifts to 95% Standard Proctor Density. The final 150mm should be Granular "A" compacted to 95% Standard Proctor Density.

4) Parking Areas

In all the parking areas and roadways, the topsoil should be removed.

The subbase should consist of 300mm of Granular "B" Type 2 and the base should consist of 150mm of Granular "A", each compacted to 100% Standard Proctor Density.

The asphalt should consist of 50mm of HL3 compacted to 96% Marshall Density.

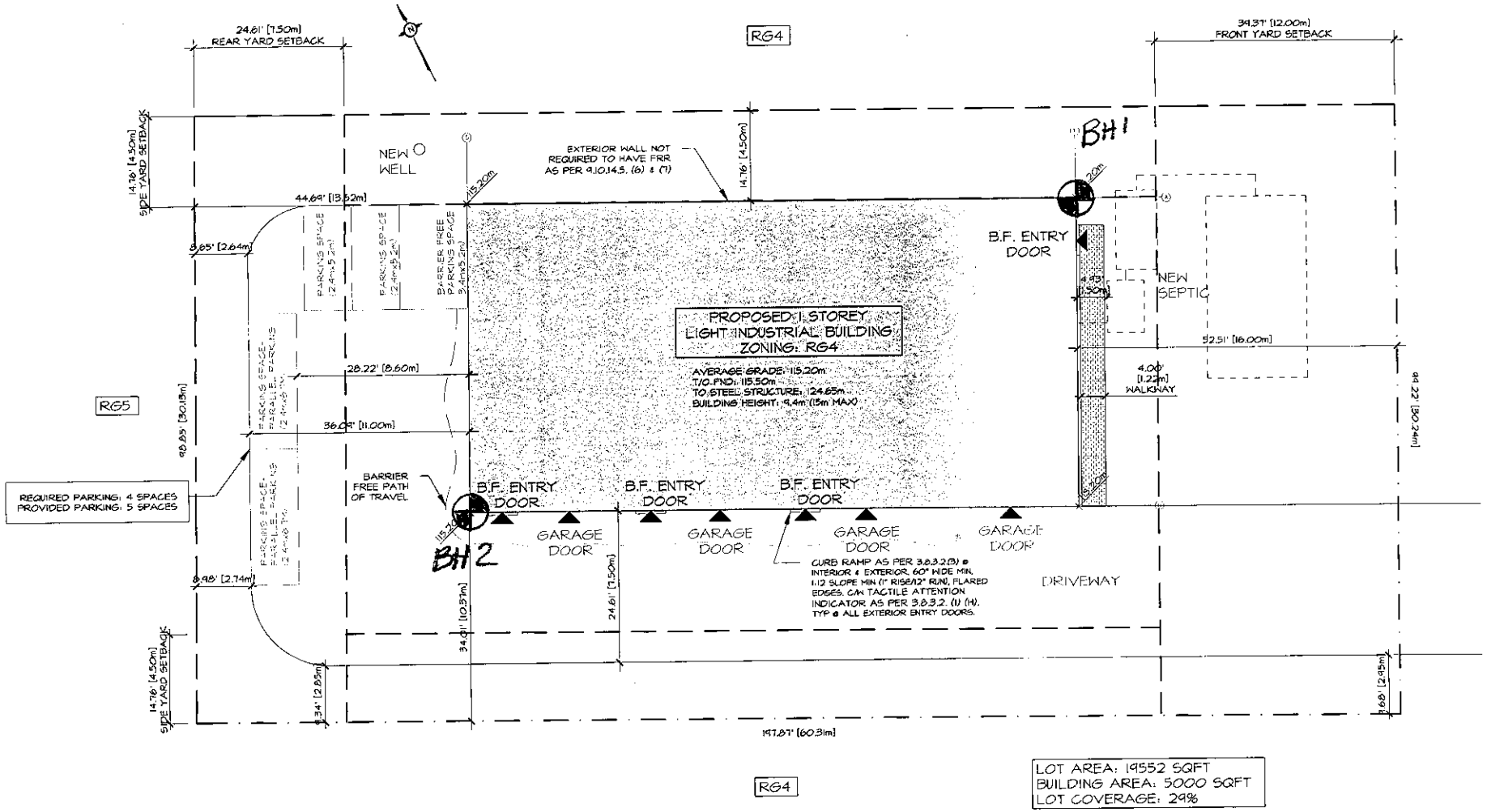
D) CONSTRUCTION CONTROL

In order to ensure that the recommendations of this report are adhered to, it is recommended that our firm be engaged to test, inspect and report accordingly.

Respectfully submitted
ST. LAWRENCE TESTING & INSPECTION CO. LTD.

G.G. McIntee, P. Eng.
GGM:mm

Attachments



SITE PLAN

PROPOSED LIGHT INDUSTRIAL BUILDING

St. Lawrence Testing
Report No 21C413
March 2021

1/8"=1'-0"

140 REIS ROAD

FEB 2021
FOR PERMIT

SP1.0

GRANT+HENLEY
DESIGN GROUP

