

REFERENCE: SF-650020

PROJECT: BPI.R010

SEE SHEET 3 FOR PLAN SHEET LAYOUT  
AT TIME OF INVESTIGATION

CONTENTS

LINE	STATION	PLAN
-L-	12+70 TO 18+25	4

CROSS SECTIONS

LINE	STATION	SHEETS
-L-	13+50 TO 14+50	5-6
-L-	16+00 TO 16+50	7

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

**ROADWAY  
SUBSURFACE INVESTIGATION**

COUNTY NORTHAMPTON  
PROJECT DESCRIPTION BRIDGE NO. 20 ON -L- (SR 1504)  
OVER POTECASTI CREEK

**INVENTORY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SF-650020	1	8

**CAUTION NOTICE**

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

NOTES:

- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
- BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

S.N. ZIMARINO

T.W. MILLER

C.M. WALKER

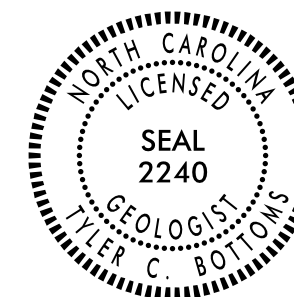
INVESTIGATED BY T.C. BOTTOMS

DRAWN BY T.C. BOTTOMS

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE MARCH 2023



DocuSigned by:

