

**PROJECT DESCRIPTION**

THE PROJECT CONSISTS OF THE CONSTRUCTION OF EIGHT (8) NEW NOISE WALLS ALONG SR 161 BETWEEN ULRU ROAD NAD US 62 IN FRANKLIN COUNTY, OHIO. BASED ON THE AVAILABLE PROJECT INFORMATION, IT IS UNDERSTOOD THAT THE WALLS WILL RANGE FROM 497 TO 2,226 FEET IN LENGTH AND WILL BE 14 FEET HIGH. NOISE WALLS 3, 6, 8, 9, 11, 12 AND 15, AS DESIGNATED AND SHOWN ON THE PROJECT DOCUMENTS, ARE INCLUDED AS PART OF THIS INVESTIGATION.

**HISTORIC RECORDS**

HISTORIC GEOTECHNICAL RECORDS WERE OBTAINED FROM ODOT'S TRANSPORTATION INFORMATION MAPPING SYTEM (TIMS). RESULTS OF THESE EXPLORATIONS INDICATED THAT PREDOMINANTLY EXISTING COHESIVE AND GRANULAR SOILS ARE PRESENT BELOW THE EXISTING GROUND SURFACE, AND ARE UNDERLAIN BY AND SHALE BEDROCK. THESE RESULTS WERE NOT UTILIZED DURING THE CURRENT DESIGN

**GEOLOGY**

PHYSIOGRAPHICALLY, THE PROJECT SITE FALLS WITHIN GALION GLACIATED LOW PLATEAU. THIS REGION IS CHARACTERIZED BY ROLLING UPLANDS WHICH ARE TRANSITIONAL BETWEEN THE GENTLY ROLLING TILL PLAINS AND HILL GLACIATED ALLEGHENY PLATEAU. THE SOILS CONSIST OF THIN TO THICK DRIFT WITH MODERATE RELIEF.

BASED ON BEDROCK GEOLOGY AND TOPOGRAPHY MAPS OF THE AREA FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE UNDERLYING BEDROCK BENEATH THE SITE IS MISSISSIPPIAN-AGE SHALES AND SANDSTONES THE BEDROCK SURFACE IN THE VICINITY OF THE SITE RANGES BETWEEN APPROXIMATELY 5 TO 25 FEET BELOW THE EXISTING SURFACE GRADE.

**RECONNAISSANCE**

FIELD RECONNAISSANCE WAS COMPLETED BY PERSONNELL FROM RESOURCE INTERNATIONAL, INC (RII) BETWEEN OCTBER 18 AND NOVEMBER 15, 2023. THE PROJECT SITE IS LOCATED ALONG SR 161 IN FRANKLIN COUNTY, OHIO. THE PROJECT SITE EXTENDS FROM URLU ROAD TO APPROXIMATELY 0.3 MILES WEST OF US 62. SR 161 WITHIN THE PROJECT LIMITS IS A BIDIRECTIONAL, DIVIDED, ASPHALT PAVED ROADWAY WITH TWO LANES IN EACH DIRECTION. ALONG THE PROJECT ALIGNMENT, THE LAND USE SURROUNDING SR 161 IS PRIMARILY RESIDENTIAL WITH SOME COMMERCIAL AND/OR INDUSTRIAL PURPOSE. SURFACE DRAINAGE APPEARS TO BE COLLECTED IN THE DRAINAGE DITCHES ALONG THE MAJORITY OF THE ROADWAY ALIGNMENT.

**SUBSURFACE EXPLORATION**

BETWEEN OCTOBER 23 AND DECEMBER 5, 2023, A TOTAL OF FIFTY-THREE (53) BORINGS, DESIGNATED AS B-001-0-23 THROUGH B-053-0-23, WERE PERFORMED AS PART OF THE SUBSURFACE EXPLORATION. THE BORINGS WERE DRILLED AND SAMPLED WITH DIEDRICH D50 TRACK MOUNTED DRILL RIG UTILIZING 3.25-INCH HOLLOW STEM AUGERS TO ADVANCE THE HOLES. STANDARD PENETRATION TESTING (SPT) AND SPLIT SPOON SAMPLING WERE PERFORMED AT 2.5-FOOT INTERVALS IN ALL BORINGS EITHER TO THE BORING TERMINATION DEPTHS OR TO AUGER REFUSAL ON BEDROCK. THE HAMMER UTILIZED IN DIEDRICH D50 TRACK RIG WAS CALIBRATED ON MARCH 21, 2022 AND HAD AN ENERGY RATIO OF 86.4 PERCENT.

THE DEPTH TO BEDROCK WAS DETERMINED BY SPLIT SPOON SAMPLER REFUSAL AND/OR AUGER REFUSAL ON BEDROCK. WHERE THE BORINGS WERE EXTENDED INTO THE BEDROCK, AN NQ2 SIZED, DOUBLE TUBE, DIAMOND BIT CORE BARREL (UTILIZING WIRE LINE EQUIPMENT) WAS USED TO CORE THE BEDROCK. THE ROCK CORES OBTAINED FROM THE BORINGS WERE LOGGED IN THE FIELD AND VISUALLY CLASSIFIED IN THE LABORATORY. THE RETRIEVED CORES WERE ANALYZED TO IDENTIFY THE TYPE OF ROCK, COLOR, MINERAL CONTENT, BEDDING PLANES AND OTHER GEOLOGICAL AND MECHANICAL FEATURES OF INTEREST IN THIS PROJECT.

**EXPLORATION FINDINGS**

THE BORINGS WERE GENERALLY PERFORMED IN THE VICINITY OF THE PROPOSED NOISE WALL ALIGNMENTS. ALL BORINGS, EXCEPT B-038-0-23, ENCOUNTERED TOPSOIL THICKNESSES BETWEEN 1 INCH AND 10 INCHES. BORING B-038-0-23 ENCOUNTERED 3.0 INCHES OF ASPHALT OVERLYING 6.5 INCHES OF CONCRETE OVERLYING 3.5 INCHES OF AGGREGATE BASE.

UNDERLYING THE SURFICIAL SOILS, THE NATURAL SOILS WERE ENCOUNTERED, CONSISTING OF BOTH COHESIVE AND GRANULAR DEPOSITS. THE NATURAL COHESIVE SOILS WERE DESCRIBED AS SANDY SILT, SILT AND CLAY, SILTY CLAY, AND CLAY (ODOT A-4A, A-6A, A-6B, A-7-6). THE SHEAR STRENGTH AND CONSISTENCY OF THE COHESIVE SOILS ARE PRIMARILY DERIVED FROM THE HAND PENETROMETER VALUES (HP). THE COHESIVE SOILS ENCOUNTERED RANGED FROM MEDIUM STIFF (0.5 < HP 1.0 TSF) TO HARD (HP 4.0 TSF). THE UNCONFINED COMPRESSIVE STRENGTH OF THE COHESIVE SOIL SAMPLES TESTED, OBTAINED FROM THE HAND PENETROMETER, RANGED FROM 0.75 TO OVER 4.5 TSF (LIMIT OF THE INSTRUMENT).

THE GRANULAR SOILS WERE DESCRIBED AS GRAVEL, GRAVEL WITH SAND, GRAVEL WITH SAND AND SILT, GRAVEL WITH SAND AND SILT AND CLAY, AND COARSE AND FINE SAND (ODOT A-1-A, A-1B, A-2-4, A-2-6, A-3A). THE RELATIVE DENSITY OF GRANULAR SOILS IS PRIMARILY DERIVED FROM SPT BLOW COUNTS (N<sub>60</sub>). BASED ON THE SPT BLOW COUNTS OBTAINED, THE GRANULAR SOILS ENCOUNTERED RANGED FROM LOOSE (5 < N<sub>60</sub> < 10 BLOWS PER FOOT (BPF)) TO VERY DENSE (N<sub>60</sub> > 50 BPF). BLOW COUNTS RECORDED FROM THE SPT SAMPLING WITHIN THE GRANULAR SOIL DEPOSITS RANGED FROM 9 TO 96 BPF.

COBBLES WERE ENCOUNTERED WITHIN THE OVERBURDEN SOILS AT VARIOUS BORING LOCATIONS AT VARYING DEPTHS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED IN THREE (3) OF THE BORINGS AT DEPTHS RANGING FROM 14.0 TO 22.4 FEET BELOW THE GROUND SURFACE. SIGNIFICANT GROUND WATER FLOW WAS ENCOUNTERED DURING DRILLING IN TWENTY-SIX (26) OF THE BORINGS AT DEPTHS RANGING FROM 12.0 TO 21.0 FEET BELOW THE EXISTING GROUND SURFACE. MEASURABLE GROUNDWATER WAS OBSERVED AT THE COMPLETION OF DRILLING IN SEVENTEEN (17) OF THE BORINGS AT DEPTHS RANGING FROM 7.8 TO 20.5 FEET BELOW EXISTING GRADE ""

| LEGEND          |   | ODOT CLASS | CLASSIFIED MECH./VISUAL |     |
|-----------------|---|------------|-------------------------|-----|
| DESCRIPTION     |   |            |                         |     |
|                 | GRAVEL AND/OR STONE FRAGMENTS   | A-1-a      | 2                       | 4   |
|                 | GRAVEL AND/OR STONE FRAGMENTS WITH SAND   | A-1-b      | 11                      | 23  |
|                 | GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT   | A-2-4      | 12                      | 57  |
|                 | GR. AND/OR ST. FRAGS. WITH SAND, SILT & CLAY  | A-2-6      | -                       | 2   |
|                 | COARSE AND FINE SAND  | A-3a       | 1                       | 9   |
|                 | SANDY SILT  | A-4a       | 18                      | 58  |
|                 | SILT AND CLAY   | A-6a       | 26                      | 102 |
|                 | SILTY CLAY  | A-6b       | 12                      | 38  |
|                 | CLAY  | A-7-6      | 7                       | 9   |
|                 |   | TOTAL      | 89                      | 302 |
|                 | SANDSTONE   | VISUAL     |                         |     |
|                 | SHALE   | VISUAL     |                         |     |
|                 | SILTSTONE   | VISUAL     |                         |     |
|                 | PAVEMENT OR BASE = X = APPROXIMATE THICKNESS  | VISUAL     |                         |     |
|                 | SOD AND TOPSOIL = X = APPROXIMATE THICKNESS   | VISUAL     |                         |     |
|                 | BORING LOCATION - PLAN VIEW.  |            |                         |     |
|                 | DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.   |            |                         |     |
| WC              | INDICATES WATER CONTENT IN PERCENT.   |            |                         |     |
| N <sub>60</sub> | INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.   |            |                         |     |
| X/Y/Z           | NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT);<br>X= NUMBER OF BLOWS FOR FIRST 6 INCHES.<br>Y= NUMBER OF BLOWS FOR SECOND 6 INCHES.<br>Z= NUMBER OF BLOWS FOR THIRD 6 INCHES. |            |                         |     |
| W               | INDICATES FREE WATER ELEVATION.   |            |                         |     |
| ●               | INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.   |            |                         |     |
| ⊕               | INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.  |            |                         |     |
| SS              | INDICATES A SPLIT SPOON SAMPLE.   |            |                         |     |
| NP              | INDICATES A NON-PLASTIC SAMPLE.   |            |                         |     |

