

REFERENCE: SF-650049

PROJECT: 17BP.1.R.80

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY NORTHAMPTON
 PROJECT DESCRIPTION BRIDGE NO. 49 ON -L- (SR 1300)
OVER CORWELLS MILLPOND

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-------|-----------------------------|-----------|--------------|
| N.C. | SF-650049 | 1 | 7 |

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.

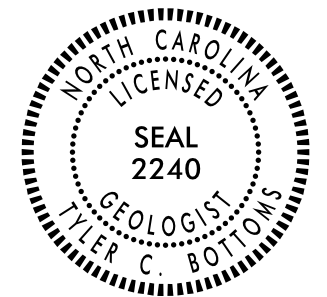
THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT 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 MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE 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.

PERSONNEL

S.N. ZIMARINO
R.E. SMITH
J.M. EDMONDSON

INVESTIGATED BY T.C. BOTTOMS
 DRAWN BY T.C. BOTTOMS
 CHECKED BY D.N. ARGENBRIGHT
 SUBMITTED BY D.N. ARGENBRIGHT
 DATE APRIL 2018



DocuSigned by:
Tyler Bottoms 6/18/2018
 48A2D3BD0838A54E SIGNATURE DATE

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

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. Includes sub-sections like SOIL LEGEND AND AASHTO CLASSIFICATION, CONSISTENCY OR DENSENESS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, and INDURATION.