St. Lawrence Testing & Inspection Co. Ltd.

OFFICE BOREHOLE RECORD

REPORT NO. 21C413

CLIENT City Wye'd Electric Ltd. BOREHOLE NO. 1

LOCATION 140 Reis Rd., Kanata, ON CASING HF Auger

DATE OF BORING March 11, 2021 DATE OF WL READING March 11, 2021 DATUM

DEPTH	ELEVATION / DEPTH	SOIL DESCRIPTION	STRAT. PLOT	WATER CONDITIONS	SAMPLES: CONDITION	TYPE	NUMBER	RECOVERY	N - VALUE	LABORATORY TESTS PERFORMED
0		Topsoil								
	.25	Sand and Gravel Brown, moist, loose, with silt becoming compact below 1.2m		1.1 ▽		SS	1	65	9	
1						SS	2	90	28	
2	2.11	Sampler and auger refusal								
3										

LAB TEST RESULTS

WATER CONTENT & ATTERBERG LIMITS. WP W WL

DYNAMIC PENETRATION TEST BLOWS PER FOOT. . .K . . .

0 20 40 60 80

APPENDIX

St. Lawrence Testing & Inspection Co. Ltd.

OFFICE BOREHOLE RECORD

REPORT NO. 21C413
BOREHOLE NO. 2
CASING HF Auger
DATUM

CLIENT City Wye'd Electric Ltd.
LOCATION 140 Reis Rd., Kanata, ON
DATE OF BORING March 11, 2021 DATE OF WL READING March 11, 2021