**EXPLORATION FINDINGS (CON'T)**

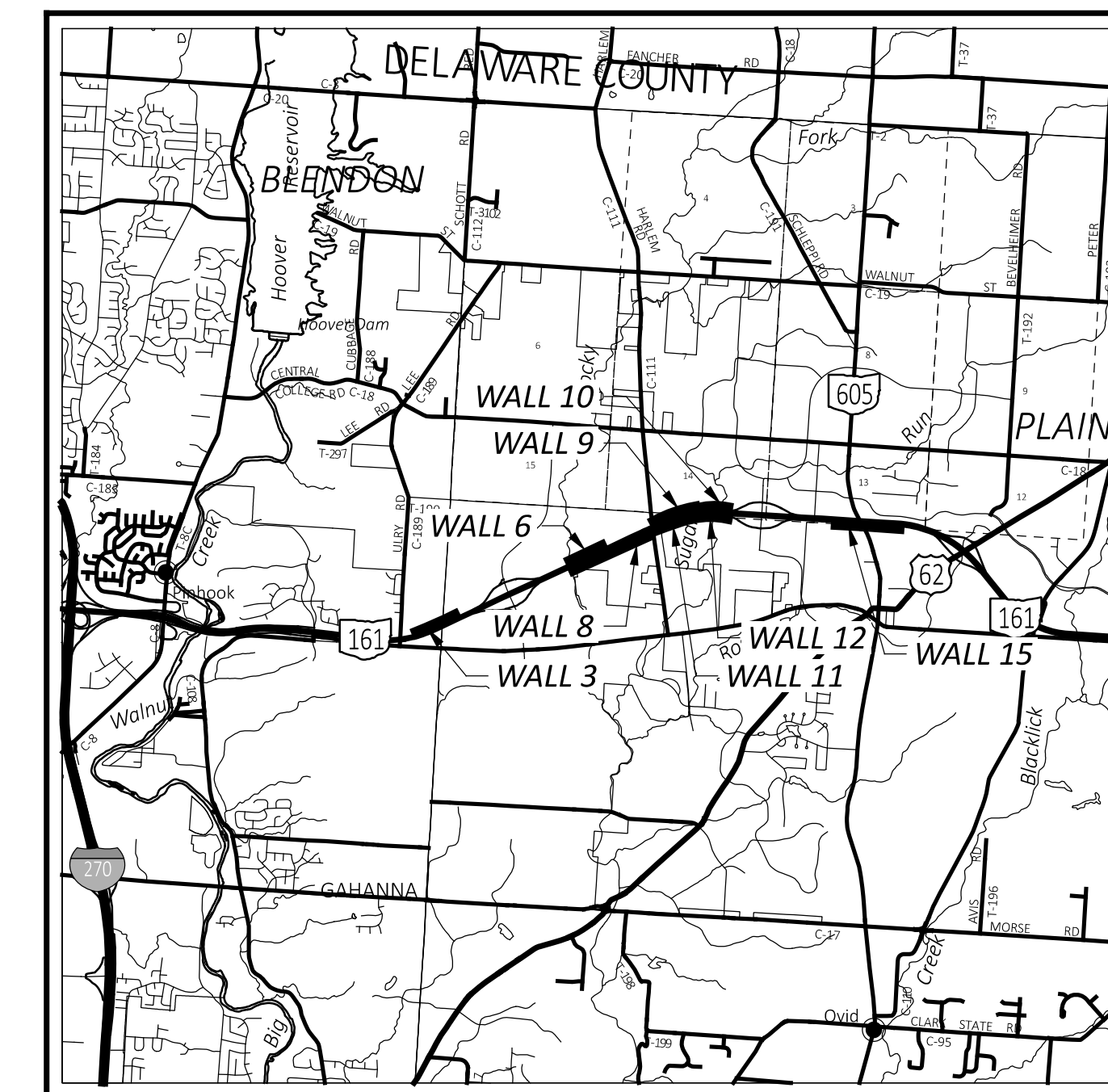
BEDROCK WAS ENCOUNTERED IN BORINGS B-001-0-23 TO B-004-0-23, B-018-0-23, B-024-0-23 B-027-0-23, B-028-0-23, B-038-0-23 TO B-053-0-23 AT DEPTHS RANGING FROM 4.3 TO 23.0 FEET BENEATH THE EXISTING GROUND SURFACE. THE BEDROCK WAS DESCRIBED AS HIGHLY WEATHERED GRAY AND BROWN SANDSTONE, HIGHLY WEATHERED TO SEVERELY WEATHERED GRAY AND BLACK SILTSTONE, AND HIGHLY WEATHERED GRAY SHALESTONE.

**SPECIFICATIONS**

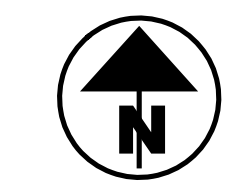
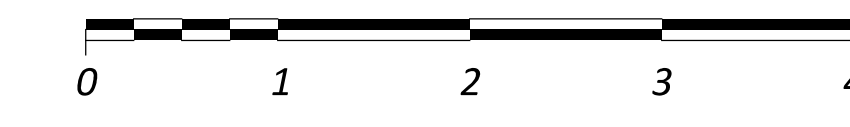
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2022.

**AVAILABLE INFORMATION**

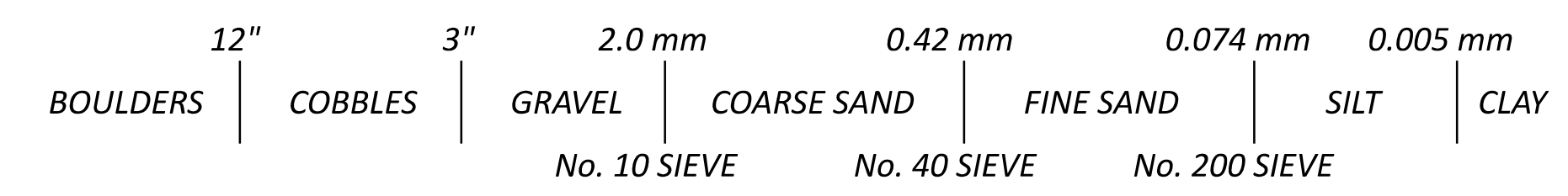
THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.



LOCATION MAP  
SCALE IN MILES



**PARTICLE SIZE DEFINITIONS**



| INDEX OF SHEETS                          |         |      |         |
|--|---------|------|---------|
| SUMMARY OF SOIL TEST DATA, SHEETS 2 - 5. |         |      |         |
| LOCATION FROM STA.                       | TO STA. | PLAN | PROFILE |
| CONST. SR 161 NOISE WALL 3               |         |      |         |
| 2130+00                                  | 2135+00 | 6    | 6       |
| 2135+00                                  | 2140+00 | 7    | 7       |
| NOISE WALL 6                             |         |      |         |
| 2192+00                                  | 2197+00 | 8    | 8       |
| 2197+00                                  | 2202+00 | 9    | 9       |
| NOISE WALL 8                             |         |      |         |
| 2192+00                                  | 2197+00 | 10   | 10      |
| 2197+00                                  | 2202+00 | 11   | 11      |
| 2202+00                                  | 2207+00 | 12   | 12      |
| 2207+00                                  | 2212+00 | 13   | 13      |
| 2212+00                                  | 2217+00 | 14   | 14      |
| NOISE WALL 9                             |         |      |         |
| 2217+00                                  | 2222+00 | 15   | 15      |
| 2222+00                                  | 2227+00 | 16   | 16      |
| 2227+00                                  | 2232+00 | 17   | 17      |

| INDEX OF SHEETS (CON'T)     |         |      |         |
|-----------------------------|---------|------|---------|
| LOCATION FROM STA.          | TO STA. | PLAN | PROFILE |
| CONST. SR 161 NOISE WALL 11 |         |      |         |
| 2216+00                     | 2221+00 | 18   | 18      |
| 2221+00                     | 2226+00 | 19   | 19      |
| 2226+00                     | 2231+00 | 20   | 20      |
| 2231+00                     | 2236+00 | 21   | 21      |
| NOISE WALL 12               |         |      |         |
| 2239+00                     | 2244+00 | 22   | 22      |
| 2244+00                     | 2249+00 | 23   | 23      |
| NOISE WALL 15               |         |      |         |
| 2286+00                     | 2291+00 | 24   | 24      |
| 2291+00                     | 2296+00 | 25   | 25      |
| 2296+00                     | 2301+00 | 26   | 26      |
| 2301+00                     | 2306+00 | 27   | 27      |
| 2306+00                     | 2311+00 | 28   | 28      |

BORING LOGS, SHEETS 29 - 66.

