THURBER ENGINEERING LTD.

December 10, 2020 File: 30175

Wallenius Wilhelmsen Solutions
#100, 820 Dock Road, Annacis Island
Delta, B.C.
V3M 6A3

Attention: Brent Moore

WALLENIUS WIHELMSEN SOLUTIONS ANNACIS TERMINAL
SIDE ONE RAIL EXTENSION
GEOTECHNICAL INVESTIGATION

Dear Brent:

Thurber has completed a geotechnical investigation for the above project. This report summarizes the results of the investigation and provides preliminary geotechnical recommendations. It is a condition of this letter that Thurber's performance of its professional services is subject to the attached Statement of Limitations and Conditions.

1. INTRODUCTION

The existing Side One rail is located along west side of the asphalt paved yard within the Wallenius Wilhelmsen Solutions (WWS) Annacis terminal, parallel to Annacis Parkway. Available historical aerial photos suggest that the rail was originally constructed in late 1970s or early 1980s. Various extensions occurred over the years. Currently, it has four sets of tracks, Track 1 (west) to Track 4 (east), running approximately in the north-south direction. The existing Track 4 has extended to Dock Road to the north since 1990 whereas the existing Tracks 1 to 3 are terminated approximately 500 m south of Dock Road. In this project, we understand that WWS plans to extend Tracks 1 to 3 to north to the same extent as Track 4.

Our scope of work in this phase of the project was to conduct a geotechnical investigation and provide preliminary geotechnical recommendations for design and construction of the rail extension in accordance to the latest standards by SRY Rail Link (SRY). Assessment of soil and groundwater contaminations is not within our scope of work. We can provide such assessment, if required.

2. PROGRAM OF WORK

Four test holes (TH20-1 to TH20-4) were drilled on September 25, 2020 using a truck-mounted drill rig operated by Southland Drilling Co. Ltd at locations selected by WWS. The approximate test hole locations are shown on the attached Dwg. 30175-1.

The test holes were advanced using solid-stem augers to depths of 6.1 m to 7.6 m. A dynamic cone penetration test (DCPT) profile was conducted at all test holes to depths of 6.3 to 8.7 m before they were drilled. The DCPT tip is similar in size and shape to the standard penetration

test (SPT) split-spoon sampler and is driven using the same hammer energy. The DCPT provides a qualitative estimate of in-situ density of granular soil and is useful for identifying stiffness and strength contrasts within and between soil strata.

The soil and groundwater conditions were logged in the field by a Thurber geotechnical engineer. Representative disturbed soil samples were collected from the continuous auger flights at regular intervals for moisture content testing and routine visual classification in our Vancouver laboratory.

Upon completion of drilling, the test holes were backfilled with drill cuttings and bentonite seals were placed in general accordance with BC groundwater protection regulations. The asphalt surface was patched with cold-mix asphalt.

3. SOIL AND GROUNDWATER CONDITIONS

The results of the investigation and laboratory testing are summarized on the attached test hole logs. The logs provide a complete, detailed description of the soils encountered and should be used in preference to the generalized descriptions given below.

The soil conditions encountered along the proposed extension generally comprise asphalt and concrete over granular fill underlain by deltaic sediments to the depths investigated. In general, the asphalt thickness was typically 50 mm, except for TH20-02 where the asphalt thickness was 75 mm. Below the asphalt, a 150 mm thick layer of concrete was encountered in TH20-1 to TH20-3. The concrete layer was absent at TH20-4. Below the asphalt and concrete, a 0.2 m to 0.6 m thick layer of sand and gravel fill was encountered. The sand and gravel fill was generally in a dense to very dense condition.

Below the sand and gravel fill, dredged sand fill was encountered to depths of 4.4 m at TH20-1 and 3.7 m at TH20-2 where a silt layer was encountered. In TH20-3 and TH20-4, we infer that the dredged sand fill extended to depths of 3.5 m and 2.8 m, respectively, where changes in the DCPT profiles were observed. The dredged sand fill was typically in a compact over loose to very loose condition. Based on our understanding, the dredged sand fill was placed circa 1949 as part of the reclamation of the Annacis Island.

Where present, the stiff sandy silt layer was typically about 1 m thick. Below the dredged sand fill or the silt, native river sand was encountered to the depths investigated. The native sand was typically in a compact condition.

