

ADDENDUM No. 1

RFP No. 26-10

South Main Street Sidewalk Project

Due: February 19, 2026, at 2:00 P.M (local time)

The information contained herein shall take precedence over the original documents and all previous addenda (if any) and is appended thereto. **This Addendum includes at total of 33 pages.**

The Proposer is to acknowledge receipt of this Addendum No. 1, including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document should be included in submitted proposal:

- **Attachment B - General Declarations**
- **Attachment D - Prevailing Wage Declaration of Compliance**
- **Attachment E - Living Wage Declaration of Compliance**
- **Attachment G - Vendor Conflict of Interest Disclosure Form**
- **Attachment H - Non-Discrimination Declaration of Compliance**

Proposals that fail to provide these completed forms listed above upon proposal opening may be rejected as non-responsive and may not be considered for award.

I. CORRECTIONS/ADDITIONS/DELETIONS

(Addition) Minutes from the Pre-proposal Conference held on January 29, 2026 at 1:00 p.m. are attached to Addendum No. 1.

(Addition) Attendance sheet from the Pre-proposal Conference held on January 29, 2026 at 1:00 p.m. is attached to Addendum No. 1.

(Addition) The geotechnical investigation for S. Main Street Sidewalk project is attached to Addendum No. 1.

(Addition) Questions and Answers

Question 01: Was DTE removing the light poles and the overhead lines or just the light poles?
Answer: DTE is removing the light poles only.

Question 02: Can you provide the E. Schedule of Pricing/Cost in an excel format?
Answer: Yes. The spreadsheet will be shared for contractors to submit bids in a future addendum.

Question 03: Will overhead utilities be relocated prior to the start of construction or are they to remain in place?
Answer: Overhead utilities are to remain in place unless otherwise indicated on the plans.

Question 04: Can the engineer's estimate be shared?

Answer: No.

Question 05: Can the temporary easement be revised to include a staging area?

Answer: We can discuss this following award. Contractors should assume that temporary easements will not be revised.

Offerors are responsible for any conclusions that they may draw from the information contained in the Addendum.

Meeting Topic: South Main St Sidewalk Project Pre-Proposal Conference

Date: January 29, 2026

Time: 1:00PM

Location: Remote

Items to Discuss:

1. Introductions

See attached sign in sheet for attendance.

2. Project Overview

- a. Installation of approximately 22,000 square feet of concrete sidewalk and ramps, approximately 1,000 feet of soldier pile walls, 25 feet of retaining wall, with miscellaneous items, including excavation, aggregate base, tree removals, vinyl coated fence, storm sewer and structures, sign removals, electrical and signals work, and landscape restoration.

Vaughn walked through google earth and talked through the project description.

3. Line Items of Note

- a. Fibermesh sidewalk items
- b. Machine Grading, Modified – includes all earthwork, except earthwork for retaining walls and soldier pile walls.
- c. Soldier Pile Walls – includes all work shown on details, including excavation, aggregate base, drain tiles, and weep holes.
- d. CIP Retaining Wall – includes excavation and any fill required.
- e. Temporary Protective Fence – unique item which requires design submittal – intended to protect workers. Will be removed following construction. Not optional.
- f. Construction fence – installed entire length along sidewalks – used around trees as well.

Vaughn discussed the soldier pile walls at length.

4. Contract Overview (Special Attention to These Items)

- a. Coordination Clause
- b. Maintaining Traffic and Sequence of Construction – 2 distinct phases
 - i. Phase 1 sidewalk along east side of S. Main Street

- ii. Phase 2 sidewalk ramps at Scio Church
 - 1. Divided into A and B to maintain access
 - c. Progress Clause
 - d. Detailed Specifications
 - e. Easements – must be obtained prior to starting work.
- 5. Bid Schedule
 - a. Written Question Deadline – February 4, 2026 at 5:00PM.
 - b. Addendum will be issued week of February 11, 2026.
 - c. Proposals Due Date – February 19, 2026 by 2:00PM.
 - d. Selections/Negotiations – February/March 2026.
 - e. City Council Authorization – March/April 2026.
- 6. Project Schedule
 - a. Expected Substantial Completion on or before August 28.
 - b. Turf Restoration acceptance on or before September 30.
 - c. Pioneer High School Fair in June (exact date unknown) – must maintain existing sidewalks throughout
 - d. Restricted dates (No work. No Lane Closures.)
 - i. Memorial Day.
 - ii. Independence Day.
 - iii. Ann Arbor Art Fair – Thursday through Sunday (good time to switch phases).
 - iv. Labor Day.
 - v. U of M Football Home Games.
- 7. Project Coordination
 - a. DTE Lighting
 - b. Ann Arbor Golf and Outing
 - c. University of Michigan
 - d. Ann Arbor City Signals
 - e. City of Ann Arbor Storm
 - f. City of Ann Arbor Forestry (for tree removals)
- 8. Material Testing
 - a. Concrete
 - b. Class II backfill
 - c. Aggregate base
 - d. Structural elements for soldier pile walls
- 9. Survey and Staking
- 10. Permanent Street Signs
 - a. Contractor will remove signs indicated on plans.
 - b. Contractor will salvage and deliver to city where indicated on plans.
 - c. Proposed new signs furnished and installed by Ann Arbor.

Contractor Questions:

Poured in place solid pile wall versus pre-cast? WT to follow up.

Will coordination with DTE cause delays to schedule? WT said the city has been coordinating with DTE since day 1, but expect some "schedule bumps".

Is temporary fence shown on plans? Yes, but actual location may change as needed in the field.

Has city talked to any suppliers about prefab wall panels? Yes. Echo Infrastructure Solutions.

Where can materials be stored – H-piles, prefab walls, topsoil? WT to look into storage areas.

Notes and additional information:

Soil borings to be provided as part of the contract documents in Addendum 1.

The above notes represent the writer's understanding of the items discussed and conclusions reached at the meeting. Please notify the writer immediately if your understanding is different. A clarification or correction will be issued to all parties. This document will be considered accurate if no corrections or clarifications are received within one week of issuance.

Minutes by,

Wade Trim Associates, Inc.

Vaughn C. Martin, PE

Vice President

Author:typist

Job Number

Path/file

cc: All Attendees

[illegible]

Testing Engineers & Consultants, Inc.

City of Ann Arbor
Engineering and Public Services
301 E. Huron Street
Ann Arbor, Michigan 48104

GEOTECHNICAL INVESTIGATION

FOR

S. Main Street Sidewalk
S. Main Street From Ann Arbor-Saline Road
To W. Stadium Boulevard
Ann Arbor, Michigan

TEC Report: 63437

By:

Testing Engineers & Consultants, Inc.
1343 Rochester Road
P.O. Box 249
Troy, Michigan 48099-0249
(248) 588-6200

May 4, 2023



Testing Engineers & Consultants, Inc.

1343 Rochester Road • PO Box 249 • Troy, Michigan 48099-0249
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www.testingengineers.com

Engineering Client Success

TEC Report: 63437

Date Issued: May 4, 2023

Ms. Theresa Bridges, P.E., Project Manager
City of Ann Arbor
Engineering and Public Services
301 E. Huron Street
Ann Arbor, Michigan 48104

Re: Geotechnical Investigation For
S. Main Street Sidewalk
S. Main Street From Ann Arbor-Saline Road
To W. Stadium Boulevard
Ann Arbor, Michigan

Dear Ms. Bridges:

Please find enclosed the results of a geotechnical investigation performed at the above referenced site. This geotechnical report presents our field and laboratory results; engineering analysis; and our recommendations for design of retaining walls, foundation and sidewalks, as well as important construction considerations.

As you may know, Testing Engineers & Consultants, Inc. (TEC) has fifty-seven years of experience in Quality Control Testing and Construction Inspection. We would be pleased to provide these services on this project.

Should you have any questions regarding this report, please let us know. It has been a pleasure to be of service to you.

Respectfully submitted,
TESTING ENGINEERS & CONSULTANTS, INC.

A handwritten signature in blue ink, appearing to read "C. Suhan", is written over the typed name.

