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July 16, 2020 (Revised August 6, 2020)
Mr. Michael Thomas, PE
GPD Group
100 Federal Plaza East
Suite 200
Youngstown, OH 44503

Re: Geotechnical Engineering Services Report
Western Reserve Greenway Bikeway
Phase 4
Trumbull County Metro Parks
ODOT PID# 99804
Niles/Warren, Ohio
PSI Project No. 01393219

Dear Mr. Thomas:

In compliance with your instructions, we have conducted a geotechnical subsurface exploration for the above-referenced project. The results of this exploration, together with our recommendations, are to be found in the accompanying report.

After the plans and specifications are complete, PSI should review the final design drawings and specifications in order to verify that the recommendations are properly interpreted and implemented. **It is also considered imperative that the geotechnical engineer or its representative be present during earthwork operations to observe field conditions with respect to the design assumptions and specifications.**

Should you have any questions regarding the contents of this submittal, please do not hesitate to contact us at 330-759-0288.

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, Inc.

Scott Hynes
Branch Manager

A. Veeramani, PE
Director

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1.0 EXECUTIVE SUMMARY

The project involves construction of approximately 4 miles of new asphalt pavement bikeway through the Cities of Niles and Warren, and Howland and Weathersfield Townships, in Trumbull County, Ohio. The new Bikeway will extend from the north end of the existing Niles Greenway at the southeast corner of the intersection of Robbins Avenue and East State Street, in Niles, Ohio (where the existing bikeway currently ends) and extend it in a northwesterly direction, terminating at the intersection of Burton Street SE and Thomas Road SE at the Warren Bikeway, In Warren, Ohio.

- Fill materials consisting of slag, cinders, sand, gravel, and/or fill soils consisting of sandy silt, silt and clay with organic matter, wood and porcelain fragments were encountered at or near the surface in soil boring locations B-001-0-20, B-002-0-20, B-003-0-20, B-004-0-20, B-005-0-20, B-006-0-20, B-007-0-20, B-024-0-020, B-025-0-020, B-026-0-20, B-027-0-20, B-028-0-20, B-029-0-20, and B-030-0-20.

- The subgrade soils consisted of Stone Fragments with Sand, Silt and Clay (A-2-6), Sandy Silt (A4a), Silt (A4b), Silt and Clay (A6a), Silty Clay (A6b), and Clay (A-7-6. The natural soils exhibited moisture contents of about 6 to 31 percent. The subgrade cohesive soils exhibited a soft to hard consistency based on the Standard Penetration tests. The subgrade granular soils exhibited a loose to dense relative compactness, based on the Standard Penetration tests.

- Free water was observed in test six (6) boring locations, B-009-0-20, B-020-0-20, B-024-0-20, B-026-0-20, B-027-0-20, and B-028-0-20 at depths ranging from 1 to 4.5 feet below the existing surface grades during field drilling operations. At the completion of field drilling activities, water was recorded at depths of about 1 to 4 feet below the existing surface grades in test boring locations B-009-0-20, B-020-0-20, B-024-0-20, B-027-0-20, and B-028-0-20. No free water was encountered at the remaining test boring locations

- An average CBR value of 7 was established for the existing subgrade according to GB-1 analysis.

The summary should be used in conjunction with the entire Subsurface Exploration Report since the summary sheet cannot include all details of the investigation's findings.

2.0 INTRODUCTION

2.1 Project Authorization

This report presents the subsurface exploration results of thirty (30) borings, laboratory testing, and soil parameter estimates for the proposed continuation of the Greenway Bikeway. The services were performed in accordance with PSI Proposal No. 0139-182055 dated November 8, 2019, and the Subconsultant Agreement for Professional Services, dated April 24, 2020. Authorization to perform this exploration was provided by Mr. Jeffrey Evans PE, Vice President with GPD Group.

2.2 Project Description and Geotechnical Scope of Services

PSI understands that the project will consist of the construction of approximately 4.0 miles of new asphalt pavement bikeway through the Cities of Niles and Warren, and Howland and Weathersfield Townships, in Trumbull County, Ohio. The new Bikeway will extend from the north end of the existing Niles Greenway at the southeast corner of the intersection of Robbins Avenue and East State Street, in Niles, Ohio (where the existing bikeway currently ends) and continue it in a northwesterly direction, terminating at the intersection of Burton Street SE and Thomas Road SE at the Warren Bikeway, In Warren, Ohio.

Based on the grading plans provided at the time of this report, the bikeway generally follows the existing site grades, with cut/fill of less than 1-foot required throughout the proposed bikeway route. However, there is one area (STA No.: 139+00) where fill operations of approximately 12 feet will be required for the proposed bikeway construction.

No other information was available at the time of this report. If any of the information noted above has changed or is incorrect, please inform PSI so that the recommendations presented in this report can be reviewed and amended, if appropriate.

The thirty (30) borings were completed between May 12 and May 24, 2020. Boring locations were selected, and stationing, GPS, and elevation data provided by GPD Group. The borings were field staked by PSI. Borings were advanced to depths of approximately 5.66 to 10 feet below existing surface grades.

The purpose of this exploration was to evaluate the soil, rock and groundwater conditions at the site to provide recommendations, from a geotechnical engineering viewpoint, for foundation design and construction, site preparation and other construction considerations. The scope included a reconnaissance of the project site, drilling thirty (30) test borings to depths of about 5.66 to 10 feet each below the existing surface grades, a laboratory testing program, and an engineering analysis and evaluation of the subsurface materials.

The scope of services did not include an environmental assessment for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around this site.

Any statements in this report or on the boring logs regarding odors, colors or unusual or suspicious items or conditions are strictly for the information of the client.

2.3 Site Location

The project site for the proposed bikeway is located within the Cities of Niles and Warren, and Howland and Weathersfield Townships, Ohio. The Bikeway starts at the existing Niles Trailhead, and generally travels in a northwesterly direction, following city street, and former railways, ending near Burton Street, in the City of Warren. Specifically, the bikeway resumes at the Niles Trailhead, near the intersection of Robbins Avenue and East State Street, in the City of Niles, Ohio, and continues northwest through a heavily wooded area along the former railway. The bikeway then follows city streets, crossing North Main Street, to Williams Street SE, north on North Chestnut Avenue, then west along Smith Street SE to the intersection with Hunter Avenue. From the intersection of Smith Street SE and Hunter Avenue, the bikeway continues northwest through a heavily wooded section, with several low-lying areas, behind an industrial development, and connecting with Warren Avenue. The bikeway continues north along Warren Avenue, crossing Deforest Road SE, continuing north through a former industrial area, along former industrial haul roads and rail spurs, parallel to and then rejoining Warren Avenue. Finally Phase 4 for the Western Reserve Greenway bike trail turns east and then north along a former haul road, ending at Burton Street SE in the City of Warren, Ohio.

2.4 Site Geology

Based on a published Ohio Department of Natural Resources (ODNR) map reference, the project site lies within the Glaciated Allegheny Plateau in northeast Ohio (Ohio Division of Geological Survey, Map SG-2). The soils in the area are predominately Wisconsinan age Clay to Loamy Till, with low carbonate content. The till contains silt, sand, and gravel lenses. The areas bedrock consists of Mississippian-age Sandstone and Shale bedrock of the Logan and Cuyahoga Formations.

3.0 EXPLORATION

3.1 Subsurface Exploration

The subsurface conditions at the site were explored with a total of thirty (30) soil test borings for the proposed multi-purpose trail and drilled to depths of about 5.66 to 10 feet each below the existing surface grades. The approximate boring locations are shown on the Boring Location Plans presented in the *Appendix* of this report. The locations of test borings were selected by GPD Group and field located by a representative of PSI prior to field drilling operations.

The borings were advanced utilizing 3¼ inch inside diameter, hollow-stem auger drilling methods. Soil samples were routinely obtained during the drilling process. Select soil samples were later tested in the laboratory to obtain soil material properties for the foundation and pavement recommendations. The split spoon sampling procedures used during this exploration are in basic accordance with Ohio Department of Transportation Specifications for Subsurface Exploration section 303.7.

3.2 Laboratory Testing

The soil samples obtained during the field exploration were transported to the laboratory and visually examined. The soil samples obtained from the drilling operation were tested for moisture content (AASHTO T-265), liquid limits (AASHTO T-89), plastic limits (AASHTO T-90), grain size analyses (AASHTO T-88), and organic content in soils (AASHTO T 267). The samples were classified in general accordance with the ODOT Specifications for Subsurface Investigations, Classification of Soil. Descriptions and lab test data of the soils encountered in the test boring is provided on the Boring Log included in the Appendix. Groundwater conditions, standard penetration resistances, and other pertinent information are also included. The remaining soil samples will be retained at our office for 60 days from the date of this report and then discarded.

4.0 FINDINGS

4.1 Subsurface Conditions

SURFACE: Topsoil surface cover was encountered at eighteen (18) of the test boring locations. The boring locations and respective topsoil thicknesses are listed below.

TABLE 1 – TOPSOIL THICKNESS

Boring ID	Topsoil Thickness (in)	Boring ID	Topsoil Thickness (in)
B-002-0-20	12	B-015-0-20	8
B-006-0-20	9	B-016-0-20	13
B-007-0-20	9	B-017-0-20	7
B-008-0-20	12	B-018-0-20	8
B-010-0-20	6	B-019-0-20	6
B-011-0-20	13	B-020-0-20	12
B-012-0-20	7	B-021-0-20	10
B-013-0-20	8	B-022-0-20	9
B-014-0-20	6	B-023-0-20	11

FILL: Slag, cinders, sand, gravel, and/or fill soils consisting of sandy silt, silt and clay with organic matter, wood and porcelain fragments were encountered at or near the surface in the following boring locations:

TABLE 2 – FILL THICKNESS

Boring ID	Approximate Strata Depth (ft)	Material
B-001-0-20	0 to 1	Slag
B-001-0-20	1 to 6	Sandy Silt with Slag Cinders and Organics
B-002-0-20	1 to 3	Slag and Cinders
B-003-0-20	0 to 1.5	Slag
B-003-0-20	1.5 to 6	Sand
B-004-0-20	0 to 2.5	Clay with Wood and Porcelain Fragments
B-005-0-20	0 to 2.5	Slag and Cinders
B-008-0-20	1 to 4	Stone Fragments with Sand and Silt
B-008-0-20	4 to 6	Silt and Clay with Petroleum Odor
B-009-0-20	0 to 1.5	Slag
B-009-0-20	1.5 to 2.5	Sandy Silt
B-024-0-20	0 to 2.5	Slag
B-024-0-20	2.5 to 4	Gravel and Sand
B-025-0-20	0 to 1	Slag
B-025-0-20	1 to 4	Clay with Stone Fragments and Slag
B-026-0-20	0 to 1.5	Slag
B-027-0-20	0 to 2.5	Slag
B-028-0-20	0 to 1	Slag
B-029-0-20	0 to 1	Slag
B-030-0-20	0 to 1	Slag
B-030-0-20	1 to 2.5	Gravel with Sand and Silt

NATURAL SOILS: Underlying the topsoil and fill materials, natural soils were encountered extending to depths of about 5 to 10 feet below existing site grades. The natural soils consisted of Stone Fragments with Sand, Silt and Clay (A-2-6), Sandy Silt (A4a), Silt (A4b), Silty and Clay (A6a), Silty Clay (A6b), and Clay (A-7-6). The natural soils exhibited moisture contents of about 6 to 31 percent. The subgrade cohesive soils exhibited a soft to hard consistency based on the Standard Penetration tests. The subgrade granular soils exhibited a loose to dense relative compactness, based on the Standard Penetration tests.

BEDROCK: At test boring location B-020-0-20, and B-023-0-20, the bottommost formation encountered consisted of weathered sandstone and siltstone, respectively.

The preceding subsurface descriptions are generalized to highlight the major soil strata encountered during the exploration. The boring logs included in the Attachments should be reviewed for specific information at individual boring locations. The strata shown on the logs represent the conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The strata represent the approximate boundaries between subsurface materials, and the actual transition may be gradual.

4.2 Groundwater Conditions

At the time of the site fieldwork (May 12 thru May 24, 2020), groundwater was encountered at the following boring locations.:

TABLE 3 – GROUNDWATER DEPTH

Boring ID	Free/Seepage Water Depth During Drilling (ft)	Water Depth at Completion Drilling (ft)
B-009-0-20	2	2.5
B-020-0-20	4.5	4
B-024-0-20	2.5	2
B-026-0-20	1.5	--
B-027-0-20	1.5	1.5
B-028-0-20	1	1

No groundwater was encountered at the remaining boring locations. Please note that the free groundwater levels fluctuate seasonally as a function of rainfall and the infiltration rate of the soil. Therefore, at a time of year different from the time of drilling, there is the possibility of a considerable change in the water table, or the occurrence of water where not previously encountered. Accordingly, we recommend that the contractor measure the actual groundwater levels (if encountered) at the time of construction to assess groundwater impact on the construction procedures.

5.0 EVALUATION AND RECOMMENDATIONS

5.1 Site Preparation and Earthwork Operations

Prior to the initiation of any earthwork operations, general site area clearing should be carried out. The site work should follow the general guidelines outlined in the ODOT CMS "Clearing and Grubbing".

Areas of the site where the new pavement will be located, shall have any and all existing topsoil, highly organic soils, excessively soft/loose or wet soils, and all other deleterious materials, completely removed from the proposed construction areas. Additionally, the existing unsuitable fill materials will have to be partially removed or stabilized as described in the following text.

In areas of the site where the bikeway will be constructed on the former railway, and in areas where fill materials were encountered, the aggregate/slag base and fill materials consisted primarily of inorganic materials. These materials may remain in place, and/or be reused, provided the areas are critically proof-rolled and meet the intent of ODOT CMS 204.

Careful visual control of clearing and stripping operations should be maintained to assure that all deleterious materials are removed. The extent to which deleterious materials are to be removed should be determined in the field following visual observation of the exposed subgrades. Subsequent to the site area clearing and stripping, all structural subgrade sectors should be subjected to critical proof-rolling operations and careful observation of subgrade reactions. Any sectors that exhibit instability are to be undercut or stabilized to such depths as may be necessary to assure satisfactory supporting properties. The undercut areas shall be backfilled with approved fill materials, placed and compacted under carefully controlled procedures as described below.

All areas that are to receive structural fill should be filled on a critically controlled, lift-by-lift basis, employing select, clean, non-organic materials. All structural fill should be verified and approved by the project's geotechnical engineer prior to placement. Individual fill lifts are to be of maximum 8-inch loose measure thickness and each individual lift is to be adjusted in moisture content to within plus or minus two 2 percent of the optimum moisture content, as determined in accordance with ASTM Standard Proctor Method D-698. However, for granular fill materials, the moisture-density compaction curve for the fill will not be sensitive to placement moisture. Accordingly, the density defined for an energy corresponding to ASTM D-698 should be used for control of fill placement. The fill materials are to be systematically compacted such that an in-place density of at least 98 percent of the maximum laboratory density as determined in accordance with the above-referenced ASTM method is achieved. Specifications should require that the resulting subgrade and fill materials' densities be verified by test measurements conducted by the geotechnical engineer.

Careful attention will be required in fine grading the subgrade surfaces in order to eliminate undulations and depressions that would tend to collect water. The pavement subgrade surface should be graded in a manner such that positive drainage towards the pavement edges and/or drainage systems will be insured.

Throughout the course of the earthwork operations, surface grades are to be maintained to facilitate positive drainage within the construction area and to prevent inundation of either the existing subgrade or new fill material. No water should be allowed to impound on the subgrade surfaces during this time.

ODOT's guidelines for geotechnical engineering titled GB1: Plan Subgrades dated August 7, 2013 and GB1: Subgrade Analysis Spreadsheet has been utilized as a guideline for development of the recommendations included in this report. Per ODOT requirements stated above, typically materials with in-place moisture contents (Mc) exceeding the optimum moisture content by 3 percent or more, or materials exhibiting low SPT N-Values ("blow counts") (HP), require subgrade undercutting or stabilization to obtain adequate pavement support.

Based on ODOT's GB1, the approximate stations along the proposed project that will likely require undercutting and replacement with geotextile are as shown in the following table:

TABLE 4 – GB1 SUMMARY

Boring ID	Station	Problem		Recommended Minimum Undercut (in) Subgrade Only
		Unsuitable	Unstable	
B-001-0-20	10+50 to 21+00		HP & Mc	12
B-002-0-20	17+00 to 63+50			--
B-003-0-20				--
B-004-0-20			Mc	--
B-005-0-20				--
B-006-0-20	63+50 to 80+75	**A-4b**	**Mc**	**30**
B-007-0-20			HP & Mc	33
B-008-0-20	80+75 to 90+75			--
B-009-0-20	90+75 to 99+50		HP & MC	--
B-010-0-20			Mc	--
B-011-0-20	99+50 to 111+50		HP	12
B-012-0-20			HP & Mc	12
B-013-0-20			HP & Mc	12
B-014-0-20	111+50 to 117+50		HP & Mc	24
B-015-0-20	117+50 to 123+50		HP	12
B-016-0-20	123+50 to 127+50		HP & Mc	33
B-017-0-20	127+50 to 138+25		HP & Mc	12
B-018-0-20			HP	12
B-019-0-20			HP & Mc	12
B-020-0-20	138+25 to 141+00			--
B-021-0-20	141+00 to 145+00		HP & Mc	24
B-022-0-20	145+00 to 149+00		HP & Mc	12
B-023-0-20	149+00 to 177+00			--
B-024-0-20				--
B-025-0-20				--
B-026-0-20				--
B-027-0-20				--
B-028-0-20	177+00 to 189+00		HP & Mc	12
B-029-0-20	189+00 to 219+00		HP & Mc	--
B-030-0-20				--

Utilizing the test borings, laboratory results, ODOT guidelines and our analysis, it is anticipated that, within the project limits outlined, removal and replacement of the unsuitable/unstable soils to depths of about 12 to 30 inches below the subgrade with geotextile, will be required for the proposed project. Please refer to the Appendix, table titled Subgrade Analysis, for the exact recommended depths and limits of the undercutting.

ODOT 712.09 Geotextile Fabric Type D should be utilized at the bottom of the undercut areas for the undercut/replacement option. The undercut areas can be replaced with compacted 703.16.C granular Type B fill materials.

Careful attention will be required in fine grading the subgrade surfaces in order to eliminate undulations and depressions that would tend to collect water. The pavement subgrade surface should be graded in a manner such, that positive drainage towards the pavement edges and/or drainage systems will be insured.

Throughout the course of the earthwork operations, surface grades are to be maintained to facilitate positive drainage within the construction area and to prevent inundation of either the existing subgrade or new fill material. No water should be allowed to impound on the subgrade surfaces during this time.

5.2 Bikeway Recommendations

Pavement design for the bikeway will include proper preparation of subgrade sectors, employing procedures outlined in the previous section titled *Site Preparation and Earthwork Construction,* careful design of the pavement area drainage systems and utilization of an aggregate base course with an asphalt concrete or concrete surface course.