Groundwater was not encountered in the test holes. The groundwater levels are generally anticipated to vary from depths of about 2.5 m to 4 m (El. 1.5 m to El. 0 m). Groundwater levels are expected to be heavily influenced by river levels and tidal fluctuations due to the close proximity to the Annacis Channel, as well as infiltration and drainage conditions.

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4. PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

4.1 General

We understand that the new tracks are required to be designed and constructed to meet the SRY's standards. SRY advised us that CN's specifications are generally consistent with SRY's standards. and that CN's "Engineering Specifications for Industrial Tracks" can be used where applicable. Accordingly, we have made reference to the CN specification dated January 31, 2019. Additional details are provided below.

According to SRY, the tracks are required to support E80 train loading. The rail height will be 175 mm (7 in.) The track bed below the rail should comprise the following:

- 175 mm (7 in.) deep tie
- Minimum 225 mm (9 in.) thick ballast below the tie
- Minimum 300 mm (12 in.) thick sub-ballast below the ballast

4.2 Subgrade

For preliminary design purposes, we have assumed that the finished grade of the new tracks will be similar to the existing grade i.e. there will be no significant change in site grades. Accordingly, the subgrade will be about 875 mm below the existing ground surface. Based on the available test hole information, we anticipate that the subgrade will be within the compact dredged sand fill.

For site preparation, we anticipate that the existing asphalt will be saw-cut along the west side of the existing Track 4 extension. Then the existing asphalt, concrete and sand and gravel fill, as well as the top of the dredged sand fill will be removed to expose the subgrade soil. the exposed granular subgrade should be compacted to at least 95% standard Proctor maximum dry density (SPMDD). For drainage purposes, the top of the subgrade should be sloped down from the centreline of each set of tracks at an inclination of 1:40 each way in accordance to the CN specification.

Provided that the subgrade is prepared as recommended, we consider it suitable to support E80 train loading.

4.3 Sub-Ballast

The minimum thickness for the sub-ballast should be 300 mm (12 in.). The sub-ballast should extend at least 1.2 m (4 ft.) from the edge of ballast.

A layer of triaxial geogrid, Tensar TriAX TX160 or approved equivalent, should be placed 150 mm below the top of the sub-ballast layer. Accordingly, we anticipate the sub-ballast to be placed in two, 150 mm thick lifts. The sub-ballast should be compacted to at least 95%SPMDD.

According to SRY, sub-ballast material should comprise well-graded minus 75 mm crushed base material in accordance to Type Well-Graded Base (WGB) in Section 202 of the 2020 BC Ministry of Transportation and Infrastructure (MoTI) Standard Specifications for Highway Construction. The gradation specification is provided below. Additional requirements for the WGB material can be found in the 2020 BC MoTI Standard Specifications for Highway Construction.

Sieve Size (mm)	Percent Passing by Weight (%)
75	100
37.5	60 – 100
19	35 – 80
9.5	25 – 60
4.75	20 – 40
2.36	15 – 30
1.18	10 - 20
0.300	3 – 10
0.075	0 – 5

4.4 Ballast (Crushed Gravel)

The minimum thickness for the sub-ballast should be 300 mm (12 in.). The gradation specification provided by SRY for a similar project on Annacis Island is summarized below. Additional information can be found in the CN specification.

Sieve Size (mm)	Percent Passing by Weight (%)
50	100
38.1	90 – 100
25.4	20 – 55
19	0 – 15
12.5	-
4.75	-
0.075	0 - 1

4.5 Estimated Settlement

SRY indicated that maximum allowable immediate and long-term settlements are 25 mm and 100 mm, respectively, and that the maximum allowable differential settlement is 25 mm. Based on the soil conditions encountered and the anticipated train loading, the anticipated total and differential settlements for the new tracks are expected to be below the respective maximum allowable values.

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5. CLOSURE

We trust that this information is sufficient for your needs. Should you require clarification of any item or additional information, please contact us at your convenience.

Yours truly,
Thurber Engineering Ltd.
Steven Coulter, M.Sc., P.Eng.
Review Engineer

2020-12-10

Charles Ng, M.Eng., P.Eng.
Associate, Project Engineer

Attachments: Statement of Limitations and Conditions (1 page)
Dwg. 30175-1 – Test Hole Location Plan (1 page)
Test Hole Logs (4 pages)

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STATEMENT OF LIMITATIONS AND CONDITIONS

1. STANDARD OF CARE

This Report has been prepared in accordance with generally accepted engineering or environmental consulting practices in the applicable jurisdiction. No other warranty, expressed or implied, is intended or made.

2. COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report, which is of a summary nature and is not intended to stand alone without reference to the instructions given to Thurber by the Client, communications between Thurber and the Client, and any other reports, proposals or documents prepared by Thurber for the Client relative to the specific site described herein, all of which together constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. THURBER IS NOT RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

3. BASIS OF REPORT

The Report has been prepared for the specific site, development, design objectives and purposes that were described to Thurber by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the Report, subject to the limitations provided herein, are only valid to the extent that the Report expressly addresses proposed development, design objectives and purposes, and then only to the extent that there has been no material alteration to or variation from any of the said descriptions provided to Thurber, unless Thurber is specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4. USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT THURBER'S WRITTEN CONSENT AND SUCH USE SHALL BE ON SUCH TERMS AND CONDITIONS AS THURBER MAY EXPRESSLY APPROVE. Ownership in and copyright for the contents of the Report belong to Thurber. Any use which a third party makes of the Report, is the sole responsibility of such third party. Thurber accepts no responsibility whatsoever for damages suffered by any third party resulting from use of the Report without Thurber's express written permission.

5. INTERPRETATION OF THE REPORT

a) Nature and Exactness of Soil and Contaminant Description: Classification and identification of soils, rocks, geological units, contaminant materials and quantities have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature. Comprehensive sampling and testing programs implemented with the appropriate equipment by experienced personnel may fail to locate some conditions. All investigations utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarizing such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and the Client and all other persons making use of such documents or records with our express written consent should be aware of this risk and the Report is delivered subject to the express condition that such risk is accepted by the Client and such other persons. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. If special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.

b) Reliance on Provided Information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to Thurber. Thurber has relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, Thurber does not accept responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of misstatements, omissions, misrepresentations, or fraudulent acts of the Client or other persons providing information relied on by Thurber. Thurber is entitled to rely on such representations, information and instructions and is not required to carry out investigations to determine the truth or accuracy of such representations, information and instructions.

c) Design Services: The Report may form part of design and construction documents for information purposes even though it may have been issued prior to final design being completed. Thurber should be retained to review final design, project plans and related documents prior to construction to confirm that they are consistent with the intent of the Report. Any differences that may exist between the Report's recommendations and the final design detailed in the contract documents should be reported to Thurber immediately so that Thurber can address potential conflicts.

d) Construction Services: During construction Thurber should be retained to provide field reviews. Field reviews consist of performing sufficient and timely observations of encountered conditions in order to confirm and document that the site conditions do not materially differ from those interpreted conditions considered in the preparation of the report. Adequate field reviews are necessary for Thurber to provide letters of assurance, in accordance with the requirements of many regulatory authorities.

6. RELEASE OF POLLUTANTS OR HAZARDOUS SUBSTANCES

Geotechnical engineering and environmental consulting projects often have the potential to encounter pollutants or hazardous substances and the potential to cause the escape, release or dispersal of those substances. Thurber shall have no liability to the Client under any circumstances, for the escape, release or dispersal of pollutants or hazardous substances, unless such pollutants or hazardous substances have been specifically and accurately identified to Thurber by the Client prior to the commencement of Thurber's professional services.

7. INDEPENDENT JUDGEMENTS OF CLIENT

The information, interpretations and conclusions in the Report are based on Thurber's interpretation of conditions revealed through limited investigation conducted within a defined scope of services. Thurber does not accept responsibility for independent conclusions, interpretations, interpolations and/or decisions of the Client, or others who may come into possession of the Report, or any part thereof, which may be based on information contained in the Report. This restriction of liability includes but is not limited to decisions made to develop, purchase or sell land.

Plotted: December 9, 2020

LEGEND:

TEST HOLE / DCPT

NOTES:
1. BASE PLAN TAKEN FROM GOOGLE EARTH.
2. TEST HOLE LOCATIONS ARE APPROXIMATE.

THURBER ENGINEERING LTD.