Carey J. Suhan, P.E.,
Vice President, Geotechnical
& Environmental Services

CJS/ln

Enclosure

cc: Wade Trim, Attn: Ms. Carmelle Tremblay, P.E.

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CONSULTING ENGINEERS & FULL-SERVICE PROFESSIONAL TESTING AND INSPECTION
OFFICES IN ANN ARBOR, DETROIT, AND TROY
FOUNDED IN 1966



Testing Engineers & Consultants, Inc.

Ms. Theresa Bridges, P.E.
City of Ann Arbor
May 4, 2023

TEC Report: 63437

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APPENDIX

TEST BORING LOCATION PLAN

LOGS OF TEST BORINGS

SIEVE ANALYSIS RESULTS

GENERAL NOTES FOR SOIL CLASSIFICATION

Testing Engineers & Consultants, Inc.

Ms. Theresa Bridges, P.E.
City of Ann Arbor
May 4, 2023

TEC Report: 63437

1.0 INTRODUCTION

This report presents the results of a geotechnical investigation for the sidewalk and retaining wall along the east side of S. Main Street between Ann Arbor-Saline Road and E. Stadium Boulevard in Ann Arbor, Michigan. Authorization to perform this investigation was given by Ms. Theresa Bridges in an email message dated April 14, 2023 and in accordance with TEC Proposal 060-23-102.

The purpose of this investigation was to obtain information necessary to determine basic engineering properties of soils at the site through a series of test borings and laboratory tests performed on the soil samples obtained during the field investigation. This information has been evaluated to provide the general recommendations for site development preparations, foundation requirements, pavement designs and other geotechnical information.

2.0 FIELD INVESTIGATION

Five test borings were drilled on the site at the locations shown on the Test Boring Location Plans. The locations are accurate to within a short distance of the locations shown on the location plan included in the appendix. The test borings were drilled on April 20 and 21, 2023, with truck-mounted auger equipment to a depth of 15 feet below the existing grade.

Ground surface elevations at the boring location were interpolated from the drawings provided by the client, entitled Boring Location Plan, indicating profile elevations. The existing grade is east of proposed wall. The elevations are shown on the boring logs in the appendix.

Drilling methods and standard penetration tests were performed in general accordance with the current ASTM D1452 and D1586 procedures, respectively. These procedures specify that a standard 2-inch O.D. split-barrel sampler be driven by a 140-pound hammer with a free fall of 30 inches. The number of hammer blows required to drive the split-barrel sampler through three successive 6-inch increments is recorded on the Test Boring Log. The first 6-inch increment is used for setting the sampler firmly in the soil and the sum of the hammer blows for the second and third increments is referred to as the "Standard Penetration Index" (N). N values were obtained with an automatic trip hammer.

From the standard penetration test a soil sample is recovered in the liner sampler tubes that are located inside the split-barrel sampler. Upon recovery of a soil sample, the liner tubes are removed from the split-barrel sampler and placed in a container which is sealed to minimize moisture losses during transportation to the laboratory. Standard penetration tests are usually made at depths of 2 ½, 5, 7 ½ and 10 feet and at 5-foot depth intervals thereafter. These

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2.0 FIELD INVESTIGATION (Cont'd)

parameters may vary for a given project depending on the nature of the subsoils and the geotechnical information required.

3.0 LABORATORY TESTING

The laboratory testing consisted of determining the unconfined compressive strength, the natural bulk density and the natural moisture content of the soil samples recovered in the liner sampler tubes. In the unconfined compression tests, the compressive strength of the soil is determined by axially loading a soil sample until failure is observed or 15% strain, whichever occurs first. The above referenced test data are recorded on the boring logs. Some test results may deviate from the norm because of variations in texture, imperfect samples, presence of pebbles and/or sand streaks, etc. The results are still reported although they may not be relevant.

The particle size distribution of two granular soil samples was also determined. The distribution provides soil classification information, structural support parameters and estimates of the permeability and permeability-related behavior of the granular soils. The results are included in the appendix.

Samples taken in the field are retained in our laboratory for 60 days and are then destroyed unless special disposition is requested by the client. Samples retained over a long period of time are subject to moisture loss and are then no longer representative of the conditions initially encountered.

4.0 GENERAL SUBSURFACE CONDITIONS

4.1 Subsoil Conditions

The soil conditions encountered in the borings are presented on the individual boring logs. Each log presents the soil types encountered at that location as well as laboratory test data, ground water data, and other pertinent information. Descriptions of the various soil consistencies, relative densities and particle sizes are given in the Appendix. Definitions of the terms and symbols utilized in this report may be found in ASTM D653.

Due to the sloped ground surface adjacent to S. Main Street, the five borings were drilled in the road pavement close to the edge of road. The hot mix asphalt (HMA) pavement thickness varied from 6 ½ to 7 inches. The pavement was underlain by medium compact to compact

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4.1 Subsoil Conditions (Cont'd)

crushed stone fill that ranged in thickness from 10 ¼ to 11 ¼ inches. Additional fill that consisted of loose to compact sand and clayey sand extended to depths of 8.3 and 7 feet below existing pavement surface at Boring Nos. 1 and 2, respectively.

The underlying native soil was generally loose to medium compact sand that extended to depths ranging from 2.2 to 3.4 feet below existing pavement surface at Boring Nos. 3 through 5 and to a depth of 9 feet at Boring No. 1. The native sand and sand fill were underlain by plastic to extremely stiff clay with some silt that extended to a depth of 12 feet at Boring No. 5 and to the terminal depth of the other borings. A wet sand seam was encountered in the clay at Boring Nos. 3 and 4 at a depth of 13 feet. At Boring No. 5, the clay was underlain by medium compact clayey sand with some gravel.

Standard penetration values range from 8 to 45 blows per foot with unconfined compressive strength of 2,060 to 11,450 pounds per square foot (psf). Bulk densities range from 112 to 143 pounds per cubic foot with moisture contents of 3 to 17 percent of the dry weight of the soil.

4.2 Ground Water Observations

Water level readings were taken in the bore holes during and after the completion of drilling. These observations are noted on the respective Test Boring Logs. Ground water was first encountered during drilling at Boring Nos. 1, 3 and 4 at depths ranging from 8'4" to 13 feet below existing pavement surface. After completion of drilling and removal of the augers, water was measured at a depth of 13 feet at Boring Nos. 3 and 4. No water was noted in Boring No. 1 after completion of drilling. At Boring Nos. 2 and 5, no water was noted either during drilling or after completion of drilling.

5.0 ANALYSIS AND RECOMMENDATIONS

5.1 Proposed Development

The proposed development is to consist of the construction of a new sidewalk along the east side of S. Main Street from Ann Arbor-Saline Road (Station 0+00) to E. Stadium Boulevard (Station 27+25). Due to the grade changes, a retaining wall will be constructed along the route of the new sidewalks. The bottom of the retaining wall will range in depth from existing ground surface to 4 feet below existing ground surface and about 4 feet below final grade.

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City of Ann Arbor
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5.2 Ground Water Conditions

The position of water levels found in test borings may vary somewhat depending on seasonal precipitation. At the level encountered in the borings, it should present no significant problems for design or construction of foundations and sidewalk pavement.

Any ground water encountered should be controllable by pumping from properly prepared sumps or direct pumping from excavations.

5.3 Recommended Earthwork Operations

The soil conditions are generally favorable along the route of the proposed sidewalk. At the south half of the route at Boring Nos. 1 and 2 the ground is underlain by sand fill but the upper 1 ½ to 4 ½ feet of the fill appears to be medium compact to compact in density.

We expect that the sidewalk will generally follow the contour of the existing ground but at the south end of the sidewalk route, approximately 2 to 3 feet of engineered fill will be placed to raise the existing grade to final grade. Some minor undercutting will be required in a couple of areas.

All the surface vegetation and topsoil should be removed prior to the site being graded. The resulting subgrade should be inspected by a geotechnical engineer to determine if the subgrade soils are suitable to remain in place. The site should then be rolled with a vibrating roller to consolidate the loose sand. This should be followed by a proof roll to identify soft or yielding areas. At the time of drilling, the moisture contents of the sand subgrade appeared to be at or within a few percentage points of the anticipated optimum moisture contents. The soils should remain stable under proof roll operations. It may be possible to stabilize soft areas with crushed stone or concrete. Soft spots that cannot be stabilized should be removed and replaced with compacted engineered fill. We recommend that the site preparation extend 3 feet beyond the pavement limits.