Tyler C. Bottoms

03/16/2023

48A2D3BD08161446

SIGNATURE

DATE

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



See Sheet 1A For Index of Sheets  
See Sheet 1B for Conventional Symbols

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

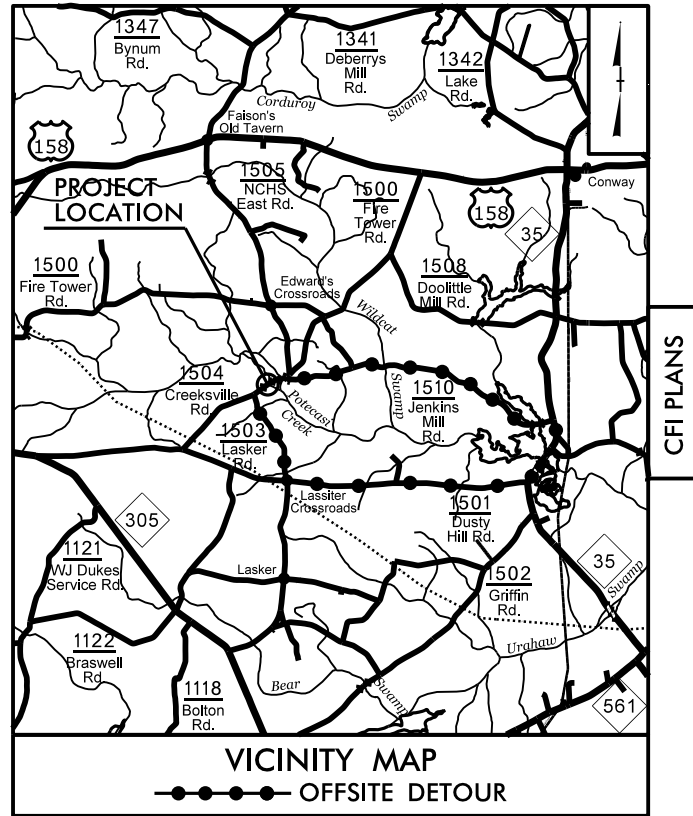
**NORTHAMPTON COUNTY**

LOCATION: REPLACE BRIDGE NO. 650020 ON SR 1504  
OVER POTECASI CREEK

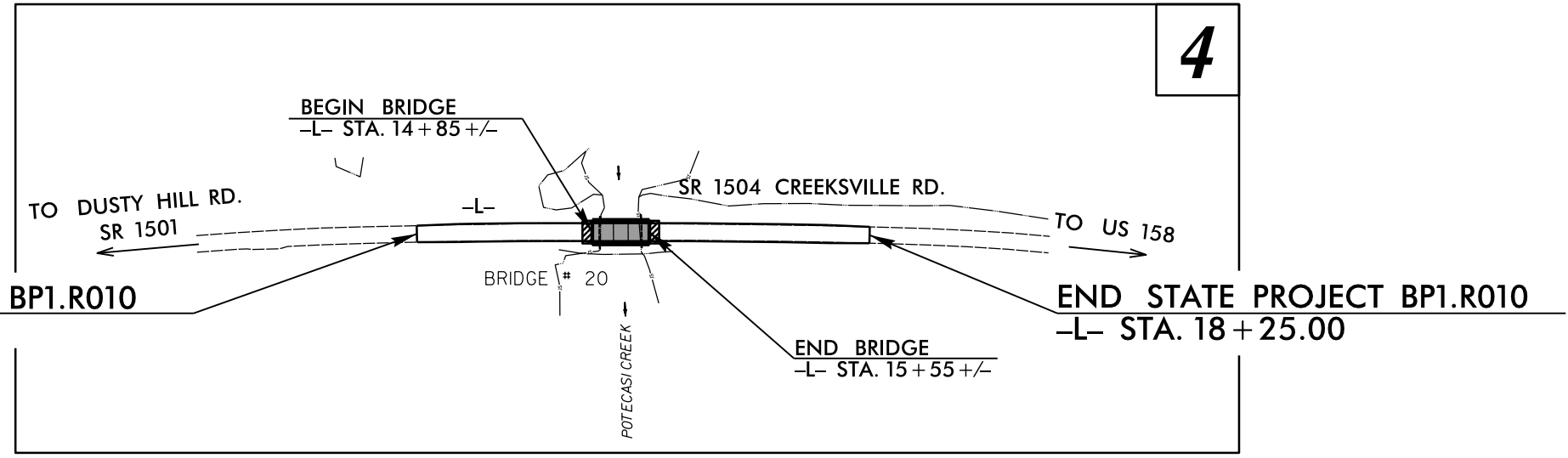
TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP1.R010	3	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
BP1.R010.1		PE	
BP1.R010.2		RW, UTIL.	
BP1.R010.3		CONST.	

PROJECT: BP1.R010



CFI PLANS

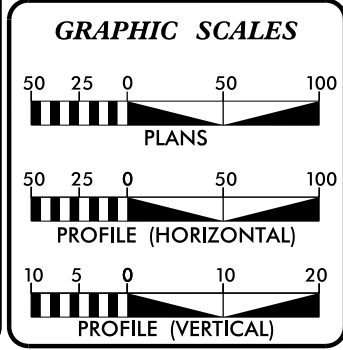


**4**

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



**DESIGN DATA**

ADT 2020 =	250
T =	6%
V =	55 MPH

FUNCT CLASS = MINOR COLLECTOR  
SUB-REGIONAL TIER DESIGN STANDARDS

**PROJECT LENGTH**

LENGTH ROADWAY PROJECT BP1.R010	=	0.092 mile
LENGTH STRUCTURES PROJECT BP1.R010	=	0.013 mile
TOTAL LENGTH PROJECT BP1.R010	=	0.105 mile

Prepared For:  
**DIVISION OF HIGHWAYS**  
509 Ward Blvd, Wilson NC, 27895

By:  
**TGS ENGINEERS**  
706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603

PH (919) 733-8887  
CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 18, 2023

LETTING DATE: OCTOBER 18, 2023

**BURKE EVANS, P.E.**  
PROJECT ENGINEER

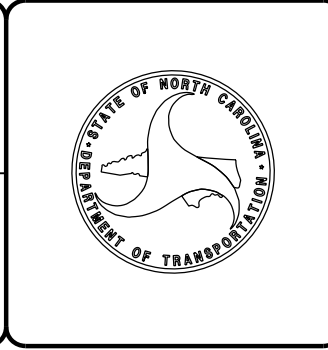
**JOHN ABEL, JR.**  
PROJECT ENGINEER  
NCDOT DIVISION 1

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



07-MAR-2023 08:46  
\\650020.Ray.Tsh.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

ERIC BOYETTE  
SECRETARY

March 7, 2023

State Project: BP1.R010.1 (SF-650020)  
F.A. Project: N/A  
County: Northampton  
Description: Bridge No. 20 on -L- (SR 1504) over Potecasi Creek  
Subject: Geotechnical Inventory Report

**Project Description**

This project begins approximately 0.25 miles west of the intersection of Creeksville, Road (SR 1504) and Jenkins Mill Road in Northampton County and extends east along SR 1504 for approximately 555 feet across Potecasi Creek. Proposed construction consists of widening and raising the grade of SR 1504 to accommodate the bridge replacement. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork was conducted in June of 2022 and February of 2023. SPT and hand auger borings were completed at various offsets along the project corridor. Representative soil samples were collected for visual classification in the field and for laboratory analysis by the Materials and Tests Unit.