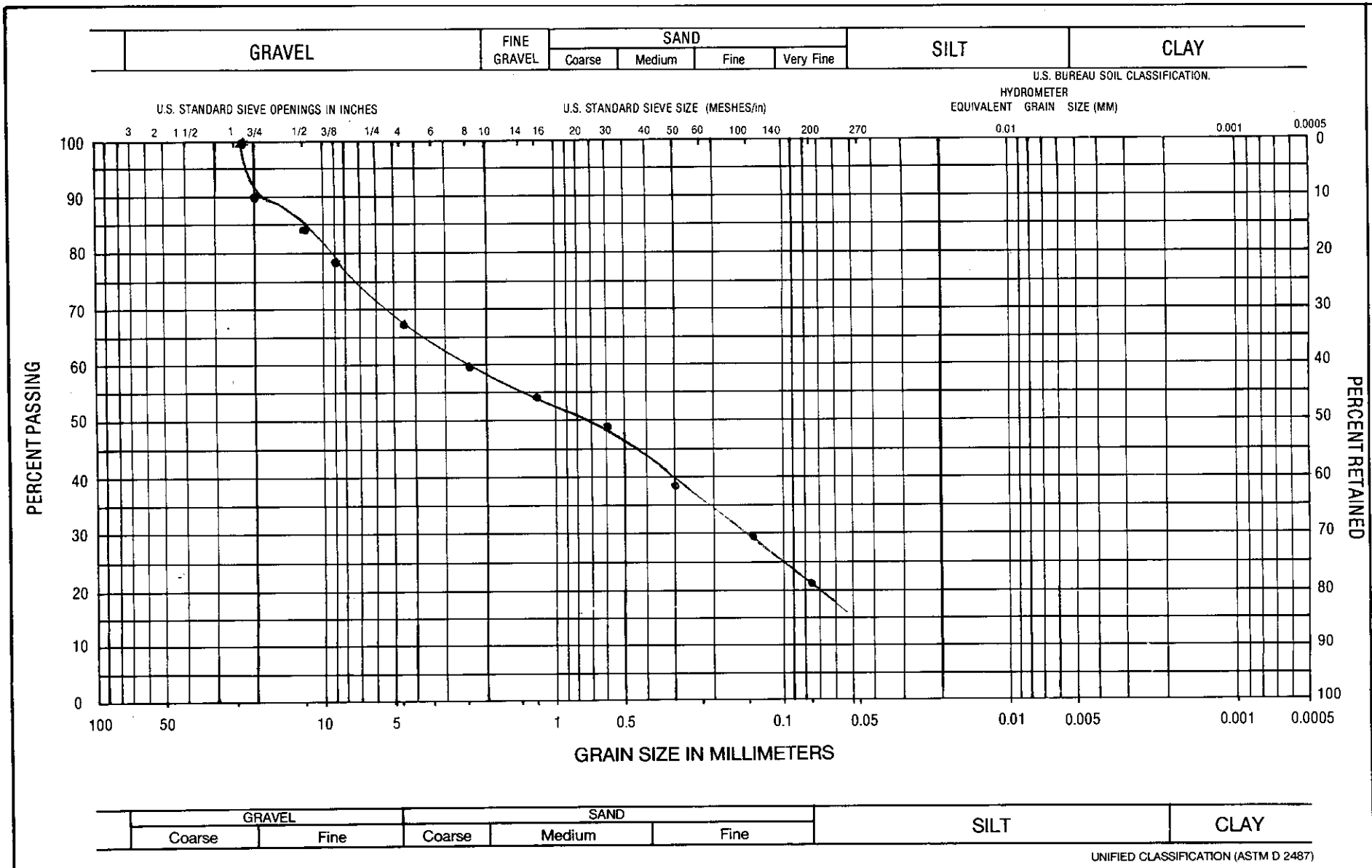
DEPTH	ELEVATION DEPTH	SOIL DESCRIPTION	STRAT. PLOT	WATER CONDITIONS	SAMPLES: CONDITION	TYPE	NUMBER	RECOVERY	N - VALUE	LABORATORY TESTS PERFORMED
0		Gravel Fill								
	.41	Sand and Gravel Brown, moist, loose with silt becoming dense below 1.1m				SS	1	70	31	
1										
	1.37	Cobbles Brown, dense				SS	2	0	50+	
2										
	2.34	Auger refusal								
3										

LAB TEST RESULTS

WATER CONTENT & ATTERBERG LIMITS.
WP W WL

DYNAMIC PENETRATION TEST BLOWS PER FOOT. . .K. . .
0 20 40 60 80

APPENDIX



GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		

UNIFIED CLASSIFICATION (ASTM D 2487)

BOREHOLE No.	SAMPLE No.	DEPTH	DESCRIPTION
1	1	0.76 to 1.37m	Sand and gravel with silt