Engineered backfill required for construction excavations or fill required to achieve desired grades should preferably consist of clean and well graded granular soils. On-site granular material should be satisfactory for use, particularly for balancing and grading the site. Fill should be placed in uniform layers not more than 9 inches in thickness with the soils in each layer compacted to a minimum of 95% of the maximum density as determined by ASTM D1557. Fill should be at approximately the optimum moisture content during placement and compaction. Furthermore, frozen material must not be used as fill and fill should not be placed on frozen ground.

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5.3 Recommended Earthwork Operations (Cont'd)

Since the upper soils are primarily sands and clays, lateral support structure or side sloping with a minimum 1H:1V ratio will be required for anticipated excavations. Soils exposed in the bases of all satisfactory foundation excavations should be protected against any detrimental change in conditions such as from disturbances, rain or freezing. Surface run-off water should be drained away from the excavations and not be allowed to pond. If possible, all footing concrete should be placed the same day the excavation is made. If this is not possible, the footing excavations should be adequately protected.

5.4 Retaining Wall Recommendations

The retaining wall foundations should bear on soil deposits that have adequate strength to develop bearing capacity and sufficient stiffness to limit settlement for reasonably-sized footings with the anticipated loads. Local building codes and climatic conditions require that exterior foundations be placed at a minimum depth of 3 ½ feet below finished grade to provide for adequate frost protection. Regardless of the loads, the foundations must be larger than the superstructure they support along with construction tolerances.

The native site soils are acceptable for support of the proposed retaining wall on shallow foundations. At the anticipated depths, the foundations will be bearing on medium compact to compact native sand or compact sand fill. Typically, foundations should not bear on existing fill, but at Boring Nos. 1 and 2, the upper 3 feet of the fill appears to be well compacted. About 3 feet of fill will be placed to raise the final grade from station 2+00 to station 7+50. The retaining wall foundations will be bearing in the upper 1 foot of the existing fill. If more than normal long term settlement can be tolerated, the fill may remain in place. Foundations can be designed for a maximum net allowable bearing pressure of 3,000 psf. The recommended design bearing pressure should provide a factor of safety of about 2.5 to 3 against shear failure and limit differential settlements along the wall to less than ¾ inch. The height of the retaining wall will be about 3 feet above final grade.

Low (less than 10 feet) retaining walls which are free to rotate about their base should be designed to resist the (lower) active pressure from the chosen backfill. To minimize the lateral earth pressure, the walls should be backfilled with clean sand fill. Material meeting MDOT Class II grading requirements or approved alternate should suffice. Care should be exercised to limit the compaction of the backfill in order to avoid overstressing the wall. Light compaction equipment and thin fill lifts should be used.

To resist the active lateral pressure imposed by the granular fill, the walls should be designed against the pressure from a liquid with an equivalent fluid weight of 40 pounds per cubic foot (pcf). This value assumes that a properly installed and maintained longitudinal drain and

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Ms. Theresa Bridges, P.E.
City of Ann Arbor
May 4, 2023

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5.4 Retaining Wall Recommendations (Cont'd)

weepholes will eliminate the water pressure on the wall. A 12-inch impervious layer should be placed on top of the granular backfill to minimize surface water infiltration.

5.5 Sidewalk Pavement Recommendations

The subgrade resulting from the site preparation, as outlined in the recommended earthwork operations section, will provide a fair to good subgrade for support of pavements.

For the proposed sidewalk the following section is recommended:

Asphalt Pavement

- 1 ½ inch bituminous concrete top course (MDOT 36A)
- 1 ½ inch bituminous concrete leveling course (MDOT 13A)
- 6 inches untreated aggregate base (MDOT 21AA)

Concrete Pavement

- 4 inches PCC
- 6 inches of untreated aggregate base (MDOT 21AA)

The pavement should be properly crowned and shaped in order to provide effective surface drainage and prevent water ponding. A 1.5 percent slope is recommended.

The pavement recommendations presented above are intended to provide a serviceable pavement for an extended period of time. However, all pavements show deterioration with time and require regular maintenance such as occasional repairs of cracks and pot holes. The need for such maintenance efforts is not necessarily indicative of premature pavement failure. The serviceable life of the pavement can be substantially reduced if maintenance and minor repair is not performed in a timely manner.

6.0 DESIGN REVIEW AND FIELD MONITORING

The evaluations and recommendations presented in this report relative to site preparation, pavements and retaining wall foundations have been formulated on the basis of assumed and provided data relating to the location, type and finished grades for the proposed structure and adjacent areas. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsoil conditions.

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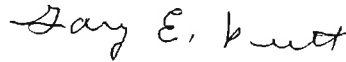
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City of Ann Arbor
May 4, 2023

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6.0 DESIGN REVIEW AND FIELD MONITORING (Cont'd)

When the plans are finalized, a consultation should be arranged with us for a review to verify that the evaluations and recommendations have been properly interpreted.

Soil conditions at the site could vary from those generalized on the basis of test borings made at specific locations. It is therefore recommended that Testing Engineers & Consultants, Inc. be retained to provide soil engineering services during the site preparation, pavement and foundation phases of the proposed project. This is to observe compliance with the design concepts, specifications and recommendations. Also, this provides opportunity for design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.



Gary E. Putt, P.E.
Senior Project Engineer



Carey J. Suhan, P.E.
Vice President, Geotechnical
& Environmental Services

GEP/CJS/ln

I:\gs\Job Files\63400-63499\63437 City of AA-S Main St Sidewalk\63437.doc

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Ms. Theresa Bridges, P.E.
City of Ann Arbor
May 4, 2023

