SEE SHEET 3 FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

CONTENTS

-0098

B

REFERENCE

86029

<u>LINE</u>	<u>STATION</u>	<u>PLAN</u>	PROFILE
-L-	13+00 TO 27+00	4	5
-RPA-	27+00 TO 39+00	4	-
-RPB-	27+00 TO 39+00	4	-
-RPC-	27+00 TO 39+00	4	_

CROSS SECTIONS

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-L-	22+50, 25+50	8

BORE LOGS AND LABORATORY RESULTS

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STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS** GEOTECHNICAL ENGINEERING UNIT

ROADWAY SUBSURFACE INVESTIGATION

COUNTY ROCKINGHAM

PROJECT DESCRIPTION BRIDGE 780183 ON SR 1767 (MAYFIELD ROAD) OVER US 29 BYPASS

INVENTORY

STATE PROJECT REPERENCE NO. BR-0098

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 (1919) TOT-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 BORCHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IMP-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METATACAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METATACE 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 MADE 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:

 1. 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.

 2. 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.

J. ROWENHORST

C.T. TANG

E. OSWALD

J. WHITE S. PUGH

D. STEWART

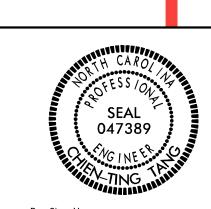
INVESTIGATED BY WSP E&I

DRAWN BY __C.T. TANG

CHECKED BY J. ROWENHORST

SUBMITTED BY __C.T. TANG

DATE SEPTEMBER 2024



10/04/2024

PROJECT REPERENCE NO. SHEET NO.