Based on the subsurface formations encountered at the test boring locations, an average CBR value of seven (7) can be used for the design of the proposed pavement structures, provided that the subgrade materials consist ODOT CMS for item 203.

Inclusion of adequate surface and subsurface drainage systems along and below the trail is considered imperative in order to maintain the compacted subgrades as close to optimum moisture conditions as possible. A subsurface drainage system consisting of perforated drainpipes bedded in and backfilled with suitable filter materials should be installed along either side of the trail at an elevation, such that groundwater will be maintained a minimum of 18-inches below the subgrade. The filter around the drainage members is to terminate in direct contact with the aggregate base course for the pavements. All subgrade sectors should be graded to direct water by gravity toward the drainage lines. At all low points and at regular intervals, lateral underdrain lines connected to suitably located outlet points are to be provided.

Site surface grades should be, such that no pavement sectors are allowed to impound water. All surface and subsurface water is to be directed to drainage ditches.

5.3 Excavations

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, Part 1926, Subpart P." This document was issued to better ensure the safety of workers entering trenches or excavations. It is mandated by this federal regulation that all excavations, whether they be utility trenches, basement excavations or foundation excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced. If they are not followed closely, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person" as defined in "CFR Part 1926," should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

We are providing this information solely as a service to our client. PSI is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred. If the excavations are left open and exposed to the elements for a significant length of time, desiccation of the clays may create minute shrinkage cracks which could allow large pieces of clay to collapse or slide into the excavation.

Materials removed from the excavation should not be stockpiled immediately adjacent to the excavation, inasmuch as this load may cause a sudden collapse of the embankment.

5.4 Weather Considerations

The soils encountered at this site are known to be sensitive to disturbances caused by construction traffic and to changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support capabilities. Care should be exercised during the grading operations at the site. Due to the fine-grained nature of the surficial soils, the traffic of heavy equipment, including heavy compaction equipment, may very well create pumping and a general deterioration of those soils in the presence of water. Therefore, the grading should, if at all possible, be performed during a dry season. A layer of crushed stone may be required to allow the movement of construction traffic over the site during the rainy season. The contractor should maintain positive site drainage and if wet/pumping conditions occur, the contractor will be responsible to over excavate the wet soils and replace them with a properly compacted engineered fill. During wet seasons, limestone stabilization may be required to place engineer fill.

6.0 GEOTECHNICAL RISK

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. Site exploration identifies actual subsurface conditions only at those points where samples are taken. A geotechnical report is based on conditions that existed at the time of the subsurface exploration. The analytical tools which geotechnical engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations presented in the preceding sections constitute PSI's professional estimate of those measures that are necessary for the proposed structure to perform according to the proposed design based on the information generated and referenced during this evaluation, and PSI's experience in working with these conditions.

7.0 REPORT LIMITATIONS

The recommendations submitted in this report are based on the available subsurface information developed by PSI and on the design, information furnished by GPD Group for the proposed project. If there are any revisions to the plans for the proposed project, or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be retained to determine if changes in the recommendations are required. If PSI is not retained to perform these functions, PSI will not be responsible for the impact of those conditions on the geotechnical recommendations for the project.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

After the plans and specifications are complete, it is recommended that PSI be provided the opportunity to review the final design drawings and specifications, in order to verify that the earthwork and foundation recommendations are properly interpreted and implemented. At that time, it may be necessary to submit supplementary recommendations. This report has been prepared for the exclusive use of GPD Group for the specific application to Phase 4 of the Western reserve Greenway, in the Cities of Niles and Warren, Trumbull County, Ohio.

APPENDIX

Site Vicinity Plan (2)

Boring Location Plans (16)

ODOT Boring Logs (B-001-0-20 thru B-030-0-20) (30)

Soil Investigation Summary (GB-1 Analysis)

ODOT Quick Reference for Visual Descriptions of Soils

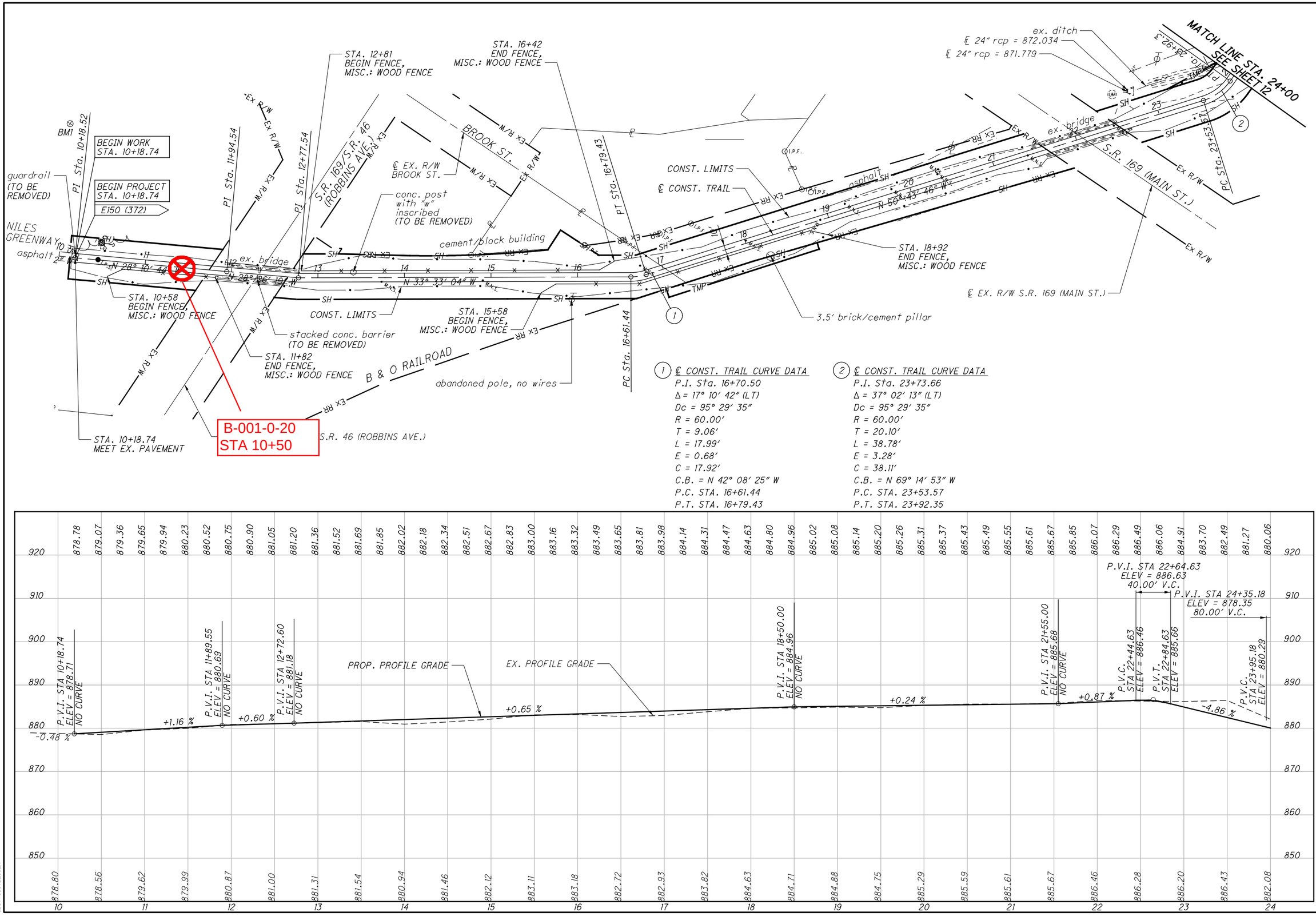
ODOT Classification of Soils

Professional Service Industries, Inc.

intertek psi **1280 Trumbull Avenue, Suite B, Girard, OH 44420** **phone 330-759-0288 fax 330-759-0923**	**Site Vicinity Plan**	**PSI PROJECT NO.:** 01393259 **PROJECT:** TRU-W.Reserve Greeway Bike Trail Phase 4 **LOCATION:** Niles & Warren, Ohio

Professional Service Industries, Inc.

intertek psi **1280 Trumbull Avenue, Suite B, Girard, OH 44420** **phone 330-759-0288 fax 330-759-0923**	**Site Vicinity Plan**	**PSI PROJECT NO.:** 01393259 **PROJECT:** TRU-W.Reserve Greeway Bike Trail Phase 4 **LOCATION:** Niles & Warren, Ohio



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L = 17.99'
E = 0.68'
C = 17.92'
C.B. = N 42° 08' 25" W
P.C. STA. 16+61.44
P.T. STA. 16+79.43

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C = 38.11'
C.B. = N 69° 14' 53" W
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P.T. STA. 23+92.35

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PLAN AND PROFILE
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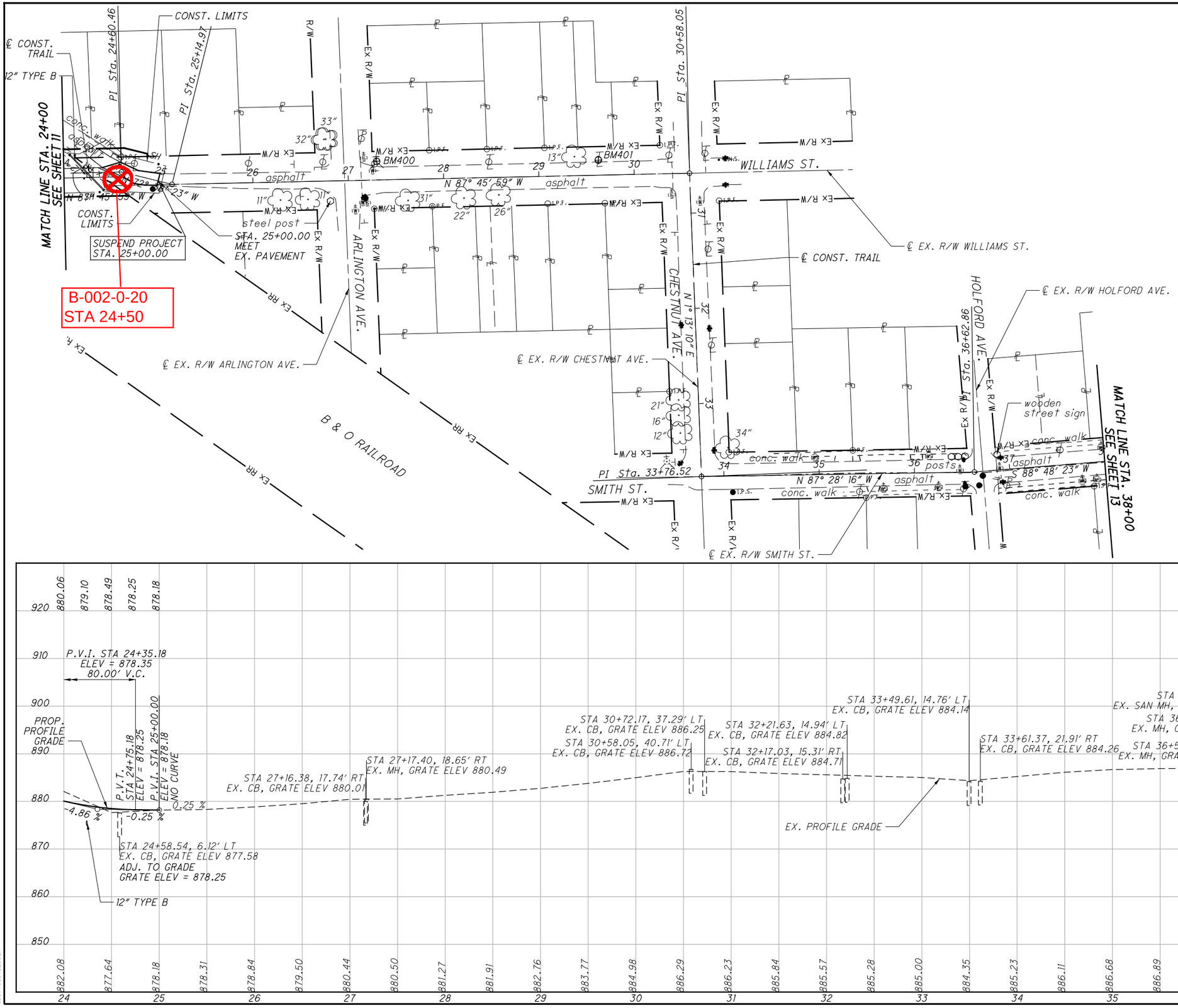
TRU-W. RESERVE
GREENWAY-PHASE4



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CALCULATED | CHECKED

PLAN AND PROFILE
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TRU-W. RESERVE
GREENWAY-PHASE4

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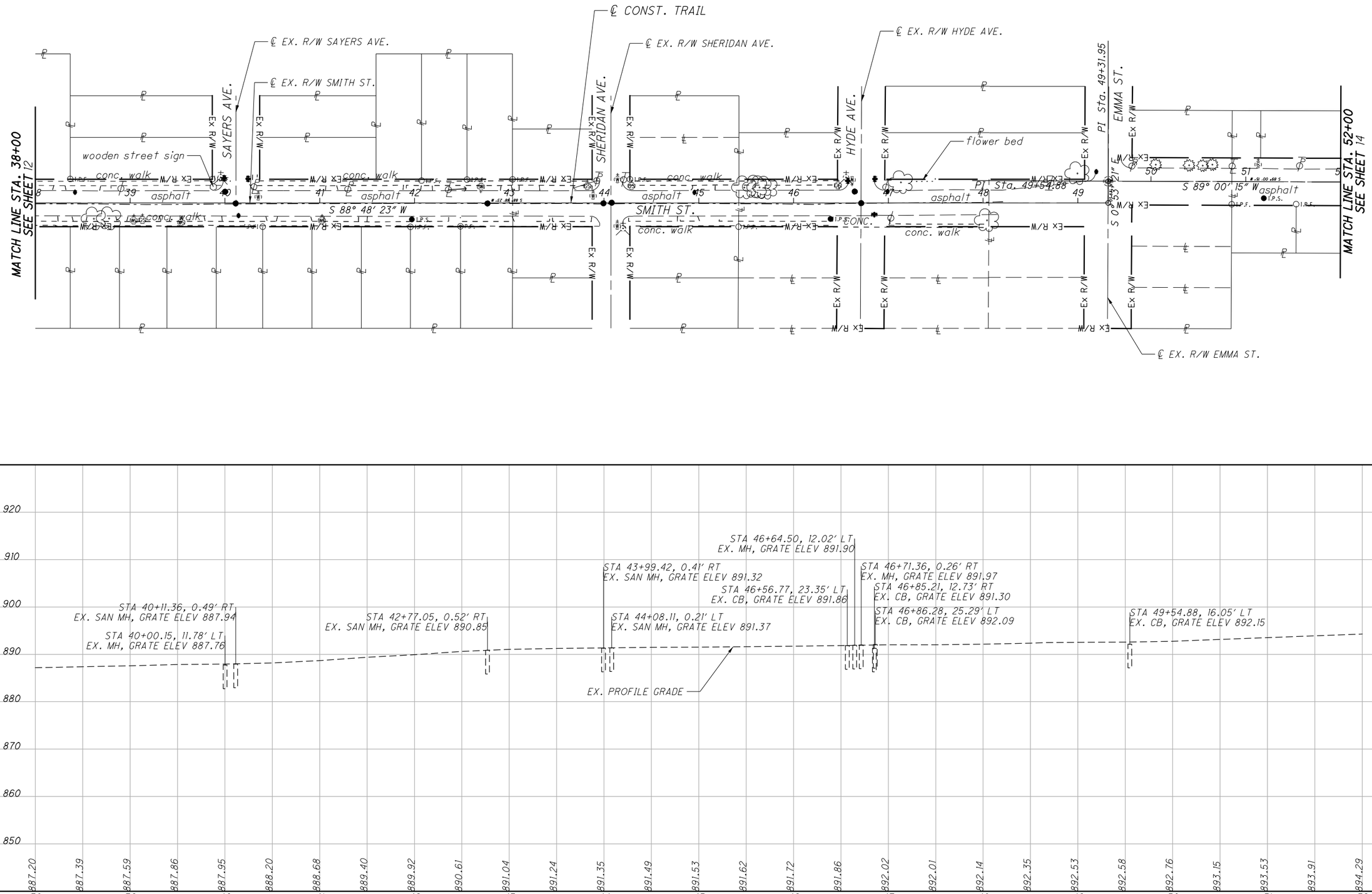

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CALCULATED | CHECKED

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TRU-W. RESERVE
GREENWAY-PHASE4