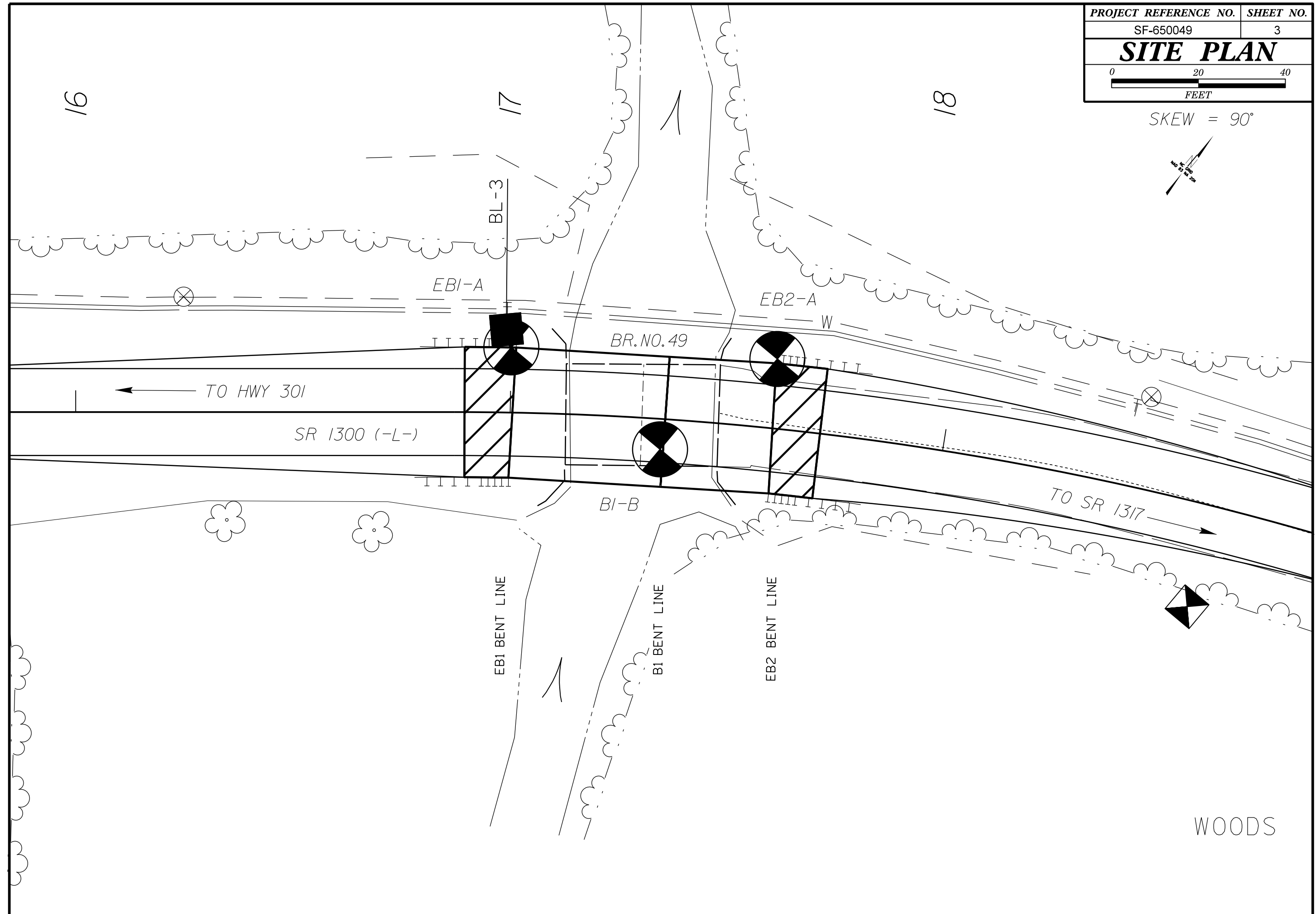
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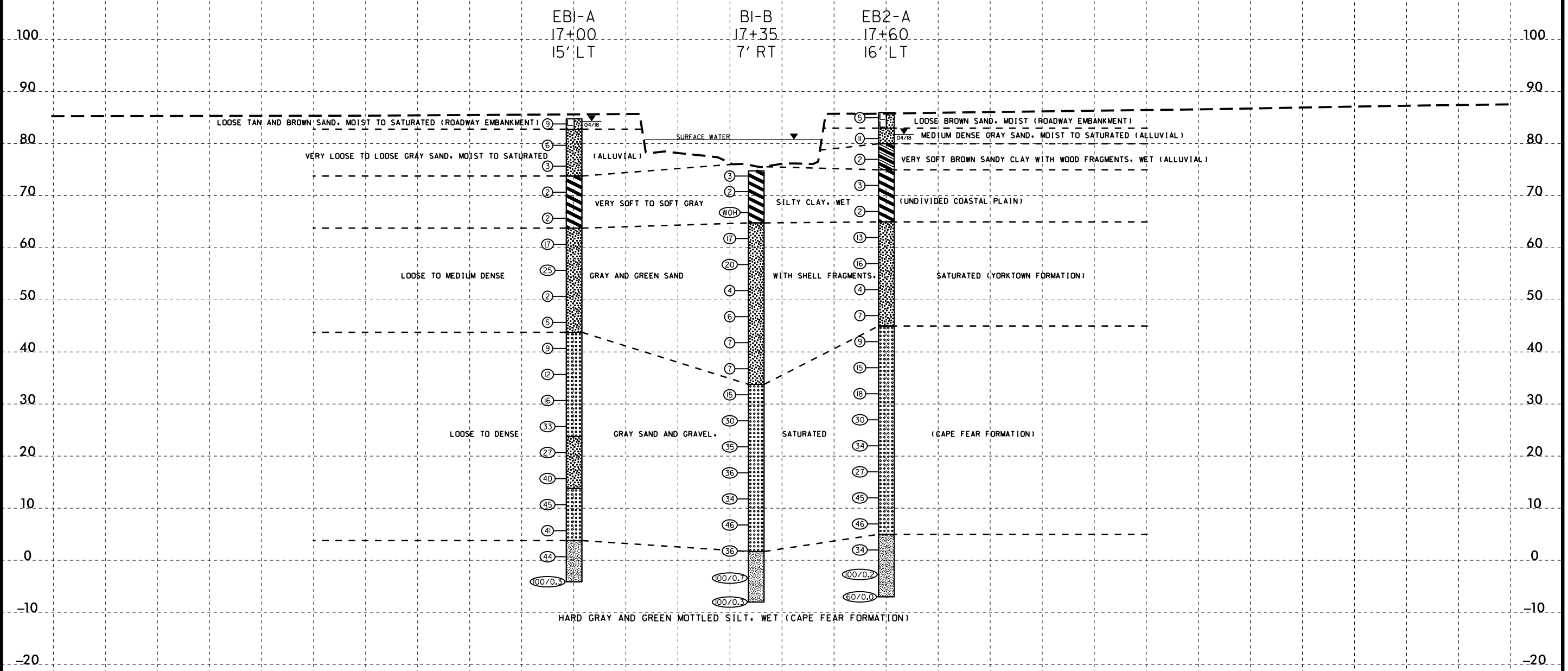
17