TEC Report: 63437

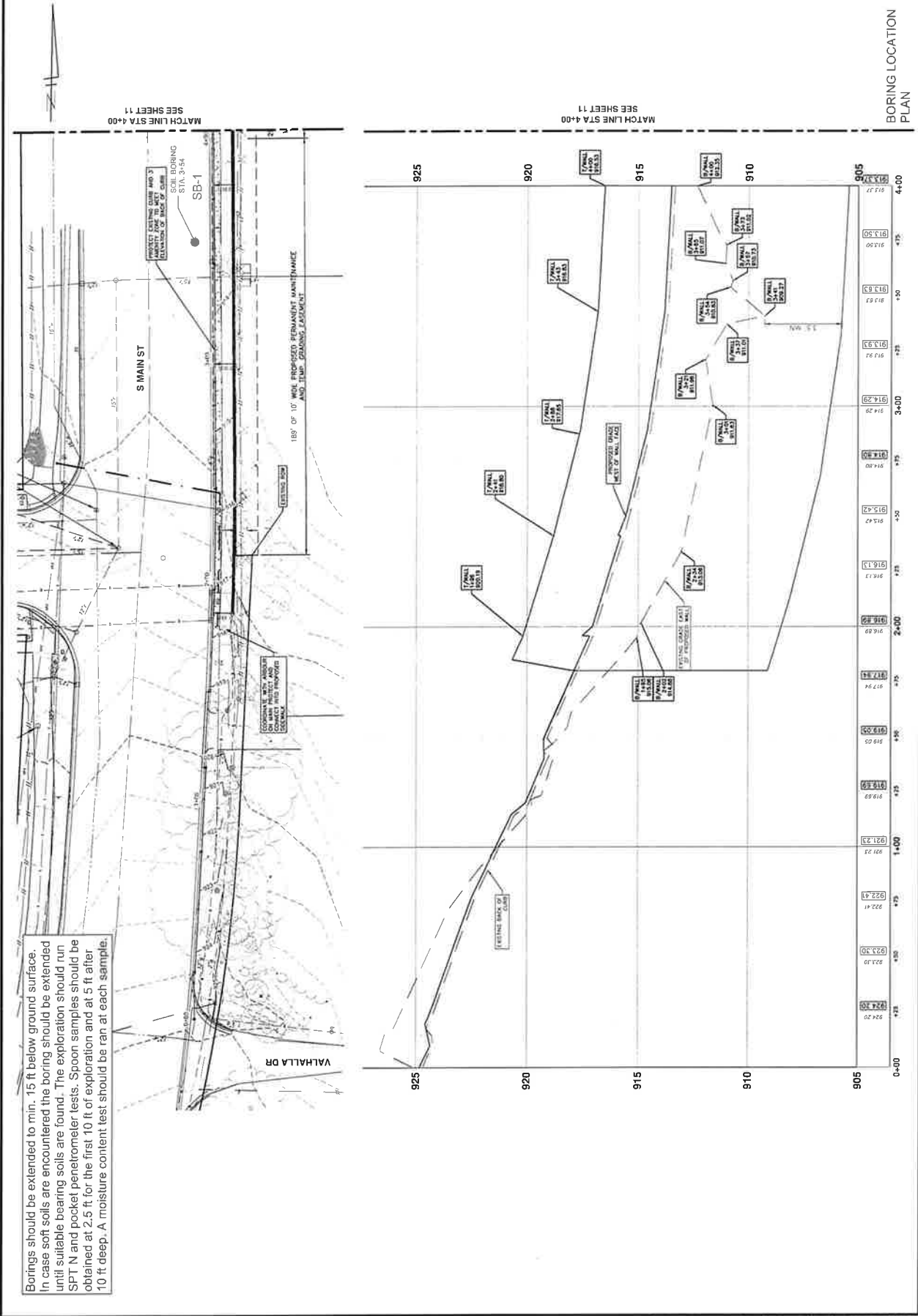
APPENDIX

Test Boring Location Plans

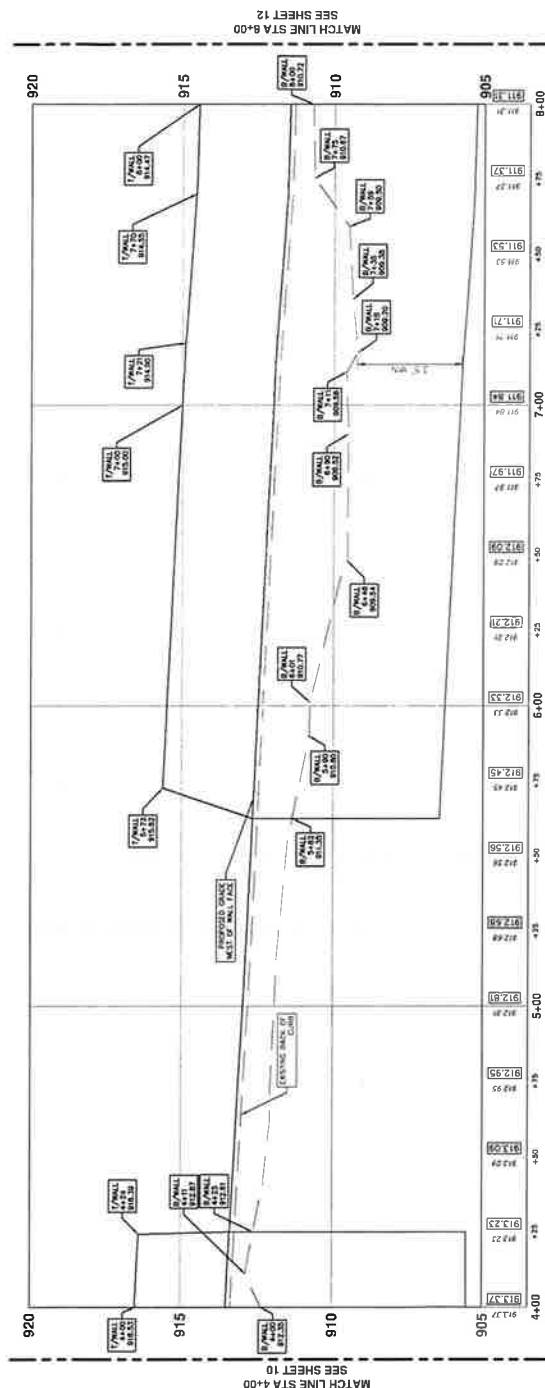
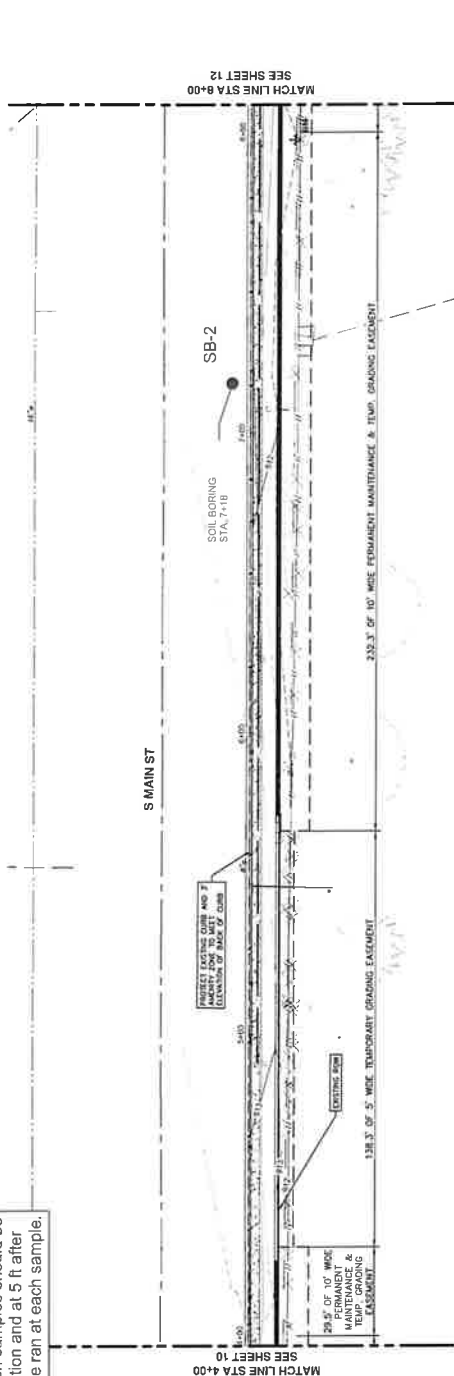
Logs Of Test Borings