BR-0098
2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT

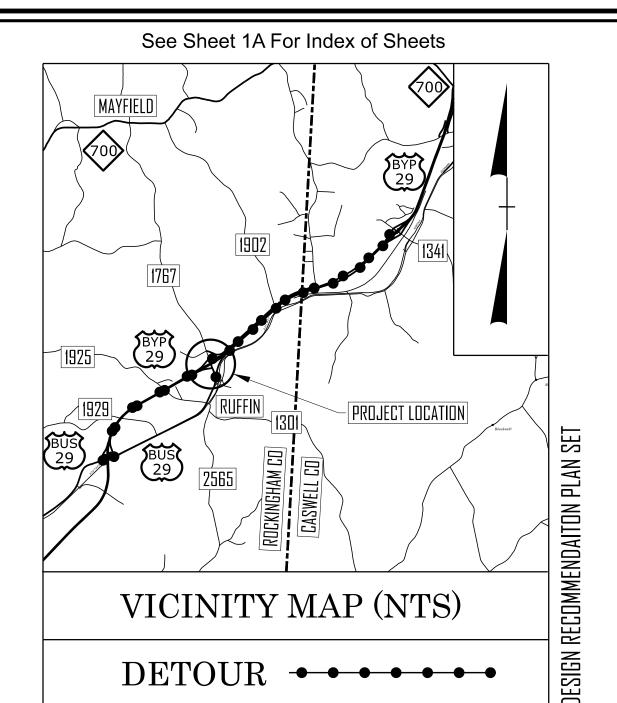
SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION	GRADATION	ROCK DESCRIPTION HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED	TERMS AND DEFINITIONS
SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT	<u>WELL GRADED</u> - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. <u>UNIFORMLY GRADED</u> - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.	ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL.	ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA.
ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM DI586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING:	GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.	SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN	ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.
CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,	ANGULARITY OF GRAINS	REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:	ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING
VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6	THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.	WEATHERED NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES >	A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.
SOIL LEGEND AND AASHTO CLASSIFICATION	MINERALOGICAL COMPOSITION	ROCK (WR) 100 BLOWS PER FOOT IF TESTED.	ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT
GENERAL GRANULAR MATERIALS SILT-CLAY MATERIALS ORGANIC MATERIALS CLASS. (≤ 35% PASSING *200) (> 35% PASSING *200) ORGANIC MATERIALS	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC.	CRYSTALLINE CRYSTALLINE WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE,	WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.
GROUP A-1 A-3 A-2 A-4 A-5 A-6 A-7 A-1, A-2 A-4, A-5	ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.	GNEISS, GABBRO, SCHIST, ETC.	CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
CLASS. A-1-6 A-1-6 A-2-4 A-2-5 A-2-6 A-2-7 A-7-5 A-3 A-6, A-7	COMPRESSIBILITY	PROCE (NICR)	COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM
SYMBOL 000000000000000000000000000000000000	SLIGHTLY COMPRESSIBLE LL < 31 MODERATELY COMPRESSIBLE LL = 31 - 50	COASTAL PLAIN COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD	OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED
% PASSING SILT-	HIGHLY COMPRESSIBLE LL > 50	SEDIMENTARY ROCK SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED (CP) SHELL BEDS, ETC.	BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
"ID 50 MX CHANLER CLAY MUCK, COILS CLAY BEAT	PERCENTAGE OF MATERIAL	WEATHERING	DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT
*200 15 MX 25 MX 10 MX 35 MX 35 MX 35 MX 35 MX 36 MN 36 MN 36 MN 36 MN 36 MN	ORGANIC MATERIAL GRANULAR SILT - CLAY SOILS OTHER MATERIAL	FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER	ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE
MATERIAL PASSING *40	TRACE OF ORGANIC MATTER 2 - 3% 3 - 5% TRACE 1 - 10% LITTLE ORGANIC MATTER 3 - 5% 5 - 12% LITTLE 10 - 20%	HAMMER IF CRYSTALLINE.	HORIZONTAL.
LL 40 MX 41 MN 40 MX 41 MN 40 MX 41 MN 40 MX 41 MN 501LS WITH	MODERATELY ORGANIC 5 - 10% 12 - 20% SOME 20 - 35%	VERY SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, (V SLI.) CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF	DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE
PI 6 MX NP 10 MX 10 MX 11 MN 11 MN 10 MX 11 MN 11 MN MODERATE ORGANIC	HIGHLY ORGANIC > 10% > 20% HIGHLY 35% AND ABOVE CROUND WATER	OF A CRYSTALLINE NATURE.	LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE
GROUP INDEX 8 8 MX 12 MX 16 MX NU MX AMUDINS OF SOILS	SHOOND WATER	SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO (SLI.) 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR	SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.
USUAL TYPES STONE FRAGS. OF MAJOR GRAVEL, AND CAMP CRAFT AND CAMP CAMP CAMP CAMP CAMP CAMP CAMP CAMP	WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING	CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.	FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.
MATERIALS SAND SAND GRAVEL AND SAND SOILS SOILS	STATIC WATER LEVEL AFTER <u>24</u> HOURS	MODERATE SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS, IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY, ROCK HAS	FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM
GEN. RATING EXCELLENT TO GOOD FAIR TO POOR POOR UNSUITABLE AS SUBGRADE		DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED	PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.
PI OF A-7-5 SUBGROUP IS ≤ LL - 30 :PI OF A-7-6 SUBGROUP IS > LL - 30	SPRING OR SEEP	WITH FRESH ROCK,	FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE
CONSISTENCY OR DENSENESS	MISCELLANEOUS SYMBOLS	MODERATELY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED, IN GRANITOID ROCKS, ALL FELDSPARS DULL SEVERE AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION, ROCK SHOWS SEVERE LOSS OF STRENGTH	FIELD.
COMPACTNESS OR RANGE OF STANDARD RANGE OF UNCONFINED	TT 25./225	(MOD. SEV.) AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK, ROCK GIVES 'CLUNK' SOUND WHEN STRUCK, IF TESTED, WOULD YIELD SPT REFUSAL	JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.
PRIMARY SOIL TYPE CONSISTENCY PENETRATION RESISTENCE COMPRESSIVE STRENGTH (N-VALUE) (TONS/FT ²)	ROADWAY EMBANKMENT (RE) OF ROCK STRUCTURES OF ROCK STRUCTURES	SEVERE ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT	LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.
GENERALLY VERY LOOSE < 4	SOIL SYMBOL SPET TEST BORING SLOPE INDICATOR INSTALLATION	(SEV.) REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED	LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.