| BEDROCK TEST SUMMARY |                  |               |          |            |           |
|----------------------|------------------|---------------|----------|------------|-----------|
| BORING ID            | SAMPLE ELEVATION | SAMPLE DEPTH  | UCS      | POINT LOAD | LITHOLOGY |
|                      |                  |               | Qu (PSI) | Qu (PSI)   |           |
| B-001-0-23           | 952.3'           | 14.0'         | 4400     | -          | SANDSTONE |
| B-003-0-23           | 955.3'           | 13.8'         | 6891     | -          | SANDSTONE |
| B-023-0-23           | 955.3' - 953.5'  | 21.5' - 23.5' | -        | 856        | SHALE     |
| B-039-0-23           | 971.4' - 966.4'  | 15.0' - 20.0' | -        | 57         | SHALE     |
| B-043-0-23           | 1014.0'          | 21.0'         | 6208     | -          | SANDSTONE |
| B-046-0-23           | 1017.1'          | 22.0'         | 7887     | -          | SANDSTONE |
| B-050-0-23           | 1017.0'          | 21.0'         | 8484     | -          | SANDSTONE |
| B-051-0-23           | 1016.9'          | 21.2'         | 8429     | -          | SANDSTONE |

**DRILLING -** TG 10/23 - 12/05/2023  
**DRAWN -** JAS, KSJ 01/18/2023  
**REVIEWED -** DEK 01/18/2023

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
**1 66**  
 SHEET TOTAL  
**P.230 295**





**RESOURCE INTERNATIONAL, INC.**  
Engineering Consultants

6350 Presidential Gateway, 9885 Rockside Road, 4480 Lake Forest Drive  
Columbus, OH 43231, Cleveland, OH 44125, Cincinnati, Ohio 45242  
Phone (614) 823-4949, Phone (216) 573-0955, Phone (513) 769-6998

**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

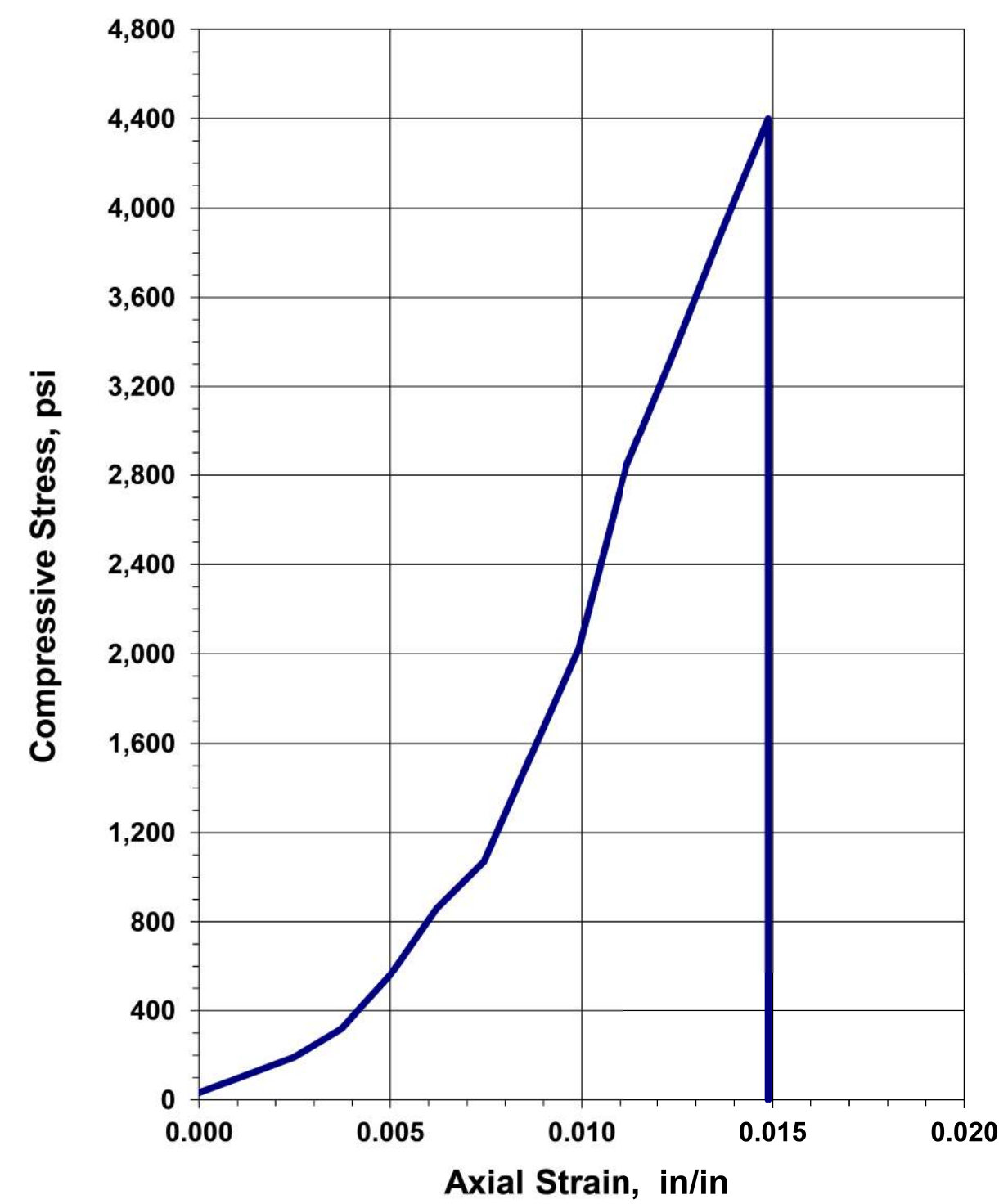
Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

|                      |                    |                                 |               |                     |
|----------------------|--------------------|---------------------------------|---------------|---------------------|
| Boring No.:          | <u>B-001-0-23</u>  | Average Length:                 | <u>4.030</u>  | in                  |
| Sample No.:          | <u>RC-2</u>        | Average Diameter:               | <u>1.993</u>  | in                  |
| Depth (ft):          | <u>14.0'</u>       | Length to diameter ratio:       | <u>2.022</u>  |                     |
| Moisture condition:  | <u>As received</u> | Cross Sectional Area:           | <u>3.120</u>  | in <sup>2</sup>     |
| Sample Mass:         | <u>470.86</u>      | Volume:                         | <u>0.0073</u> | ft <sup>3</sup>     |
| Testing Temperature: | <u>23</u>          | Unit Weight (sample specimen)*: | <u>142.68</u> | lbs/ft <sup>3</sup> |
| Rate of Loading:     | <u>62.1</u>        | Failure Load:                   | <u>13,727</u> | lbs                 |
| Testing Time:        | <u>221</u>         | Axial Strain at Failure:        | <u>0.0149</u> | in/in               |
| (Rate 2-15 min)      |                    | Compressive Strength:           | <u>4,400</u>  | psi                 |

Sample Preparation: Per ASTM D4543

\*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_



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**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

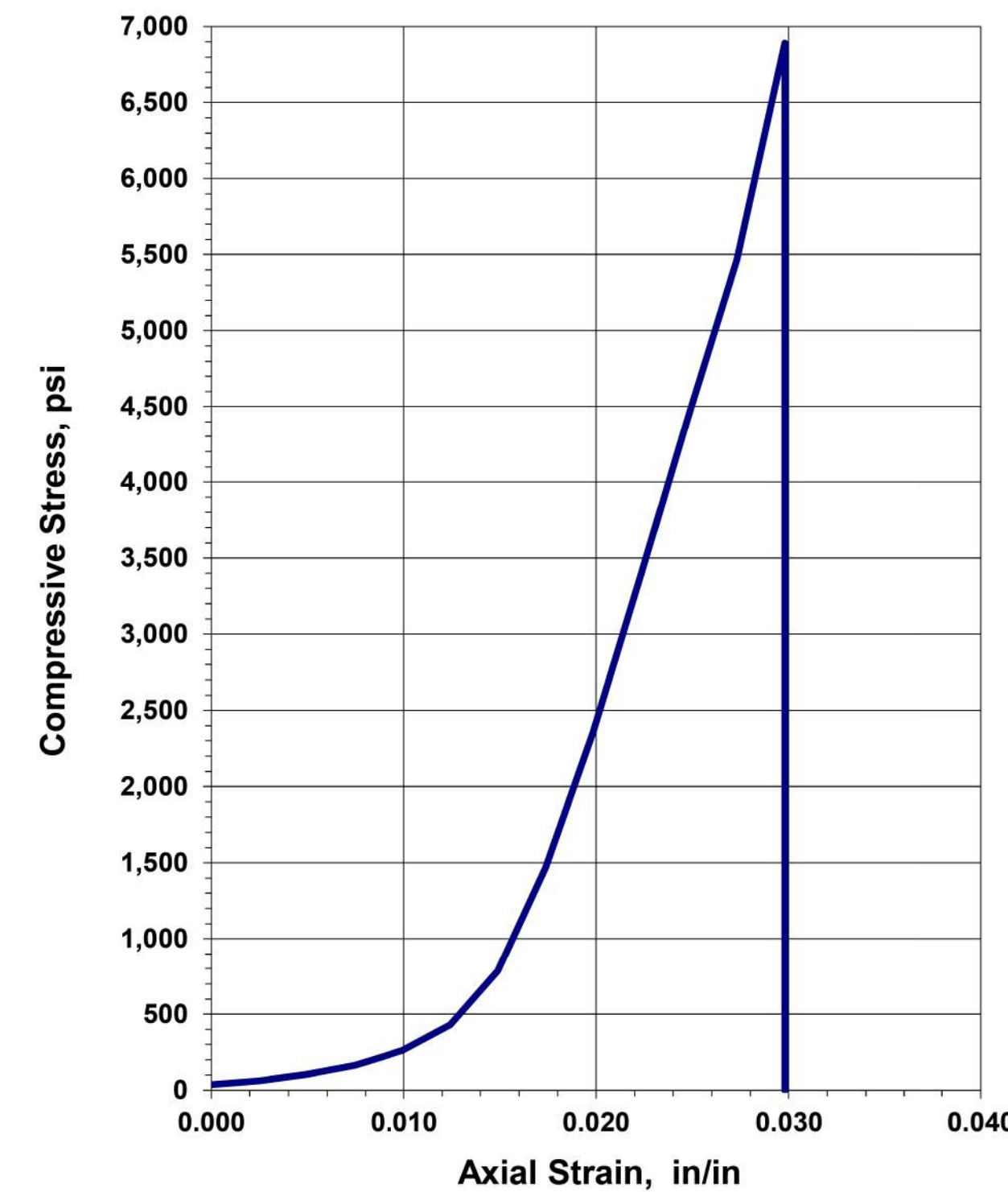
Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