18



WOODS

PROFILE THROUGH BORINGS PROJECTED ALONG -L-



NOTE: GROUNDLINE PROFILE ALONG -L- TAKEN FROM BRIDGE SURVEY AND HYDRAULIC DESIGN REPORT DATED 3/29/18

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE

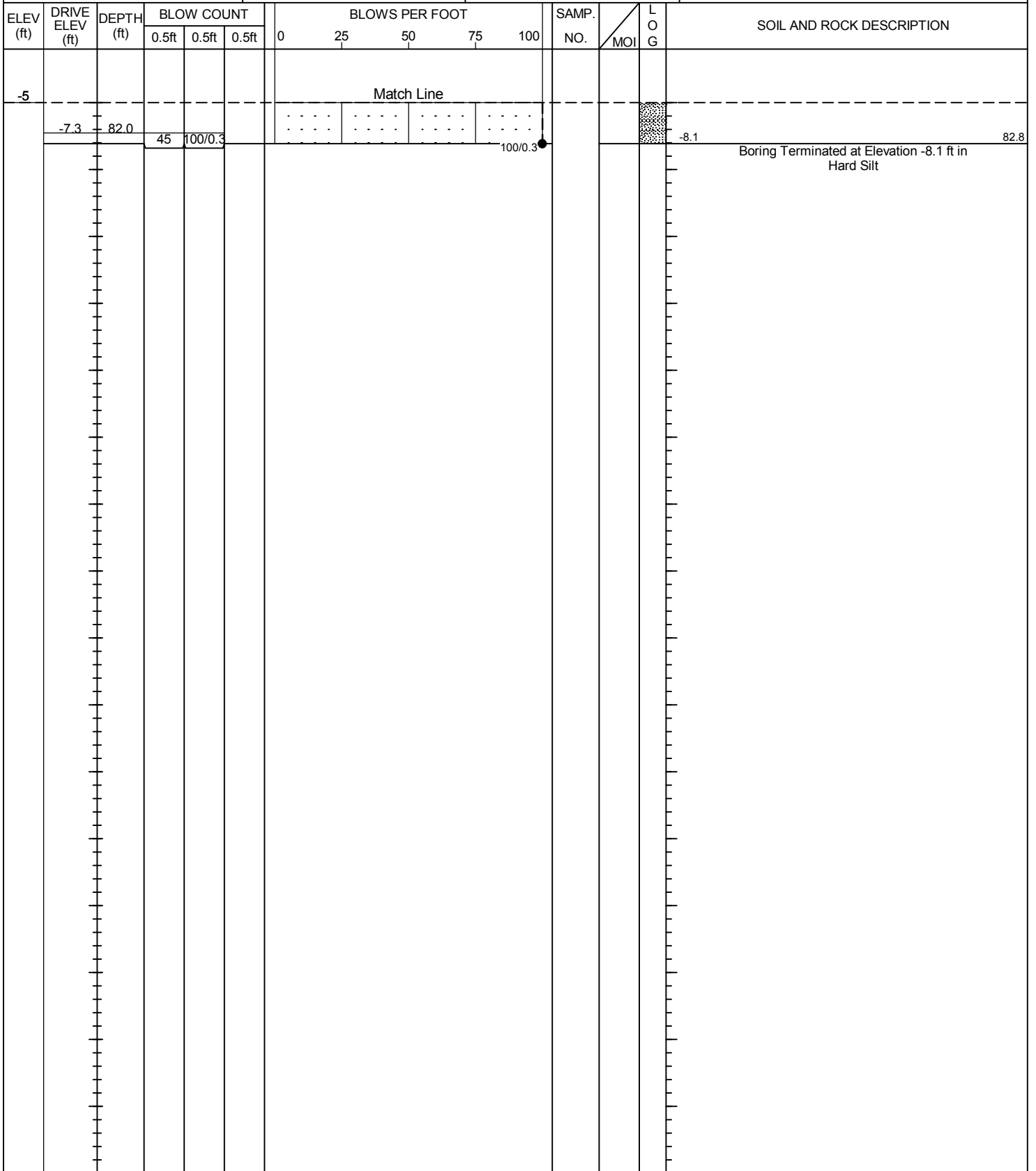
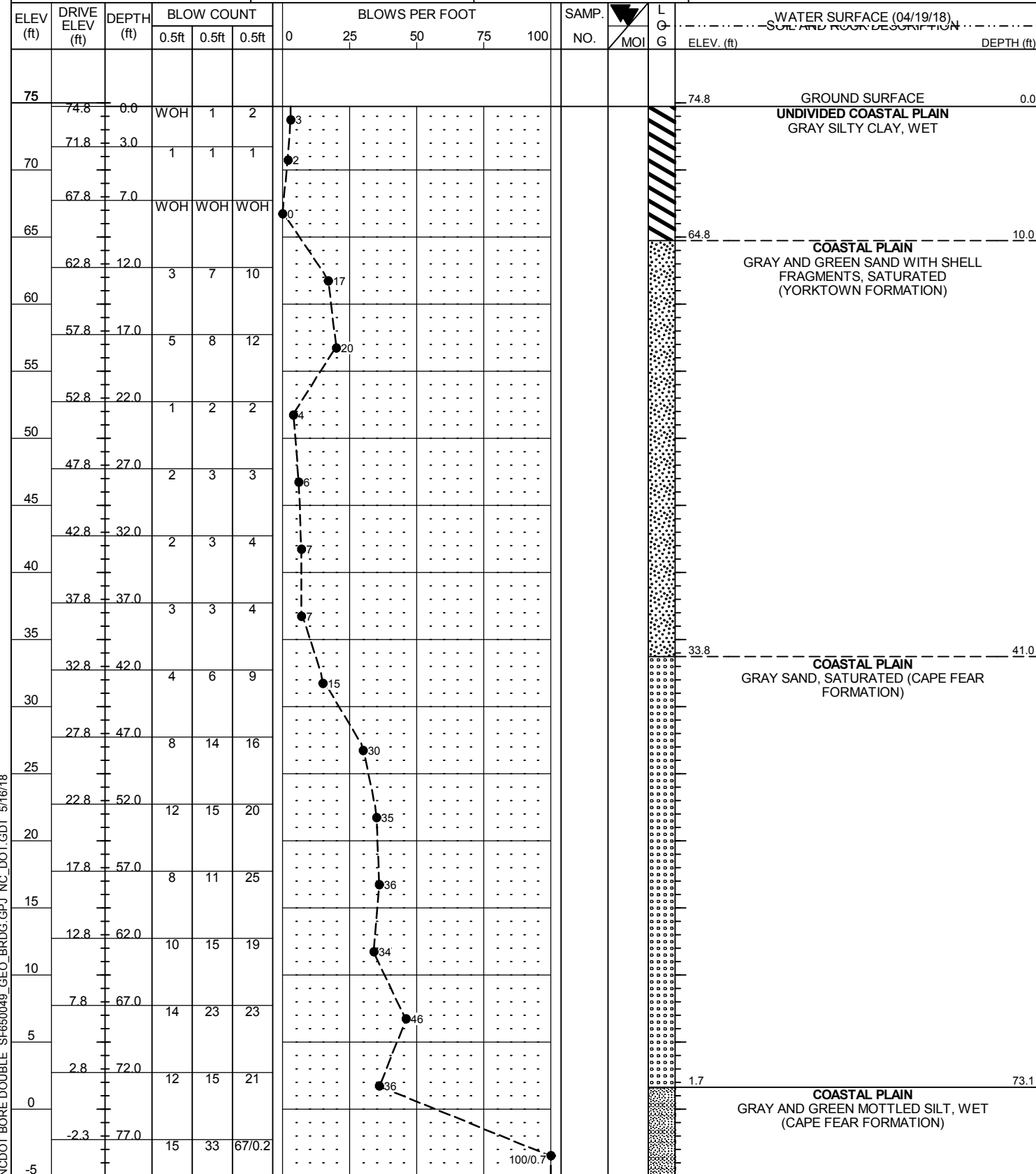
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 \$\$\$\$STRANDUP\$\$\$\$