GRANULAR MEDIUM DENSE 18 TO 38 N/A	I №	TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF	MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS, MOTTLING IN SOILS
MAILKIAL DENSE 30 TO 50	ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT AUGER BORING CONE PENETROMETER	VERY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE	USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.
VERT DENSE 7 30	INFERRED SOIL BOUNDARY - CORE BORING SOUNDING ROD	SEVERE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK (V SEV.) REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.
GENERALLY SOFT 2 TO 4 0.25 TO 0.5	MW - TECT DODING	VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. <u>IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF</u>	RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.
SILT-CLAY MEDIUM STIFF 4 TO 8 0.5 TO 1.0 MATERIAL STIFF 8 TO 15 1 TO 2	INFERRED ROCK LINE MONITORING WELL WITH CORE	COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS	ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF
(COHESIVE) VERY STIFF 15 TO 30 2 TO 4	→ → → → ← ALLUVIAL SOIL BOUNDARY \(\triangle \) PIEZOMETER \(\triangle \) SPT N-VALUE	ALSO AN EXAMPLE.	ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
HARD > 30 > 4 TEXTURE OR GRAIN SIZE	RECOMMENDATION SYMBOLS	ROCK HARDNESS	SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT
		VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK, BREAKING OF HAND SPECIMENS REQUIRES	ROCK.
U.S. STD. SIEVE SIZE 4 10 40 60 200 270 OPENING (MM) 4.76 2.00 0.42 0.25 0.075 0.053	UNSUITABLE WASTE ACCEPTABLE, BUT NOT TO BE	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY, HARD HAMMER BLOWS REQUIRED	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO
BOULDER COBBLE GRAVEL COARSE FINE SILT CLAY	SHALLOW UNCLASSIFIED EXCAVATION - USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL	TO DETACH HAND SPECIMEN.	THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.
(BLDR.) (COB.) (GR.) (CSE. SD.) (F SD.) (SL.) (CL.)	ABBREVIATIONS	MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK, GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK, HAND SPECIMENS CAN BE DETACHED	SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.
GRAIN MM 305 75 2.0 0.25 0.05 0.005	AR - AUGER REFUSAL MED MEDIUM VST - VANE SHEAR TEST	BY MODERATE BLOWS.	STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF
SIZE IN. 12 3	BT - BORING TERMINATED MICA MICACEOUS WEA WEATHERED CL CLAY MOD MODERATELY 7 - UNIT WEIGHT	MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.	A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL
SOIL MOISTURE - CORRELATION OF TERMS	CL CLAY MOD MODERATELY 7- UNIT WEIGHT CPT - CONE PENETRATION TEST NP - NON PLASTIC 7- DRY UNIT WEIGHT	HARD CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.	TO OR LESS THAN Ø.1 FOOT PER 60 BLOWS.
SOIL MOISTURE SCALE FIELD MOISTURE GUIDE FOR FIELD MOISTURE DESCRIPTION	LOSE - CUARSE ORGANIC	SOFT CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS	STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY
(ATTERBERG LIMITS) DESCRIPTION SOIDE FOR FIELD HOLDSTONE DESCRIPTION	DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.
- SATURATED - USUALLY LIQUID; VERY WET, USUALLY (SAT,) FROM BELOW THE GROUND WATER TABLE	e - VOID RATIO SD SAND, SANDY SS - SPLIT SPOON F - FINE SL SILT, SILTY ST - SHELBY TUBE	VERY CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH	STRATA ROCK QUALITY DESIGNATION (SROD): A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.
LL LIOUID LIMIT	FOSS FOSSILIFEROUS SLI SLIGHTLY RS - ROCK	SOFT OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE, CAN BE SCRATCHED READILY BY FINGERNAIL.	TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.
BANGE - WET - (W) SEMISOLID; REQUIRES DRYING TO	FRAC FRACTURED, FRACTURES TCR - TRICONE REFUSAL RT - RECOMPACTED TRIAXIAL FRAGS FRAGMENTS w - MOISTURE CONTENT CBR - CALIFORNIA BEARING	FRACTURE SPACING BEDDING	
(PI) PLASTIC LIMITATTAIN OPTIMUM MOISTURE	HI HIGHLY V - VERY RATIO	TERM SPACING TERM THICKNESS	BENCH MARK: BY-12 (N:985483, E:1840037) ELEVATIONS OF ROADWAY BORINGS BASED ON PROVIDED ELECTRONIC FILE
- MOIST - (M) - SOLID-AT OF NEAR OFTIMUM MOISTURE	EQUIPMENT USED ON SUBJECT PROJECT	VERY WIDE MORE THAN 10 FEET VERY THICKLY BEDDED 4 FEET WIDE 3 TO 10 FEET THICKLY BEDDED 1.5 - 4 FEET	(BROO98_IS_TIN.TIN) ELEVATION: 667.98 FEET
OM _ OPTIMUM MOISTURE SL _ SHRINKAGE LIMIT	DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE:	MODERATELY CLOSE 1 TO 3 FEET THINLY BEDDED Ø.16 - 1.5 FEET	NOTES:
- DRY - (D) REQUIRES ADDITIONAL WATER TO	CME-45C CLAY BITS AUTOMATIC MANUAL	CLOSE 0.16 TO 1 FOOT VERY THINLY BEDDED 0.03 - 0.16 FEET VERY CLOSE LESS THAN 0.16 FEET THICKLY LAMINATED 0.008 - 0.03 FEET	FIAD: FILLED IMMEDIATELY AFTER DRILLING
- UKY - (U) ATTAIN OPTIMUM MOISTURE	CME-55 6. CONTINUOUS FLICHT AUGER CORE SIZE:	THINLY LAMINATED < 0.008 FEET	
PLASTICITY	X 8* HOLLOW AUGERS	INDURATION	-
PLASTICITY INDEX (PI) DRY STRENGTH	CME-550 HARD FACED FINGER BITS X-N O	FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC. RUBBING WITH FINGER FREES NUMEROUS GRAINS;	
NON PLASTIC 0-5 VERY LOW SLIGHTLY PLASTIC 6-15 SLIGHT	VANE SHEAR TEST UNG,-CARBIDE INSERTS	FRIABLE GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.	
MODERATELY PLASTIC 16-25 MEDIUM HIGHLY PLASTIC 26 OR MORE HIGH	X CASING W/ ADVANCER POST HOLE DIGGER	MODERATELY INDURATED GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE;	
	PORTABLE HOIST TRICONE STEEL TEETH HAND AUGER	BREAKS EASILY WHEN HIT WITH HAMMER.	
COLOR	X B-57 TRICONE TUNGCARB. SOUNDING ROD	INDURATED GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.	
DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY).	CORE BIT VANE SHEAR TEST	CHARD HAMMED DI DWC DECILIDED TO DDEAV CAMDIE.	
MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.		EXTREMELY INDURATED SAMPLE BREAKS ACROSS GRAINS.	DATE: 8-15-14