The following alignment was investigated. Selected cross sections of this alignment are included in this report.

<u>Line</u>	<u>Station(±)</u>
-L-	12+70 to 18+25

**Areas of Special Geotechnical Interest**

- 1) The entire project was found to exhibit seasonal high ground water.
- 2) The entire project was found to contain cohesive soils which have the potential to cause embankment/subgrade and or slope stability problems during construction.

**Physiography and Geology**

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Natural ground elevations ranged from 46± to 63± feet above sea level.

Surficial soils in this area are generally classified as alluvial sediments and are underlain by formational soils belonging to the Yorktown Formation.

**Ground Water**

Ground water data was collected in June of 2022 and February of 2023. Ground water elevations ranged from 55± to 60± feet above sea level.

**Soils**


Soils encountered within this project area have been divided into two categories: Roadway Embankment, alluvial and formational.

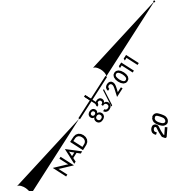
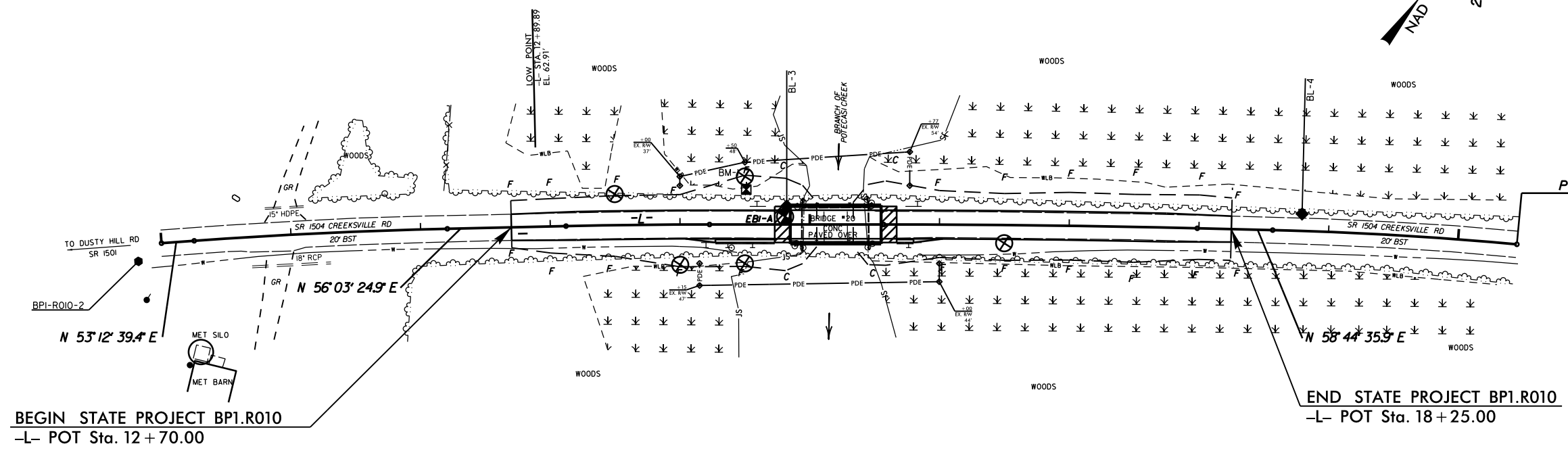
Roadway embankment soils were found along the existing SR 1504 corridor. Where encountered it was composed of 2± to 3± feet of loose to medium dense sand (A-2-4) and 2± to 3± feet of medium stiff sandy clay (A-6).

Soils identified as alluvial are composed of 4± to 15± feet of very soft to soft sandy clay and 2± to 6± feet of loose sand. A Moisture sample taken within the cohesive unit returned a natural moisture content of 20%.

Formational soils were encountered during the bridge replacement investigation. A portion of one of the end bent borings is included in this report and shows 5 feet of medium dense clayey sand (A-2-6) and 15 feet of soft silty clay (A-7-6) underlying the alluvial soils.