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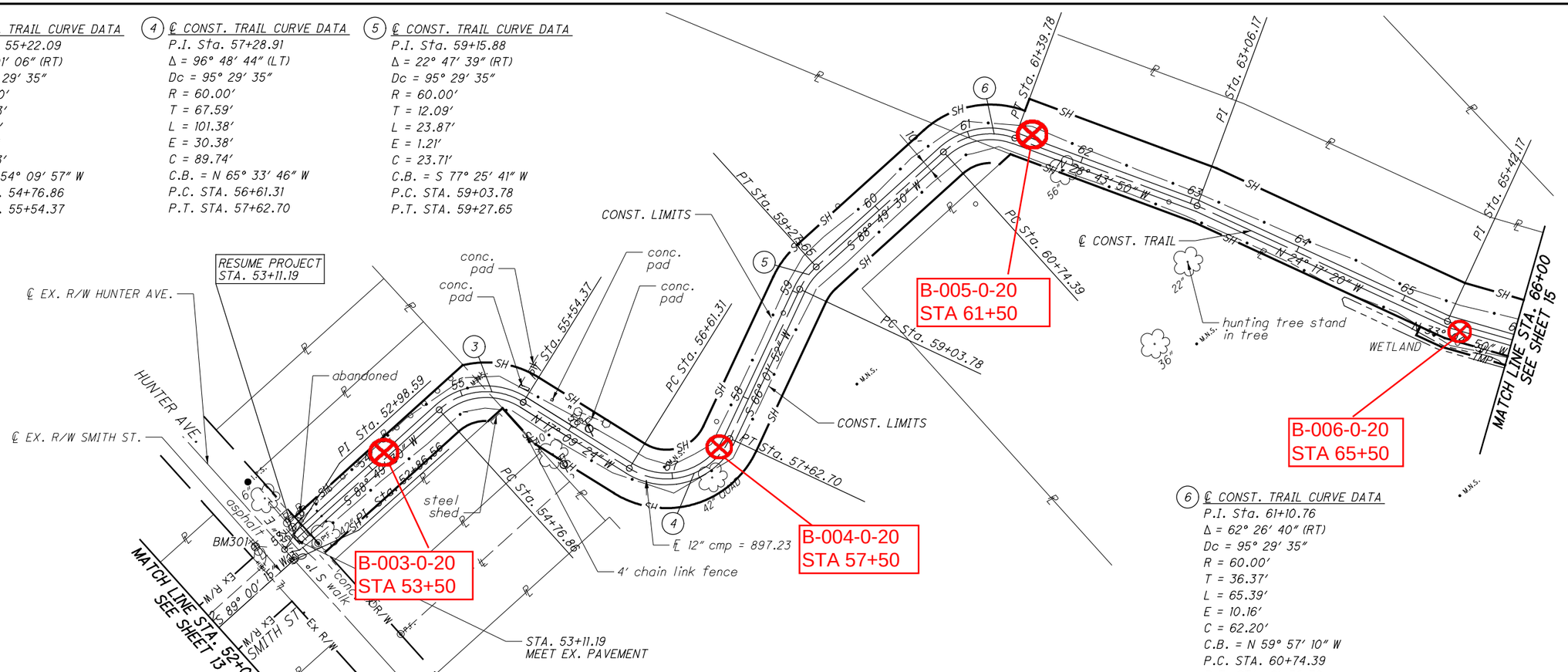
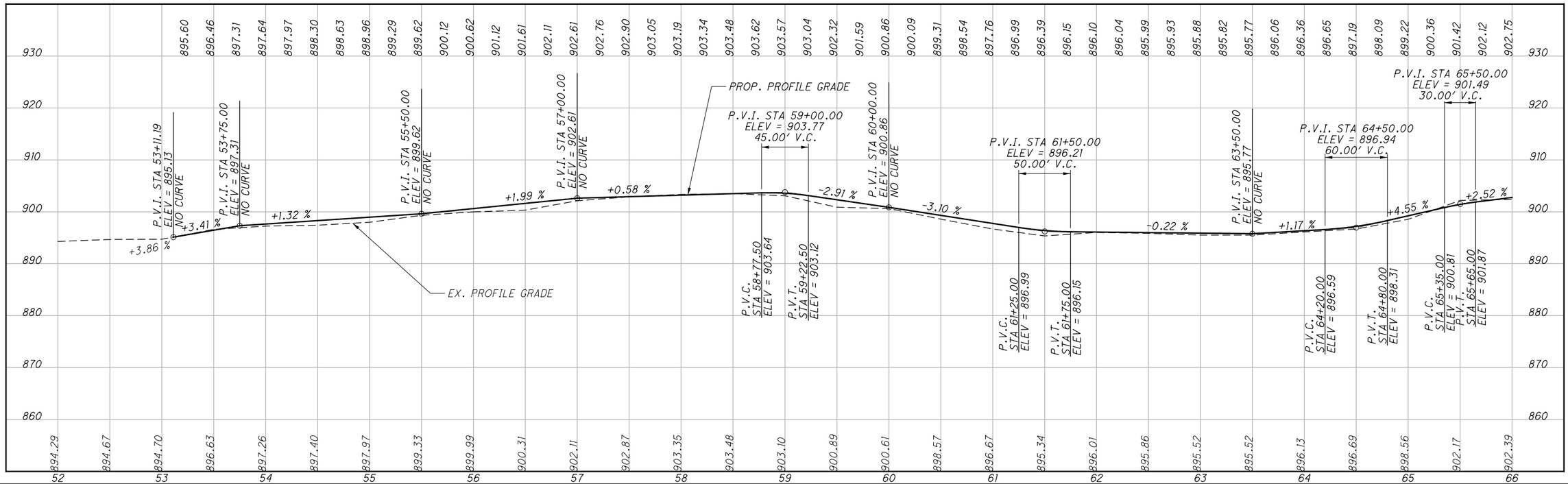
(3) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 55+22.09
Δ = 74° 01′ 06″ (RT)
Dc = 95° 29′ 35″
R = 60.00′
T = 45.23′
L = 77.51′
E = 15.14′
C = 72.23′
C.B. = N 54° 09′ 57″ W
P.C. STA. 54+76.86
P.T. STA. 55+54.37

(4) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 57+28.91
Δ = 96° 48′ 44″ (LT)
Dc = 95° 29′ 35″
R = 60.00′
T = 67.59′
L = 101.38′
E = 30.38′
C = 89.74′
C.B. = N 65° 33′ 46″ W
P.C. STA. 56+61.31
P.T. STA. 57+62.70

(5) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 59+15.88
Δ = 22° 47′ 39″ (RT)
Dc = 95° 29′ 35″
R = 60.00′
T = 12.09′
L = 23.87′
E = 1.21′
C = 23.71′
C.B. = S 77° 25′ 41″ W
P.C. STA. 59+03.78
P.T. STA. 59+27.65



(6) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 61+10.76
Δ = 62° 26′ 40″ (RT)
Dc = 95° 29′ 35″
R = 60.00′
T = 36.37′
L = 65.39′
E = 10.16′
C = 62.20′
C.B. = N 59° 57′ 10″ W
P.C. STA. 60+74.39
P.T. STA. 61+39.78



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA. 52+00 TO STA. 66+00

TRU-W. RESERVE
GREENWAY-PHASE4

14
80

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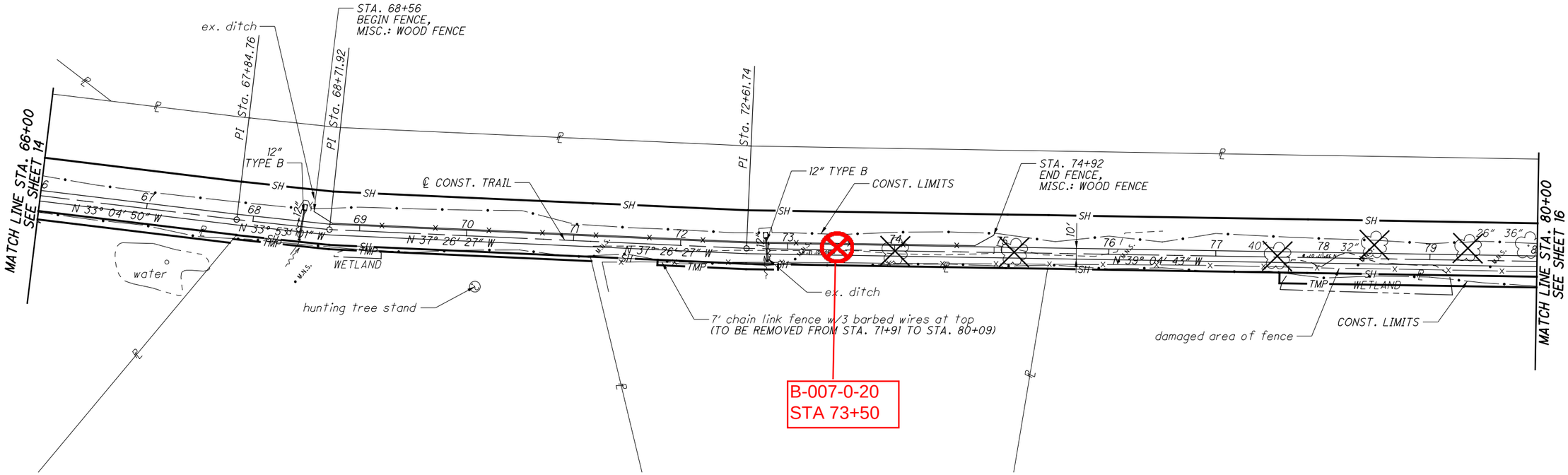

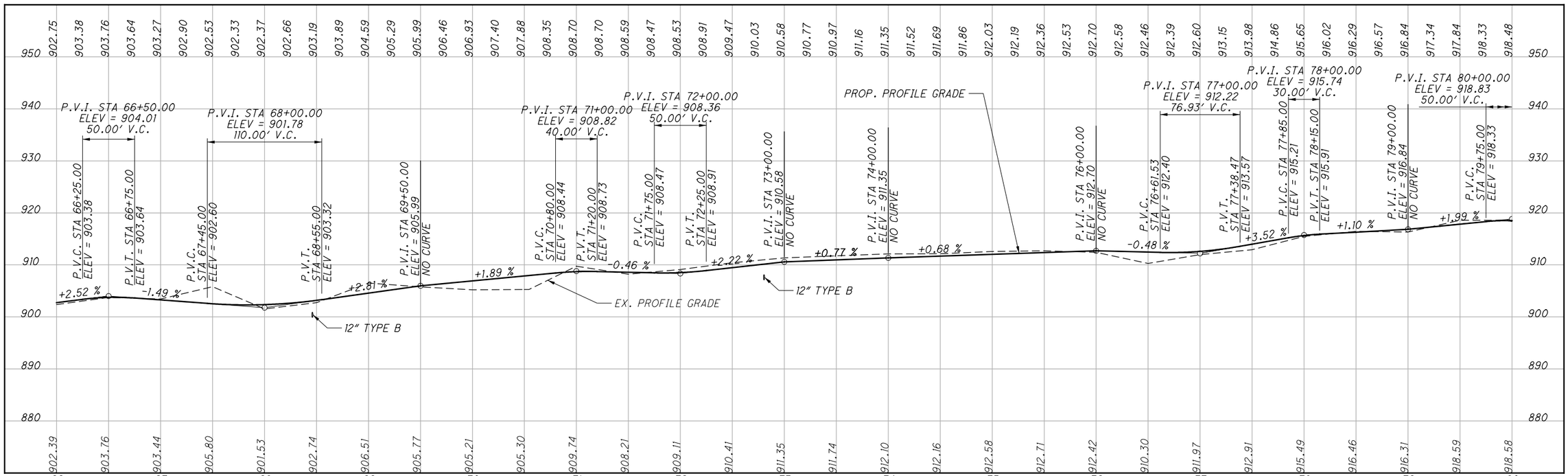

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

PLAN AND PROFILE
STA. 66+00 TO STA. 80+00

TRU-W. RESERVE
GREENWAY-PHASE4

15
80

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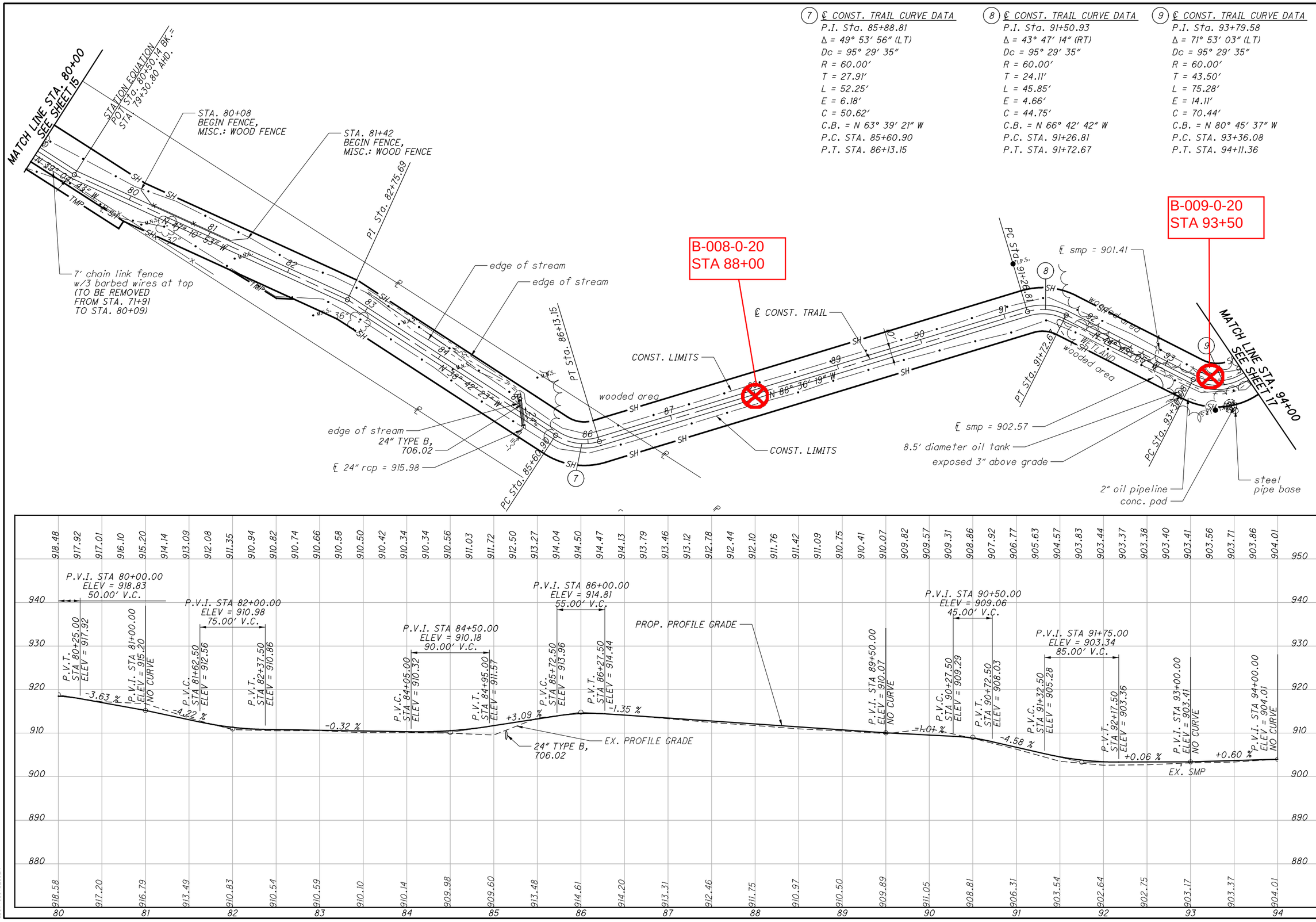

PLAN AND PROFILE
STA. 80+00 TO STA. 94+00

TRU-W. RESERVE
GREENWAY-PHASE4

16
80

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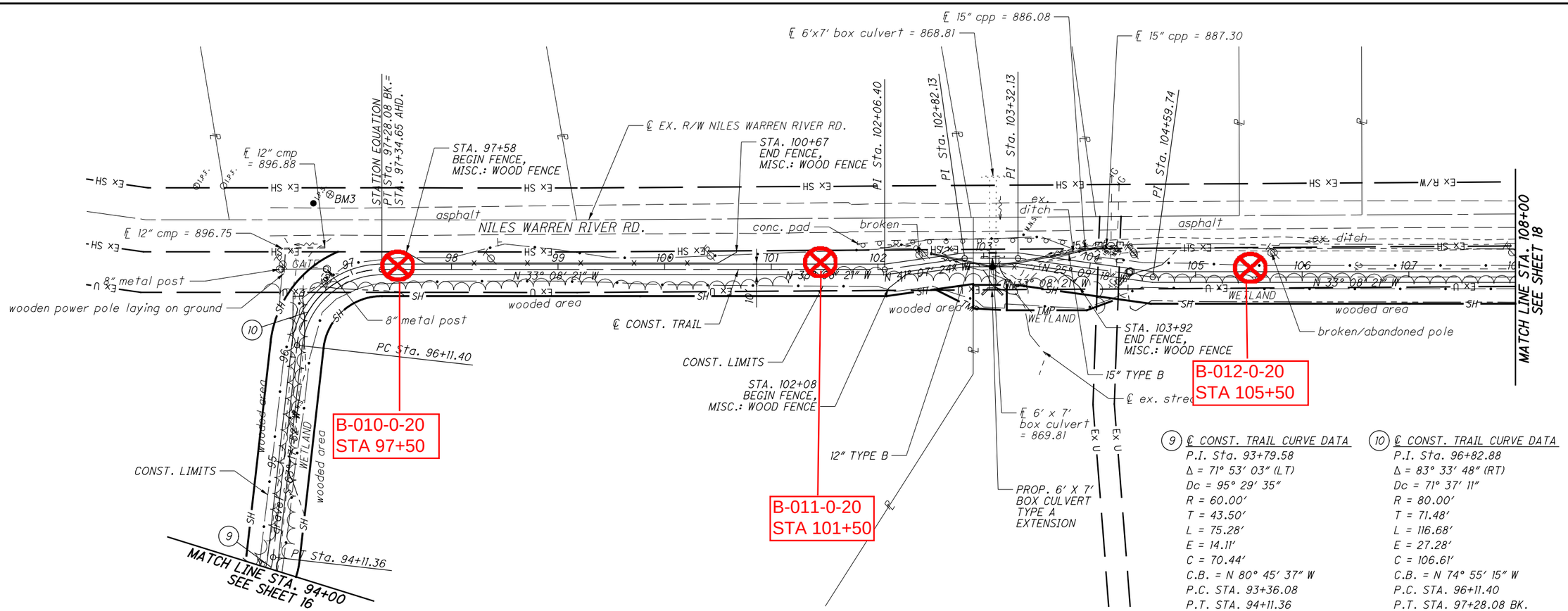

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

PLAN AND PROFILE
STA. 94+00 TO STA. 108+00

TRU-W. RESERVE
GREENWAY-PHASE4

17
80

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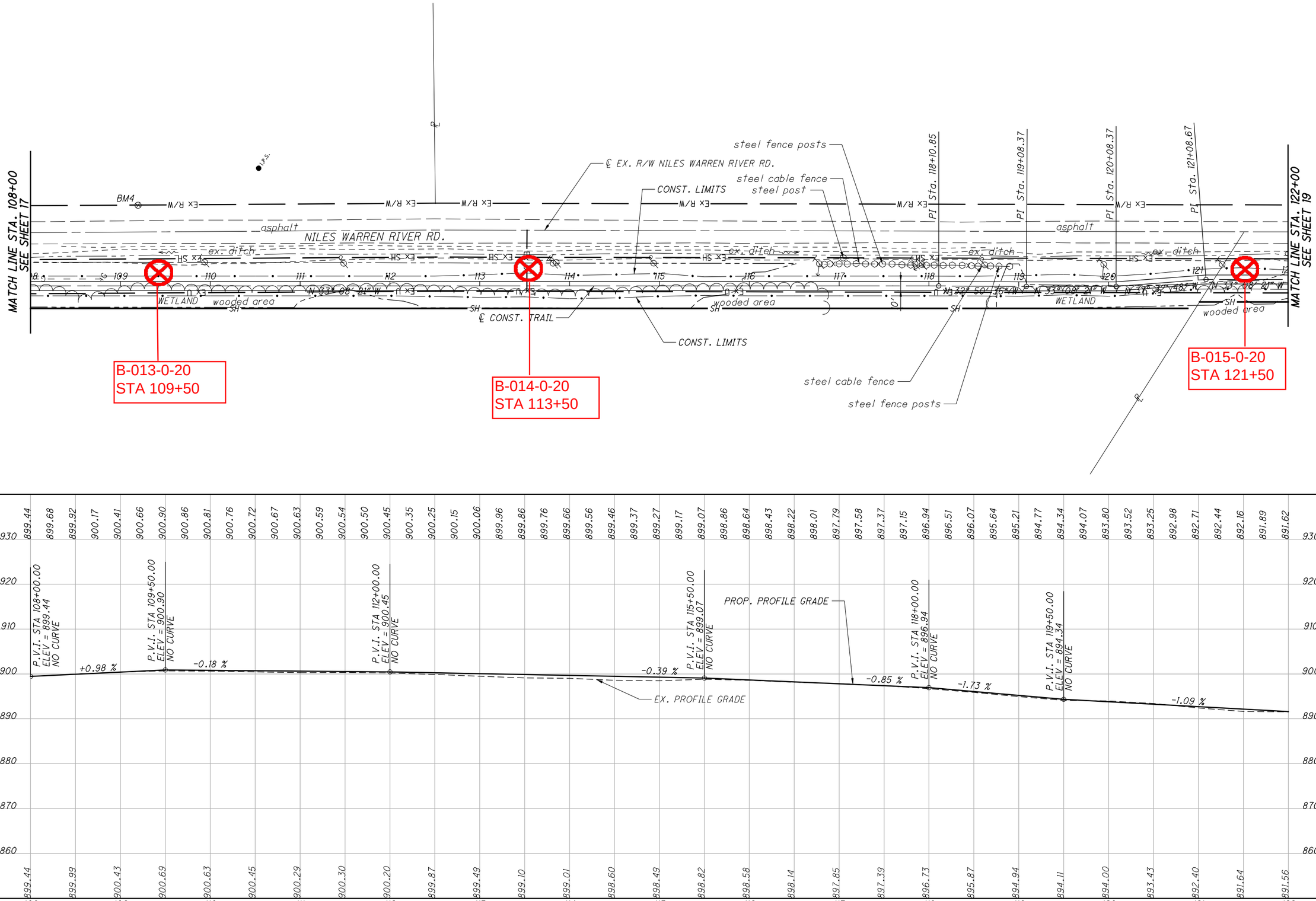