TIP PROJECT: BR-0098

NTRACT:



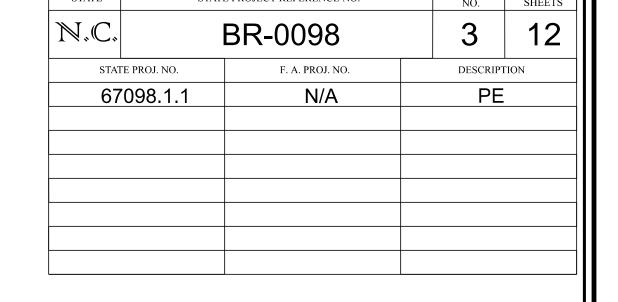
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

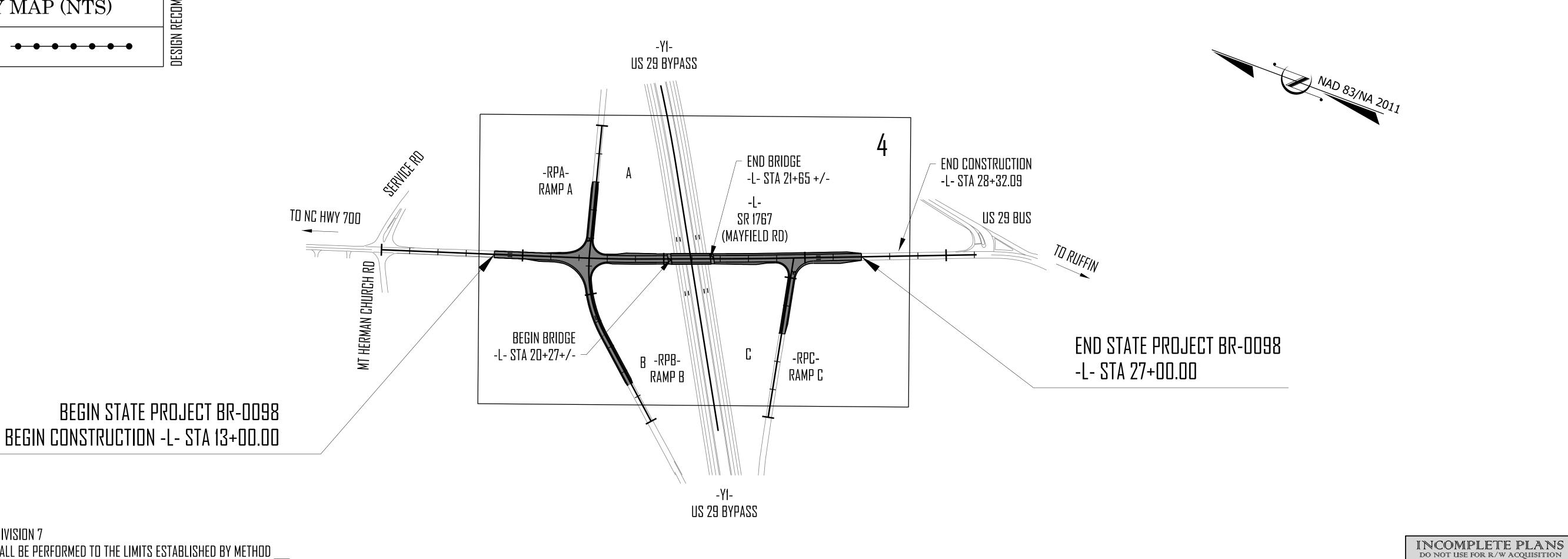
ROCKINGHAM COUNTY

LOCATION: REPLACE BRIDGE #780183 ON SR 1767 (MAYFIELD RD) OVER US 29 BYPASS

TYPE OF WORK: PAVING, GRADING, DRAINAGE

AND STRUCTURES





NCDOT CONTACT : XXXXXXXX - DIVISION 7

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____
THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS SHOWN ON THE PLANS.

GRAPHIC SCALES 50 25 0 50 100 PLANS 50 25 0 50 100 PROFILE (HORIZONTAL)

PROFILE (VERTICAL)

ADT 2019 = 1,600 ADT 2040 = 1,800

DESIGN DATA

K = 8 %
D = 55 %
T = 3 % *

V = 45 MPH
* TTST =1% DUAL 2%
FUNC CLASS =
MINOR ARTERIAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT BR-0098 = 0.239 MILES
LENGTH OF STRUCTURE TIP PROJECT BR-0098 = 0.026 MILES
TOTAL LENGTH OF TIP PROJECT BR-0098 = 0.265 MILES

Prepared in the Office of: moffatt & nichol 4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC LICENSE NO.: F-0105

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

OCTOBER 14, 2024

LETTING DATE:
OCTOBER 21, 2025

TRENT E. HUFFMAN, P.E. PROJECT ENGINEER

GRAY MODLIN, P.E.

PROJECT DESIGN ENGINEER

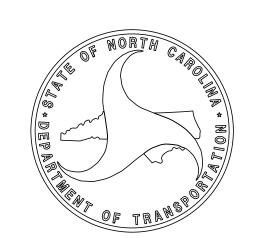
LINDSAY CROCKER

NCDOT CONTACT

HYDRAULICS ENGINEER P.E. SIGNATURE: ROADWAY DESIGN ENGINEER .

P.E.

SIGNATURE:



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

\$\$\$-USER NAME-\$\$\$ - \$\$\$-DATE-\$\$\$

August 5, 2024

WBS Number: 67098.1.1
TIP Number: BR-0098
COUNTY: Rockingham

DESCRIPTION: Replacement of Bridge No. 183 on US 29 Bus over US 29 Bypass

WSP Number: US0037375.9748

SUBJECT: Geotechnical Inventory Report

Project Description

The project area lies on the existing SR 1767 (Mayfield Road) alignment on both sides of Bridge No. 183 over US-29 and is also located approximately 0.3 miles to the north of Ruffin, NC. The proposed construction is associated with the replacement of Bridge No. 183 and will consist of a 0.3-mile roadway.

The geotechnical field investigation for the project was conducted from July 8 to July 11, 2021. The subsurface investigation was performed using hand auger tools and a Mobile Drill B-57 drill rig equipped with an automatic hammer. Hollow-stem auger and mud-rotary drilling procedures were used to advance borings to the required depths. Standard Penetration Tests (SPT) were performed at approximately 2.5-foot to 5.0-foot intervals to termination in selected borings. Representative soil samples were collected for visual classification in the field and selected samples were submitted for laboratory analysis.