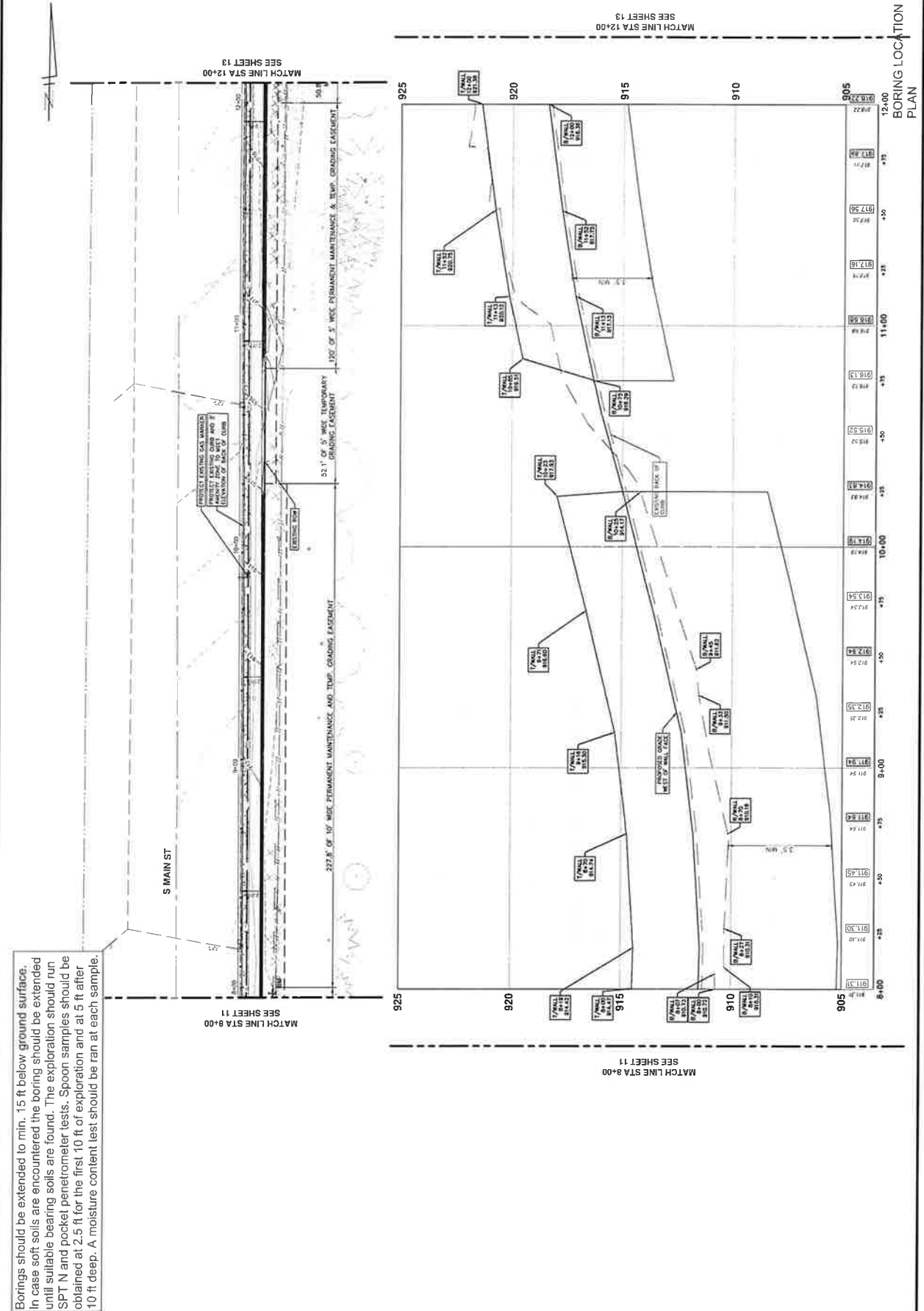
Sieve Analysis Results

General Notes For Soil Classification

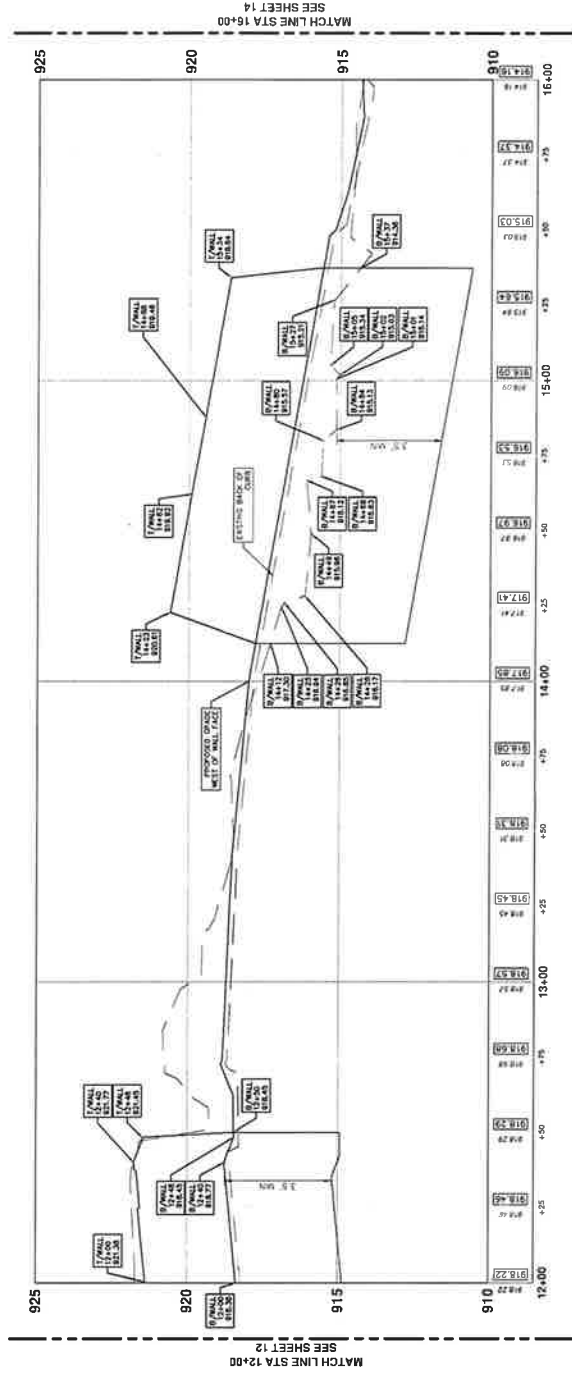
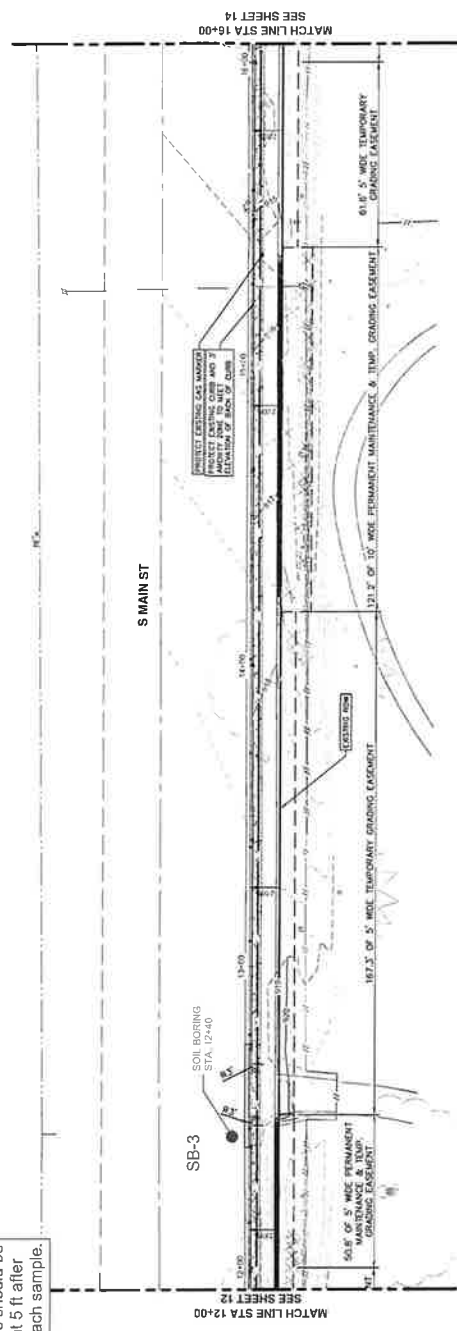


Borings should be extended to min. 15 ft below ground surface. In case soft soils are encountered the boring should be extended until suitable bearing soils are found. The exploration should run SPT N and pocket penetrometer tests. Spoon samples should be obtained at 2.5 ft for the first 10 ft of exploration and at 5 ft after 10 ft deep. A moisture content test should be run at each sample.