|                      |                    |                                 |               |                     |
|----------------------|--------------------|---------------------------------|---------------|---------------------|
| Boring No.:          | <u>B-003-0-23</u>  | Average Length:                 | <u>4.028</u>  | in                  |
| Sample No.:          | <u>RC-2</u>        | Average Diameter:               | <u>1.995</u>  | in                  |
| Depth (ft):          | <u>13.8'</u>       | Length to diameter ratio:       | <u>2.019</u>  |                     |
| Moisture condition:  | <u>As received</u> | Cross Sectional Area:           | <u>3.126</u>  | in <sup>2</sup>     |
| Sample Mass:         | <u>480.55</u>      | Volume:                         | <u>0.0073</u> | ft <sup>3</sup>     |
| Testing Temperature: | <u>23</u>          | Unit Weight (sample specimen)*: | <u>145.39</u> | lbs/ft <sup>3</sup> |
| Rate of Loading:     | <u>75.1</u>        | Failure Load:                   | <u>21,542</u> | lbs                 |
| Testing Time:        | <u>287</u>         | Axial Strain at Failure:        | <u>0.0298</u> | in/in               |
| (Rate 2-15 min)      |                    | Compressive Strength:           | <u>6,891</u>  | psi                 |

Sample Preparation: Per ASTM D4543

\*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_





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|  |   |  |
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|--|---|--|

**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

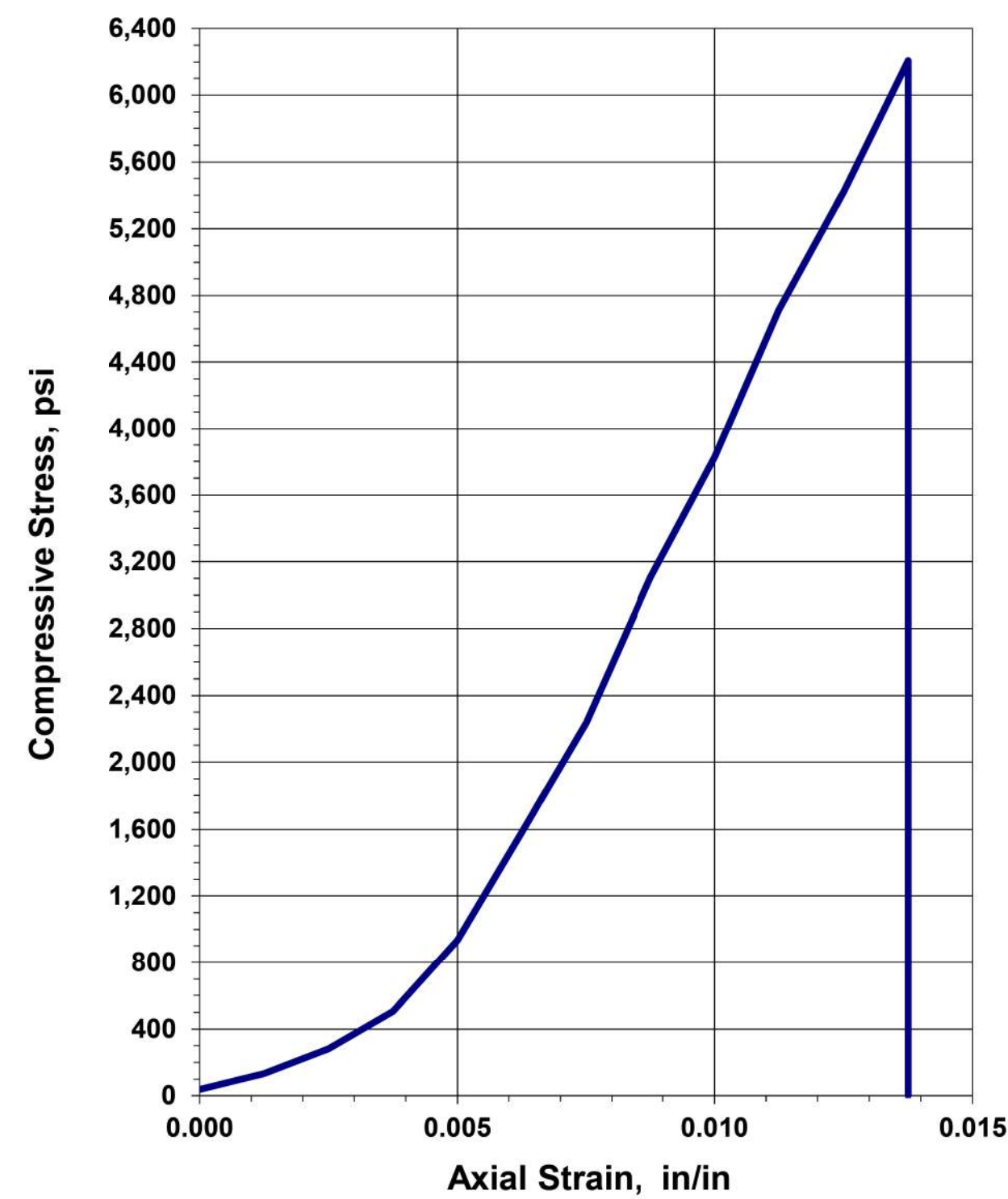
Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

|   |   |
|---|---|
| Boring No.: <u>B-043-0-23</u>                   | Average Length: <u>4.000</u> in                                   |
| Sample No.: <u>RC-2</u>                         | Average Diameter: <u>1.988</u> in                                 |
| Depth (ft): <u>21.00</u> feet                   | Length to diameter ratio: <u>2.012</u>                            |
| Moisture condition: <u>As received</u>          | Cross Sectional Area: <u>3.104</u> in <sup>2</sup>                |
| Sample Mass: <u>460.53</u> grams                | Volume: <u>0.0072</u> ft <sup>3</sup>                             |
| Testing Temperature: <u>23</u> °C               | Unit Weight (sample specimen)*: <u>141.30</u> lbs/ft <sup>3</sup> |
| Rate of Loading: <u>87.2</u> lbs/sec            | Failure Load: <u>19,269</u> lbs                                   |
| Testing Time: <u>221</u> sec<br>(Rate 2-15 min) | Axial Strain at Failure: <u>0.0138</u> in/in                      |
|   | Compressive Strength: <u>6,208</u> psi                            |

Sample Preparation: Per ASTM D4543 \*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_



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|  |   |  |
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|--|---|--|

**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

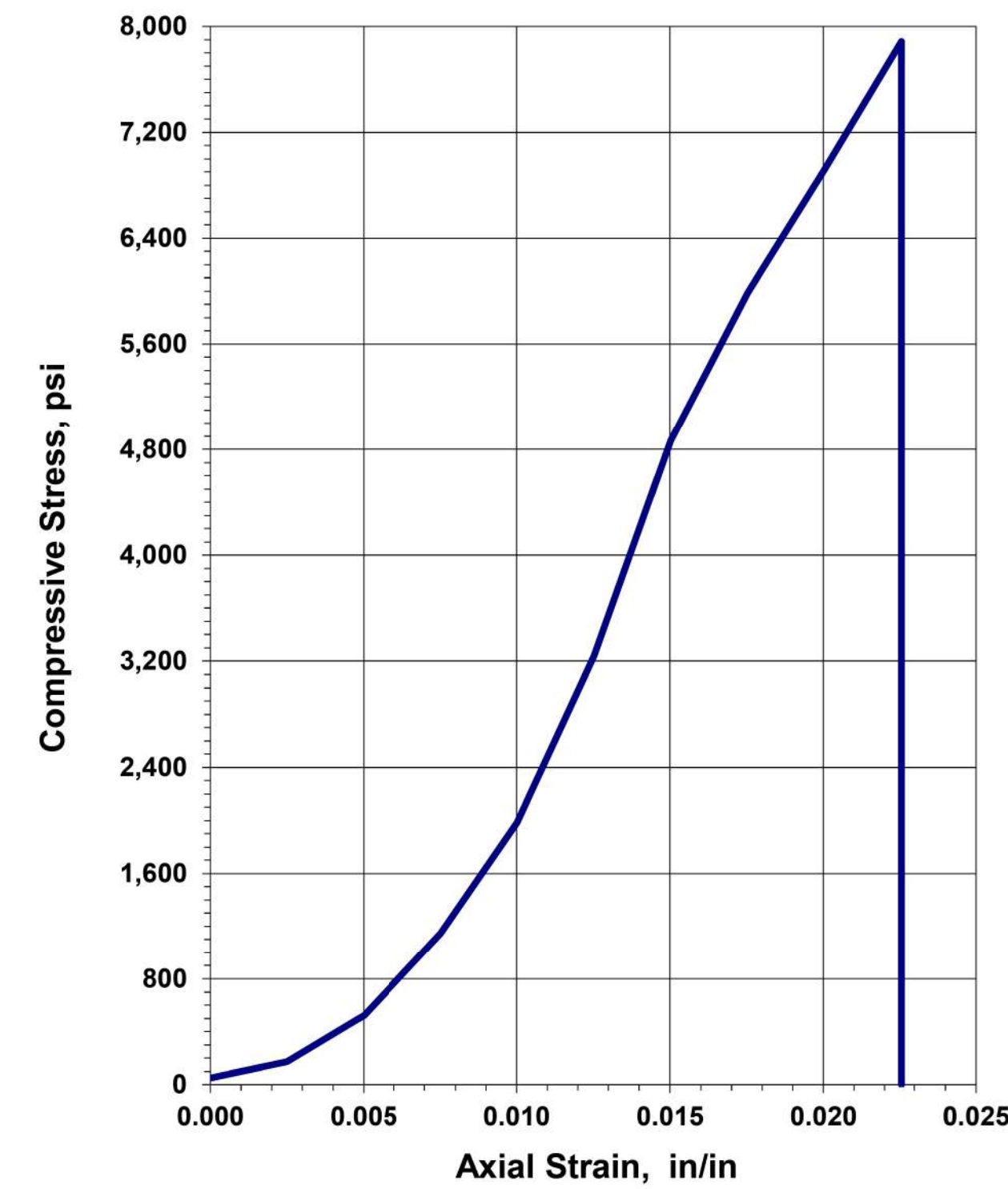
Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