The following alignments, totalling approximately 2,420 feet, were explored. Subsurface profile and representative cross sections of main alignment, -L-, is included in this report.

<u>Alignment</u>	Station (±)
-L-	13+00 to 27+00
-RPA-	12+00 to 14+71
-RPB-	11+50 to 16+28
-RPC-	13+00 to 15+71

Physiography and Geology

The project site is located within the Piedmont Physiographic Province. Topography in the region is typified by northeast–southwest trending ridges that exhibit structural control and are cut by trellis drainage pattern. The project area is on a ridge between two creeks of the Dan River sub-basin of the Roanoke River Basin. Elevations along the project alignments range from a low of 667± feet below Bridge No. 183 to a high of 693.66± at the high point of Bridge No. 183. A mixture of small commercial farms, a substation and wooded areas are present along the project corridor.

Geologically, the project is located in the central Piedmont physiographic region and is underlain by residual soils and rocks of the Milton Belt. Residual soils within the Milton Belt are derived from in-situ weathering of the underlying Palaeozoic aged gneiss and schist.

Soil Properties

Soils encountered during this investigation have been divided into two categories based on origin, including roadway embankment and residual soils.

Roadway embankment soils were observed along the entire project corridor. The soils for the existing roadway embankment generally consist of brown, light brown, red-brown, and tan, soft to very stiff, dry to wet, sandy silt, silt, clayey silt and clay (A-4, A-5, A-7). These soils typically contain some gravel near surface, and trace mica in most samples. The roadway embankment clays exhibit low to medium plasticity with plastic indices ranging from 9 to 24. A layer of asphalt fragments was observed in roadway borings L_1960 and L_2240, at elevations close to top of current US-29, which indicates the layer may be the pavement of old Mayfield Road.

Milton Belt residual soils are derived from the weathering of the underlying crystalline rocks. Milton Belt residual soils were encountered underlying roadway embankment. These soils primarily consist of Light brown, brown, dark brown, red brown, and gray, soft to hard, moist to wet, sandy silt, silt, and sandy/silty clay (A-4, A-5, A-7). Lesser amount of coarse-grained soil was encountered near the transition to Weathered Rock, consists of light brown, brown, dark brown, gray, and tan, very dense, moist, silty, fine sand (A-2-4). The Milton Belt residual clayey soils exhibit medium to high plasticity with plastic indices ranging from 13 to 41.

Rock Properties

Weathered rock and crystalline rock occur in several areas of the project. The weathered rock and crystalline rock encountered on this project were identified by SPT sampling and SPT refusal. Where encountered, the depths to weathered rock ranged from approximately 26± to 39± feet below existing ground surface (Elevations of approximately 630.2 to 642.8 feet MSL). Crystalline rock was encountered in boring EB2-A, at an approximate depth of 33.5 feet below existing ground surface (Elevation of approximately 635.3 feet MSL). Where encountered, the weathered rock and crystalline rock consists of gray to gray-brown schist belonging to the Milton Belt.

Groundwater

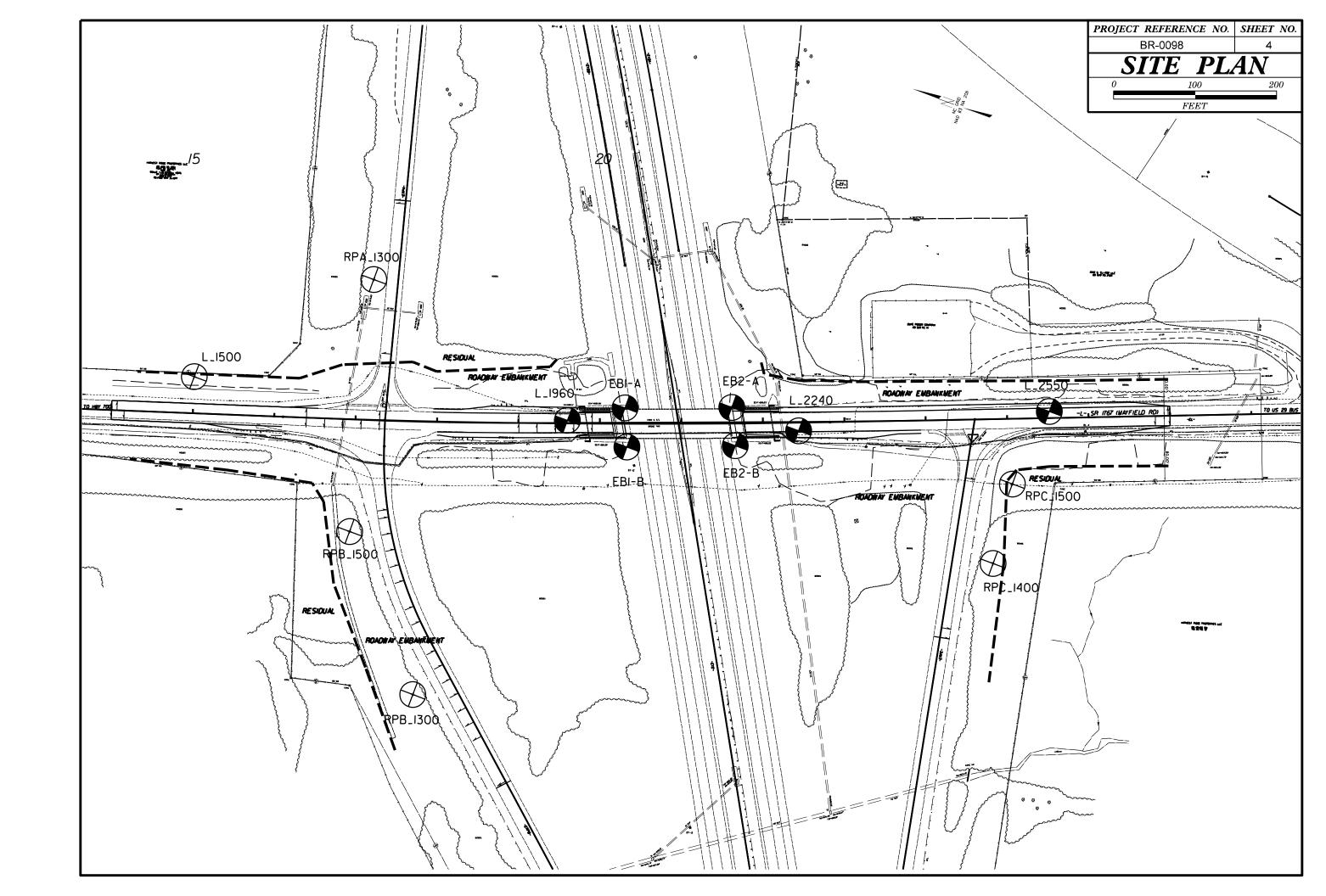
Ground water data was collected at the time of the geotechnical field investigation (July 8 to July 11, 2024). Stabilized ground water level (after 24-hours stabilization period) was measured in four bridge end bent borings, ranging from approximately 8.6± to 10.0± feet below existing ground surface (Elevations of approximately 658.4 to 660.2 feet MSL)