CLIENT: WALLENIUS WILHELMSEN SOLUTIONS

TEST HOLE LOCATION PLAN

ANNACIS TERMINAL
SIDE ONE RAIL EXTENSION
DELTA, BC

DESIGNED	DRAWN	APPROVED
AGW	MOM	

DATE	SCALE
DECEMBER 9, 2020	1:2500

PROJECT No.	DWG. No.	REV.
30175	1	0

CANCEL PRINTS BEARING EARLIER NUMBER

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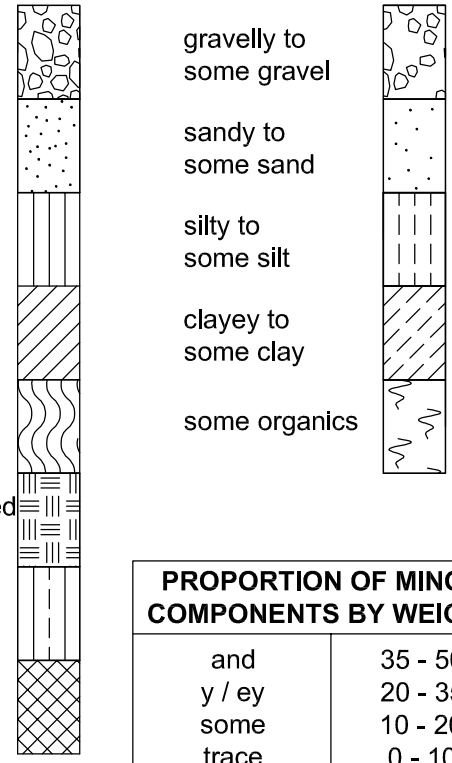
SYMBOLS AND TERMS
FOR SOIL DESCRIPTION AND TEST HOLE LOGS

BASIC SOIL SYMBOLS

Predominant Material	Secondary Material
GRAVEL	gravelly to some gravel
SAND	sandy to some sand
SILT	silty to some silt
CLAY	clayey to some clay
PEAT / ORGANICS	some organics
Undifferentiated BEDROCK	
ORGANIC SILT	
FILL / DEBRIS	

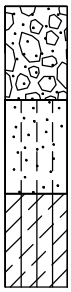


SYMBOL VARIATIONS - EXAMPLES (1)

SAND and GRAVEL

SAND, silty

SILT with some clay



PROPORTION OF MINOR COMPONENTS BY WEIGHT (2)

and	35 - 50%
y / ey	20 - 35%
some	10 - 20%
trace	0 - 10%

DENSITY OF GRANULAR SOILS

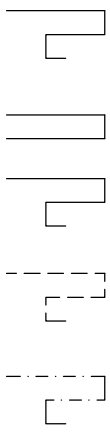
Description	SPT N (5) (6)
Very Loose	0 - 4
Loose	4 - 10
Compact	10 - 30
Dense	30 - 50
Very Dense	> 50

CONSISTENCY OF COHESIVE SOILS

Description	Undrained Shear Strength (kPa) (6)
Very Soft	< 12
Soft	12 - 25
Firm	25 - 50
Stiff	50 - 100
Very Stiff	100 - 200
Hard	> 200

PENETRATION TESTS

Dynamic Cone Penetration	
Standard Penetration	
Becker Closed Casing	
Becker Open Casing	
Bounce Chamber Pressure	



CLASSIFICATION BY PARTICLE SIZE

Name		Size Range (6) (mm) (3)	U.S. Standard Sieve Size Retained	U.S. Standard Sieve Size Passing
Boulders		> 200	8 inch	-
Cobbles		75 - 200	3 inch	8 inch
Gravel:	coarse	19 - 75	0.75 inch	3 inch
	fine	5 - 19	No. 4	0.75 inch
Sand:	coarse	2 - 5	No. 10	No. 4
	medium	0.4 - 2	No. 40	No. 10
	fine	0.075 - 0.4	No. 200	No. 40
Fines (Silt or Clay) (4)		< 0.075	-	No. 200

(1) Only selected examples of the possible variations or combinations of the basic symbols are illustrated.
(2) Example: SAND, silty, trace of gravel = sand with 20 to 35% silt and up to 10% gravel, by dry weight. Percentages of secondary materials are estimates based on visual and tactile assessment of samples.
(3) Approximate metric conversion.
(4) Fines are classified as silt or clay on the basis of Atterberg limits.
(5) SPT N values on test hole logs are uncorrected field values.
(6) Reference Canadian Foundation Engineering Manual 4th Edition, 2006.