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

PLAN AND PROFILE
STA. 108+00 TO STA. 122+00

TRU-W. RESERVE
GREENWAY-PHASE4

18
80

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B-016-0-20
STA 125+50

B-017-0-20
STA 129+50

B-018-0-20
STA 133+50

℄ 42" rcp = 883.56
18" TYPE C
PC Sta. 122+89.34
PT Sta. 122+71.89
℄ 42" rcp = 883.50
12" TYPE C
PI Sta. 123+83.08
PC Sta. 125+20.23
℄ EX. R/W NILES WARREN RIVER RD.
CONST. LIMITS
PI Sta. 129+23.53
PI Sta. 130+24.29
℄ 12" rcp = 881.20
12" TYPE C
12" TYPE C
PI Sta. 132+80.24
MATCH LINE STA. 122+00
SEE SHEET 18
MATCH LINE STA. 136+00
SEE SHEET 20
NILES WARREN RIVER RD.
asphalt
ex. ditch
WETLAND
PC Sta. 122+48.20
PT Sta. 123+12.83
N 33° 08' 21" W
N 55° 45' 48" W
N 26° 29' 39" W
N 33° 08' 21" W
N 40° 52' 09" W
N 30° 21' 27" W
N 32° 02' 25" W
STA. 122+79
BEGIN FENCE,
MISC.: WOOD FENCE
PROP. 42"
TYPE A
EXTENSION
STA. 123+94
END FENCE,
MISC.: WOOD FENCE
wooded area
STA. 130+83
BEGIN FENCE,
MISC.: WOOD FENCE
STA. 131+57
END FENCE,
MISC.: WOOD FENCE
12" CONDUIT, TYPE A
℄ 12" rcp = 887.03
℄ CONST. TRAIL
WETLAND

(11) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 122+60.20
Δ = 22° 37' 27" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 12.00'
L = 23.69'
E = 1.19'
C = 23.54'
C.B. = N 44° 27' 04" W
P.C. STA. 122+48.20
P.T. STA. 122+71.89

(11A) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 123+01.15
Δ = 22° 37' 27" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 12.00'
L = 23.69'
E = 1.19'
C = 23.54'
C.B. = N 44° 27' 04" W
P.C. STA. 122+89.14
P.T. STA. 123+12.83

P.V.I. STA 123+25.00
ELEV = 890.26
125.00' V.C.
P.V.C. STA 122+62.50 ELEV = 890.94
P.V.T. STA 123+87.50 ELEV = 892.47
P.V.I. STA 125+50.00
ELEV = 898.21
60.00' V.C.
P.V.C. STA 125+20.00 ELEV = 897.15
P.V.T. STA 125+80.00 ELEV = 897.99
P.V.I. STA 127+50.00
ELEV = 896.75
NO CURVE
P.V.I. STA 129+00.00
ELEV = 897.55
35.00' V.C.
P.V.C. STA 128+82.50 ELEV = 897.46
P.V.T. STA 129+17.50 ELEV = 897.16
P.V.I. STA 131+25.00
ELEV = 892.55
160.00' V.C.
P.V.C. STA 130+45.00 ELEV = 894.33
P.V.T. STA 132+05.00 ELEV = 895.41
P.V.I. STA 133+00.00
ELEV = 898.82
40.00' V.C.
P.V.C. STA 132+80.00 ELEV = 898.10
P.V.T. STA 133+20.00 ELEV = 898.87
P.V.I. STA 136+00.00
ELEV = 899.56
NO CURVE
-1.09 %
+3.53 %
-0.73 %
+0.53 %
-2.22 %
+3.58 %
+0.25 %
EX. PROFILE GRADE
PROP. PROFILE GRADE
STA. 122+89.57,
14.75' LT.
℄ 18" (NE)
HW-2.1 OR
HW-2.2
ELEV. = 886.29
35' - 18" CONDUIT, TYPE C
@ 3.00%
42" TYPE A
STA. 123+59.91, 7.23' LT.
HW-2.1 OR HW-2.2
℄ 12" (SE) ELEV. = 889.63
37' - 12" CONDUIT, TYPE C
@ 8.00%
STA. 123+19.23, 8.20' LT.
M.H. NO. 3, 72" DIA. BASE
RIM ELEV. = 891.00
℄ 18" (SE) ELEV. = 885.24
℄ 12" (NW) ELEV. = 886.67
℄ 42" (NE) ELEV. = 883.56
STA. 130+81.22, 13.95' LT.
HW-2.1 OR HW-2.2
℄ 12" (NW) ELEV. = 891.12
43' - 12" CONDUIT, TYPE C
@ 9.51%
STA. 131+50.00, 14.39' LT.
HW-2.1 OR HW-2.2
℄ 12" (SE) ELEV. = 889.92
27' - 12" CONDUIT, TYPE C
@ 10.70%
STA. 131+24.03, 7.93' LT.
M.H. NO. 3
RIM ELEV. = 893.70
℄ 12" (NE&NW&SE) ELEV. = 887.03

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA. 122+00 TO STA. 136+00

TRU-W. RESERVE
GREENWAY-PHASE4

19
80

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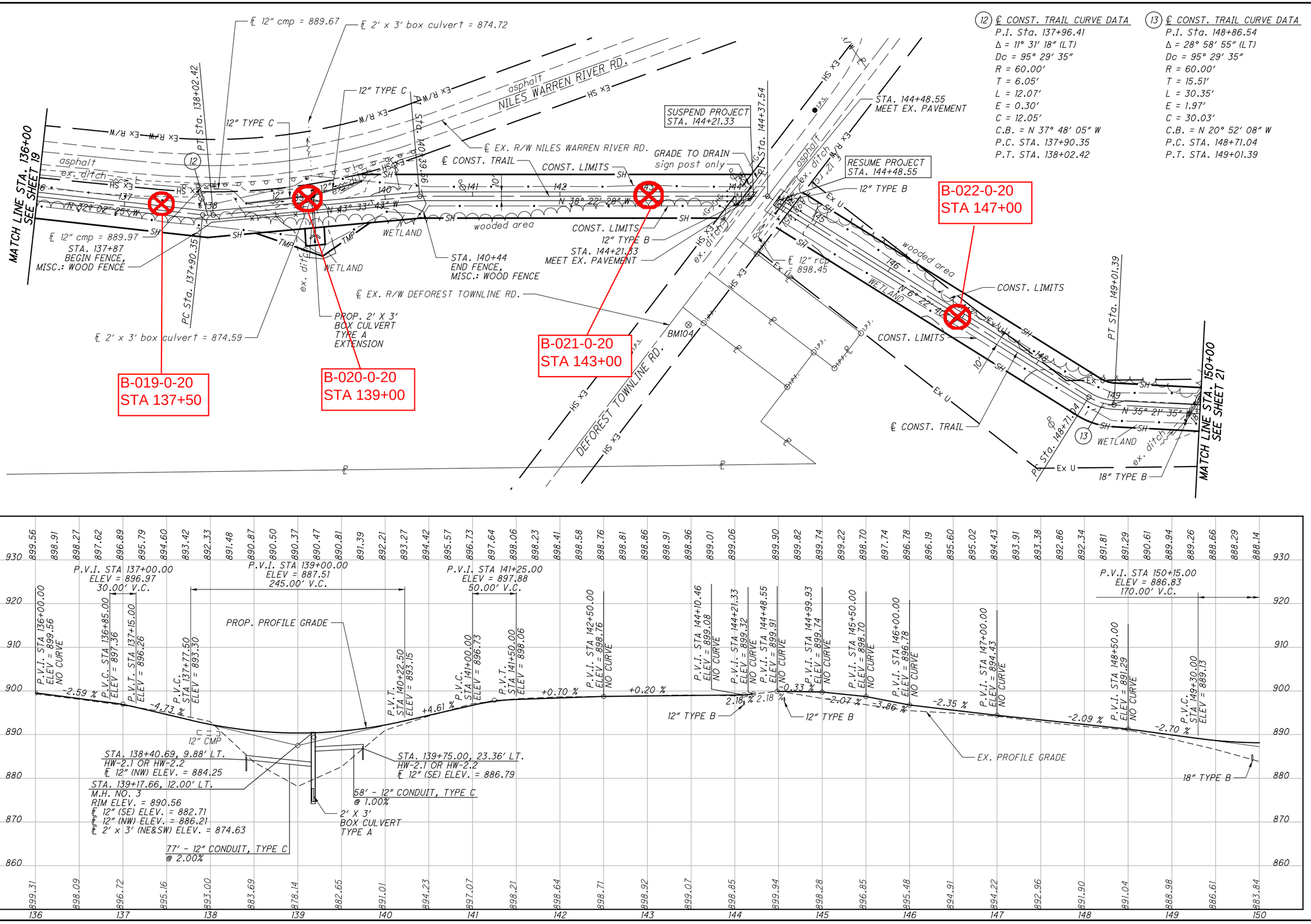

12 ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 137+96.41
Δ = 11° 31' 18" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 6.05'
L = 12.07'
E = 0.30'
C = 12.05'
C.B. = N 37° 48' 05" W
P.C. STA. 137+90.35
P.T. STA. 138+02.42

13 ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 148+86.54
Δ = 28° 58' 55" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 15.51'
L = 30.35'
E = 1.97'
C = 30.03'
C.B. = N 20° 52' 08" W
P.C. STA. 148+71.04
P.T. STA. 149+01.39

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA. 136+00 TO STA. 150+00

TRU-W. RESERVE
GREENWAY-PHASE4

20
80

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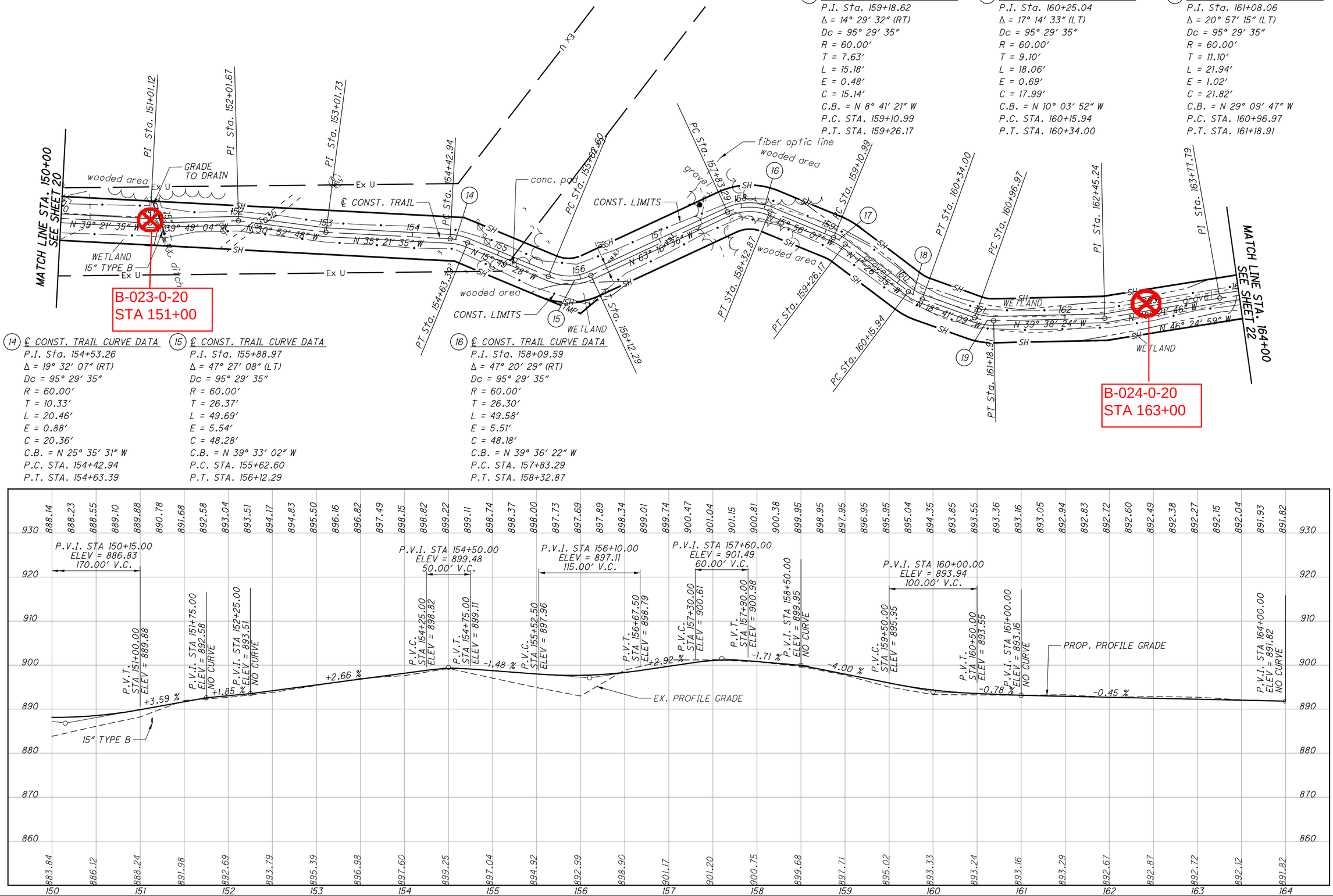

(14) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 154+53.26
Δ = 19° 32' 07" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 10.33'
L = 20.46'
E = 0.88'
C = 20.36'
C.B. = N 25° 35' 31" W
P.C. STA. 154+42.94
P.T. STA. 154+63.39

(15) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 155+88.97
Δ = 47° 27' 08" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 26.37'
L = 49.69'
E = 5.54'
C = 48.28'
C.B. = N 39° 33' 02" W
P.C. STA. 155+62.60
P.T. STA. 156+12.29

(16) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 158+09.59
Δ = 47° 20' 29" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 26.30'
L = 49.58'
E = 5.51'
C = 48.18'
C.B. = N 39° 36' 22" W
P.C. STA. 157+83.29
P.T. STA. 158+32.87

(17) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 159+18.62
Δ = 14° 29' 32" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 7.63'
L = 15.18'
E = 0.48'
C = 15.14'
C.B. = N 8° 41' 21" W
P.C. STA. 159+10.99
P.T. STA. 159+26.17

(18) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 160+25.04
Δ = 17° 14' 33" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 9.10'
L = 18.06'
E = 0.69'
C = 17.99'
C.B. = N 10° 03' 52" W
P.C. STA. 160+15.94
P.T. STA. 160+34.00

(19) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 161+08.06
Δ = 20° 57' 15" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 11.10'
L = 21.94'
E = 1.02'
C = 21.82'
C.B. = N 29° 09' 47" W
P.C. STA. 160+96.97
P.T. STA. 161+18.91

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA. 150+00 TO STA. 164+00

TRU-W. RESERVE
GREENWAY-PHASE4

21
80

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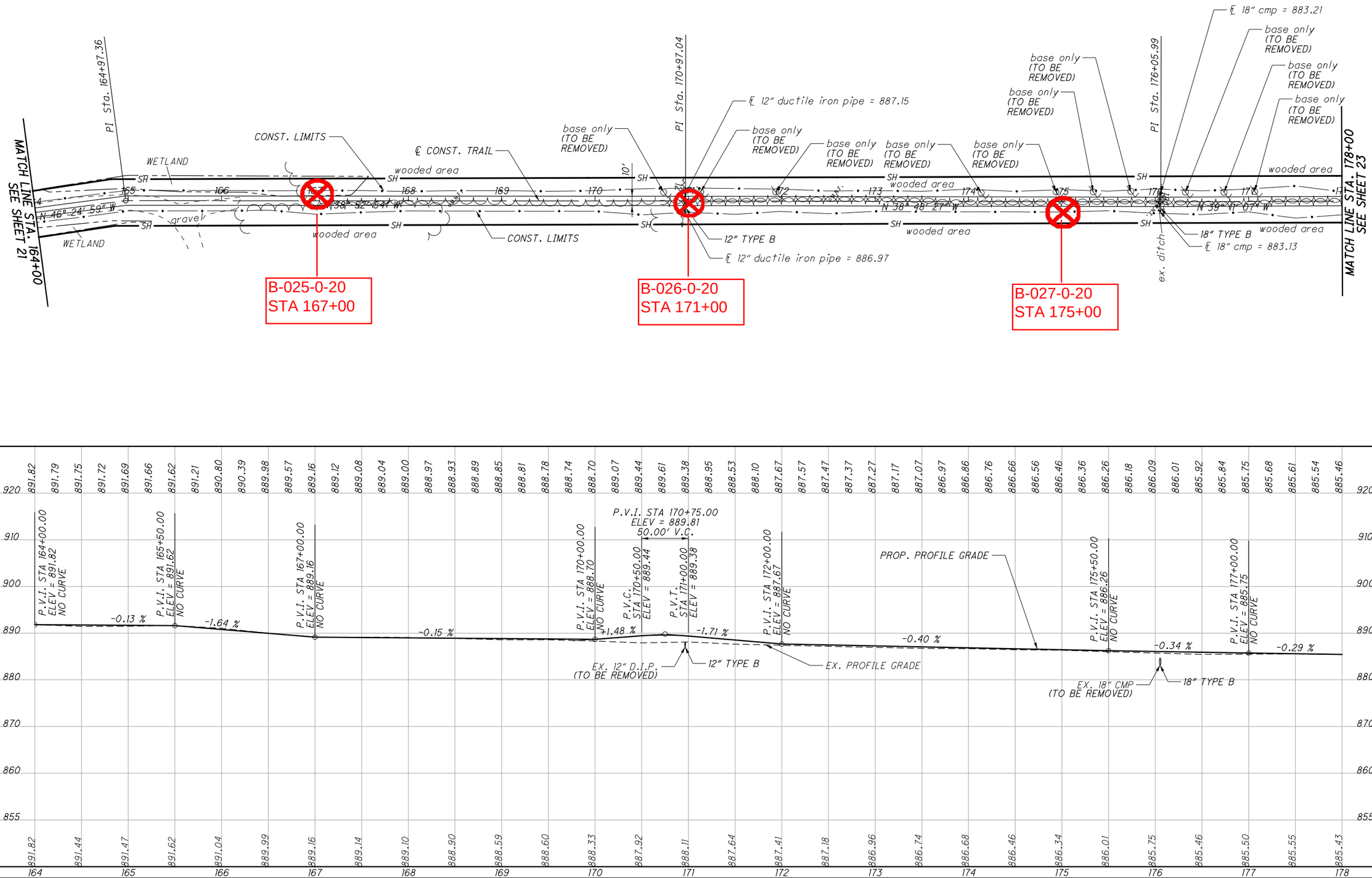