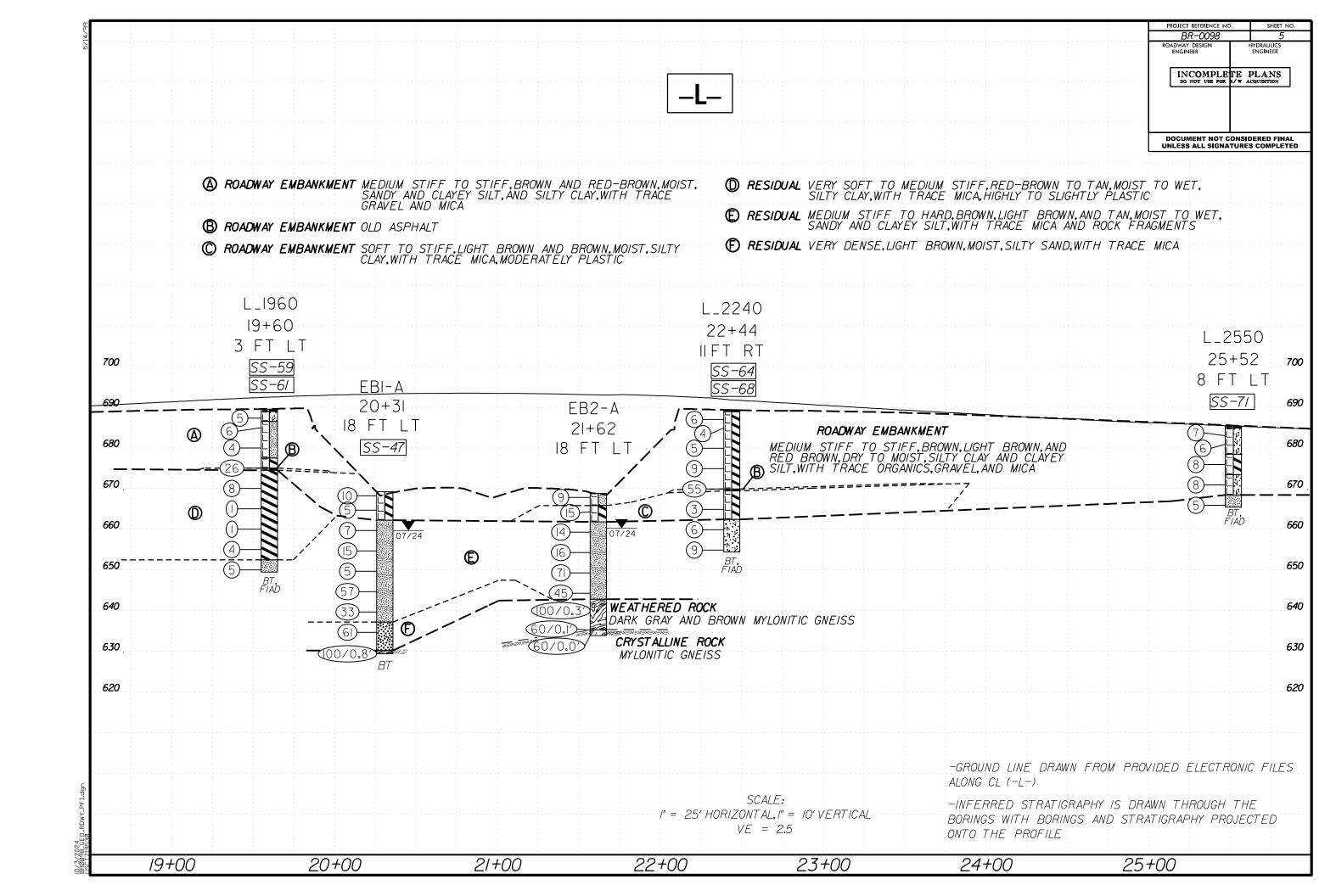
Prepared By

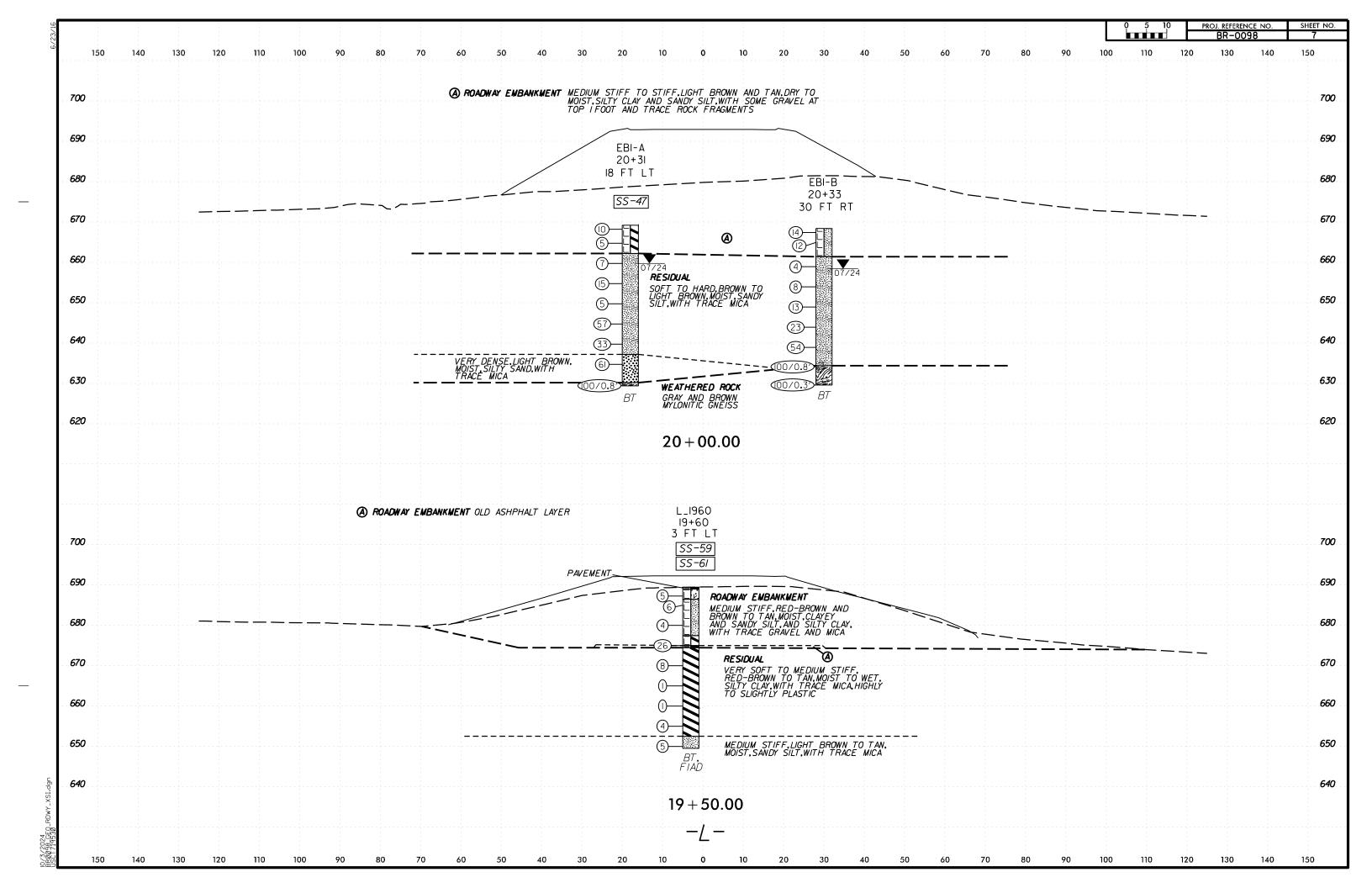
Jack Rowenhorst Geotechnical Engineer Reviewed By
Chien-Ting Tang