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Sheet 1 of 1

LOG OF TEST HOLE

TEST HOLE NO. 20-1

LOCATION: See DWG. 30175-1
N 5448741, E 505721 (Est.)

TOP OF HOLE ELEV:

METHOD: Solid Stem Auger / DCPT

DRILLING CO.: Southland Drilling Co. Ltd.

INSPECTOR: AGW

THURBER

CLIENT: Wallenius Wilhelmsen Solutions

PROJECT: Annacis Terminal
Side One Rail Extension

DATE: September 25, 2020

FILE NO.: 30175

REVIEWED BY:

PENETRATION (blows/300 mm) | WATER CONTENT (%): ○ Disturbed ● Undisturbed | WATER LEVEL: Plastic Limit — Liquid Limit | SAMPLES: Disturbed, Undisturbed, No Recovery | UNDRAINED SHEAR STRENGTH (kPa): ◆ Peak ◇ Residual ◆ Remolded | GRAIN SIZE (%): ▲ Passing #200 sieve △ Passing #4 sieve | SOIL HEADSPACE READING (ppm): GASTECH reading, PID reading

DEPTH (m) | 10 20 30 40 50 60 70 80 90 100 | COMMENTS | SOILS DESCRIPTION

DEPTH (m)		COMMENTS	SOILS DESCRIPTION
0		Drilled down to 0.5 m depth for DCPT	ASPHALT (50 mm thick).
			CONCRETE (150 mm thick).
	GP-GM/SP-SM		Very dense, brown, moist SAND and GRAVEL with a trace of silt (FILL).
1	SP-SM		Compact over loose, brown, moist SAND with traces of gravel and silt.
2	SP		
3			- wet below 3.1 m depth - 150 mm thick seam of clay at 3.4 m depth
4	SM		
	ML		Stiff, grey, wet, sandy SILT with a trace of clay.
5	ML		
			Compact, grey, wet SAND with some silt and a trace of clay.
6			- alternating sand lenses with silty sand below 6.0 m depth
7	SM		
	SP		
8			End of hole at required depth. Hole open to 3.4 m depth. Water observed at 3.1 m depth upon completion of drilling.
9			
10			

LOG OF TEST HOLE (COORD EST) 30175.GPJ THURBER_MOM.GDT 9/12/20- THURBER MOM.GLB

Sheet 1 of 1

LOG OF TEST HOLE

TEST HOLE NO. 20-2

LOCATION: See DWG. 30175-1
N 5448673, E 505666 (Est.)

TOP OF HOLE ELEV:

METHOD: Solid Stem Auger / DCPT

DRILLING CO.: Southland Drilling Co. Ltd.

INSPECTOR: AGW

THURBER

CLIENT: Wallenius Wilhelmsen Solutions

PROJECT: Annacis Terminal
Side One Rail Extension

DATE: September 25, 2020

FILE NO.: 30175

REVIEWED BY:

PENETRATION (blows/300 mm) | WATER CONTENT (%): ○ Disturbed ● Undisturbed | WATER LEVEL: Plastic Limit — Liquid Limit | SAMPLES: Disturbed, Undisturbed, No Recovery | UNDRAINED SHEAR STRENGTH (kPa): ◆ Peak ◇ Residual ◆ Remolded | GRAIN SIZE (%): ▲ Passing #200 sieve △ Passing #4 sieve | SOIL HEADSPACE READING (ppm): GASTECH reading, PID reading

DEPTH (m) | 10 20 30 40 50 60 70 80 90 100

COMMENTS

Drilled down to 0.5 m depth for DCPT

SOILS DESCRIPTION

DEPTH (m)		
0		ASPHALT (75 mm thick).
		CONCRETE (150 mm thick).
		Very dense, brown, moist SAND and GRAVEL with a trace of silt (FILL).
1	SM	Compact over loose, brown, moist SAND with a trace to some silt and a trace of gravel.
2	SP-SM	
3		
4	ML	Stiff, grey, wet SILT with some sand to sandy and a trace of clay. - a trace of wood fragments at 3.7 m depth
5	ML	
	SP-SM	Compact, grey, wet SAND with a trace of silt.
6		End of hole at required depth. Hole open to 3.1 m depth. No water observed upon completion of drilling.
7		
8		
9		
10		

LOG OF TEST HOLE (COORD EST) 30175.GPJ THURBER_MOM.GDT 9/12/20- THURBER MOM.GLB

Sheet 1 of 1

LOG OF TEST HOLE

TEST HOLE NO. 20-3

LOCATION: See DWG. 30175-1
N 5448606, E 505617 (Est.)