|   |   |
|---|---|
| Boring No.: <u>B-046-0-23</u>                   | Average Length: <u>3.992</u> in                                   |
| Sample No.: <u>RC-2</u>                         | Average Diameter: <u>1.995</u> in                                 |
| Depth (ft): <u>22.0'</u> feet                   | Length to diameter ratio: <u>2.001</u>                            |
| Moisture condition: <u>As received</u>          | Cross Sectional Area: <u>3.126</u> in <sup>2</sup>                |
| Sample Mass: <u>519.17</u> grams                | Volume: <u>0.0072</u> ft <sup>3</sup>                             |
| Testing Temperature: <u>23</u> °C               | Unit Weight (sample specimen)*: <u>158.49</u> lbs/ft <sup>3</sup> |
| Rate of Loading: <u>101.9</u> lbs/sec           | Failure Load: <u>24,655</u> lbs                                   |
| Testing Time: <u>242</u> sec<br>(Rate 2-15 min) | Axial Strain at Failure: <u>0.0225</u> in/in                      |
|   | Compressive Strength: <u>7,887</u> psi                            |

Sample Preparation: Per ASTM D4543 \*Actual test sample used for unit weight prior to testing.

**Unconfined Compression Test**



**Before Testing**



**After Failure**



REMARKS: \_\_\_\_\_





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**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

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Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

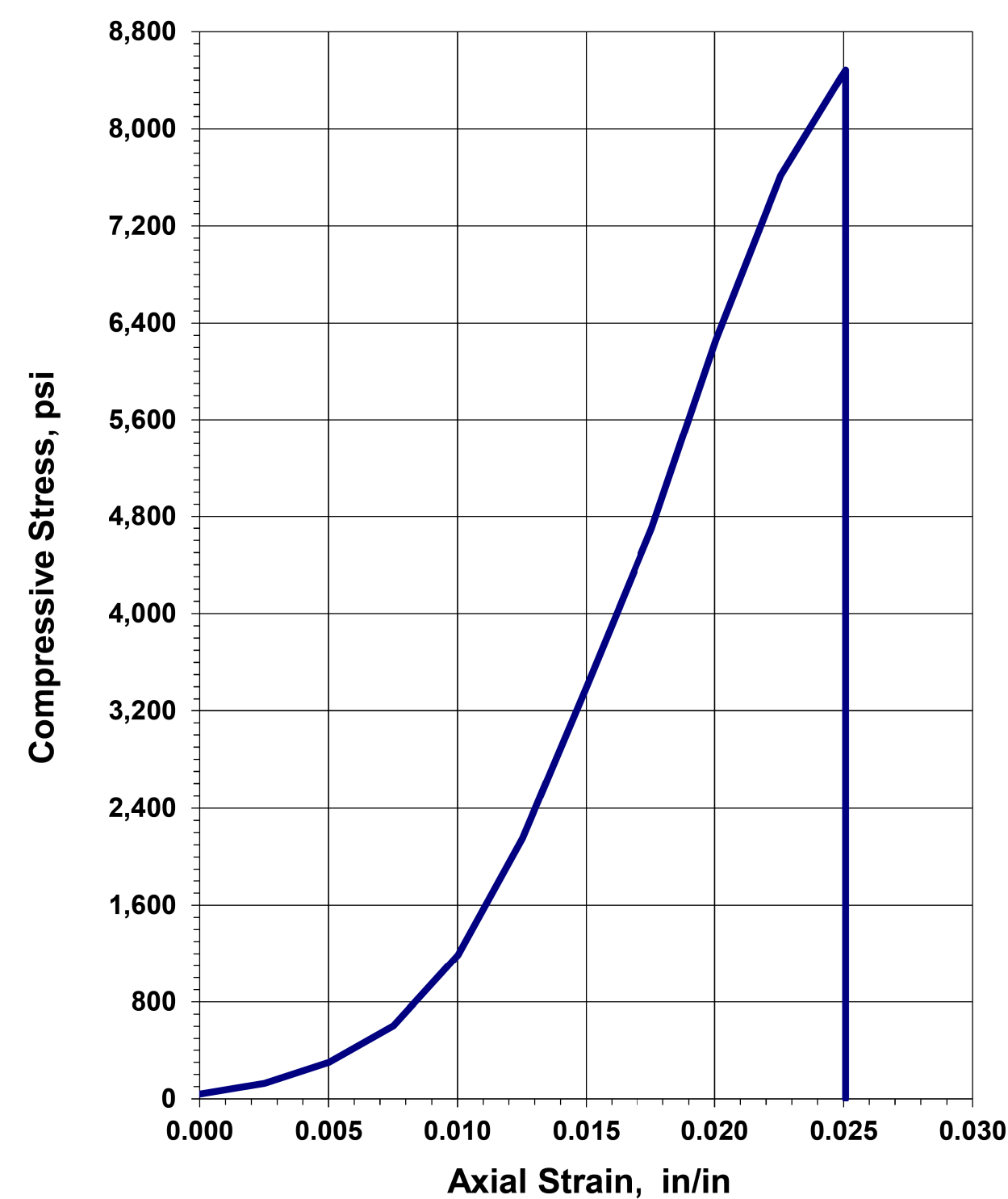
Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

|                      |                      |                                 |               |                     |
|----------------------|----------------------|---------------------------------|---------------|---------------------|
| Boring No.:          | <u>B-050-0-23</u>    | Average Length:                 | <u>3.988</u>  | in                  |
| Sample No.:          | <u>RC-2</u>          | Average Diameter:               | <u>1.985</u>  | in                  |
| Depth (ft):          | <u>21.0'</u> feet    | Length to diameter ratio:       | <u>2.009</u>  |                     |
| Moisture condition:  | <u>As received</u>   | Cross Sectional Area:           | <u>3.095</u>  | in <sup>2</sup>     |
| Sample Mass:         | <u>455.36</u> grams  | Volume:                         | <u>0.0071</u> | ft <sup>3</sup>     |
| Testing Temperature: | <u>23</u> °C         | Unit Weight (sample specimen)*: | <u>140.56</u> | lbs/ft <sup>3</sup> |
| Rate of Loading:     | <u>108.5</u> lbs/sec | Failure Load:                   | <u>26,255</u> | lbs                 |
| Testing Time:        | <u>242</u> sec       | Axial Strain at Failure:        | <u>0.0251</u> | in/in               |
| (Rate 2-15 min)      |                      | Compressive Strength:           | <u>8,484</u>  | psi                 |

Sample Preparation: Per ASTM D4543

\*Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: \_\_\_\_\_



**RESOURCE INTERNATIONAL, INC.**  
Engineering Consultants

6350 Presidential Gateway, 9885 Rockside Road, 4480 Lake Forest Drive  
Columbus, OH 43231, Cleveland, OH 44125, Cincinnati, Ohio 45242  
Phone (614) 823-4949, Phone (216) 573-0955, Phone (513) 769-6998

**Unconfined Compressive Strength  
of Intact Rock Core Specimens**  
(ASTM D 7012-14)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: KL/EM

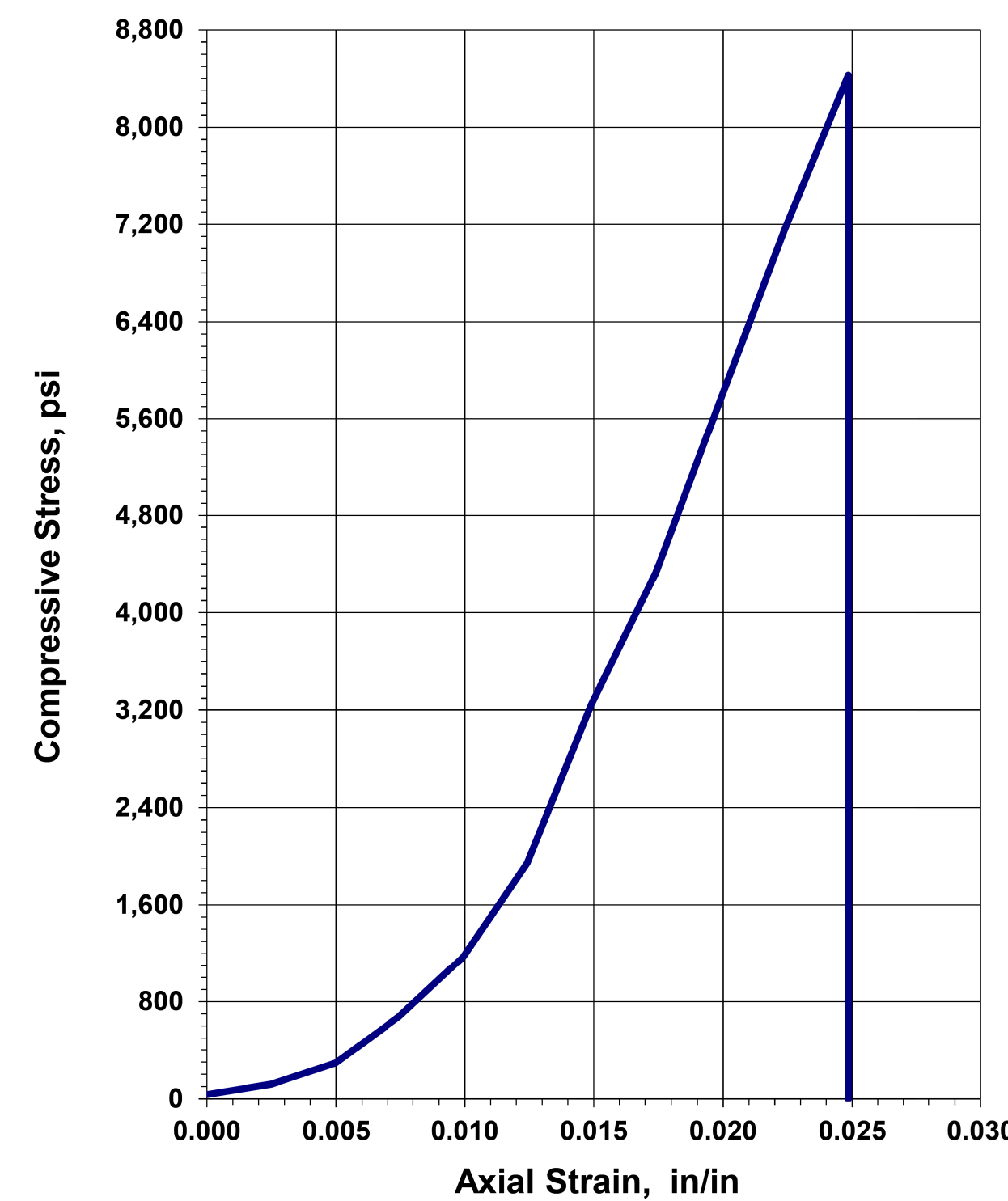
Rock Description: Gray Sandstone  
Rock Formation: \_\_\_\_\_