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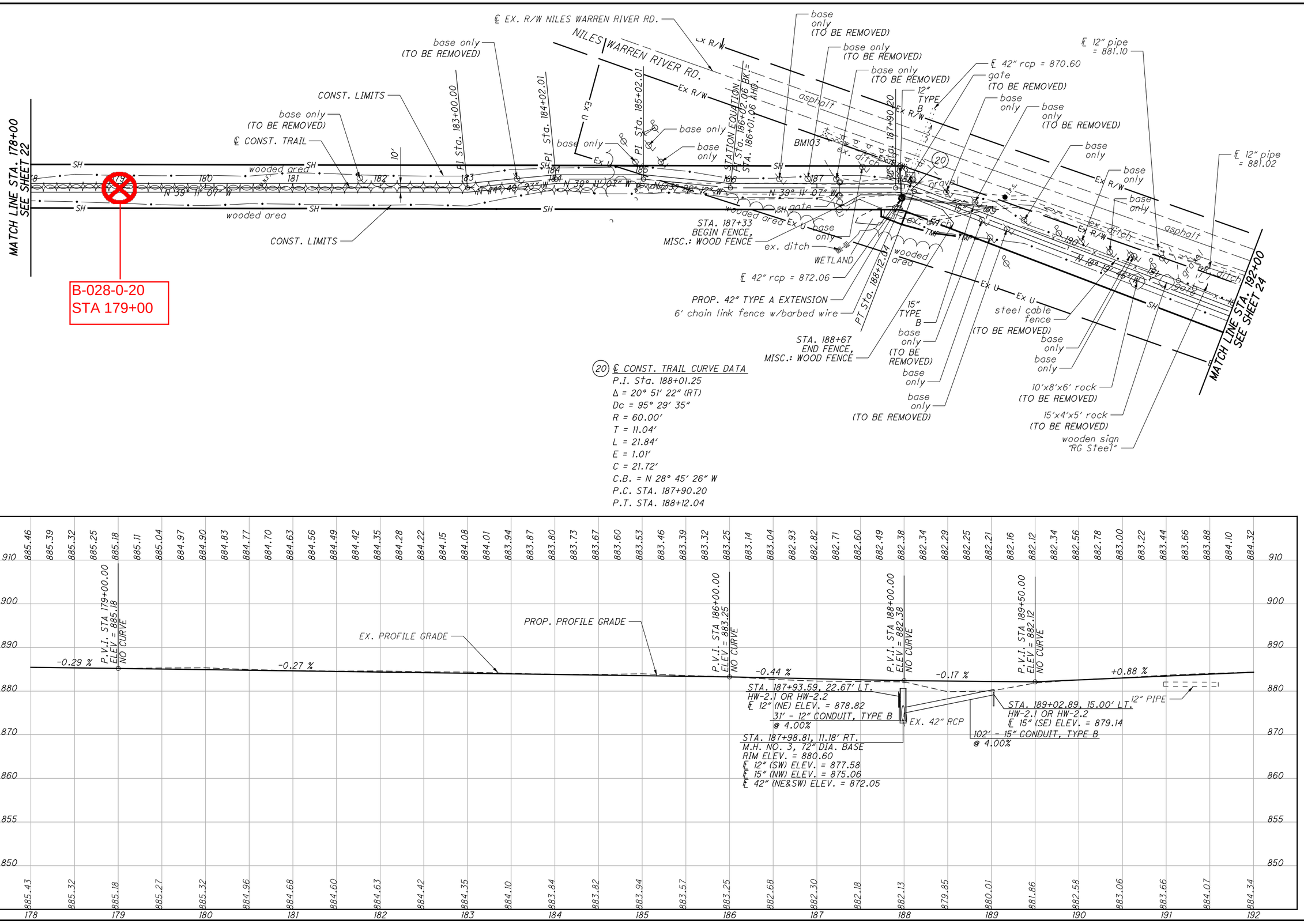
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA. 164+00 TO STA. 178+00

TRU-W. RESERVE
GREENWAY-PHASE4

22
80



HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED | CHECKED

PLAN AND PROFILE
STA. 178+00 TO STA. 192+00

TRU-W. RESERVE
GREENWAY-PHASE4

23
80

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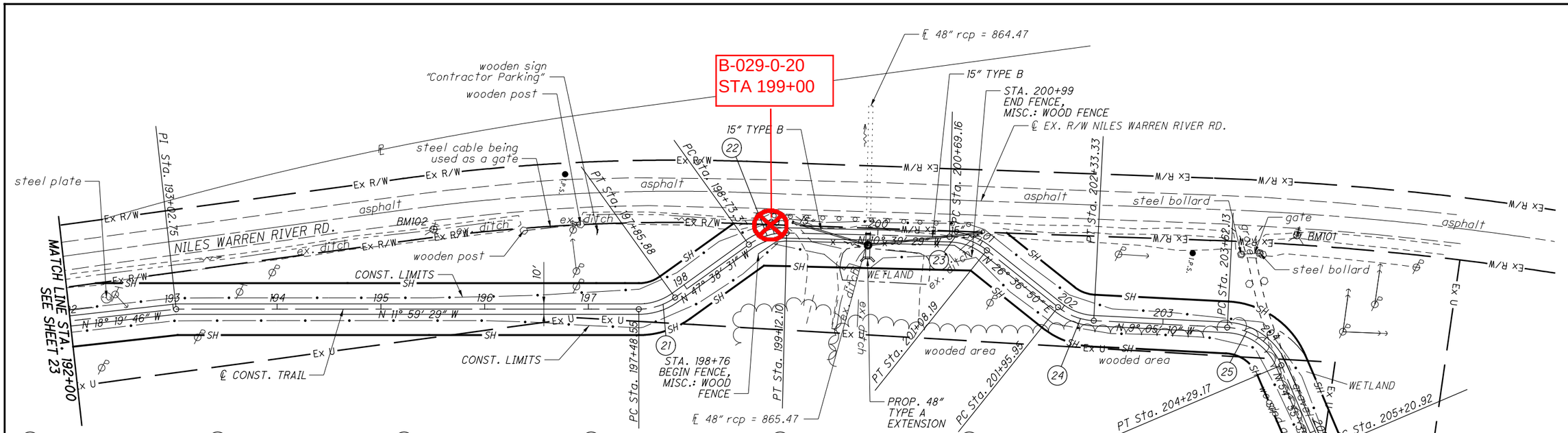


(21) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 197+67.84
Δ = 35° 39' 02" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 19.29'
L = 37.33'
E = 3.03'
C = 36.73'
C.B. = N 29° 49' 00" W
P.C. STA. 197+48.55
P.T. STA. 197+85.88

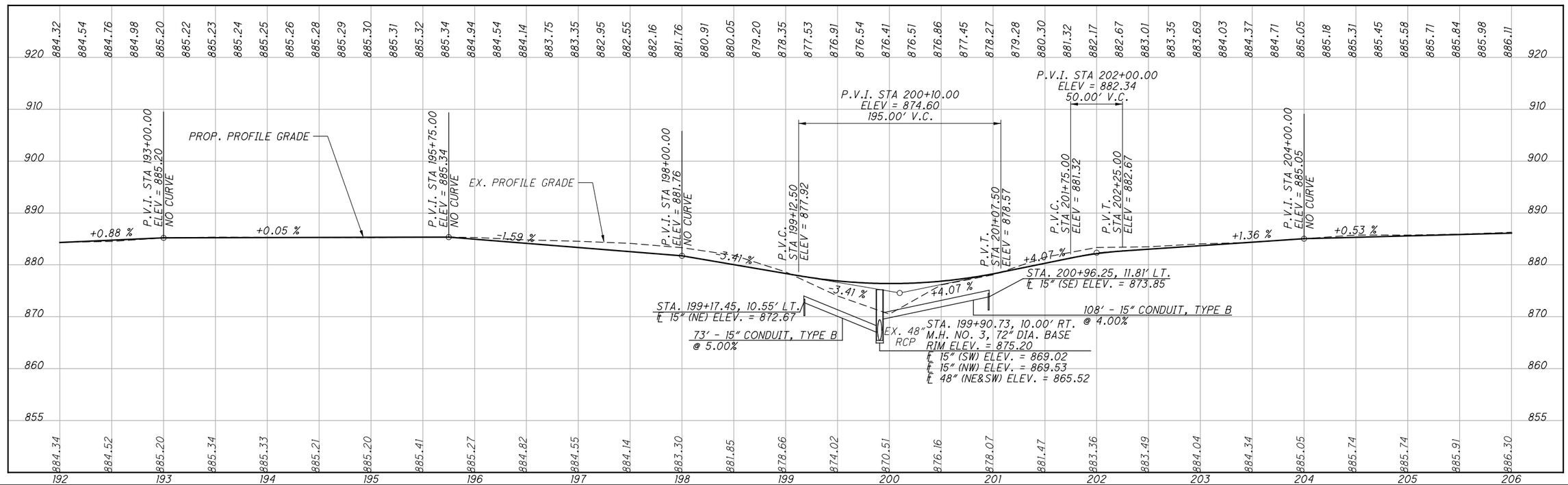
(22) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 198+93.44
Δ = 36° 59' 01" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 20.07'
L = 38.73'
E = 3.27'
C = 38.06'
C.B. = N 29° 09' 00" W
P.C. STA. 198+73.37
P.T. STA. 199+12.10

(23) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 200+89.39
Δ = 37° 16' 20" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 20.23'
L = 39.03'
E = 3.32'
C = 38.35'
C.B. = N 7° 58' 40" E
P.C. STA. 200+69.16
P.T. STA. 201+08.19

(24) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 202+15.27
Δ = 35° 42' 00" (LT)
Dc = 95° 29' 35"
R = 60.00'
T = 19.32'
L = 37.38'
E = 3.03'
C = 36.78'
C.B. = N 8° 45' 50" E
P.C. STA. 201+95.95
P.T. STA. 202+33.33

(25) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 203+99.63
Δ = 64° 00' 45" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 37.50'
L = 67.03'
E = 10.76'
C = 63.60'
C.B. = N 22° 55' 13" E
P.C. STA. 203+62.13
P.T. STA. 204+29.17

(26) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 205+36.24
Δ = 28° 38' 49" (RT)
Dc = 95° 29' 35"
R = 60.00'
T = 15.32'
L = 30.00'
E = 1.92'
C = 29.69'
C.B. = N 69° 15' 00" E
P.C. STA. 205+20.92
P.T. STA. 205+50.92



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA. 192+00 TO STA. 206+00

TRU-W. RESERVE
GREENWAY-PHASE4

24
80

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MATCH LINE STA. 206+00
SEE SHEET 24

MATCH LINE STA. 220+00
SEE SHEET 26

B-030-0-20
STA 199+00

WETLAND

Ex U

CONST. LIMITS

brick foundation
(TO BE REMOVED)

℄ CONST. TRAIL

℄ 18" cmp = 895.71

8' chain link fence

18" TYPE B

℄ 18" cmp = 892.44

Ex RR

PC Sta. 212+86.82

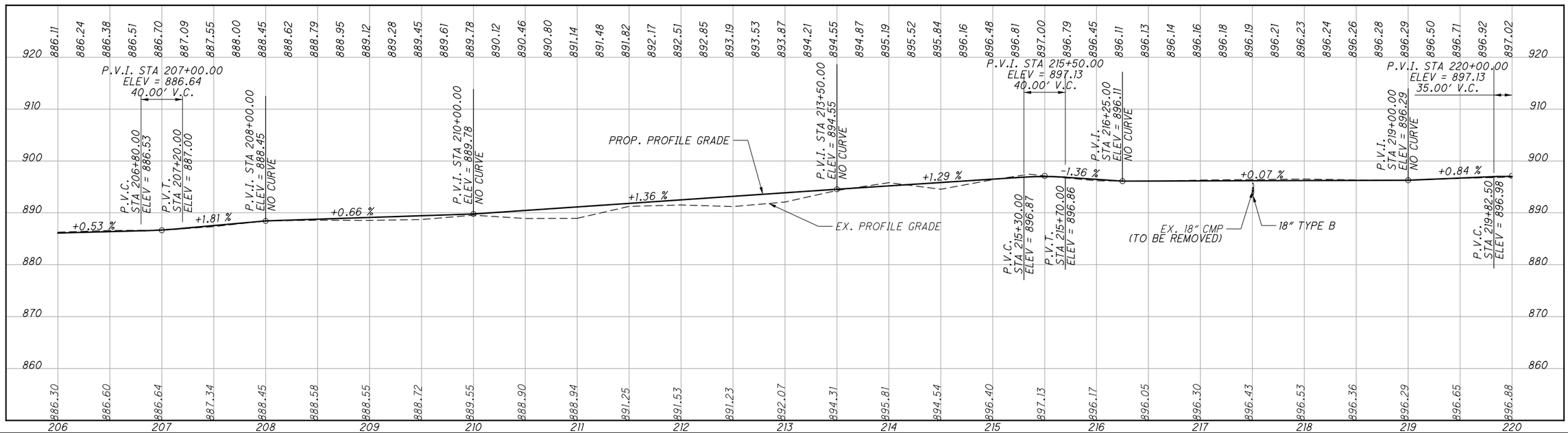
conc. base only

wooded area

PT Sta. 213+76.65

CONST. LIMITS

(27) ℄ CONST. TRAIL CURVE DATA
P.I. Sta. 213+42.56
Δ = 85° 46′ 55″ (LT)
Dc = 95° 29′ 35″
R = 60.00′
T = 55.74′
L = 89.83′
E = 21.89′
C = 81.67′
C.B. = N 40° 40′ 57″ E
P.C. STA. 212+86.82
P.T. STA. 213+76.65



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

PLAN AND PROFILE
STA. 206+00 TO STA. 220+00

TRU-W. RESERVE
GREENWAY-PHASE4

25
80

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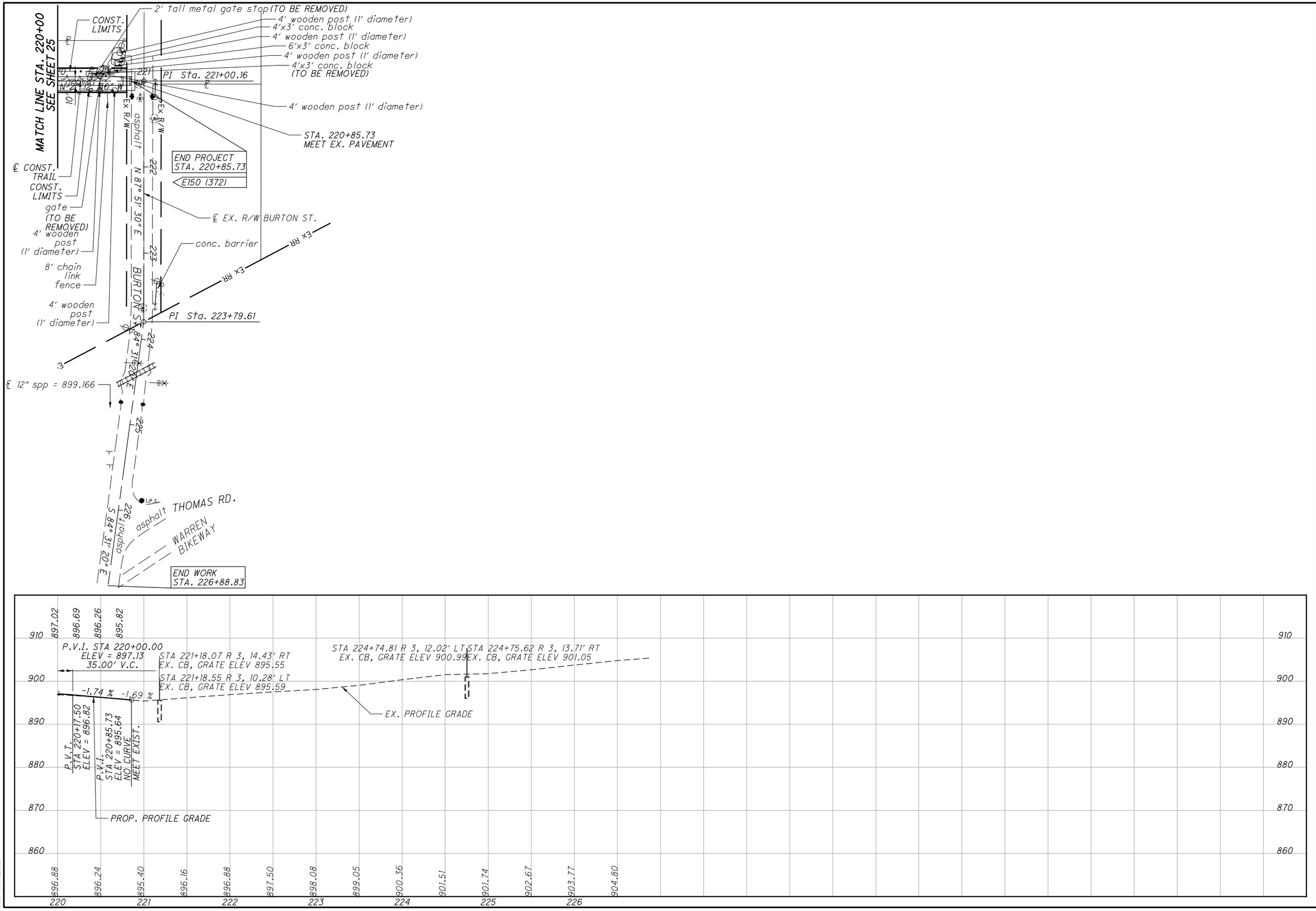