8/17/99

PROJECT REFERENCE NO. <b>SF-650020</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	
	TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275

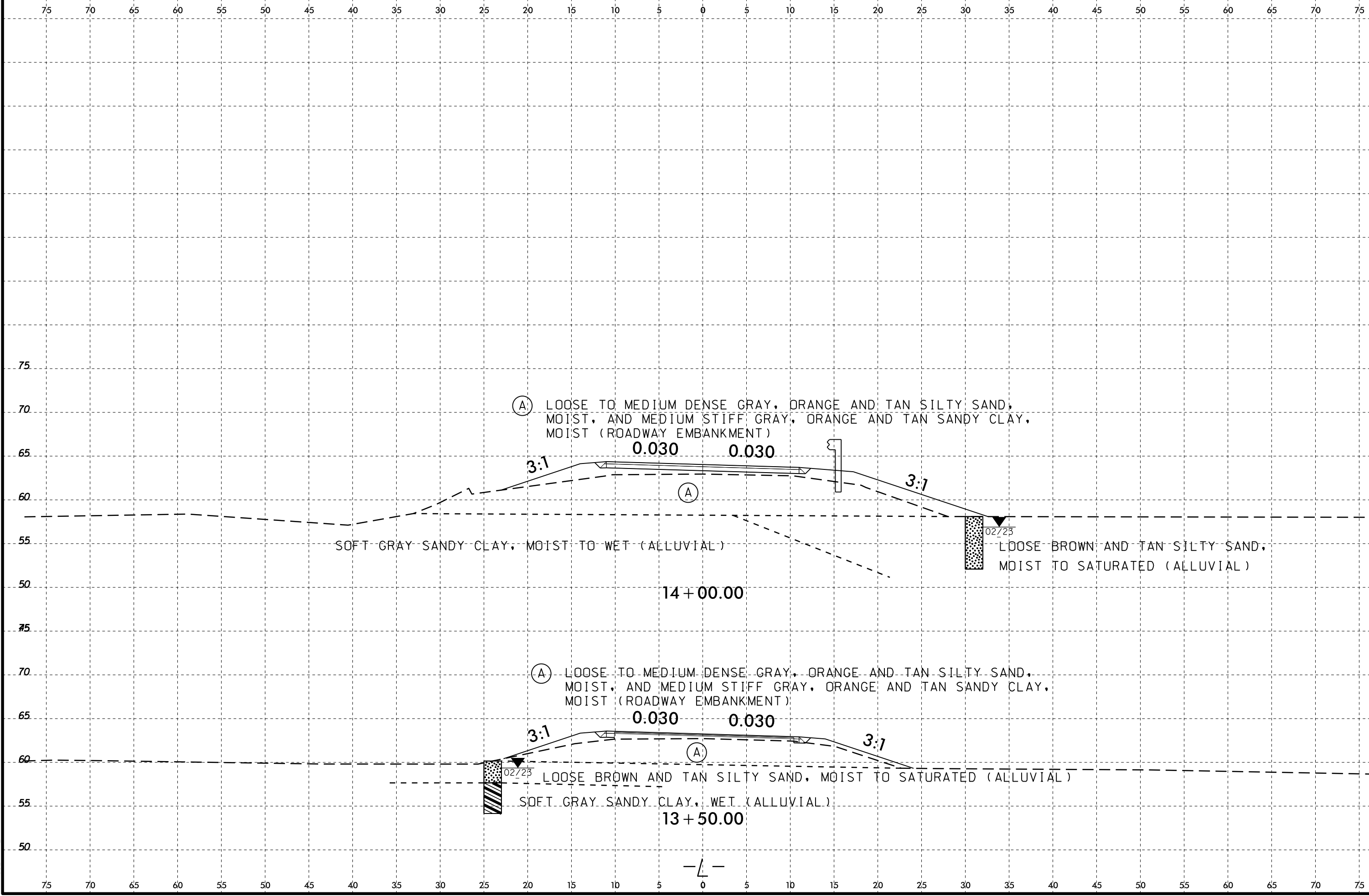


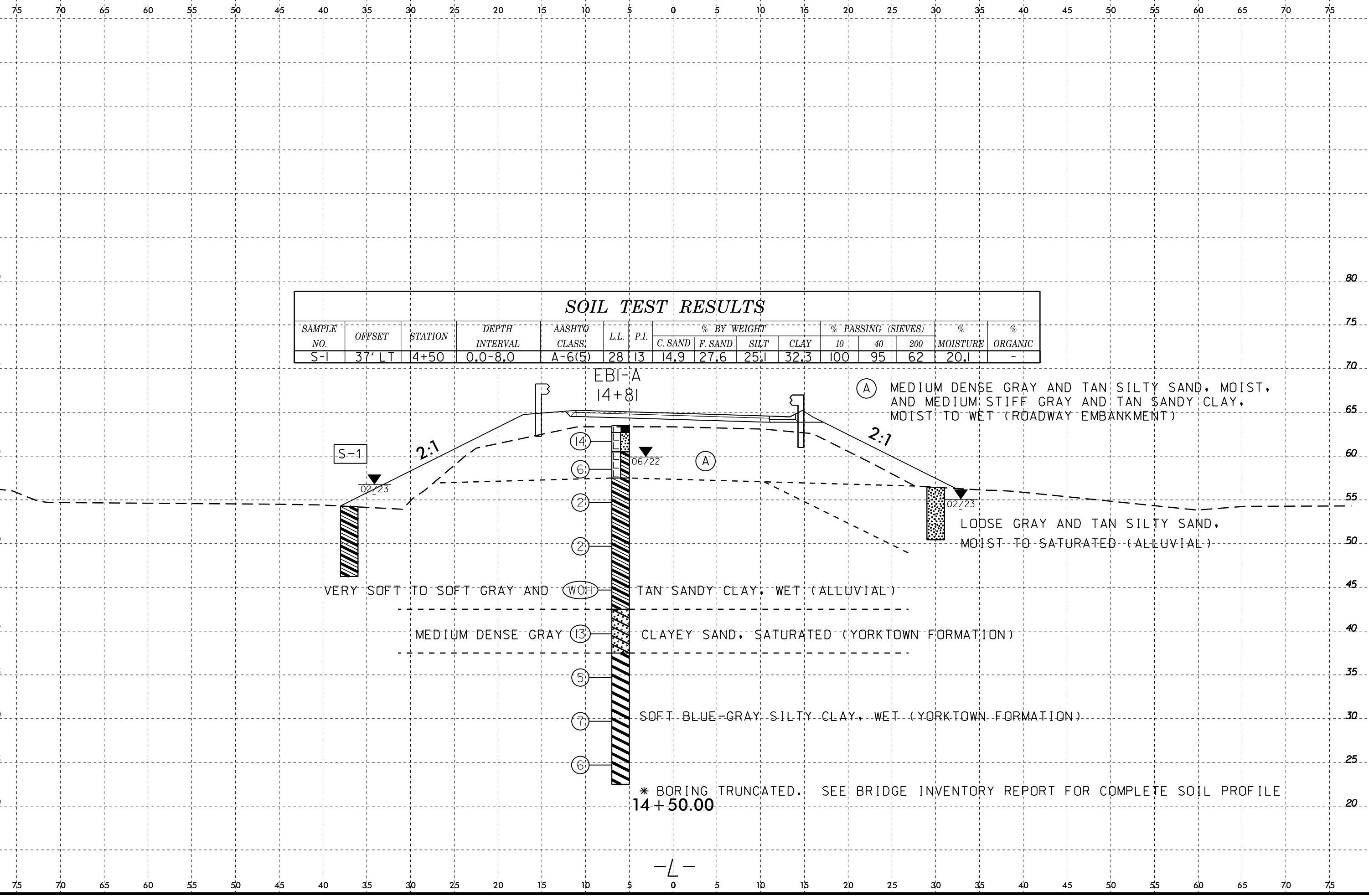
BEGIN STATE PROJECT BP1.R010  
-L- POT Sta. 12 + 70.00

END STATE PROJECT BP1.R010  
-L- POT Sta. 18 + 25.00

PT Sta. 20+45.42

 BRIDGE APPROACH SLAB





SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-1	37' LT	14+50	0.0-8.0	A-6(5)	28	13	14.9	27.6	25.1	32.3	100	95	62	20.1	-

EBI-A  
14+81

(A) MEDIUM DENSE GRAY AND TAN SILTY SAND, MOIST, AND MEDIUM STIFF GRAY AND TAN SANDY CLAY, MOIST TO WET (ROADWAY EMBANKMENT)

LOOSE GRAY AND TAN SILTY SAND, MOIST TO SATURATED (ALLUVIAL)

VERY SOFT TO SOFT GRAY AND TAN SANDY CLAY, WET (ALLUVIAL)

MEDIUM DENSE GRAY CLAYEY SAND, SATURATED (YORKTOWN FORMATION)

SOFT BLUE-GRAY SILTY CLAY, WET (YORKTOWN FORMATION)

\* BORING TRUNCATED. SEE BRIDGE INVENTORY REPORT FOR COMPLETE SOIL PROFILE  
14+50.00

