APPENDIX 3 SOUTH BORROW PIT SOIL TESTING RESULTS



199 Henlow Bay Winnipeg, MB R3Y 1G4 Email: jason.thompson@stantec.com



PROCTOR TEST REPORT

City of Winnipeg 110 - 1199 Pacific Ave. Winnipeg, MB R3E 3S8

CLIENT City of Winnipeg C.C. City of Winnipeg Water & Waste

ATTN: Ash Raichura PROJECT Cell 34 - 1777 Brady Road

PROJECT NO.

123316217

PROCTOR NO.

DATE SAMPLED

Site - South Borrow Pit

2023.Aug.16

DATE RECEIVED

2023.Aug.16

DATE TESTED

2023.Aug.18

INSITU MOISTURE 37.8 %

TESTED BY Madison Murphy

MATERIAL IDENTIFICATION

MAJOR COMPONENT

Subgrade SIZE Clay

DESCRIPTION

SUPPLIER

SOURCE

Existing Materials

COMPACTION STANDARD

COMPACTION PROCEDURE

RETAINED 4.75mm SCREEN

RAMMER TYPE **PREPARATION** OVERSIZE CORRECTION METHOD Standard Proctor, ASTM

D698

A: 101.6mm Mold,

Passing 4.75mm

Manual Moist

None N/A %

1450 DRY DENSITY (kg/m3) 1425 1400 1375 1350 20.5 23 25.5 28 30.5 18 33 **MOISTURE CONTENT (%)**

| TRIAL NUMBER | WET DENSITY (kg/m³) | DRY DENSITY (kg/m³) | MOISTURE CONTENT (%) |
|-----------------|------------------------|------------------------|-------------------------|
| 1 | 1653 | 1373 | 20.4 |
| 2 | 1732 | 1396 | 24.1 |
| 3 | 1825 | 1425 | 28.1 |
| 4 | 1790 | 1352 | 32.4 |
| | | | |

| | MAXIMUM DRY DENSITY (kg/m³) | OPTIMUM MOISTURE CONTENT (%) |
|--------------------|-----------------------------------|------------------------------------|
| CALCULATED | 1420 | 28.0 |
| OVERSIZE CORRECTED | | |

COMMENTS

Stantec Sample No. 2590. The material tested was obtained by the client from Cell 34.

Page 1 of 1

2023.Aug.18

Stantec Consulting Ltd.

REVIEWED BY:

Jason Thompson, C.E.T.



Stantec Consulting Ltd.

Stantec 199 Henlow Bay, Winnipeg, MB R3Y 1G4

Tel: (204) 488-6999



AASHTO T88 (ASTM D422) - PARTICLE-SIZE ANALYSIS OF SOILS

TO City of Winnipeg, Water and Waste **PROJECT**

BRRMF Cell 34

110 - 1199 Pacific Avenue

Winnipeg, Manitoba

R3E 3S8

PROJECT NO. 123316217

ATTN: Ash Raichura REPORT NO.

DATE TESTED: 2023.Aug.16

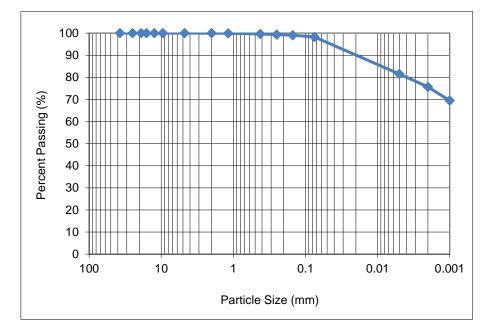
TESTED BY:

Kevin Hiraoka

DATE SAMPLED: 2023.Aug.10 SAMPLED BY:

City of Winnipeg

DATE RECEIVED: 2023.Aug.10 SUBMITTED BY: City of Winnipeg



| Gravel | | Sand | | Silt Clay Call | | Silt Clay Co | | Colloids |
|--------|--------|--------|------|----------------|------|--------------|--|----------|
| Glavei | Coarse | Medium | Fine | Sill | Clay | Colloius | | |
| 0.0 | 0.0 | 0.4 | 1.3 | 22.6 | 75.7 | 69.5 | | |

| SIEVE SIZE (mm) | % PASSING |
|--------------------|--------------|
| 37.5 | 100.0 |
| 25.0 | 100.0 |
| 19.0 | 100.0 |
| 16.0 | 100.0 |
| 12.5 | 100.0 |
| 9.5 | 100.0 |
| 4.75 | 100.0 |
| 2.00 | 100.0 |
| 1.18 | 99.9 |
| 0.425 | 99.6 |
| 0.250 | 99.3 |
| 0.150 | 99.1 |
| 0.075 | 98.3 |
| 0.005 | 81.5 |
| 0.002 | 75.7 |
| 0.001 | 69.5 |

COMMENTS:

Material tested was identified as Cell 34, South Borrow Pit.

REPORT DATE 2023.Aug.18

REVIEWED BY Guillaume Beauce, P. Eng.

Associate - Materials Testing Services

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of the test results is provided on written request. The data presented is for sole use of client stipulated above. Stantec is not responsible, nor can be held liable, for the use of this report by any other party, with or without the knowledge of Stantec.

Design with community in mind



Stantec Consulting Ltd.

199 Henlow Bay, Winnipeg, MB R3Y 1G4

Tel: (204) 488-6999



ASTM D4318 - LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS (LL **METHOD A - MULTIPOINT)**

City of Winnipeg, Water and Waste TO

110 - 1199 Pacific Avenue

Winnipeg, Manitoba

R3E 3S8

ATTN: Ash Raichura PROJECT BRRMF Cell 34

PROJECT NO. 123316217

REPORT NO.

DATE SAMPLED: 2023.Aug.10

DATE RECEIVED: 2023.Aug.10

DATE TESTED: 2023.Aug.14

SAMPLED BY:

City of Winnipeg

SUBMITTED BY: City of Winnipeg

TESTED BY:

Madison Murphy

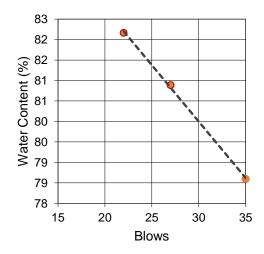
SAMPLE ID: Cell 34, South Borrow Pit

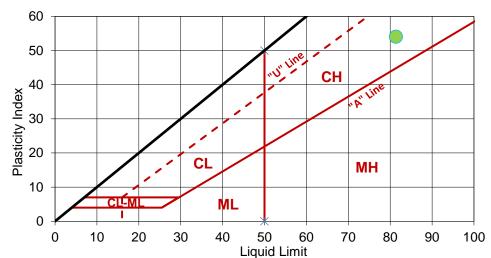
| | LIQUID LIMIT | | |
|--------|--------------|----|----|
| TRIAL | 1 | 2 | 3 |
| BLOWS | 35 | 27 | 22 |
| MC (%) | 79 | 81 | 82 |

TRIAL MC (%)

| PLASTIC LIMIT | | |
|---------------|----|--|
| 1 | 2 | |
| 27 | 28 | |

LIQUID LIMIT, LL PLASTIC LIMIT. PL PLASTICITY INDEX, PI AS REC'D MC (%)





COMMENTS: No comments.

REPORT DATE 2023.Aug.18

REVIEWED BY

Guillaume Beauce, P.Eng.

Associate - Materials Testing Services

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