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GRAIN SIZE DISTRIBUTION

REPORT NO. 21C213

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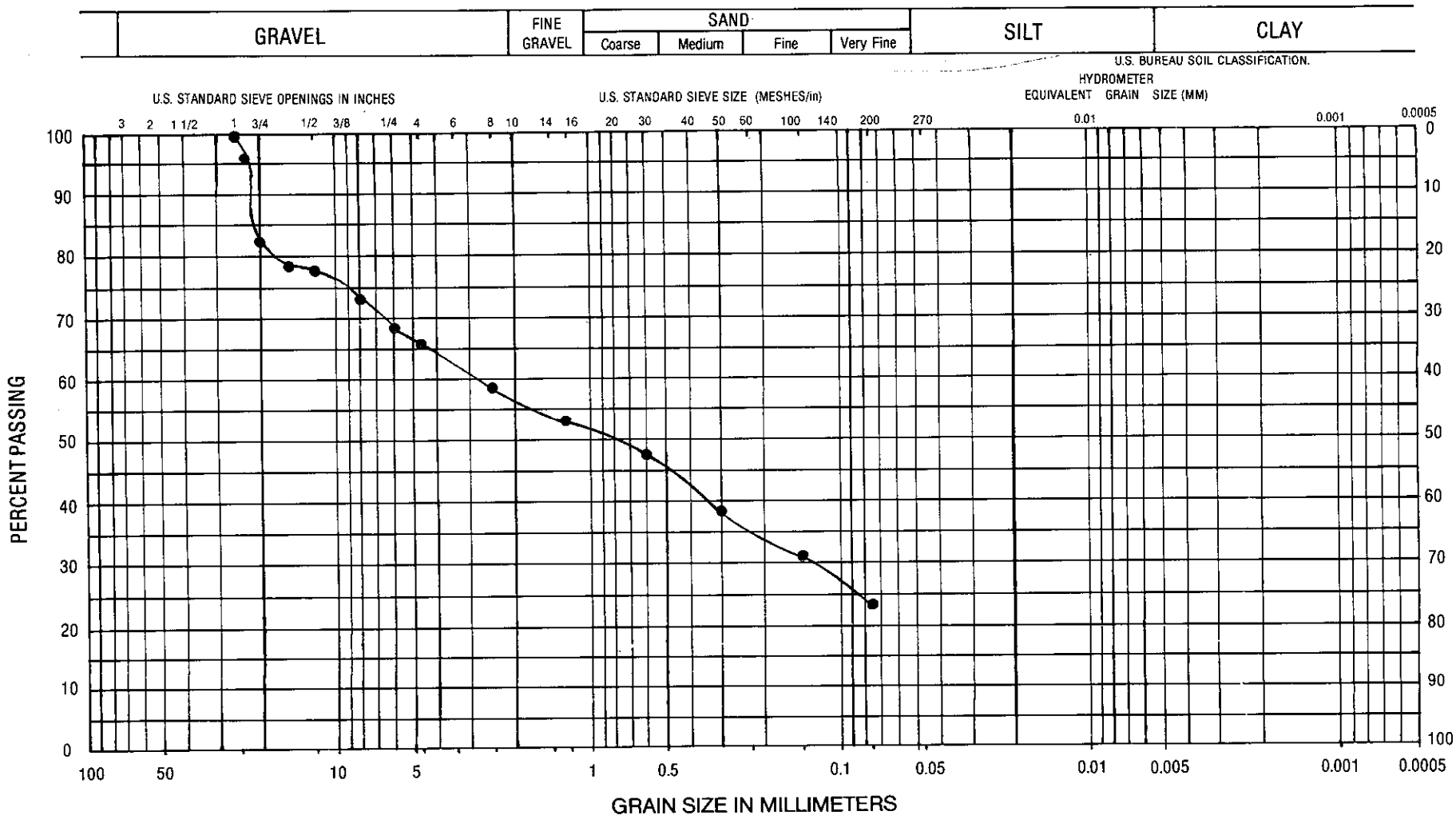
GRAIN SIZE DISTRIBUTION

REPORT NO. 21C413



GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		

UNIFIED CLASSIFICATION (ASTM D 2487)

BOREHOLE No.	SAMPLE No.	DEPTH	DESCRIPTION
1	2	1.52 to 2.13m	Sand and gravel with silt