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

PLAN AND PROFILE
STA. 220+00 TO STA. 224+50

TRU-W. RESERVE
GREENWAY-PHASE4

26
80

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1:57:32 PM
ODOT81STD.USER

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 10+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 878.6 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.182327, -80.762427

EXPLORATION ID: B-001-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 878.6	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" SLAG RAILROAD BED *FILL*	877.6																		
STIFF, BROWN, **SANDY SILT**, SOME SAND AND GRAVEL, LITTLE ORGANICS, MOIST *FILL*		1	5 4 4	11	67	SS-1	1.50	25	8	19	28	20	25	17	8	15	A-4a (3)	-	
		2																	
		3	4 4 4	11	56	SS-2	1.50	-	-	-	-	-	-	-	-	19	A-4a (V)	<100	
	873.6	4																	
		5	8 16 16	44	75	SS-3T	--	-	-	-	-	-	-	-	-	-	A-4a (V)	-	
DENSE, BLACK SLAG AND CINDERS, MOIST *FILL*	872.6		11			SS-3B	--	32	33	21	11	3	NP	NP	NP	25	A-1-b (0)	-	
		EOB 6																	

End of Boring @ 6'

No Free Water Encountered
Caved @ 3.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 24+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 877.7 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.185057, -80.765796

EXPLORATION ID: B-002-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 877.7	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" TOPSOIL	876.7																		
MEDIUM DENSE 24" SLAG AND CINDERS *FILL*	874.7	1	6 9 5	19	100	SS-1	--	42	18	19	16	5	NP	NP	NP	27	A-1-b (0)	-	
		2	3 2 3	7	100	SS-2T	--	-	-	-	-	-	-	-	-	-	A-1-b (V)	-	
		3				SS-2B	--	3	9	34	41	13	NP	NP	NP	20	A-4a (4)	-	
LOOSE, BROWN TO GRAY, **SANDY SILT**, MOIST TO WET	871.7	4	3 2 3	7	83	SS-3	--	-	-	-	-	-	-	-	-	19	A-4a (V)	<100	
		EOB 5 6	2																

End of Boring @ 6'

No Free Water Encountered
Caved @ 2'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 53+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 896.6 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.186020, -80.774984

EXPLORATION ID: B-003-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 896.6	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
VERY LOOSE 18" SLAG WITH CINDERS AND PORCELAIN FRAGMENTS	895.1	1	3	3	100	SS-1T	--	58	9	15	13	5	NP	NP	NP	21	A-1-b (0)	-	
LOOSE TO MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME SILT AND CLAY, MOIST *POSSIBLE FILL*		2	1 1			SS-1B	--	-	-	-	-	-	-	-	-	-	A-3a (V)	-	
		3	5 4 4	11	100	SS-2	--	0	4	68	15	13	NP	NP	NP	17	A-3a (0)	-	
	890.6	4	3 3 4	10	75	SS-3	--	-	-	-	-	-	-	-	-	17	A-3a (V)	-	
		EOB 5 6	5																

End of Boring @ 6'

No Free Water Encountered
Caved @ 2'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 57+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 902.8 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.186537, -80.776012

EXPLORATION ID: B-004-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
VERY STIFF, GRAY 30" CLAY, PORCELAIN FRAGMENTS, AND WOOD FRAGMENTS, MOIST *FILL*	902.8	1	7 5 7	16	100	SS-1	2.00	10	4	6	29	51	42	24	18	25	A-7-6 (12)	-	
STIFF, MOTTLED BROWN AND GRAY, **CLAY**, TRACE SAND, TRACE ORGANICS, MOIST	900.3	2	3 3 4	10	100	SS-2	1.50	0	2	7	38	53	41	18	23	19	A-7-6 (13)	-	
	896.8	3	3 4 7	15	75	SS-3	1.50	-	-	-	-	-	-	-	-	19	A-7-6 (V)	<100	
		EOB 4 5 6	10																

End of Boring @ 6'

No Free Water Encountered
Caved @ 3.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / LITTLE	DRILL RIG: DIEDRICH D-50 ATV	STATION / OFFSET: 61+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: DIEDRICH AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 895.3 (MSL) EOB: 6.0 ft.
START: 5/22/20 END: 5/22/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 80	LAT / LONG: 41.186477, -80.777356

EXPLORATION ID B-005-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
MEDIUM DENSE, BROWN 30" SLAG WITH CINDERS RAILROAD BED, MOIST *FILL*	895.3																		
	892.8	1	16 6 3	12	100	SS-1	--	67	13	10	8	2	NP	NP	NP	20	A-1-a (0)	-	
STIFF, BROWN TO GRAY, **CLAY**, MOIST		2 3 4	2 4 5	12	100	SS-2	1.50	0	0	0	18	82	52	26	26	26	A-7-6 (17)	-	
	889.3	EOB 5 6	2 5 6 8	15	83	SS-3	1.50	-	-	-	-	-	-	-	-	28	A-7-6 (V)	<100	

End of Boring @ 6'

No Free Water Encountered
Caved @ 3.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4) | DRILLING FIRM / OPERATOR: RIDGEWAY / LITTLE | DRILL RIG: DIEDRICH D-50 ATV | STATION / OFFSET: 65+60 | EXPLORATION ID B-006-0-20

TYPE: ROADWAY | SAMPLING FIRM / LOGGER: PSI / J. MELLINGER | HAMMER: DIEDRICH AUTOMATIC | ALIGNMENT:

PID: | SFN: | DRILLING METHOD: 3.25" HSA | CALIBRATION DATE: 7/29/19 | ELEVATION: 902.2 (MSL) EOB: 6.0 ft. | PAGE 1 OF 1

START: 5/22/20 END: 5/22/20 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 80 | LAT / LONG: 41.187470, -80.777971

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
9" TOPSOIL	901.5																		
VERY STIFF, BROWN, **SILT**, LITTLE SAND, MOIST		1	5																
		2	5 7	16	100	SS-1	2.00	5	3	8	57	27	24	15	9	15	A-4b (8)	-	
	898.2	3	4																
			5 7	16	100	SS-2	2.00	-	-	-	-	-	-	-	-	14	A-4b (V)	590	
STIFF, BROWN, **SANDY SILT**, MOIST		4	4																
	896.2	5	4 6	13	83	SS-3	1.50	5	7	16	47	25	24	14	10	16	A-4a (7)	-	
	EOB	6	7																

End of Boring @ 6'

No Free Water Encountered
Caved @ 5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / LITTLE	DRILL RIG: DIEDRICH D-50 ATV	STATION / OFFSET: 73+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: DIEDRICH AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 909.4 (MSL) EOB: 6.0 ft.
START: 5/22/20 END: 5/22/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 80	LAT / LONG: 41.189271, -80.779630

EXPLORATION ID B-007-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 909.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
9" TOPSOIL	908.7																		
SOFT, GRAY BROWN, **SANDY SILT**, LITTLE GRAVEL, WET	905.4	1 2 3	2 1 1	3	33	SS-1	0.50	-	-	-	-	-	-	-	-	20	A-4a (V)	730	
			2 1 2	4	100	SS-2	0.50	12	5	27	44	12	19	16	3	21	A-4a (4)	-	
VERY STIFF, BROWN, **SILT AND CLAY**, SOME SAND, MOIST	903.4	4 5 EOB 6	2 5 7 6	16	79	SS-3	2.00	4	6	19	45	26	27	16	11	16	A-6a (8)	-	

End of Boring @ 6'

No Free Water Encountered
Caved @ 4'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 88+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 911.8 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.192151, -80.783570

EXPLORATION ID: B-008-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 911.8	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" TOPSOIL	910.8																		
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND AND SILT**, MOIST *FILL*	907.8	1 2 3	8 11 11	30	67	SS-1	--	39	10	18	23	10	25	19	6	12	A-2-4 (0)	-	
			8 5 4	12	100	SS-2	--	-	-	-	-	-	-	-	-	15	A-2-4 (V)	<100	
STIFF, GRAY, **SILT AND CLAY**, MOIST , PETROLEUM ODOR *POSSIBLE FILL*	905.8	4 5 EOB 6	7 5 5 9	14	75	SS-3	1.50	20	10	19	30	21	29	18	11	18	A-6a (4)	-	

End of Boring @ 6'

No Free Water Encountered
Caved @ 4'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 93+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 903.4 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.192589, -80.785353

EXPLORATION ID: B-009-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 903.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
18" SLAG *FILL*	901.9					SS-1T	--	-	-	-	-	-	-	-	-	-	A-1-a (V)	-	
HARD, MOTTLED BLACK AND GRAY, **SANDY SILT**, MOIST *POSSIBLE FILL*	900.9	W 901.4 / 900.9	30 29 5	46	100	SS-1B	1.50	3	8	24	42	23	20	16	4	20	A-4a (6)	-	
STIFF, BROWN, **SILT AND CLAY**, SOME SAND, LITTLE GRAVEL, MOIST			2 4 7	15	100	SS-2	1.50	16	7	16	33	28	26	14	12	17	A-6a (6)	-	
	897.4	EOB	4 4 5 6	12	58	SS-3	1.50	-	-	-	-	-	-	-	-	14	A-6a (V)	<100	

End of Boring @ 6'

Water Encountered @ 2'
Water at Completion @ 2.5'
Caved @ 3.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 97+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 900.0 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.192480, -80.786623

EXPLORATION ID: B-010-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 900.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
6" TOPSOIL	899.5																		
STIFF, BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, MOIST	897.5	1 2 3 4 5 6	2 5 6	15	78	SS-1	2.50	7	8	16	40	29	30	15	15	17	A-6a (9)	-	
VERY STIFF, MOTTLED BROWN AND GRAY, **SILTY CLAY**, LITTLE SAND, TRACE GRAVEL, MOIST	894.0	EOB	4 6 7	18	100	SS-2	2.50	9	4	13	34	40	39	16	23	25	A-6b (13)	-	
			3 5 9 12	19	100	SS-3	2.50	-	-	-	-	-	-	-	-	23	A-6b (V)	<100	

End of Boring @ 6'

No Free Water Encountered
Caved @ 4.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 7/28/20 15:23 - \\CLIENT\C$\GINT\DATA FILES\01393219 METROPARKS BIKE PATH PHASE 4.GPJ

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 101+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 893.8 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.193411, -80.787393

EXPLORATION ID: B-011-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 893.8	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
13" TOPSOIL	892.7																		
MEDIUM STIFF TO STIFF, BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, MOIST		1 2 3 4 5	1 2 4 5 8 8 3 4 7 9	8	89	SS-1	1.50	5	7	14	38	36	32	18	14	10	A-6a (9)	-	
				22	94	SS-2	2.50	7	7	14	39	33	27	15	12	15	A-6a (8)	-	
	887.8	EOB 6		15	100	SS-3	1.50	-	-	-	-	-	-	-	-	13	A-6a (V)	640	

End of Boring @ 6'

No Free Water Encountered
Caved @ 5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 105+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 894.6 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.194348, -80.788138

EXPLORATION ID: B-012-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
7" TOPSOIL	894.0																		
STIFF, MOTTLED BROWN AND GRAY, **CLAY**, LITTLE SAND, MOIST	892.1	1	1 3 5	11	6	SS-1	1.50	2	4	16	31	47	44	20	24	26	A-7-6 (14)	-	
VERY STIFF, BROWN, **SILT AND CLAY**, MOIST		2 3	4 8 9	23	11	SS-2	3.00	-	-	-	-	-	-	-	-	18	A-6a (V)	<100	
	888.6	4 5 EOB 6	4 7 8 9	20	13	SS-3	2.50	0	0	0	49	51	32	21	11	27	A-6a (8)	-	

End of Boring @ 6'

No Free Water Encountered
Caved @ 5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 109+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 900.7 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.195279, -80.788908

EXPLORATION ID: B-013-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 900.7	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
8" TOPSOIL	900.0																		
MEDIUM STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, MOIST	898.2	1	WOH 2 4	8	78	SS-1	1.50	8	6	14	35	37	32	19	13	18	A-6a (9)	-	
STIFF, BROWN, **CLAY**, MOIST		2																	
		3	3 4 6	14	100	SS-2	1.50	-	-	-	-	-	-	-	-	21	A-6a (V)	900	
		4																	
	894.7	5	3 4 6 7	14	83	SS-3	1.50	3	0	0	15	82	52	27	25	28	A-7-6 (16)	-	
		EOB 6																	

End of Boring @ 6'

No Free Water Encountered
Caved @ 5.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 113+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 899.1 (MSL) EOB: 6.0 ft.
START: 5/12/20 END: 5/12/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.196209, -80.789679

EXPLORATION ID: B-014-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
6" TOPSOIL	899.1																		
SOFT TO VERY STIFF, MOTTLED BROWN AND GRAY **CLAY**, LITTLE SAND, MOIST	898.6	1	1 1 2	4	67	SS-1	0.50	1	2	13	34	50	48	23	25	34	A-7-6 (16)	-	
		2																	
		3	4 6 7	18	89	SS-2	2.50	-	-	-	-	-	-	-	-	16	A-7-6 (V)	640	
		4																	
		5	4 5 6	15	79	SS-3	1.50	1	1	1	17	80	50	27	23	25	A-7-6 (15)	-	
	893.1	EOB 6	10																

End of Boring @ 6'

No Free Water Encountered
Caved @ 5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 121+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 891.4 (MSL) EOB: 6.0 ft.
START: 5/13/20 END: 5/13/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.198047, -80.791263

EXPLORATION ID: B-015-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 891.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
8" TOPSOIL	890.7																		
STIFF TO VERY STIFF, BROWN, **SILT AND CLAY**, SOME SAND AND GRAVEL, MOIST		1	2 2 4	8	100	SS-1	1.50	24	9	24	22	21	27	15	12	16	A-6a (2)	-	
		2																	
		3	6 9 10	26	56	SS-2	3.00	14	6	13	35	32	29	17	12	13	A-6a (7)	860	
		4																	
		5	4 6 7	18	83	SS-3	2.50	8	5	12	40	35	30	18	12	17	A-6a (9)	-	
	885.4	EOB 6	9																

End of Boring @ 6'

No Free Water Encountered
Caved @ 5.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 125+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 897.9 (MSL) EOB: 6.0 ft.
START: 5/13/20 END: 5/13/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.198982, -80.792005

EXPLORATION ID: B-016-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 897.9	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
13" TOPSOIL	896.8																		
SOFT TO VERY STIFF, BROWN **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, MOIST		1 2 3 4 5	WOH 1 1 1 5 8 3 5 10	3	67	SS-1	0.50	6	7	15	38	34	29	17	12	20	A-6a (8)	-	
				18	78	SS-2	2.50	10	6	12	36	36	28	17	11	14	A-6a (8)	-	
	891.9	EOB 6		20	100	SS-3	2.50	-	-	-	-	-	-	-	-	15	A-6a (V)	<100	

End of Boring @ 6'

No Free Water Encountered
Caved @ 5.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 129+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 897.0 (MSL) EOB: 6.0 ft.
START: 5/13/20 END: 5/13/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.199908, -80.792785

EXPLORATION ID: B-017-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
7" TOPSOIL	896.4																		
STIFF TO VERY STIFF, BROWN, **SANDY SILT**, TRACE GRAVEL, MOIST	897.0	1	1 3 4	10	100	SS-1	1.50	9	12	42	20	17	20	15	5	15	A-4a (0)	-	
		2																	
		3	6 8 10	25	100	SS-2	3.00	-	-	-	-	-	-	-	-	15	A-4a (V)	<100	
		4																	
		5	4 7 9	22	92	SS-3	2.50	7	7	15	41	30	25	16	9	15	A-4a (7)	-	
	891.0	EOB 6	7																

End of Boring @ 6'

No Free Water Encountered

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 7/28/20 15:29 - \\CLIENT\C$\GINT\DATA FILES\01393219 METROPARKS BIKE PATH PHASE 4.GPJ

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 133+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 898.6 (MSL) EOB: 6.0 ft.
START: 5/13/20 END: 5/13/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.200843, -80.793540

EXPLORATION ID: B-018-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
8" TOPSOIL	898.6 897.9																		
STIFF TO VERY STIFF, BROWN, **SILTY CLAY**, SOME SAND, TRACE GRAVEL, MOIST		1 2 3	1 2 7	12	100	SS-1	1.50	7	10	24	31	28	30	14	16	13	A-6b (7)	-	
			5 7 8	20	100	SS-2	2.50	-	-	-	-	-	-	-	-	14	A-6b (V)	<100	
	894.6	4																	
VERY STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND AND GRAVEL, MOIST			4 8 12 14	27	100	SS-3	3.50	14	6	10	34	36	28	17	11	15	A-6a (7)	-	
	892.6	EOB 6																	

End of Boring @ 6'

No Free Water Encountered

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 137+50
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 895.2 (MSL) EOB: 6.0 ft.
START: 5/13/20 END: 5/13/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.201785, -80.794287

EXPLORATION ID: B-019-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
6" TOPSOIL	895.2																		
STIFF TO VERY STIFF, BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, MOIST	894.7	1	1 2 4	8	100	SS-1	1.50	8	6	14	39	33	31	17	14	17	A-6a (9)	-	
		2	6 8 10	25	100	SS-2	2.50	10	7	12	37	34	29	17	12	14	A-6a (8)	-	
		3	4 7 7	19	100	SS-3	2.50	-	-	-	-	-	-	-	-	16	A-6a (V)	<100	
	889.2	4																	
		EOB 5																	
		6																	

End of Boring @ 6'

No Free Water Encountered

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / LITTLE	DRILL RIG: PORTABLE HAND DRILL	STATION / OFFSET: 139+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: SAFETY HAMMER	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 878.1 (MSL) EOB: 6.92 ft.
START: 5/24/20 END: 5/24/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 60	LAT / LONG: 41.202104, -80.794628

EXPLORATION ID: B-020-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 878.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" TOPSOIL	877.1		1 2 1	3	67	SS-1T	--	-	-	-	-	-	-	-	-	31	A-8a (V)	-	
VERY STIFF TO HARD, GRAY, **SILT AND CLAY**, SOME SAND, SOME SANDSTONE FRAGMENTS, MOIST TO WET						SS-1B	--	-	-	-	-	-	-	-	-	-	A-6a (V)	-	
		1	4 5 39	44	67	SS-2	--	21	10	16	28	25	27	16	11	15	A-6a (4)	-	
		2																	
		3	13 8 6	14	17	SS-3	1.50	37	15	9	12	27	29	16	13	13	A-6a (2)	-	
▽ 874.1 W 873.6		4																	
		5	9 13 13	26	100	SS-4T	3.50	-	-	-	-	-	-	-	-	-	A-6a (V)	-	
	872.6					SS-4B	3.50	28	19	24	10	19	24	12	12	25	A-2-6 (0)	-	
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND, SILT, AND CLAY**, WET	871.6	6																	
SANDSTONE, GRAY, HIGHLY WEATHERED, WEAK	871.2	EOB	13 50/5"	-	36	SS-5	--	-	-	-	-	-	-	-	-	9	Rock (V)	-	