TOP OF HOLE ELEV:

METHOD: Solid Stem Auger / DCPT

DRILLING CO.: Southland Drilling Co. Ltd.

INSPECTOR: AGW

THURBER

CLIENT: Wallenius Wilhelmsen Solutions

PROJECT: Annacis Terminal
Side One Rail Extension

DATE: September 25, 2020

FILE NO.: 30175

REVIEWED BY:

DEPTH (m) | PENETRATION (blows/300 mm) | WATER CONTENT (%): ○ Disturbed ● Undisturbed | WATER LEVEL: Plastic Limit — Liquid Limit | SAMPLES: Disturbed, Undisturbed, No Recovery | UNDRAINED SHEAR STRENGTH (kPa): ◆ Peak ◇ Residual ◆ Remolded | GRAIN SIZE (%): ▲ Passing #200 sieve △ Passing #4 sieve | SOIL HEADSPACE READING (ppm): GASTECH reading, PID reading

10 20 30 40 50 60 70 80 90 100

DEPTH (m)	COMMENTS		SOILS DESCRIPTION
0	Drilled down to 0.5 m depth for DCPT		ASPHALT (50 mm thick).
			CONCRETE (150 mm thick).
			Brown, dry to moist SAND and GRAVEL with a trace of silt (FILL).
1		SP-SM	Very loose to compact, brown-grey, dry to moist SAND with a trace to some silt and a trace of gravel.
2		SP	
3			- wet below 3.4 m depth
4		SM	
5		SM	
6			- 150 mm thick zone of sand with a trace of wood fragments at 6.4 m depth
7		SP	- 75 mm thick seam of silt and sand at 7.2 m depth
8			End of hole at required depth. Hole open to 3.1 m depth. No water observed upon completion of drilling.
9			
10			

LOG OF TEST HOLE (COORD EST) 30175.GPJ THURBER_MOM.GDT 9/12/20- THURBER MOM.GLB

Sheet 1 of 1

LOG OF TEST HOLE

TEST HOLE NO. 20-4

LOCATION: See DWG. 30175-1
N 5448517, E 505545 (Est.)

TOP OF HOLE ELEV:

METHOD: Solid Stem Auger / DCPT

DRILLING CO.: Southland Drilling Co. Ltd.

INSPECTOR: AGW

THURBER

CLIENT: Wallenius Wilhelmsen Solutions

PROJECT: Annacis Terminal
Side One Rail Extension

DATE: September 25, 2020

FILE NO.: 30175

REVIEWED BY:

PENETRATION (blows/300 mm) | WATER CONTENT (%): ○ Disturbed ● Undisturbed | WATER LEVEL: Plastic Limit – Liquid Limit | SAMPLES: Disturbed, Undisturbed, No Recovery | UNDRAINED SHEAR STRENGTH (kPa): ◆ Peak ◇ Residual ◆ Remolded | GRAIN SIZE (%): ▲ Passing #200 sieve △ Passing #4 sieve | SOIL HEADSPACE READING (ppm): GASTECH reading, PID reading

DEPTH (m) | 10 20 30 40 50 60 70 80 90 100

DEPTH (m)	COMMENTS		SOILS DESCRIPTION
0	Drilled down to 0.5 m depth for DCPT		ASPHALT (50 mm thick).
		GP-GM/SP-SM	Very dense, brown, moist SAND and GRAVEL with a trace to some silt (FILL).
1		SP-SM	Compact to loose, brown, dry to moist SAND with a trace of silt.
2		SP-SM	
3			- wet below 3.0 m depth
4		SP	
5		SP	
6			- 150 mm thick sandy silt lens at 6.7 m depth
7		SP	- grey below 6.9 m depth
8			End of hole at required depth. Hole open to 2.7 m depth. No water observed upon completion of drilling.
9			
10			

LOG OF TEST HOLE (COORD EST) 30175.GPJ THURBER_MOM.GDT 9/12/20- THURBER MOM.GLB