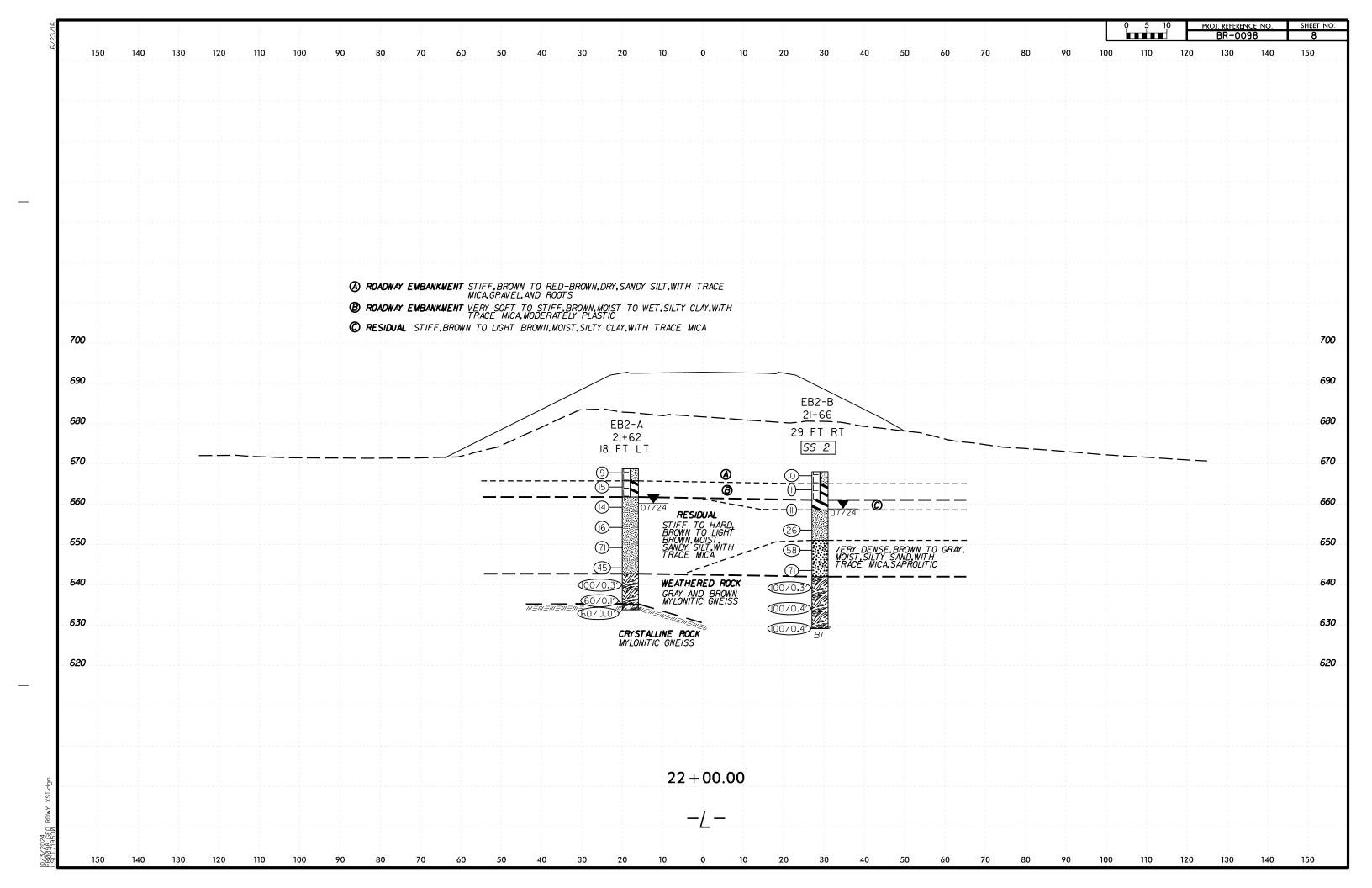
Chien-Ting Tang

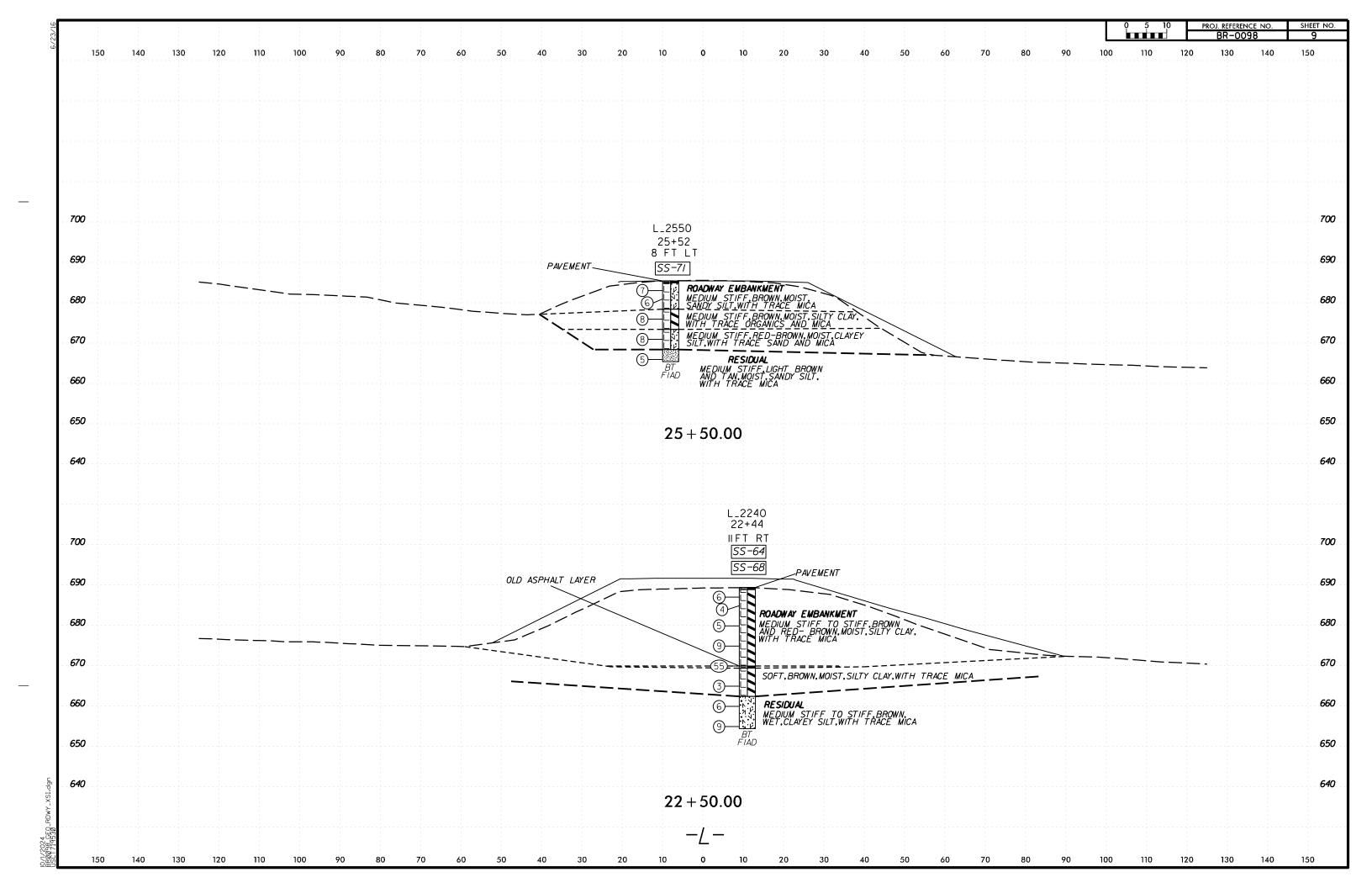
Senior Engineer -Geotechnical











GEOTECHNICAL BORING REPORT BORE LOG

	BORE LOG							
WBS 67098.1.1 TIP BR-009	98 COUNTY ROCKINGHAM	GEOLOGIST J. Rowenhorst		WBS 67098.1.1	TIP BR-0098	COUNTY ROCKINGHAM	GEOLOGIST J. Rowenhorst	
SITE DESCRIPTION Bridge 780183 on SR 1767	(Mayfield Road) over US 29 Bypass	GF	ROUND WTR (ft)	SITE DESCRIPTION Bridge 78	80183 on SR 1767 (Mayfield Roa	ad) over US 29 Bypass		GROUND WTR (ft)
BORING NO. RPA_1300 STATION	13+00 OFFSET 30 ft RT	ALIGNMENT -RPA- 0	HR. Dry	BORING NO. RPB_1300	STATION 13+00	OFFSET 50 ft LT	ALIGNMENT -RPB-	0 HR. Dry
COLLAR ELEV. 684.2 ft TOTAL DEF	PTH 5.0 ft NORTHING 985,863	EASTING 1,840,139 24	HR. FIAD	COLLAR ELEV. 668.5 ft	TOTAL DEPTH 4.5 ft	NORTHING 985,640	EASTING 1,839,678	4 HR. FIAD
DRILL RIG/HAMMER EFF./DATE N/A	DRILL METHOD Har	d Auger HAMMER T		DRILL RIG/HAMMER EFF./DATE N	N/A	DRILL METHOD	Hand Auger HAMMER	TYPE N/A
	TE 07/11/24 COMP. DATE 07/11/24	SURFACE WATER DEPTH N/A		DRILLER J. Rowenhorst	START DATE 07/10/24		SURFACE WATER DEPTH N/A	
DRILL RIG/HAMMER EFF./DATE N/A DRILLER J. Rowenhorst START DATE ELEV DRIVE DEPTH BLOW COUNT	DRILL METHOD Har	SURFACE WATER DEPTH N/A SOIL AND ROCK DESCRIE	PTION DEPTH (ft) = 0.0 with Trace 5.0	DRILL RIG/HAMMER EFF./DATE N DRILLER J. Rowenhorst ELEV DRIVE DEPTH BLOW C	START DATE 07/10/24 COUNT BLOWS PE 5ft 0.5ft 0 25 50	DRILL METHOD	Hand Auger HAMMER SURFACE WATER DEPTH N/A L O SOIL AND ROCK DESCR	IPTION E 0.0 ENT Moist, Sandy oots 3.0 Sandy Silt
NCDOT BORE DOUBLE BR0086 GEO_BRDG_BORINGS.GPJ NC_DOT.GDT 10/1/24								