End of Boring @ 6' 11"

Water Encountered @ 4' 6"
Water at Completion @ 4'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 83 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 143+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 898.9 (MSL) EOB: 6.0 ft.
START: 5/13/20 END: 5/13/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.202956, -80.795543

EXPLORATION ID: B-021-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
10" TOPSOIL	898.1																		
MEDIUM STIFF, BROWN, **SANDY SILT**, MOIST	896.4	1	WOH	5	100	SS-1	0.50	5	6	24	43	22	24	16	8	20	A-4a (6)	-	
		2	1																
			3																
VERY STIFF, BROWN, **SILT AND CLAY**, SOME SAND AND STONE FRAGMENTS, MOIST		3	5	19	100	SS-2	2.50	30	16	10	23	21	31	16	15	13	A-6a (3)	-	
			6																
		4	8																
	892.9	5	3	16	100	SS-3	2.00	-	-	-	-	-	-	-	-	14	A-6a (V)	<100	
		EOB 6	5																
			7																
			7																

End of Boring @ 6'

No Free Water Encountered
Caved @ 5.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 147+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 894.1 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.203974, -80.795933

EXPLORATION ID: B-022-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
9" TOPSOIL	893.4																		
STIFF, BROWN, **SANDY SILT**, MOIST	891.6	1	WOH	14	100	SS-1	1.50	1	6	35	36	22	20	13	7	19	A-4a (5)	-	
		2	4 6																
VERY STIFF, BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, MOIST		3	5 8 10	25	100	SS-2	3.00	7	6	16	39	32	30	15	15	14	A-6a (9)	-	
		4	4 5 7	16	100	SS-3	2.00	-	-	-	-	-	-	-	-	15	A-6a (V)	<100	
	888.1	5 EOB 6	7																

End of Boring @ 6'

No Free Water Encountered
Caved @ 3.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 151+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 888.2 (MSL) EOB: 5.67 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.204969, -80.796433

EXPLORATION ID: B-023-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 888.2	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
11" TOPSOIL	887.3																		
STIFF TO HARD, BROWN, **SANDY SILT**, SOME STONE FRAGMENTS, MOIST		1 2 3 4 5	0 3 4	10	100	SS-1	1.50	20	14	18	34	14	23	17	6	14	A-4a (3)	-	
			8 13 11	33	100	SS-2	4.00	-	-	-	-	-	-	-	-	10	A-4a (V)	<100	
	883.2		10 28 25	72	70	SS-3	--	-	-	-	-	-	-	-	-	15	Rock (V)	-	
SILTSTONE, BROWN, HIGHLY WEATHERED, WEAK	882.5	EOB	50/2"																

End of Boring @ 5' 8"

No Free Water Encountered
Caved @ 3.5'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 68 IN. SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 7/28/20 15:34 - \\CLIENT\C$\GINT\DATA FILES\01393219 METROPARKS BIKE PATH PHASE 4.GPJ

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 163+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 892.7 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.207621, -80.798653

EXPLORATION ID: B-024-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
30" SLAG DRIVEWAY *FILL*	892.7																		
	890.2	▽ 890.7 / W 890.2	28 19 25	60	100	SS-1	--	50	26	14	8	2	NP	NP	NP	17	A-1-a (0)	-	
18" DRIVEWAY GRAVEL BASE WITH SAND *FILL*	888.7		14 10 8	25	33	SS-2	--	46	27	15	9	3	NP	NP	NP	25	A-1-b (0)	-	
VERY STIFF, BROWN, **SILT**, WET	886.7	EOB	6 8 10 12	25	50	SS-3	3.00	5	5	4	65	21	28	24	4	26	A-4b (8)	-	

End of Boring @ 6'

Water Encountered at 2.5'
Water at Completion @ 2'
Caved @ 2.5'

NOTES: WATER LEVELS POTENTIALLY AFFECTED BY PROXIMITY TO DRAINAGE DITCH

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 167+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 889.2 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.208436, -80.799620

EXPLORATION ID: B-025-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 889.2	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" SLAG DRIVEWAY	888.2																		
STIFF TO HARD, DARK GRAY, **CLAY**, AND STONE FRAGMENTS, LITTLE SLAG, MOIST *FILL*	885.2	1	6 9 21	41	6	SS-1	--	39	14	7	28	12	43	27	16	24	A-7-6 (3)	-	
		2	7 4 2	8	11	SS-2	--	-	-	-	-	-	-	-	-	46	A-6b (V)	-	
STIFF, GRAY BROWN, **CLAY**, LITTLE SAND, MOIST	883.2	3	4 6 9	20	13	SS-3	1.50	8	6	5	25	56	51	25	26	29	A-7-6 (17)	-	
		EOB 4 5 6	11																

End of Boring @ 6'

No Free Water Encountered
Caved @ 3'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 171+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 888.1 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.209304, -80.800510

EXPLORATION ID: B-026-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 888.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
18" SLAG DRIVEWAY	886.6	W 886.6	4			SS-1T	--	-	-	-	-	-	-	-	-	-			-
STIFF, BROWN AND GRAY TO BROWN, **SILTY CLAY**, TRACE SAND AND GRAVEL, MOIST		1	3 7	14	67	SS-1B	1.50	12	4	4	30	50	40	23	17	24	A-6b (11)	-	
		2	7 9 14	31	78	SS-2	3.50	-	-	-	-	-	-	-	-	18	A-6b (V)	<100	
		3	8 11 13	33	83	SS-3	4.00	4	3	2	28	63	37	21	16	19	A-6b (10)	-	
	882.1	4 EOB 6	15																

End of Boring @ 6'

Water Encountered @ 1.5'
Caved @ 4'

NOTES: WATER LEVELS POTENTIALLY AFFECTED BY PROXIMITY TO DRAINAGE DITCH

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 175+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 886.3 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.210173, -80.801399

EXPLORATION ID: B-027-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
30" SLAG DRIVEWAY	886.3																		
	883.8	884.8 ▽	2 6 10	22	67	SS-1	--	52	21	13	9	5	NP	NP	NP	28	A-1-a (0)	-	
STIFF TO VERY STIFF, BROWN, **CLAY**, LITTLE GRAVEL, TRACE SAND, MOIST			9 4 5	12	67	SS-2	1.50	13	4	5	22	56	46	23	23	22	A-7-6 (14)	-	
	880.3	EOB	3 6 9 7	20	58	SS-3	2.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	<100	

End of Boring @ 6'

Water Encountered @ 1.5'
Water at Completion @ 1.5'
Caved @ 3'

NOTES: WATER LEVELS POTENTIALLY AFFECTED BY PROXIMITY TO DRAINAGE DITCH

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 179+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 885.1 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.211038, -80.802293

EXPLORATION ID: B-028-0-20

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 885.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" SLAG DRIVEWAY	884.1	884.1																	
MEDIUM STIFF, BROWN AND GRAY, **SILT AND CLAY**, LITTLE SAND, MOIST	882.6		1 2 4	8	100	SS-1	1.50	5	4	7	46	38	32	21	11	25	A-6a (8)	-	
MEDIUM DENSE, BROWN, **SILT**, MOIST TO WET	879.1	EOB	4 6 7	18	89	SS-2	--	0	0	1	85	14	NP	NP	NP	28	A-4b (8)	-	
			5 7 6 8	18	88	SS-3	--	-	-	-	-	-	-	-	-	29	A-4b (V)	<100	

End of Boring @ 6'

Water Encountered @ 1'
Water at Completion @ 1'
Caved @ 4'

NOTES: WATER LEVELS POTENTIALLY AFFECTED BY PROXIMITY TO DRAINAGE DITCH

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 199+00	EXPLORATION ID B-029-0-20
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:	
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 878.7 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.215816, -80.805507	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" SLAG PARKING LOT	877.7																		
STIFF TO HARD, BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, MOIST		1 2 3 4	10	67	SS-1	1.50	8	16	15	33	28	37	24	13	24	A-6a (6)	-	
		6 7 8	20	100	SS-2	2.50	14	4	9	34	39	32	17	15	17	A-6a (10)	-	
		4 5 8 9	18	100	SS-3	2.50	-	-	-	-	-	-	-	-	24	A-6a (V)	<100	
	868.7	EOB 10	11 11 17 19	38	100	SS-4	4.00	-	-	-	-	-	-	-	-	12	A-6a (V)	-	

End of Boring @ 10'

No Free Water Encountered
Caved @ 5.5'

NOTES: OFFSET 20'S INTO GRAVEL PARKING AREA. DRILLED DEEPER TO COMPENSATE FOR THE ELEVATION DIFFERENCE BETWEEN THE PROPOSED BORING LOCATION AND THE DRILLE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 120 IN. SOIL CUTTINGS

PROJECT: GREENWAY BIKE TRAIL (PH4)	DRILLING FIRM / OPERATOR: RIDGEWAY / SIMPSON	DRILL RIG: CME 550 ATV	STATION / OFFSET: 219+00
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: PSI / J. MELLINGER	HAMMER: CME AUTOMATIC	ALIGNMENT:
PID: SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/29/19	ELEVATION: 896.3 (MSL) EOB: 6.0 ft.
START: 5/21/20 END: 5/21/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 81.9	LAT / LONG: 41.219157, -80.802188

EXPLORATION ID: B-030-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
12" SLAG AND TOPSOIL MIXTURE	896.3 / 895.3																		
MEDIUM DENSE, BROWN, **GRAVEL WITH SAND AND SILT**, MOIST *POSSIBLE FILL*	893.8	1	5 5 9	19	67	SS-1	--	16	16	33	22	13	19	16	3	12	A-2-4 (0)	-	
VERY STIFF TO HARD, BROWN, **SILTY CLAY**, LITTLE SAND AND GRAVEL, MOIST	890.3	2 3 4 5 EOB 6	4 5 7	16	89	SS-2	2.00	17	3	8	42	30	33	17	16	15	A-6b (10)	-	
			10 19 28 42	64	17	SS-3	--	-	-	-	-	-	-	-	-	6	A-6b (V)	-	

End of Boring @ 6'

No Free Water Encountered
Caved @ 4'

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 72 IN. SOIL CUTTINGS

OHIO DEPARTMENT OF TRANSPORTATION

OFFICE OF GEOTECHNICAL ENGINEERING

PLAN SUBGRADES
Geotechnical Bulletin GB1

TRU- W RESERVE GREENWAY PH. 4

STATION 10+50 TO STATION 219+00

INTERTEK PSI

Prepared By: Scott Hynes
Date prepared: Tuesday, July 28, 2020

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NO. OF BORINGS: 30

#	Boring ID	Alignment	Station	Offset	Dir	Drill Rig	ER	Boring EL.	Proposed Subgrade EL	Cut Fill
1	B-001-0-20	Greenway Bike Trail	10+50			CME 550 ATV	82	878.6	878.6	0.0
2	B-002-0-20	Greenway Bike Trail	24+50			CME 550 ATV	82	877.7	877.7	0.0
3	B-003-0-20	Greenway Bike Trail	53+50			CME 550 ATV	82	896.6	896.6	0.0
4	B-004-0-20	Greenway Bike Trail	57+50			CME 550 ATV	82	902.8	902.8	0.0
5	B-005-0-20	Greenway Bike Trail	61+50			Diedrich D-50 ATV	80	895.3	896.3	1.0 F
6	B-006-0-20	Greenway Bike Trail	65+50			Diedrich D-50 ATV	80	902.2	902.2	0.0
7	B-007-0-20	Greenway Bike Trail	73+50			Diedrich D-50 ATV	80	909.4	909.4	0.0
8	B-008-0-20	Greenway Bike Trail	88+00			CME 550 ATV	82	911.8	911.8	0.0
9	B-009-0-20	Greenway Bike Trail	93+50			CME 550 ATV	82	903.4	903.4	0.0
10	B-010-0-20	Greenway Bike Trail	97+50			CME 550 ATV	82	900.0	900.0	0.0
11	B-011-0-20	Greenway Bike Trail	101+50			CME 550 ATV	82	893.8	891.8	2.0 C
12	B-012-0-20	Greenway Bike Trail	105+50			CME 550 ATV	82	894.6	894.6	0.0
13	B-013-0-20	Greenway Bike Trail	109+50			CME 550 ATV	82	900.7	900.7	0.0
14	B-014-0-20	Greenway Bike Trail	113+50			CME 550 ATV	82	899.1	899.1	0.0
15	B-015-0-20	Greenway Bike Trail	121+50			CME 550 ATV	82	891.4	891.4	0.0
16	B-016-0-20	Greenway Bike Trail	125+50			CME 550 ATV	82	897.9	897.9	0.0
17	B-017-0-20	Greenway Bike Trail	129+50			CME 550 ATV	82	897.0	897.0	0.0
18	B-018-0-20	Greenway Bike Trail	133+50			CME 550 ATV	82	898.6	898.6	0.0
19	B-019-0-20	Greenway Bike Trail	137+50			CME 550 ATV	82	895.2	895.2	0.0
20	B-020-0-20	Greenway Bike Trail	139+00			Portable Hand Drill	60	878.1	890.1	12.0 F
21	B-021-0-20	Greenway Bike Trail	143+00			CME 550 ATV	82	898.9	898.9	0.0
22	B-022-0-20	Greenway Bike Trail	147+00			CME 550 ATV	82	894.1	894.1	0.0
23	B-023-0-20	Greenway Bike Trail	151+00			CME 550 ATV	82	888.2	890.2	2.0 F
24	B-024-0-20	Greenway Bike Trail	163+00			CME 550 ATV	82	892.7	892.7	0.0
25	B-025-0-20	Greenway Bike Trail	167+00			CME 550 ATV	82	889.2	890.2	1.0 F
26	B-026-0-20	Greenway Bike Trail	171+00			CME 550 ATV	82	888.1	890.1	2.0 F
27	B-027-0-20	Greenway Bike Trail	175+00			CME 550 ATV	82	886.3	886.3	0.0
28	B-028-0-20	Greenway Bike Trail	179+00			CME 550 ATV	82	885.1	885.1	0.0
29	B-029-0-20	Greenway Bike Trail	199+00			CME 550 ATV	82	878.7	879.7	1.0 F
30	B-030-0-20	Greenway Bike Trail	219+00			CME 550 ATV	82	896.3	896.3	0.0

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
1	B	SS-1	1.0	2.5	1.0	2.5	11		1.5	25	17	8	28	20	48	15	12	A-4a	3			HP & Mc		12"	12"
	001-0	SS-2	2.5	4.0	2.5	4.0	11		1.5							19	10	A-4a	8	0					204 Geotextile
	20	SS-3T	4.0	5.0	4.0	5.0	44		--								10	A-4a	8						
		SS-3B	5.0	6.0	5.0	6.0		11	--	NP	NP	NP	11	3	14	25	6	A-1-b	0						
2	B	SS-1	1.0	2.5	1.0	2.5	19		--	NP	NP	NP	16	5	21	27	6	A-1-b	0						0"
	002-0	SS-2T	2.5	3.0	2.5	3.0	7		--								6	A-1-b	0						
	20	SS-2B	3.0	4.0	3.0	4.0			--	NP	NP	NP	41	13	54	20	11	A-4a	4						
		SS-3	4.0	6.0	4.0	6.0	7	7	--							19	10	A-4a	8	0					
3	B	SS-1T	1.0	1.5	1.0	1.5	3		--	NP	NP	NP	13	5	18	21	6	A-1-b	0						0"
	003-0	SS-1B	1.5	2.5	1.5	2.5			--								8	A-3a	0						
	20	SS-2	2.5	4.0	2.5	4.0	11		--	NP	NP	NP	15	13	28	17	8	A-3a	0						
		SS-3	4.0	6.0	4.0	6.0	10	3	--							17	8	A-3a	0	0					
4	B	SS-1	1.0	2.5	1.0	2.5	16		2	42	24	18	29	51	80	25	21	A-7-6	12			Mc			0"
	004-0	SS-2	2.5	4.0	2.5	4.0	10		1.5	41	18	23	38	53	91	19	18	A-7-6	13						
	20	SS-3	4.0	6.0	4.0	6.0	15		1.5							19	18	A-7-6	16						
								10																	
5	B	SS-1	1.0	2.5	2.0	3.5	12		--	NP	NP	NP	8	2	10	20	6	A-1-a	0						0"
	005-0	SS-2	2.5	4.0	3.5	5.0	12		1.5	52	26	26	18	82	100	26	23	A-7-6	17						
	20	SS-3	4.0	6.0	5.0	7.0	15		1.5							28	18	A-7-6	16	0					
								12																	
6	B	SS-1	1.0	2.5	1.0	2.5	16		2	24	15	9	57	27	84	15	10	A-4b	8		A-4b	Mc	30"		30"
	006-0	SS-2	2.5	4.0	2.5	4.0	16		2							14	10	A-4b	8	590					204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	13		1.5	24	14	10	47	25	72	16	10	A-4a	7						
								13																	
7	B	SS-1	1.0	2.5	1.0	2.5	3		0.5							20	10	A-4a	8	730		HP & Mc		33"	33"
	007-0	SS-2	2.5	4.0	2.5	4.0	4		0.5	19	16	3	44	12	56	21	11	A-4a	4						204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	16		2	27	16	11	45	26	71	16	14	A-6a	8						
								3																	
8	B	SS-1	1.0	2.5	1.0	2.5	30		--	25	19	6	23	10	33	12	10	A-2-4	0						0"
	008-0	SS-2	2.5	4.0	2.5	4.0	12		--							15	10	A-2-4	0	0					
	20	SS-3	4.0	6.0	4.0	6.0	14		1.5	29	18	11	30	21	51	18	14	A-6a	4						
								12																	
9	B	SS-1T	1.0	1.5	1.0	1.5	46		--								6	A-1-a	0						0"
	009-0	SS-1B	1.5	2.5	1.5	2.5			1.5	20	16	4	42	23	65	20	11	A-4a	6			HP & Mc			
	20	SS-2	2.5	4.0	2.5	4.0	15		1.5	26	14	12	33	28	61	17	14	A-6a	6						
		SS-3	4.0	6.0	4.0	6.0	12	12	1.5							14	14	A-6a	10	0					