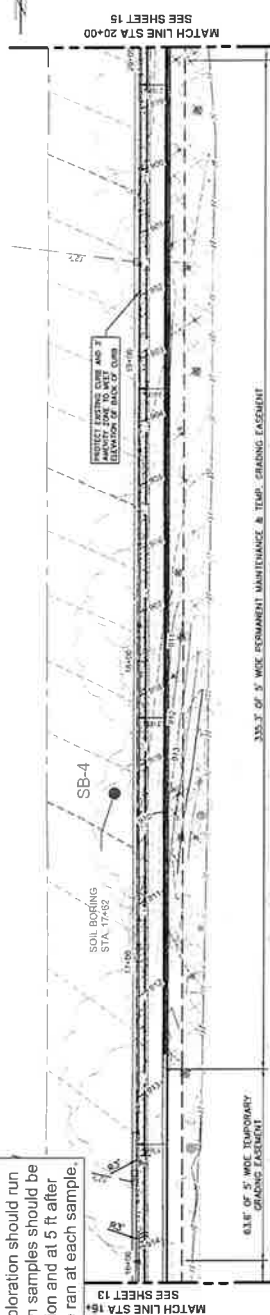
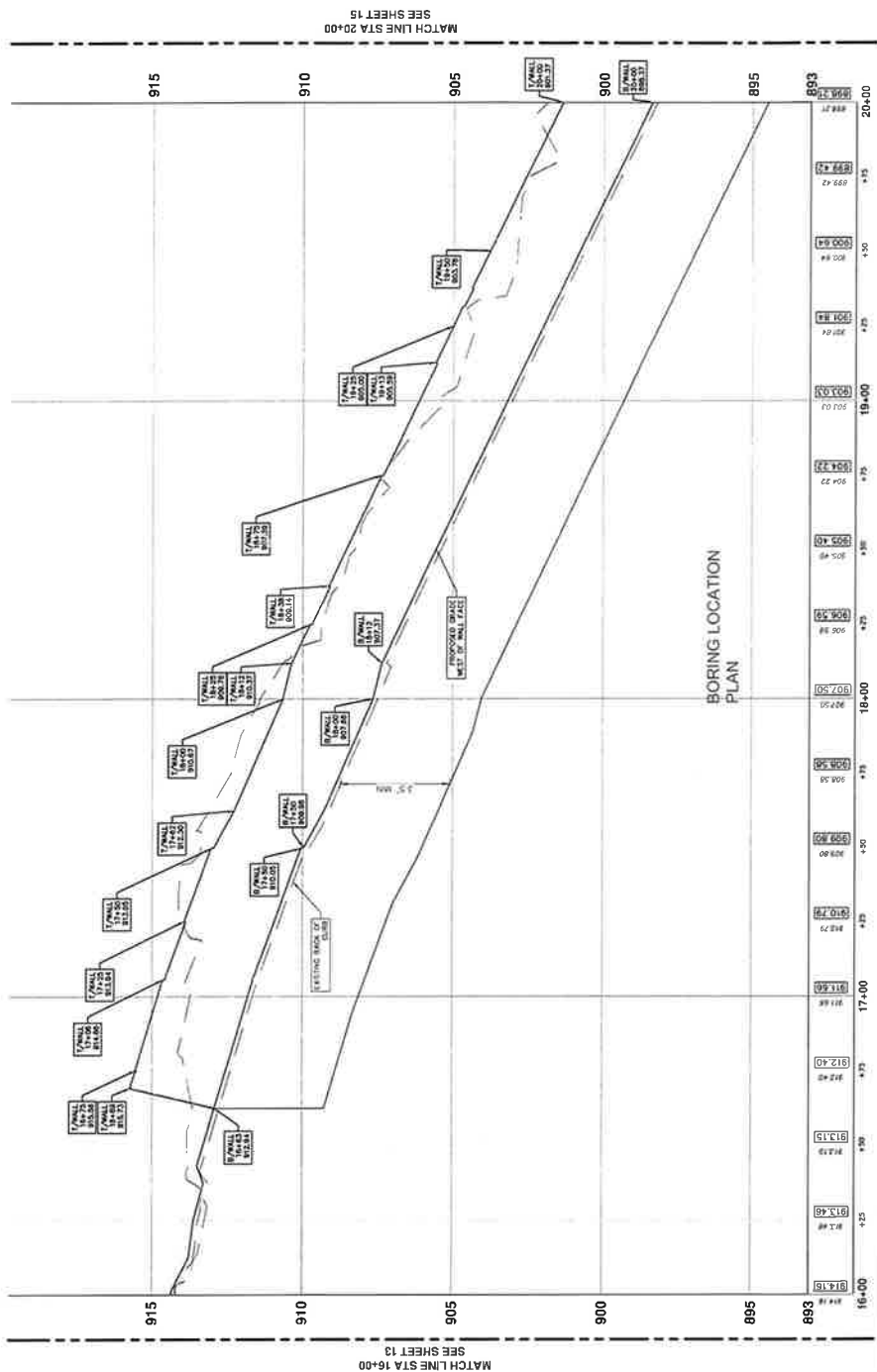
BORING LOCATION
PLAN



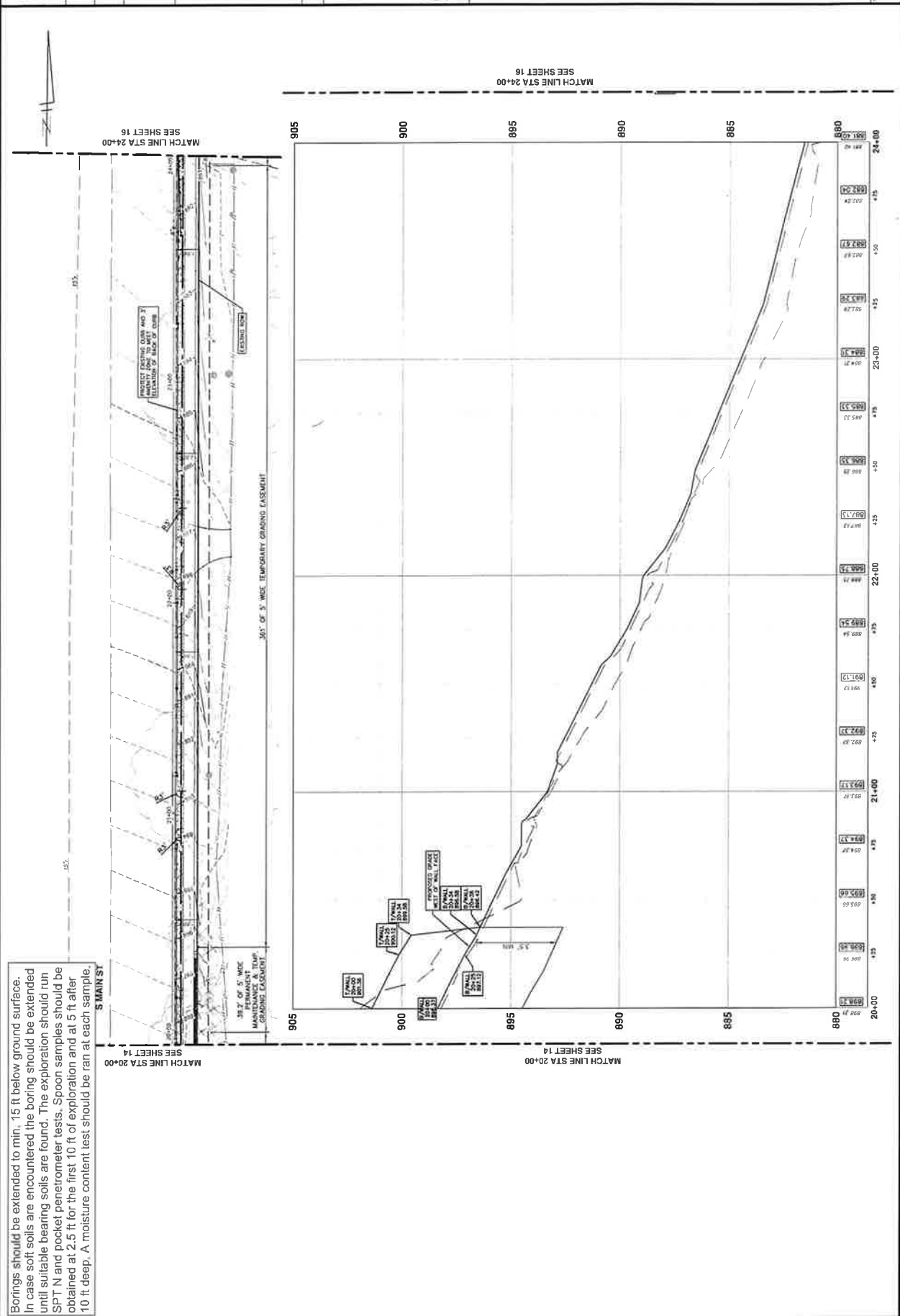
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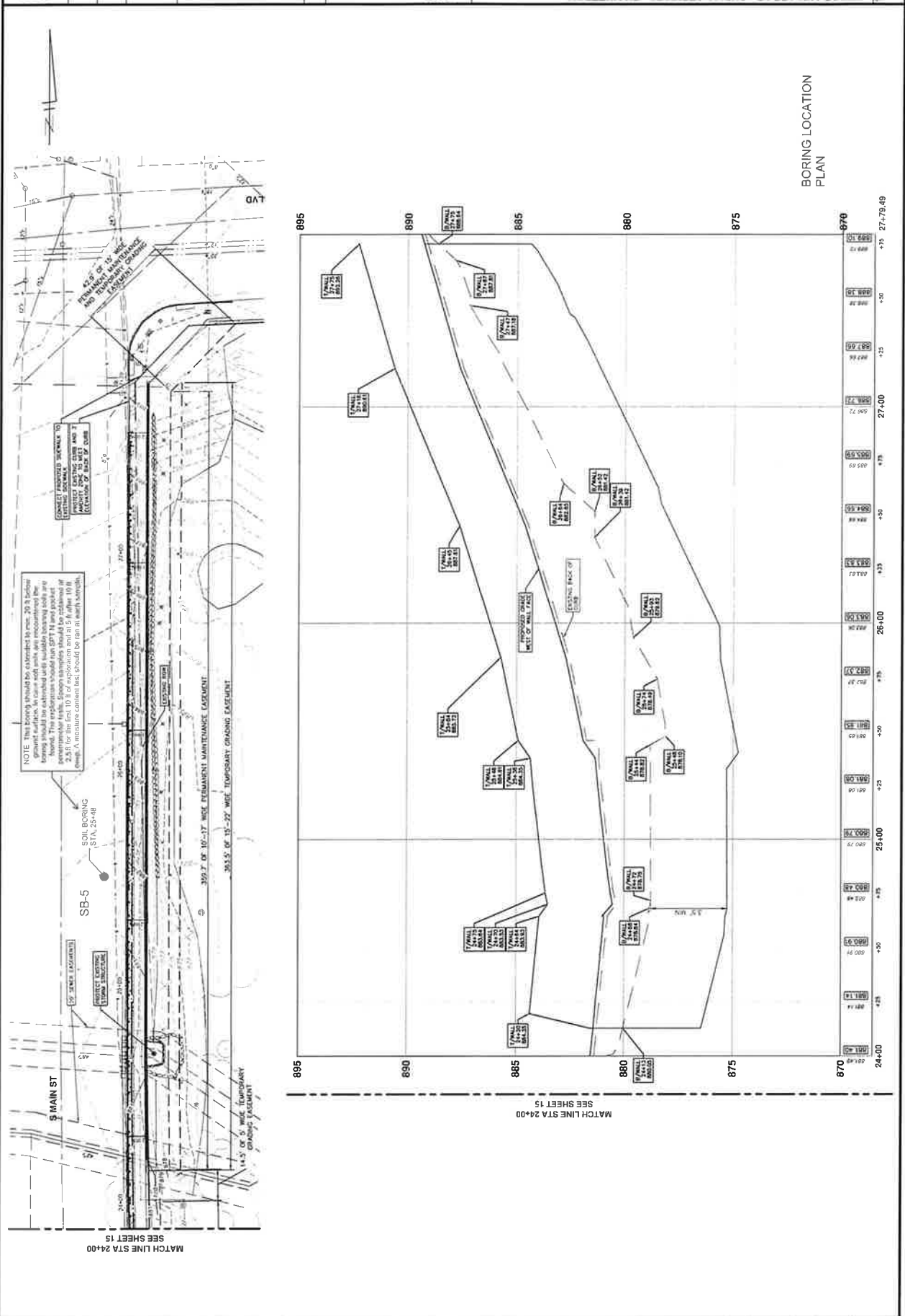