GEOTECHNICAL BORING REPORT BORE LOG

COLLAR ELEV. 675.8 ft								DUI	RE L	<u>.UG</u>	'																										
BORING NO. RPB_1500 STATION 15+00 OFFSET 50 ft.LT ALIGNMENT -RPB- 0 HR. Dry	WBS 67098.	1.1			IP BR-00	98	COL	JNTY F	ROCKIN	GHAM			GEO	LOGIST	J. Rov	wenhorst			WBS 6	7098.1	.1		TII	IP B	BR-0098		COUNT	Y ROCKII	NGHAM			GEOLOG	IST J. R	Rowenhors	t		
COLLAR ELEV. 675.8 ft TOTAL DEPTH 1.4 ft NORTHING 985,782 EASTING 1,839,839 24 HR. FIAD DRILL RIGHAMMER EFF, DATE N/A DRILL RIGHAMMER EFF, DATE N/A DRILL BETHOD Hand Auger HAMMER TYPE N/A DRILL BETHOD HAND Auger HAMMER TYPE N/A DRILL BETHOD HAND Auger HAMMER TYPE N/A DRILL RIGHAMMER EFF, DATE N/A DRILL BETHOD HAND Auger HAMMER TYPE N/A DRILL BETHOD HAND Auger DRILL BETHOD HAND Auger HAMMER TYPE N/A DRILL BETHOD HAND Auger DRILL BETHOD HAND Auger HAMMER TYPE N/A DRILL BETHOD HAND Auger DRILL BETHOD HAND Auger HAMMER TYPE N/A DRILL BETHOD HAND Auger DRILL BETHOD HAND Auger DRILL BETHOD HAND Auger HAMMER TYPE N/A DRILL BETHOD HAND Auger DRILL BETHOD	SITE DESCRIP	PTION	Bridge	780183 d	n SR 1767	(Mayfield	d Road) c	ver US 2	29 Вура	ss							GROU	JND WTR (f	SITE DE	SCRIP	TION Bri	idge 780)183 on	n SR	1767 (May	field Roa	ad) over	US 29 Byp	ass						GRO	UND W	TR (ft)
DRILL RIGHAMMER EFF. DATE N/A DRILL METHOD Hand Auger HAMMER TYPE N/A	BORING NO.	RPB_1	500	;	STATION	15+00		OF	FSET	50 ft L	-		ALIG	NMENT	-RPB-		0 HR	. Dr	y BORING	NO.	RPC_140	0	ST	TATI	ON 14+00)		OFFSET	50 ft R	Т		ALIGNME	NT -RP	PC-	0 HF	₹.	Dry
DRILLER J. Rowenhorst START DATE 07/10/24 COMP. DATE 07/10/24 SURFACE WATER DEPTH N/A	COLLAR ELEV	V. 675.	.8 ft		OTAL DE	PTH 1.4	4 ft	NC	ORTHING	3 985,	782		EAS	TING 1	,839,839	9	24 HR	. FIAI	COLLAR	RELEV	. 670.01	ft	TC	OTAL	L DEPTH	5.0 ft		NORTHIN	IG 985,	028		EASTING	1,840,0)78	24 HF	₹.	FIAD
DRIVE (ft) DRIVE (ft) DEPTH BLOW COUNT (ft) O.5ft	DRILL RIG/HAMN	MER EFF.	/DATE	N/A						DRILL	METHO	DD Ha	and Augei	•		HAM	IMER TYPE	N/A	DRILL RIG	HAMM)	ER EFF./DA	ATE N/A	١						DRILL	METHO	D Han	d Auger		HA	MMER TYP	E N/A	
680 670.0 GROUND SURFACE 0.0 675.8 GROUND SURFACE 0.0 665.0 Cay (A-7), with Trace Gravel and Mica Cay (A-7), with Trace Mi					START DA				OMP. DA				SUR	FACE W	ATER D	EPTH I	N/A		1 1					TARI							4	SURFACI	WATER	R DEPTH	N/A		
	BORING NO. COLLAR ELEV DRILL RIG/HAMM DRILLER J. F ELEV (ft) Column 1	RPB_15 V. 675. MER EFF. Rowenho	500 .8 ft /DATE orst BLOW	N/A SCOUNT	OTAL DE	15+00 PTH 1.4	1 ft 10/24 WS PER F	OF NC	PERSET DRITHING	50 ft LT 985, DRILL TE 07	782 METHO 7/10/24 P.	L O OI G	EAS and Auger SUR ELEV.	FACE W (ft) Mediur Stif to	GRO ROADW n Stiff, Sa Very Stiff	HAMDEPTH I ROCK DE ROC	0 HR. 24 HR. IMER TYPE N/A ESCRIPTIO RFACE INKMENT DWN, Dry to A-4) IL Wn, Moist, Devation 674	Dr. FIAI	BORING COLLAR DRILL RIG DRILLEF (ft) 670	NO. RELEV G/HAMM R J. R	RPC_140 /. 670.01 ER EFF./DA	0 ft ATE N/A	ST TC	START OTAL	ON 14+00 L DEPTH F DATE 0 Bi 25	5.0 ft 7/11/24 OWS PI 50	ER FOOT	OFFSET NORTHIN 75 10	50 ft R [*] IG 985, DRILL ATE 07 SAMF 0 NO.	028 METHOD 7/11/24 D. MOI	L O G	670.0 669.0 665.0 Lig	1,840,0 E WATER SOIL AN GR ROAL tht Brown, Tra ght Brown Clay (ght Gray, N rring Term	ROUND SUDWAY EMB Moist, Silty: RESIDU to Light G (A-7), with Moist, Silty: Trace M inated at E	0 HF 24 HF MMER TYP N/A ESCRIPTION RFACE ANKMENT Sand (A-2-and Mica AL ray, Moist, 3 Frace Mica Sand (A-2-aca evation 668	E. N/A E. N/A DN 4), with Sandy 1), with	Dry FIAD

GEOTECHNICAL BORING REPORT BORE LOG

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WBS	67098	3.1.1			TI	P	BR-009	98		COL	JNTY	/ ROO	CKING	HAM			GEOLOG	IST J. Rowe	nhorst		
SITE	DESCR	IPTION	Bridg	ge 780	183 on	SR	1767 (Mayfi	ield Ro	oad) o	ver l	JS 29 I	Bypas	5						GROUND	WTR (ft
BOR	NG NO.	RPC	1500		S	ГАТ	ION 1	5+00				OFFS	ET 5	8 ft RT			ALIGNME	NT -RPC-		0 HR.	Dry
	LAR ELE				T	ОТА	L DEP	TH (5.0 ft			NORT	HING	985,0	40		EASTING	1,840,177		24 HR.	FIAD
DRILL	. RIG/HAN	IMER EF	F./DATI	E N/A										DRILL I	/ETHOI	D Ha	and Auger		HAMN	JERTYPE N/	'A
	LER J.					TAR	T DAT	E 07	7/11/2	4		COME	P. DA	Γ E 07/				E WATER DE			
LEV		DEPTH		W CO					OWSI		OOT			SAMP		1					
(ft)	ELEV (ft)	(ft)		0.5ft	0.5ft	0		25		50		75	100	NO.	МОІ	O G	ELEV. (ft)	SOIL AND RO	OCK DES	SCRIPTION	DEPTH
670	_					⊬									-	2000	670.0		ND SURF		(
	-	Ŧ				-				: :		1					- 668.5 -	Brown, Mois	st, Sandy	Silt (A-4)	
ec E	-	‡				:	 	-										an, Moist, Sand	y Clay (A Mica	/), with I race	
665	-	<u> </u>				μ.				<u> </u>		<u> </u>		1		33660	665.0 Liç	ht Gray, Moist	to Wet, S Trace Mi	Sandy Silt (A-4	·),
	-	ł															Bo	ring Terminate	d at Elev	ation 665.0 ft I	/ In
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SHEET 12

PROJECT REFERENCE NO.	SHEET NO.
BR-0098	13

LABORATORY TESTS COMPLETED ON 7-29-2024

	SUMMARY OF LABORATORY TEST RESULTS																		
SAMPLE	BORING	STATION	OFFSET	ALIGN-	NORTHING	EASTING	DEPTH	AASHTO	L.L.	P.I.	% BY WEIGHT % BY PASSING S		I	/ °	%				
NO.				MENT			INTERVAL	CLASS.		,	GRAVEL	SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-59	L_1960	19+60	3 FT LT	-L-	985,579	1,840,060	23.5′-25.0′	A-7-6	69	41	0	7	64	29	100	98	93	77.9	-
SS-61	L_1960	19+60	3 FT LT	-L-	985,579	1,840,060	33.5′-35.0′	A-7-6	51	13	0	37	63	0	100	97	63	59.4	-
SS-64	L_2240	22+44	11 FT RT	-L-	985,308	1,840,147	5.0′-5.4′	A-7-5	51	14	0	30	64	6	99	96	70	34.5	-
SS-68	L_2240	22+44	11 FT RT	-L-	985,308	1,840,147	23.5′-25.0′	A-7-6	47	24	2	36	18	44	96	91	62	25.1	_
SS-71	L_2550	25+52	8 FT RT	-L-	985,022	1,840,262	1.5′-3.0′	A-5	41	9	I	34	48	17	97	93	65	22.3	_
SS-2	EB2-B	21+66	29 FT RT	-L-	985,376	1,840,103	3.5′-5.0′	A-7-6	45	24	0	37	55	18	100	95	73	26.8	-
SS-47	EBI-A	20+31	18 FT LT	-L-	985,518	1,840,099	3.5′-5.0′	A-7-5	60	14	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*	n/a*	-

^{*} DUE TO INSUFFICIENT SAMPLE AMOUNT, ONLY ATTERBERG LIMIT TEST WAS PERFORMED. BASED ON VISUAL CLASSIFICATION THAT INDICATES SS-47 BEING FINE MATERIAL, THE AASHTO SOIL CLASSIFICATION TYPE OF SS-47 IS LIKELY A-7.