|                      |                      |                                 |               |                     |
|----------------------|----------------------|---------------------------------|---------------|---------------------|
| Boring No.:          | <u>B-052-0-23</u>    | Average Length:                 | <u>4.024</u>  | in                  |
| Sample No.:          | <u>RC-2</u>          | Average Diameter:               | <u>1.993</u>  | in                  |
| Depth (ft):          | <u>21.20</u> feet    | Length to diameter ratio:       | <u>2.019</u>  |                     |
| Moisture condition:  | <u>As received</u>   | Cross Sectional Area:           | <u>3.120</u>  | in <sup>2</sup>     |
| Sample Mass:         | <u>505.98</u> grams  | Volume:                         | <u>0.0073</u> | ft <sup>3</sup>     |
| Testing Temperature: | <u>23</u> °C         | Unit Weight (sample specimen)*: | <u>153.55</u> | lbs/ft <sup>3</sup> |
| Rate of Loading:     | <u>112.4</u> lbs/sec | Failure Load:                   | <u>26,295</u> | lbs                 |
| Testing Time:        | <u>234</u> sec       | Axial Strain at Failure:        | <u>0.0249</u> | in/in               |
| (Rate 2-15 min)      |                      | Compressive Strength:           | <u>8,429</u>  | psi                 |

Sample Preparation: Per ASTM D4543

\*Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: \_\_\_\_\_

GEOTECHNICAL PROFILE - NOISE WALLS  
 NOISE WALL 15  
 LABORATORY TEST DATA - UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK** 1/19/24  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
 4 | 66  
 SHEET TOTAL  
 P.233 | 295





**RESOURCE INTERNATIONAL, INC.**  
Engineering Consultants

6350 Presidential Gateway.  
Columbus, OH 43231  
Phone (614) 823-4949

9885 Rockside Road  
Cleveland, OH 44125  
Phone (216) 573-0955

4480 Lake Forest Drive  
Cincinnati, Ohio 45242  
Phone (513) 769-6998

**Point Load Strength Index  
of Rock Specimens**  
(ASTM D 5731-08)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: EMIKL

Rock Description: Gray Shale

Boring No.: B-23-0-23  
Station / Offset: RC-3  
Sample No. / Depth: 21.5'-23.5'

Test Apparatus: Forney-LA 0080  
Serial Number: A125/AZ/0014  
Date of Calibration: 4/25/2023

| Sample No. | Test Type | Depth (ft) | Width (mm) | Diameter (mm) | Load (N) | D <sub>e</sub> <sup>2</sup> (mm <sup>2</sup> ) | D <sub>e</sub> (mm) | F    | Is (MPa) | Is <sub>(50)</sub> (MPa) | σ <sub>c</sub> (MPa) |
|------------|-----------|------------|------------|---------------|----------|--|---------------------|------|----------|--------------------------|----------------------|
| 1          | a ⊥       | 21.5-23.5  | 49.7       | 21.1          | 503      | 1,336  | 36.5                | 0.87 | 0.38     | 0.33                     | 4.52                 |
| 2          | a ⊥       | 21.5-23.5  | 49.6       | 25.8          | 783      | 1,631  | 40.4                | 0.91 | 0.48     | 0.44                     | 5.76                 |
| 3          | a ⊥       | 21.5-23.5  | 49.7       | 23.1          | 525      | 1,463  | 38.3                | 0.89 | 0.36     | 0.32                     | 4.31                 |
| 4          | a ⊥       | 21.5-23.5  | 49.7       | 28.5          | 814      | 1,802  | 42.5                | 0.93 | 0.45     | 0.42                     | 5.42                 |
| 5          | a ⊥       | 21.5-23.5  | 49.7       | 30.0          | 854      | 1,895  | 43.5                | 0.94 | 0.45     | 0.42                     | 5.41                 |
| 6          | a ⊥       | 21.5-23.5  | 49.7       | 25.1          | 916      | 1,589  | 39.9                | 0.90 | 0.58     | 0.52                     | 6.92                 |
| 7          | a ⊥       | 21.5-23.5  | 49.7       | 24.6          | 816      | 1,555  | 39.4                | 0.90 | 0.52     | 0.47                     | 6.30                 |
| 8          | a ⊥       | 21.5-23.5  | 49.7       | 22.6          | 798      | 1,429  | 37.8                | 0.88 | 0.56     | 0.49                     | 6.70                 |
| 9          | a ⊥       | 21.5-23.5  | 49.7       | 21.5          | 789      | 1,361  | 36.9                | 0.87 | 0.58     | 0.51                     | 6.96                 |
| 10         | a ⊥       | 21.5-23.5  | 49.7       | 22.5          | 801      | 1,427  | 37.8                | 0.88 | 0.56     | 0.49                     | 6.73                 |

**STATISTICS**

|                           |                   |
|---------------------------|-------------------|
| Mean Is <sub>(50)</sub> ⊥ | 0.44 MPa (64 psi) |
| Mean Is <sub>(50)</sub>   |                   |
| Ia <sub>(50)</sub>        |                   |

**Specific Specimen Shape:**

- d = diametrical
- a = axial
- b = block
- i = irregular lump
- ⊥ = perpendicular to bedding plane
- || = parallel to bedding plane

**Estimated Uniaxial Compression, σ<sub>c</sub> = K\*Is**

K = 12  
Mean σ<sub>c</sub> = 5.90 MPa (0.856 psi)

\*Per Section 206.1.3 of 2011 ODOT Rock Slope Design Guide

Remarks:

1



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Engineering Consultants

6350 Presidential Gateway.  
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4480 Lake Forest Drive  
Cincinnati, Ohio 45242  
Phone (513) 769-6998

**Point Load Strength Index  
of Rock Specimens**  
(ASTM D 5731-08)

Project: FRA-161-15.80  
Project No.: W-23-107  
Date of Testing: 1/8/2024  
Test Performed by: EMIKL

Rock Description: Gray Shale

Boring No.: B-39-0-23  
Station / Offset: RC-2  
Sample No. / Depth: 15.0-20.0

Test Apparatus: Forney-LA 0080  
Serial Number: A125/AZ/0014  
Date of Calibration: 4/25/2023

| Sample No. | Test Type | Depth (ft) | Width (mm) | Diameter (mm) | Load (N) | D <sub>e</sub> <sup>2</sup> (mm <sup>2</sup> ) | D <sub>e</sub> (mm) | F    | Is (MPa) | Is <sub>(50)</sub> (MPa) | σ <sub>c</sub> (MPa) |
|------------|-----------|------------|------------|---------------|----------|--|---------------------|------|----------|--------------------------|----------------------|
| 1          | a ⊥       | 17.5-18.5  | 49.9       | 21.7          | 50       | 1,381  | 37.2                | 0.88 | 0.04     | 0.03                     | 0.43                 |
| 2          | a ⊥       | 17.5-18.5  | 49.5       | 24.4          | 45       | 1,539  | 39.2                | 0.90 | 0.03     | 0.03                     | 0.35                 |
| 3          | a ⊥       | 17.5-18.5  | 50.5       | 20.4          | 40       | 1,309  | 36.2                | 0.86 | 0.03     | 0.03                     | 0.37                 |
| 4          | a ⊥       | 17.5-18.5  | 50.6       | 23.9          | 48       | 1,538  | 39.2                | 0.90 | 0.03     | 0.03                     | 0.37                 |
| 5          | a ⊥       | 17.5-18.5  | 50.6       | 22.3          | 49       | 1,440  | 38.0                | 0.88 | 0.03     | 0.03                     | 0.41                 |
| 6          | a ⊥       | 17.5-18.5  | 50.6       | 21.1          | 49       | 1,362  | 36.9                | 0.87 | 0.04     | 0.03                     | 0.43                 |
| 7          | a ⊥       | 17.5-18.5  | 50.6       | 22.6          | 53       | 1,455  | 38.1                | 0.89 | 0.04     | 0.03                     | 0.44                 |
| 8          | a ⊥       | 17.5-18.5  | 50.6       | 22.6          | 48       | 1,456  | 38.2                | 0.89 | 0.03     | 0.03                     | 0.40                 |
| 9          | a ⊥       | 17.5-18.5  | 50.6       | 35.0          | 51       | 2,255  | 47.5                | 0.98 | 0.02     | 0.02                     | 0.27                 |
| 10         | a ⊥       | 17.5-18.5  | 50.6       | 22.2          | 52       | 1,429  | 37.8                | 0.88 | 0.04     | 0.03                     | 0.44                 |