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
10	B	SS-1	1.0	2.5	1.0	2.5	15		2.5	30	15	15	40	29	69	17	14	A-6a	9			Mc			0"
	010-0	SS-2	2.5	4.0	2.5	4.0	18		2.5	39	16	23	34	40	74	25	16	A-6b	13						
	20	SS-3	4.0	6.0	4.0	6.0	19		2.5							23	16	A-6b	16	0					
								15																	
11	B	SS-1	1.0	2.5	-1.0	0.5	8		1.5	32	18	14	38	36	74	10	14	A-6a	9			HP		12"	12"
	011-0	SS-2	2.5	4.0	0.5	2.0	22		2.5	27	15	12	39	33	72	15	14	A-6a	8						204 Geotextile
	20	SS-3	4.0	6.0	2.0	4.0	15		1.5							13	14	A-6a	10	640					
								8																	
12	B	SS-1	1.0	2.5	1.0	2.5	11		1.5	44	20	24	31	47	78	26	18	A-7-6	14			HP & Mc		12"	12"
	012-0	SS-2	2.5	4.0	2.5	4.0	23		3							18	14	A-6a	10	0					204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	20		2.5	32	21	11	49	51	100	27	16	A-6a	8						
								11																	
13	B	SS-1	1.0	2.5	1.0	2.5	8		1.5	32	19	13	35	37	72	18	14	A-6a	9			HP & Mc		12"	12"
	013-0	SS-2	2.5	4.0	2.5	4.0	14		1.5							21	14	A-6a	10	900					204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	14		1.5	52	27	25	15	82	97	28	24	A-7-6	16						
								8																	
14	B	SS-1	1.0	2.5	1.0	2.5	4		0.5	48	23	25	34	50	84	34	20	A-7-6	16			HP & Mc		24"	24"
	014-0	SS-2	2.5	4.0	2.5	4.0	18		2.5							16	18	A-7-6	16	640					204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	15		1.5	50	27	23	17	80	97	25	24	A-7-6	15						
								4																	
15	B	SS-1	1.0	2.5	1.0	2.5	8		1.5	27	15	12	22	21	43	16	14	A-6a	2			HP		12"	12"
	015-0	SS-2	2.5	4.0	2.5	4.0	26		3	29	17	12	35	32	67	13	14	A-6a	7	860					
	20	SS-3	4.0	6.0	4.0	6.0	18		2.5	30	18	12	40	35	75	17	14	A-6a	9						
								8																	
16	B	SS-1	1.0	2.5	1.0	2.5	3		0.5	29	17	12	38	34	72	20	14	A-6a	8			HP & Mc		33"	33"
	016-0	SS-2	2.5	4.0	2.5	4.0	18		2.5	28	17	11	36	36	72	14	14	A-6a	8						204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	20		2.5							15	14	A-6a	10	0					
								3																	
17	B	SS-1	1.0	2.5	1.0	2.5	10		1.5	20	15	5	20	17	37	15	10	A-4a	0			HP & Mc		12"	12"
	017-0	SS-2	2.5	4.0	2.5	4.0	25		3							15	10	A-4a	8	0					204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	22		2.5	25	16	9	41	30	71	15	11	A-4a	7						
								10																	
18	B	SS-1	1.0	2.5	1.0	2.5	12		1.5	30	14	16	31	28	59	13	16	A-6b	7			HP		12"	12"
	018-0	SS-2	2.5	4.0	2.5	4.0	20		2.5							14	16	A-6b	16	0					204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	27		3.5	28	17	11	34	36	70	15	14	A-6a	7						
								12																	

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
19	B	SS-1	1.0	2.5	1.0	2.5	8		1.5	31	17	14	39	33	72	17	14	A-6a	9			HP & Mc		12"	12"
	019-0	SS-2	2.5	4.0	2.5	4.0	25		2.5	29	17	12	37	34	71	14	14	A-6a	8						204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	19		2.5							16	14	A-6a	10	0					
								8																	
20	B	SS-1	0.0	1.5	12.0	13.5	3		--							31		A-8a							0"
	020-0	SS-2	1.5	3.0	13.5	15.0	44		--	27	16	11	28	25	53	15	14	A-6a							
	20	SS-3	3.0	4.5	15.0	16.5	14		1.5	29	16	13	12	27	39	13	14	A-6a							
		SS-4T	4.5	5.5	16.5	17.5	26		3.5								14	A-6a							
21	B	SS-1	1.0	2.5	1.0	2.5	5		0.5	24	16	8	43	22	65	20	11	A-4a	6			HP & Mc		24"	24"
	021-0	SS-2	2.5	4.0	2.5	4.0	19		2.5	31	16	15	23	21	44	13	14	A-6a	3						204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	16		2							14	14	A-6a	10	0					
								5																	
22	B	SS-1	1.0	2.5	1.0	2.5	14		1.5	20	13	7	36	22	58	19	10	A-4a	5			HP & Mc		12"	12"
	022-0	SS-2	2.5	4.0	2.5	4.0	25		3	30	15	15	39	32	71	14	14	A-6a	9						204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	16		2							15	14	A-6a	10	0					
								14																	
23	B	SS-1	1.0	2.5	3.0	4.5	10		1.5	23	17	6	34	14	48	14	12	A-4a	3						0"
	023-0	SS-2	2.5	4.0	4.5	6.0	33		4							10	10	A-4a	8	0					
	20	SS-3	4.0	5.7	6.0	7.7	72		--							15	0	Rock							
								10																	
24	B	SS-1	1.0	2.5	1.0	2.5	60		--	NP	NP	NP	8	2	10	17	6	A-1-a	0						0"
	024-0	SS-2	2.5	4.0	2.5	4.0	25		--	NP	NP	NP	9	3	12	25	6	A-1-b	0						
	20	SS-3	4.0	6.0	4.0	6.0	25		3	28	24	4	65	21	86	26	19	A-4b	8						
								25																	
25	B	SS-1	1.0	2.5	2.0	3.5	41		--	43	27	16	28	12	40	24	24	A-7-6	3						0"
	025-0	SS-2	2.5	4.0	3.5	5.0	8		--							46	16	A-6b	16						
	20	SS-3	4.0	6.0	5.0	7.0	20		1.5	51	25	26	25	56	81	29	22	A-7-6	17						
								8																	
26	B	SS-1	1.0	2.5	3.0	4.5	14		1.5	40	23	17	30	50	80	24	18	A-6b	11						0"
	026-0	SS-2	2.5	4.0	4.5	6.0	31		3.5							18	16	A-6b	16	0					
	20	SS-3	4.0	6.0	6.0	8.0	33		4	37	21	16	28	63	91	19	16	A-6b							
								14																	
27	B	SS-1	1.0	2.5	1.0	2.5	22		--	NP	NP	NP	9	5	14	28	6	A-1-a	0						0"
	027-0	SS-2	2.5	4.0	2.5	4.0	12		1.5	46	23	23	22	56	78	22	20	A-7-6	14						
	20	SS-3	4.0	6.0	4.0	6.0	20		2.5							25	18	A-7-6	16	0					
								12																	

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
28	B	SS-1	1.0	2.5	1.0	2.5	8		1.5	32	21	11	46	38	84	25	16	A-6a	8			HP & Mc		12"	12"
	028-0	SS-2	2.5	4.0	2.5	4.0	18		--	NP	NP	NP	85	14	99	28	11	A-4b	8						204 Geotextile
	20	SS-3	4.0	6.0	4.0	6.0	18		--							29	10	A-4b	8	0					
								8																	
29	B	SS-1	1.0	2.5	2.0	3.5	10		1.5	37	24	13	33	28	61	24	19	A-6a	6			HP & Mc			0"
	029-0	SS-2	2.5	4.0	3.5	5.0	20		2.5	32	17	15	34	39	73	17	14	A-6a	10						
	20	SS-3	4.0	6.0	5.0	7.0	18		2.5							24	14	A-6a	10						
		SS-4	8.0	10.0	9.0	11.0	38	10	4							12	14	A-6a							
30	B	SS-1	1.0	2.5	1.0	2.5	19		--	19	16	3	22	13	35	12	10	A-2-4	0						0"
	030-0	SS-2	2.5	4.0	2.5	4.0	16		2	33	17	16	42	30	72	15	16	A-6b	10						
	20	SS-3	4.0	6.0	4.0	6.0	64		--							6	16	A-6b	16	0					
								16																	

PID:

County-Route-Section: TRU- W RESERVE GREENWAY PH. 4

No. of Borings: 30

Geotechnical Consultant: INTERTEK PSI

Prepared By: Scott Hynes

Date prepared: 7/28/2020

Chemical Stabilization Options		
320	Rubblize & Roll	No
206	Cement Stabilization	Option
	Lime Stabilization	No
206	Depth	14"

Excavate and Replace Stabilization Options	
Global Geotextile Override(N60L):	18"
Override(HP):	24"
Global Geogrid Override(N60L):	12"
Override(HP):	18"

Design CBR	7

% Samples within 6 feet of subgrade			
$N_{60} \leq 5$	7%	HP ≤ 0.5	5%
$N_{60} < 12$	25%	0.5 < HP ≤ 1	0%
$12 \leq N_{60} < 15$	13%	1 < HP ≤ 2	40%
$N_{60} \geq 20$	30%	HP > 2	29%
M+	18%		
Rock	0%		
Unsuitable	7%		

Excavate and Replace at Surface	
Average	4"
Maximum	12"
Minimum	0"

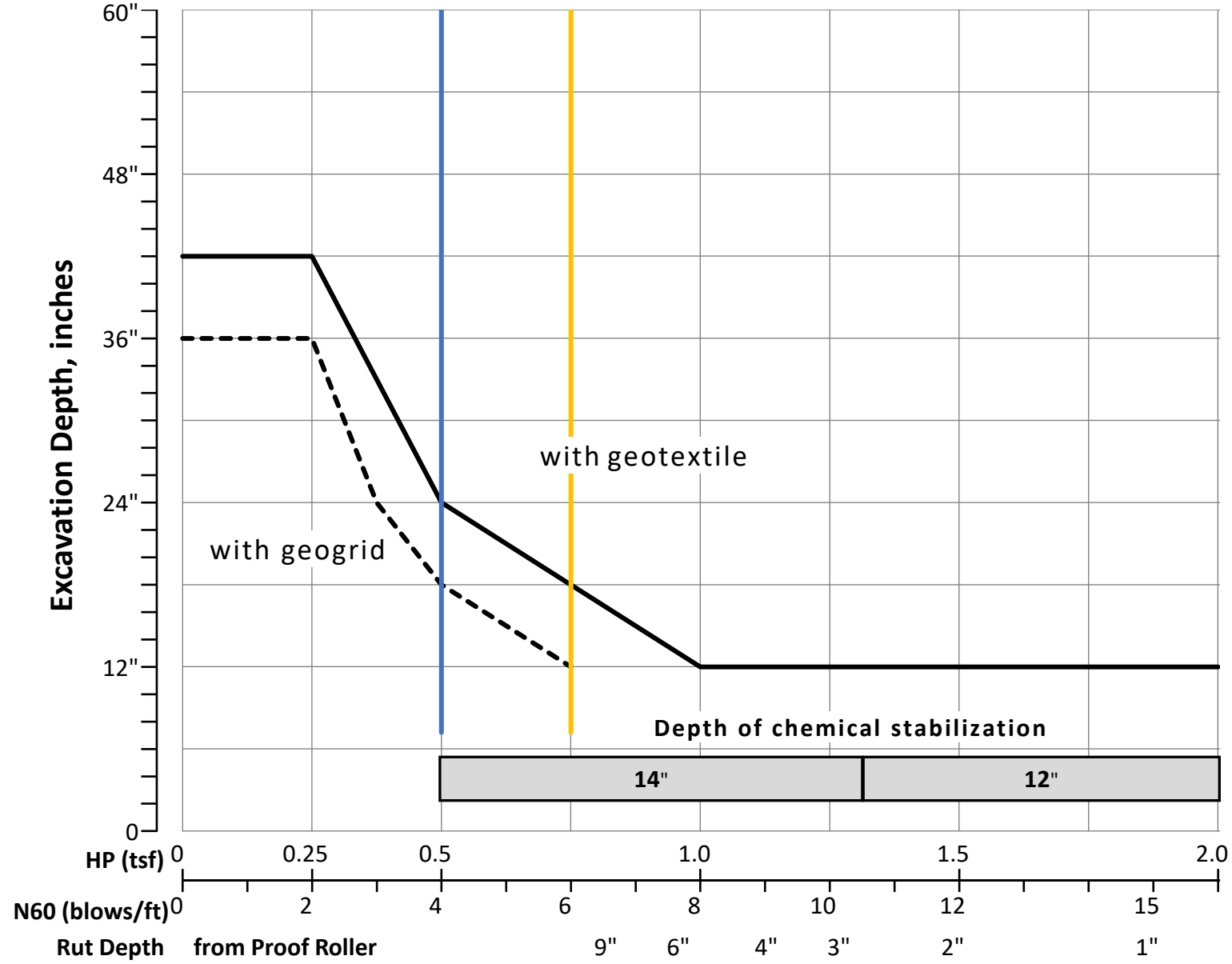
% Proposed Subgrade Surface	
Unstable & Unsuitable	37%
Unstable	35%
Unsuitable	2%

	N_{60}	N_{60L}	HP	LL	PL	PI	Silt	Clay	P 200	M_C	M_{OPT}	GI
Average	19	10	2.02	32	18	13	32	30	62	19	13	8
Maximum	72	25	4.00	52	27	26	85	82	100	46	24	17
Minimum	3	3	0.50	19	13	3	8	2	10	6	0	0

Classification Counts by Sample

ODOT Class	Rock	A-1-a	A-1-b	A-2-4	A-2-5	A-2-6	A-2-7	A-3	A-3a	A-4a	A-4b	A-5	A-6a	A-6b	A-7-5	A-7-6	A-8a	A-8b	Totals
Count	1	4	5	3	0	0	0	0	3	16	5	0	34	10	0	14	1	0	96
Percent	1%	4%	5%	3%	0%	0%	0%	0%	3%	17%	5%	0%	35%	10%	0%	15%	1%	0%	100%
% Rock|Granular|Cohesive	1%	32%									67%								100%
Surface Class Count	0	4	4	3	0	0	0	0	2	9	3	0	18	4	0	7	0	0	54
Surface Class Percent	0%	7%	7%	6%	0%	0%	0%	0%	4%	17%	6%	0%	33%	7%	0%	13%	0%	0%	100%

GB1 Figure B – Subgrade Stabilization



OVERRIDE TABLE

Calculated Average	New Values	Check to Override
2.02	0.50	☑ HP
10.07	6.00	☑ N60L

Average HP
Average N_{60L}

APPENDIX A.1 - ODOT Quick Reference for Visual Description of Soils

1) STRENGTH OF SOIL:

Non-Cohesive (granular) Soils - Compactness	
Description	**Blows Per Ft.**
Very Loose	≤ 4
Loose	5 – 10
Medium Dense	11 – 30
Dense	31 – 50
Very Dense	> 50

2) COLOR :

If a color is a uniform color throughout, the term is single, modified by an adjective such as light or dark. If the predominate color is shaded by a secondary color, the secondary color procedes the primary color. If two major and distinct colors are swirled throughout the soil, the colors are modified by the term "mottled"

3) PRIMARY COMPONENT

Use **DESCRIPTION** from ODOT Soil Classification Chart on Back

Cohesive (fine grained) Soils - Consistency

Description	Qu (TSF)	Blows Per Ft.	Hand Manipulation
Very Soft	<0.25	<2	Easily penetrates 2" by fist
Soft	0.25-0.5	2 - 4	Easily penetrates 2" by thumb
Medium Stiff	0.5-1.0	5 - 8	Penetrates by thumb with moderate effort
Stiff	1.0-2.0	9 - 15	Readily indents by thumb, but not penetrate
Very Stiff	2.0-4.0	16 - 30	Readily indents by thumbnail
Hard	>4.0	>30	Indent with difficulty by thumbnail

4) COMPONENT MODIFIERS:

Description	Percentage By Weight
Trace	0% - 10%
Little	10% - 20%
Some	20% - 35%
"And"	35% -50%

5) Soil Organic Content

Description	% by Weight
Slightly Organic	2% - 4%
Moderately Organic	4% - 10%
Highly Organic	> 10%

6) Relative Visual Moisture

Description	Criteria	
	Cohesive Soil	**Non-cohesive Soils**
Dry	Powdery; Cannot be rolled; Water content well below the plastic limit	No moisture present
Damp	Leaves very little moisture when pressed between fingers; Crumbles at or before rolled to $^1/_8$"; Water content below plastic limit	Internal moisture, but no to little surface moisture
Moist	Leaves small amounts of moisture when pressed between fingers; Rolled to $^1/_8$" or smaller before crumbling; Water content above plastic limit to -3% of the liquid limit	Free water on surface, moist (shiny) appearance
Wet	Very mushy; Rolled multiple times to $^1/_8$" or smaller before crumbles; Near or above the liquid limit	Voids filled with free water, can be poured from split spoon.

CLASSIFICATION OF SOILS

Ohio Department of Transportation

(The classification of a soil is found by proceeding from top to bottom of the chart.
The first classification that the test data fits is the correct classification.)

SYMBOL	DESCRIPTION	Classifcation AASHTO	Classifcation OHIO	LL_0/LL x 100*	% Pass #40	% Pass #200	Liquid Limit (LL)	Plastic Index (PI)	Group Index Max.	REMARKS
	Gravel and/or Stone Fragments	A-1-a			30 Max.	15 Max.		6 Max.	0	Min. of 50% combined gravel, cobble and boulder sizes
	Gravel and/or Stone Fragments with Sand	A-1-b			50 Max.	25 Max.		6 Max.	0	
F.S.	Fine Sand	A-3			51 Min.	10 Max.	NON-PLASTIC		0	
	Coarse and Fine Sand	--	A-3a			35 Max.		6 Max.	0	Min. of 50% combined coarse and fine sand sizes
	Gravel and/or Stone Fragments with Sand and Silt	A-2-4				35 Max.	40 Max.	10 Max.	0	
		A-2-5					41 Min.			
	Gravel and/or Stone Fragments with Sand, Silt and Clay	A-2-6				35 Max.	40 Max.	11 Min.	4	
		A-2-7					41 Min.			
	Sandy Silt	A-4	A-4a	76 Min.		36 Min.	40 Max.	10 Max.	8	Less than 50% silt sizes
	Silt	A-4	A-4b	76 Min.		50 Min.	40 Max.	10 Max.	8	50% or more silt sizes
	Elastic Silt and Clay	A-5		76 Min.		36 Min.	41 Min.	10 Max.	12	
	Silt and Clay	A-6	A-6a	76 Min.		36 Min.	40 Max.	11 - 15	10	
	Silty Clay	A-6	A-6b	76 Min.		36 Min.	40 Max.	16 Min.	16	
	Elastic Clay	A-7-5		76 Min.		36 Min.	41 Min.	$\geq$LL-30	20	
	Clay	A-7-6		76 Min.		36 Min.	41 Min.	>LL-30	20	
	Organic Silt	A-8	A-8a	75 Max.		36 Min.				W/o organics would classify as A-4a or A-4b
	Organic Clay	A-8	A-8b	75 Max.		36 Min.				W/o organics would classify as A-5, A-6a, A-6b, A-7-5 or A-7-6

MATERIAL CLASSIFIED BY VISUAL INSPECTION

Sod and Topsoil

Pavement or Base

Uncontrolled Fill (Describe)

Bouldery Zone

Peat, S-Sedimentary W-Woody F-Fibrous L-Loamy & etc

* Only perform the oven-dried liquid limit test and this calculation if organic material is present in the sample.