BORING LOCATION
PLAN



Borings should be extended to min. 15 ft below ground surface. In case soft soils are encountered the boring should be extended until suitable bearing soils are found. The exploration should run SPT N and pocket penetrometer tests. Spoon samples should be obtained at 2.5 ft for the first 10 ft of exploration and at 5 ft after 10 ft deep. A moisture content test should be ran at each sample.







Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

Boring No.: 1 Job No.: 63437

Project: S. Main Street Sidewalk

Client: City of Ann Arbor

Location: Ann Arbor, Michigan

Type of Rig: Truck

Drilled By: I. Mickle

Drilling Method: Solid Stem Augers

Started: 4/20/2023

Ground Surface Elevation: 911

Completed: 4/20/2023

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.56				
	LS	12	1.5	ASPHALT (6 3/4")	4.8	139	
2.5		18					
		19	3	Medium Compact Moist Crushed Stone-FILL			
	LS	9		Compact Moist Brown Sand With Trace Of Gravel-FILL	4.0	131	
5.0		8					
		10	6	Medium Compact Moist Brown Sand With Trace Of Gravel-FILL			
	LS	5			4.5	131	
7.5		4		Loose Moist Brown Medium to Fine Sand With Trace Of Gravel & Silt-FILL			
		5	8.3				
	LS	4	9	Loose Wet Brown SAND With Trace Of Gravel	15.9	130	3540
10.0		4					
		4		Firm Moist Brown Oxidized CLAY With Some Silt & Trace Of Gravel			
12.5			13				
	LS	3		Stiff Moist Brown Oxidized CLAY With Some Silt & Trace Of Gravel	16.3	130	5690
15.0		5	15				
		7		Bottom of Boring at 15'			
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" J.D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: 8'4"

At Completion: None

Boring No. 1



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

Boring No.: 2

Job No.: 63437

Project: S. Main Street Sidewalk

Client: City of Ann Arbor

Location: Ann Arbor, Michigan

Type of Rig: Truck

Drilled By: I. Mickle

Drilling Method: Solid Stem Augers

Started: 4/20/2023

Ground Surface Elevation: 909

Completed: 4/20/2023

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.58				
	LS	13	1.5	ASPHALT (7")	2.8	143	
2.5		19					
		19	3	Medium Compact Moist Crushed Stone-FILL			
	LS	6			8.6	142	
		3		Compact Moist Brown Sand With Trace Of Gravel-FILL			
5.0		5					
	LS	2	7	Loose Moist Dark Brown & Dark Gray Clayey Sand With Very Moist Sand Seam-FILL	13.8	134	
		4					
7.5		8		Extremely Stiff Moist Brown Oxidized CLAY With Some Silt			
	LS	3			16.8	128	11450
		7					
10.0		12					
			12				
12.5				Extremely Stiff Moist Brown CLAY With Some Silt & Sand Seams			
	LS	10			9.5	132	
		15					
15.0		21	15	Bottom of Boring at 15'			
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" I.D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: None

At Completion: None

Boring No. 2



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

Boring No.: 3

Job No.: 63437

Project: S. Main Street Sidewalk

Client: City of Ann Arbor

Location: Ann Arbor, Michigan

Type of Rig: Truck

Drilled By: I. Mickle

Drilling Method: Solid Stem Augers

Started: 4/20/2023

Ground Surface Elevation: 918

Completed: 4/20/2023

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.56				
	LS	11	1.5	ASPHALT (6 3/4")	3.0	130	
2.5		11	2.2	Medium Compact Moist Crushed Stone-FILL			
		9		Medium Compact Moist Brown SAND	6.9	138	
5.0	LS	4					
		5					
		8	5.5	Firm Moist Brown CLAY With Some Silt			
	LS	7		Stiff Moist Brown CLAY With Some Silt & Trace Of Gravel	11.8	138	7250
7.5		10					
		15					
	LS	6	9	Stiff Moist Gray Oxidized CLAY With Some Silt	12.2	128	
10.0		9					
		11					
12.5			12	Firm Moist Gray CLAY With Some Silt & Wet Sand Seam			
	LS	4			14.0	136	2060
		5					
15.0		7	15	Bottom of Boring at 15'			
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" I.D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: 13'0"

At Completion: 13'0"

Boring No. 3



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249
 (248) 588-6200 or (313) T-E-S-T-I-N-G
 Fax (248) 588-6232