**STATISTICS**

|                           |                  |
|---------------------------|------------------|
| Mean Is <sub>(50)</sub> ⊥ | 0.03 MPa (4 psi) |
| Mean Is <sub>(50)</sub>   |                  |
| Ia <sub>(50)</sub>        |                  |

**Specific Specimen Shape:**

- d = diametrical
- a = axial
- b = block
- i = irregular lump
- ⊥ = perpendicular to bedding plane
- || = parallel to bedding plane

**Estimated Uniaxial Compression, σ<sub>c</sub> = K\*Is**

K = 12  
Mean σ<sub>c</sub> = 0.39 MPa (0.057 psi)

\*Per Section 206.1.3 of 2011 ODOT Rock Slope Design Guide

Remarks:



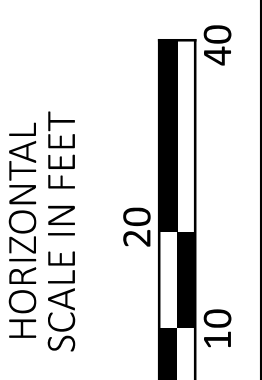
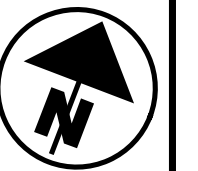
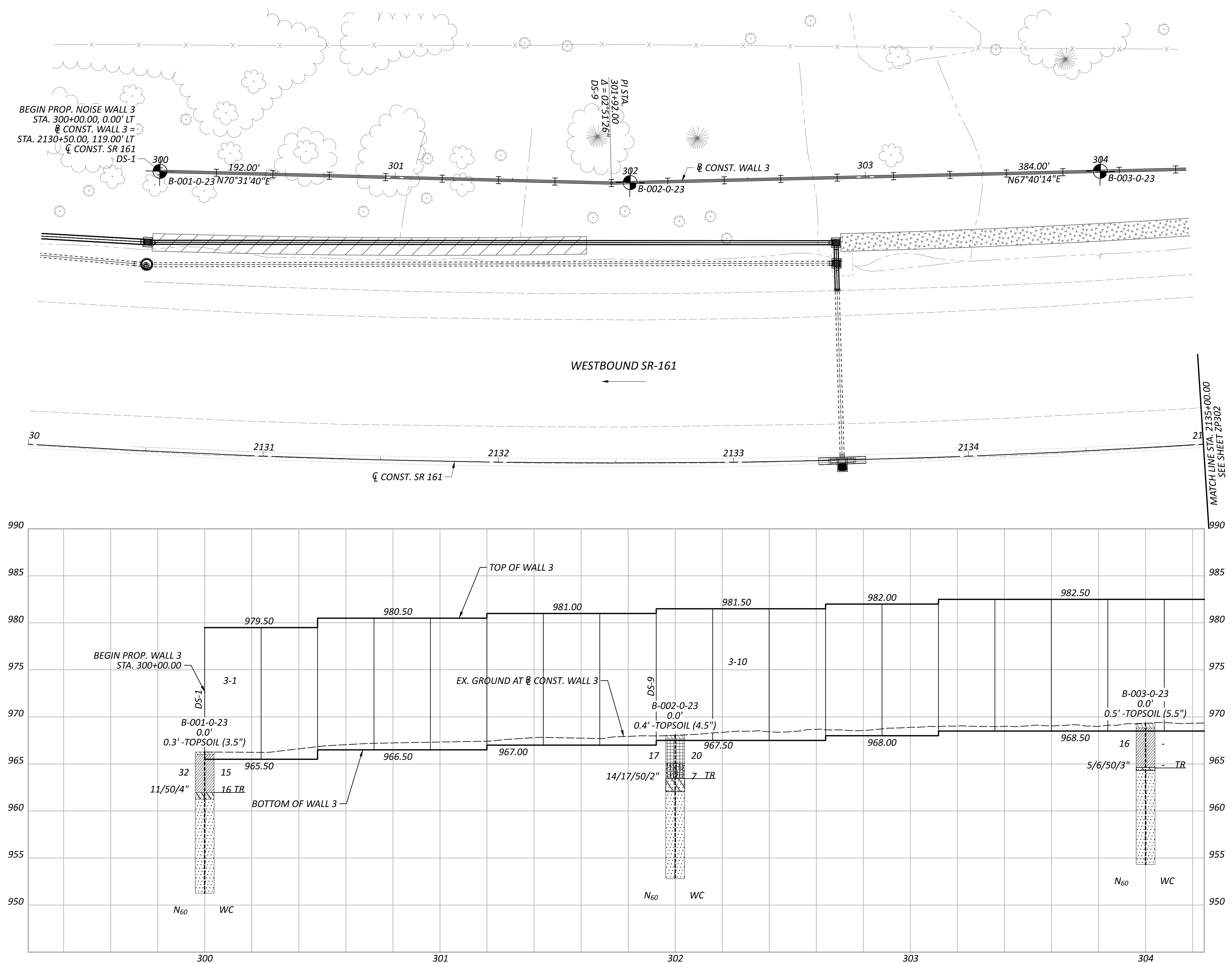
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

|               |                        |
|---------------|------------------------|
| DESIGN AGENCY | RESOURCE INTERNATIONAL |
| DESIGNER      | JAS                    |
| REVIEWER      | DEK                    |
| PROJECT ID    | 117607                 |
| SUBSET        | 5                      |
| TOTAL         | 66                     |
| SHEET         | P.234                  |
| TOTAL         | 295                    |



**FRA-161-15.80 NOISE WALLS**

MODEL: Wall 3 - Plan 2 PAPER: 34x22 (in.) DATE: 3/14/2024 TIME: 3:51:47 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP301.dgn



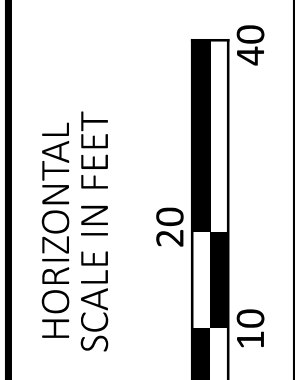
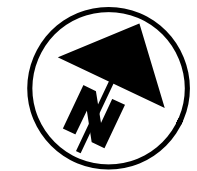
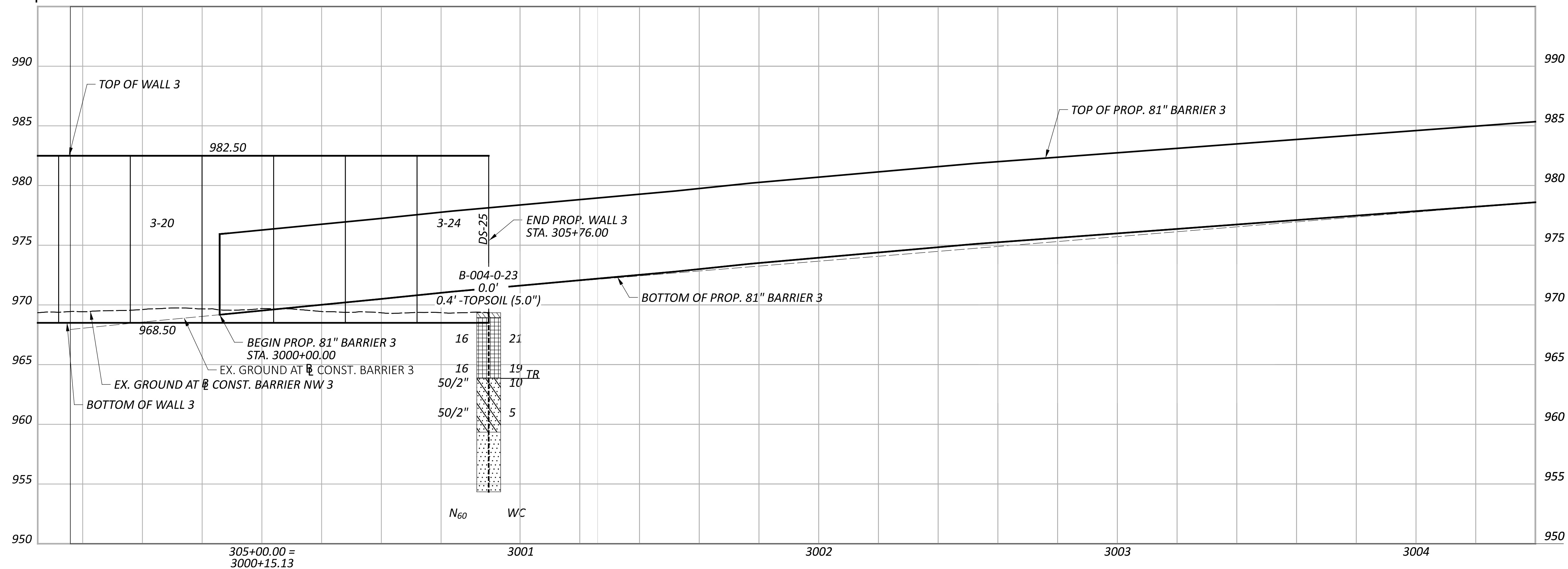
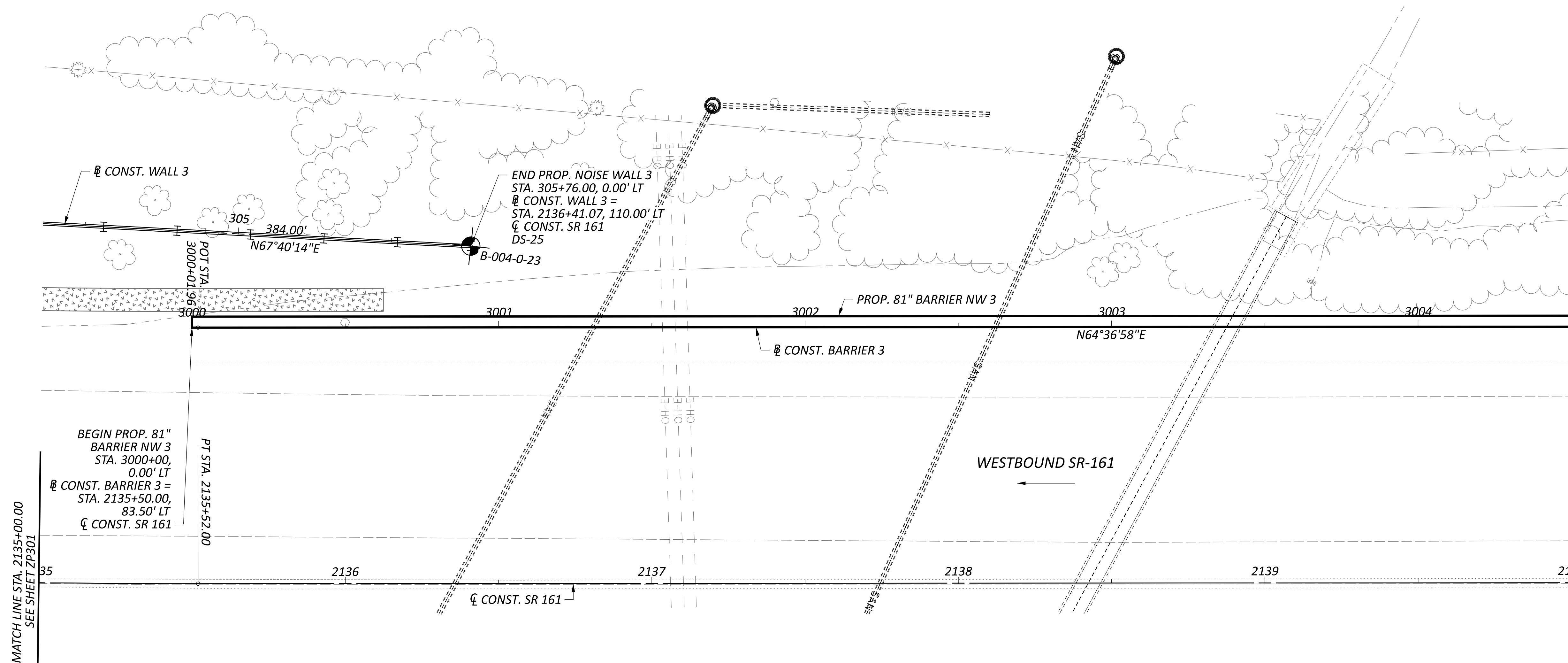
**GEOTECHNICAL PROFILE - NOISE WALL 3  
 STA. 2130+00.00 TO STA. 2135+00.00**