GEOTECHNICAL BORING REPORT

BORE LOG

| | | | |
|---|---------------------|-------------------------|---------------------------|
| WBS 17BP.1.R.80 | TIP SF-650049 | COUNTY NORTHAMPTON | GEOLOGIST Zimarino, S. N. |
| SITE DESCRIPTION BRIDGE NO. 49 ON -L- (SR 1300) OVER CORWELL'S MILLPOND | | | GROUND WTR (ft) |
| BORING NO. B1-B | STATION 17+35 | OFFSET 7 ft RT | ALIGNMENT -L- |
| COLLAR ELEV. 74.8 ft | TOTAL DEPTH 82.8 ft | NORTHING 1,009,009 | EASTING 2,439,076 |
| DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 84% 08/21/2017 | | DRILL METHOD Mud Rotary | HAMMER TYPE Automatic |
| DRILLER Edmondson, J. M. | START DATE 04/19/18 | COMP. DATE 04/19/18 | SURFACE WATER DEPTH 6.0ft |

| | | | |
|---|---------------------|-------------------------|---------------------------|
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NCDOT BORE DOUBLE_SF650049_GEO_BRDG.GPJ_NC_DOT.GDT_5/16/18

GEOTECHNICAL BORING REPORT

BORE LOG

| | | | | | | | |
|--|--|--------------------------------|--|------------------------------|--|----------------------------------|------------------------|
| WBS 17BP.1.R.80 | | TIP SF-650049 | | COUNTY NORTHAMPTON | | GEOLOGIST Zimarino, S. N. | |
| SITE DESCRIPTION BRIDGE NO. 49 ON -L- (SR 1300) OVER CORWELL'S MILLPOND | | | | | | | GROUND WTR (ft) |
| BORING NO. EB2-A | | STATION 17+60 | | OFFSET 16 ft LT | | ALIGNMENT -L- | |
| COLLAR ELEV. 86.0 ft | | TOTAL DEPTH 93.0 ft | | NORTHING 1,009,042 | | EASTING 2,439,083 | |
| DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 84% 08/21/2017 | | DRILL METHOD Mud Rotary | | HAMMER TYPE Automatic | | | |
| DRILLER Edmondson, J. M. | | START DATE 04/18/18 | | COMP. DATE 04/18/18 | | SURFACE WATER DEPTH N/A | |

| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | | |
|-----------|-----------------|------------|------------|-------|-------|----------------|----|----|----|-----|-----------|-----|---------------------------|------------|--|--|
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | | |
| 90 | | | | | | | | | | | | | | | | |
| 85 | 86.0 | 0.0 | 2 | 2 | 3 | | | | | | | | | | | |
| 80 | 82.0 | 4.0 | 1 | 5 | 6 | | | | | | | | | | | |
| 75 | 78.0 | 8.0 | WOH | WOH | 2 | | | | | | | | | | | |
| 70 | 73.0 | 13.0 | 1 | 1 | 2 | | | | | | | | | | | |
| 65 | 68.0 | 18.0 | 1 | 1 | 1 | | | | | | | | | | | |
| 60 | 63.0 | 23.0 | 2 | 6 | 7 | | | | | | | | | | | |
| 55 | 58.0 | 28.0 | 6 | 7 | 9 | | | | | | | | | | | |
| 50 | 53.0 | 33.0 | 2 | 2 | 2 | | | | | | | | | | | |
| 45 | 48.0 | 38.0 | 2 | 3 | 4 | | | | | | | | | | | |
| 40 | 43.0 | 43.0 | 2 | 4 | 5 | | | | | | | | | | | |
| 35 | 38.0 | 48.0 | 4 | 7 | 8 | | | | | | | | | | | |
| 30 | 33.0 | 53.0 | 6 | 9 | 9 | | | | | | | | | | | |
| 25 | 28.0 | 58.0 | 9 | 13 | 17 | | | | | | | | | | | |
| 20 | 23.0 | 63.0 | 11 | 16 | 18 | | | | | | | | | | | |
| 15 | 18.0 | 68.0 | 11 | 12 | 15 | | | | | | | | | | | |
| 10 | 13.0 | 73.0 | 13 | 21 | 24 | | | | | | | | | | | |

| | | | | | | | |
|--|--|--------------------------------|--|------------------------------|--|----------------------------------|------------------------|
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| DRILLER Edmondson, J. M. | | START DATE 04/18/18 | | COMP. DATE 04/18/18 | | SURFACE WATER DEPTH N/A | |

| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | | |
|-----------|-----------------|------------|------------|-------|-------|----------------|----|----|----|-----|-----------|-----|---------------------------|------------|--|--|
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | | |
| 10 | | | | | | | | | | | | | | | | |
| 5 | 8.0 | 78.0 | 11 | 21 | 25 | | | | | | | | | | | |
| 0 | 3.0 | 83.0 | 6 | 17 | 17 | | | | | | | | | | | |
| -5 | -2.0 | 88.0 | 50 | 100 | 0.2 | | | | | | | | | | | |
| -7.0 | -7.0 | 93.0 | 60 | 0 | 0 | | | | | | | | | | | |

NCDOT BORE DOUBLE SF650049_GEO_BRDG.GPJ_NC_DOT.GDT 5/16/18