Boring No.: 4 **Job No.:** 63437

Project: S. Main Street Sidewalk

Client: City of Ann Arbor

Location: Ann Arbor, Michigan

Type of Rig: Truck

Drilled By: I. Mickle

Drilling Method: Solid Stem Augers

Started: 4/21/2023

Ground Surface Elevation: 913

Completed: 4/21/2023

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.54				
	LS	11	1.4	ASPHALT (6 1/2")	8.3	142	
2.5		18		Medium Compact Moist Crushed Stone-FILL			
		20	3.3				
	LS	6	4.5	Compact Moist Brown Clayey Well Graded SAND With Some Gravel	11.1	140	
5.0		6		Firm Moist Variegated CLAY With Some Silt			
		9					
	LS	6		Firm Moist Gray CLAY With Some Silt & Trace Of Gravel	9.2	134	3790
7.5		7					
		12	8				
	LS	3		Firm Moist Gray CLAY With Some Silt	14.4	134	3790
10.0		5					
		6					
			12.5				
12.5				Extremely Stiff Moist Gray CLAY With Some Silt, Trace Of Gravel & Wet Sand Seam	7.7	138	8080
	LS	13					
15.0		18	15				
		21		Bottom of Boring at 15'			
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" J.D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: 13'0"

At Completion: 13'0"

Boring No. 4



Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249
 (248) 588-6200 or (313) T-E-S-T-I-N-G
 Fax (248) 588-6232

Boring No.: 5	Job No.: 63437	Project: S. Main Street Sidewalk
Client: City of Ann Arbor		Location: Ann Arbor, Michigan
Type of Rig: Truck		Drilled By: I. Mickle
Drilling Method: Solid Stem Augers		Started: 4/21/2023
Ground Surface Elevation: 879		Completed: 4/21/2023

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.58				
	LS	16	1.5	ASPHALT (7")	4.7	131	
2.5		22		Compact Moist Crushed Stone-FILL			
		23					
	LS	3	3.4	Compact Moist Brown SAND With Trace Of Gravel	13.1	112	
		4					
5.0		5		Firm Moist Brown CLAY With Some Silt & Sand			
	LS	3	6.5		16.0	134	2060
		7					
7.5		7	8	Medium Compact Moist Brown Clayey SAND With Clay Layers			
	LS	4		Stiff Moist Brown CLAY With Some Silt	15.3	128	6180
		6					
10.0		9					
			12				
12.5				Medium Compact Moist Brown Clayey SAND With Some Gravel			
	LS	6			12.6	136	
		9					
15.0		5	15	Bottom of Boring at 15'			
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance
 SS - 2" I.D. Split Spoon Sample
 LS - Sectional Liner Sample
 ST - Shelby Tube Sample
 AS - Auger Sample

w - H₂O, % of dry weight
 d - Bulk Density, pcf
 qu - Unconfined Compression, psf
 DP - Direct Push
 RC - Rock Core

Water Encountered: None

At Completion: None

Boring No. 5



Testing Engineers and Consultants, Inc.

1343 Rochester Road PO Box 249 Troy, Michigan 48099-0249

248-588-6200 or 313 T-E-S-T-I-N-G

Fax 248-588-6232

SIEVE ANALYSIS RESULTS

PROJECT: S. Main Street Sidewalk
S. Main Street From Ann Arbor-Saline Road
LOCATION: Ann Arbor, Michigan
CLIENT: City of Ann Arbor

TEC REPORT NUMBER: 63437

DATE: 5/6/2023

Material Description: Brown Medium to Fine Sand With
Trace of Gravel & Silt

Date Sampled: 4/20/23

Sample Source / Depth: B-1 @ 7.5'

Sampled By: I. Mickle

Sample Location:

TEC Lab Sample Number: 1881

Intended Use:

Remarks:

AGGREGATE ANALYSIS				
Sieve No.	Total Weight Retained	Total Percent Retained	Total Percent Passing	Specification Range
3"				
2-1/2"				
1-1/2"				
1"				
3/4"				
1/2"				
3/8"		0.0	100.0	
#4	12.9	4.7	95.3	
#10	55.9	20.5	79.5	
#20	100.9	37.0	63.0	
#30	125.1	45.9	54.1	
#40	159.1	58.4	41.6	
#100	256.1	93.9	6.1	
#200	265.1	97.2	2.8	
Total Sample	272.6	100.0	0.0	
Test Method: ASTM C117/C136 <u>X</u> AASHTO T11/T27 <u> </u> MTM 108/109 <u> </u>				
Remarks:				
Respectfully Submitted: Testing Engineers and Consultants, Inc.				



Testing Engineers and Consultants, Inc.

1343 Rochester Road PO Box 249 Troy, Michigan 48099-0249
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Fax 248-588-6232

SIEVE ANALYSIS RESULTS

PROJECT: S. Main Street Sidewalk
S. Main Street From Ann Arbor-Saline Road
LOCATION: Ann Arbor, Michigan
CLIENT: City of Ann Arbor

TEC REPORT NUMBER: 63437

DATE: 5/6/2023

Material Description: Brown Clayey Well Graded Sand
With Some Gravel

Date Sampled: 4/21/23

Sample Source / Depth: B-4 @ 2.5'

Sampled By: I. Mickle

Sample Location:

TEC Lab Sample Number: 1882

Intended Use:

Remarks:

AGGREGATE ANALYSIS				
Sieve No.	Total Weight Retained	Total Percent Retained	Total Percent Passing	Specification Range
3"				
2-1/2"				
1-1/2"				
1"				
3/4"		0.0	100.0	
1/2"	8.5	3.2	96.8	
3/8"	12.7	4.8	95.2	
#4	36.5	13.8	86.2	
#10	75.6	28.6	71.4	
#20	110.7	41.9	58.1	
#30	125.0	47.3	52.7	
#40	141.0	53.4	46.6	
#100	185.6	70.3	29.7	
#200	196.8	74.5	25.5	
Total Sample	264.0	100.0	0.0	
Test Method: ASTM C117/C136 X AASHTO T11/T27 MTM 108/109				
Remarks:				
Respectfully Submitted: Testing Engineers and Consultants, Inc.				

Testing Engineers & Consultants, Inc.

Ms. Theresa Bridges, P.E.
City of Ann Arbor
May 4, 2023

TEC Report: 63437

SOIL DESCRIPTIONS

In order to provide uniformity throughout our projects, the following nomenclature has been adopted to describe soil characteristics:

CONSISTENCY AND RELATIVE DENSITY

COHESIVE SOILS			GRANULAR SOILS	
UNCONFINED COMPRESSIVE STRENGTH, PSF	"N" VALUES	CONSISTENCY	"N" VALUES	RELATIVE DENSITY
Below 500	0 – 2	Very Soft	0 – 4	Very Loose
500 – 1,000	3 – 4	Soft	5 – 10	Loose
1,000 – 2,000	5 – 8	Plastic	11 – 30	Medium Compact
2,000 – 4,000	9 – 15	Firm	31 – 50	Compact
4,000 – 8,000	16 – 30	Stiff	50+	Dense
8,000 – 16,000	31 – 50	Ex. Stiff		
Over 16,000	51+	Hard		

Material Types By Particle Size

BOULDERS

COBBLES

GRAVEL

COARSE SAND

MEDIUM SAND

ASTM D2487

Stones Over 12" In Diameter

Stones 3" To 12" In Diameter

#4 To 3" Diameter

#10 To #4 Sieves

#40 To #10 Sieves

Testing Engineers & Consultants, Inc.

Ms. Theresa Bridges, P.E.
City of Ann Arbor
May 4, 2023

TEC Report: 63437

SOIL DESCRIPTIONS (Cont'd)

Material Types By Particle Size

FINE SAND

SILT

CLAY

PEAT

MARL

SWAMP BOTTOM DEPOSITS

ASTM D2487

#200 To #40 Sieves

Minus #200 Sieve Material,
Fairly Non-Plastic, Falls Below
"A"-Line

Minus #200 Sieve Material Plastic
Material That Has A Tendency To
Stick Together, Can Be Rolled
Into Fine Rods When Moistened;
Falls Above "A"-Line

Black Organic Material
Containing Partially Decayed
Vegetable Matter

Fresh Water Deposits Of Calcium
Carbonate, Often Containing
Percentages Of Peat, Clay
& Fine Sand

Mixtures Of Peat, Marl,
Vegetation & Fine Sand
Containing Large Amounts Of
Decayable Organic Material