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
|   |       |
| 8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 6   | 66    |
| SHEET   | TOTAL |
| P.235   | 295   |



**FRA-161-15.80 NOISE WALLS**

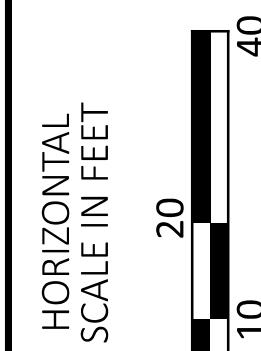
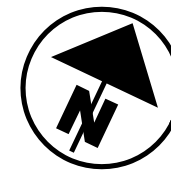
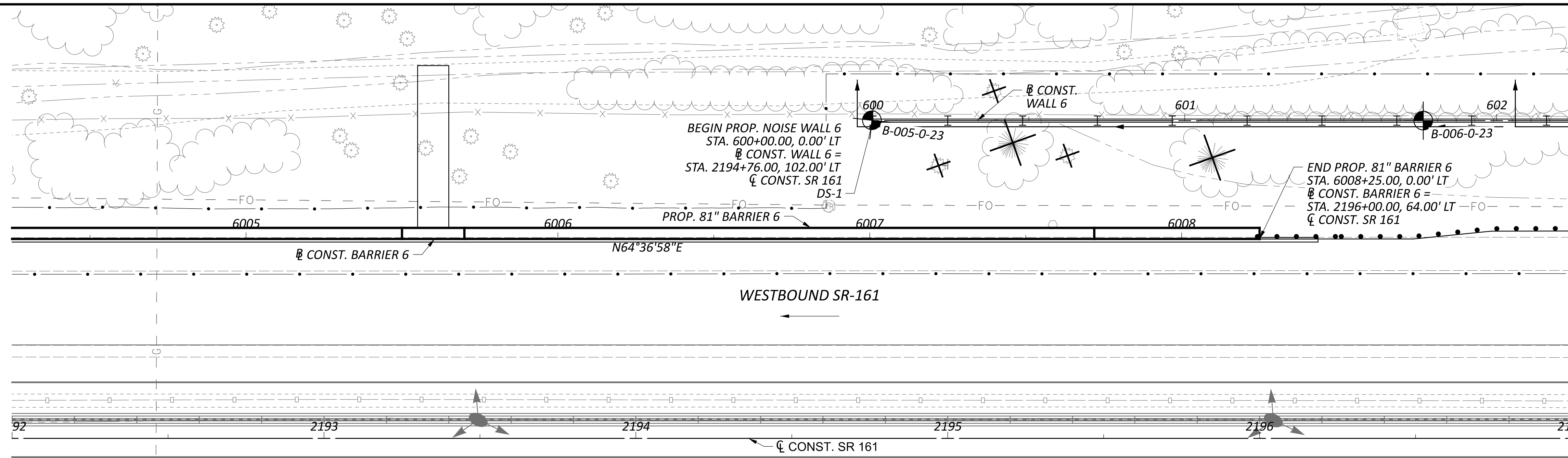
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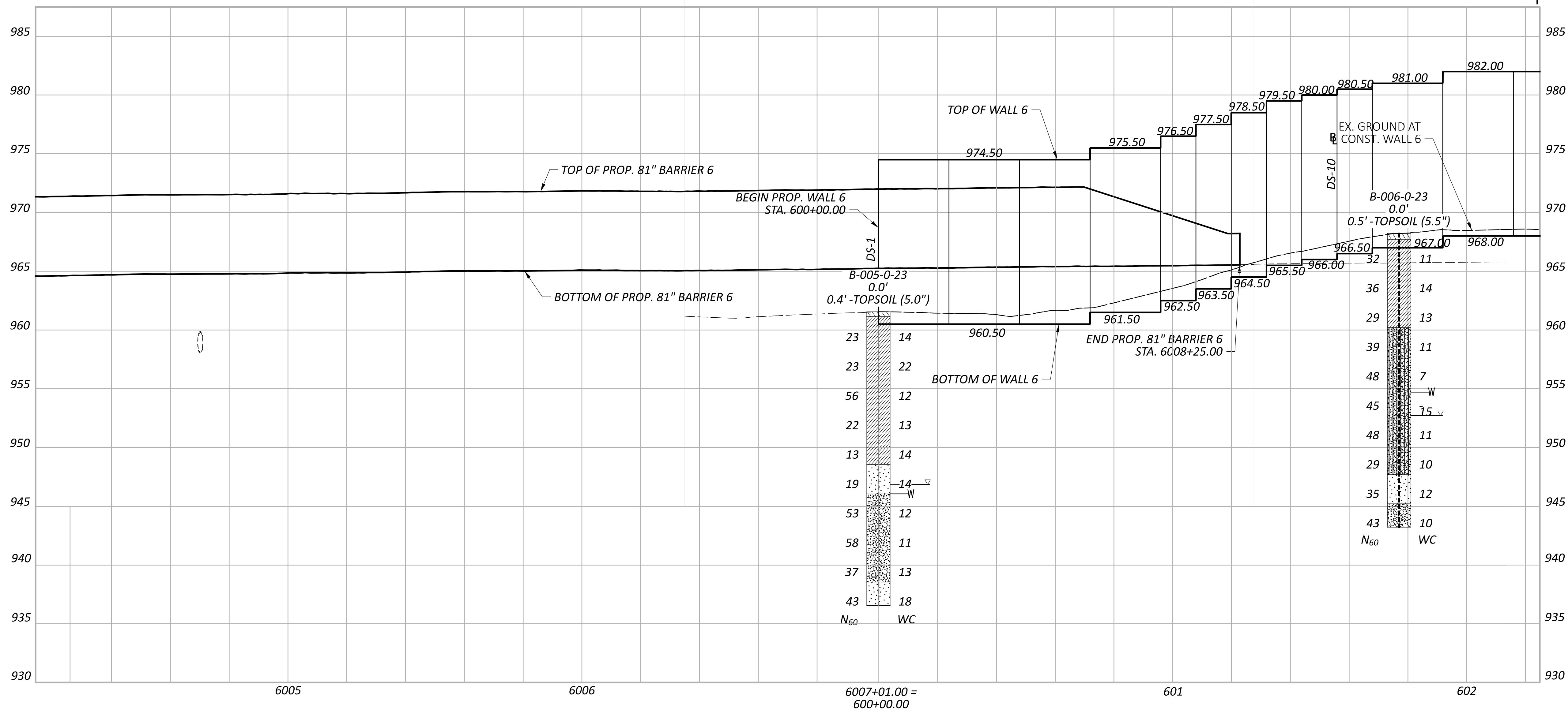
**GEOTECHNICAL PROFILE - NOISE WALL 3  
 STA. 2135+00.00 TO STA. 2140+00.00**

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
|   |       |
| 6350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 7   | 66    |
| SHEET   | TOTAL |
| P.236   | 295   |





**GEOTECHNICAL PROFILE - NOISE WALL 6**  
 STA. 2192+00.00 TO STA. 2197+00.00



MATCH LINE STA. 2197+00.00  
 SEE SHEET ZP603

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

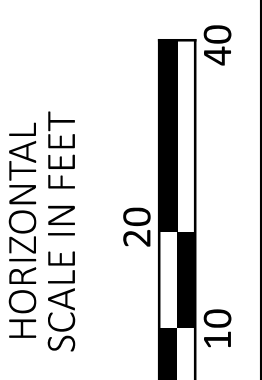
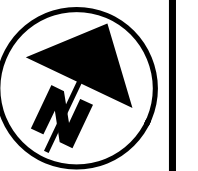
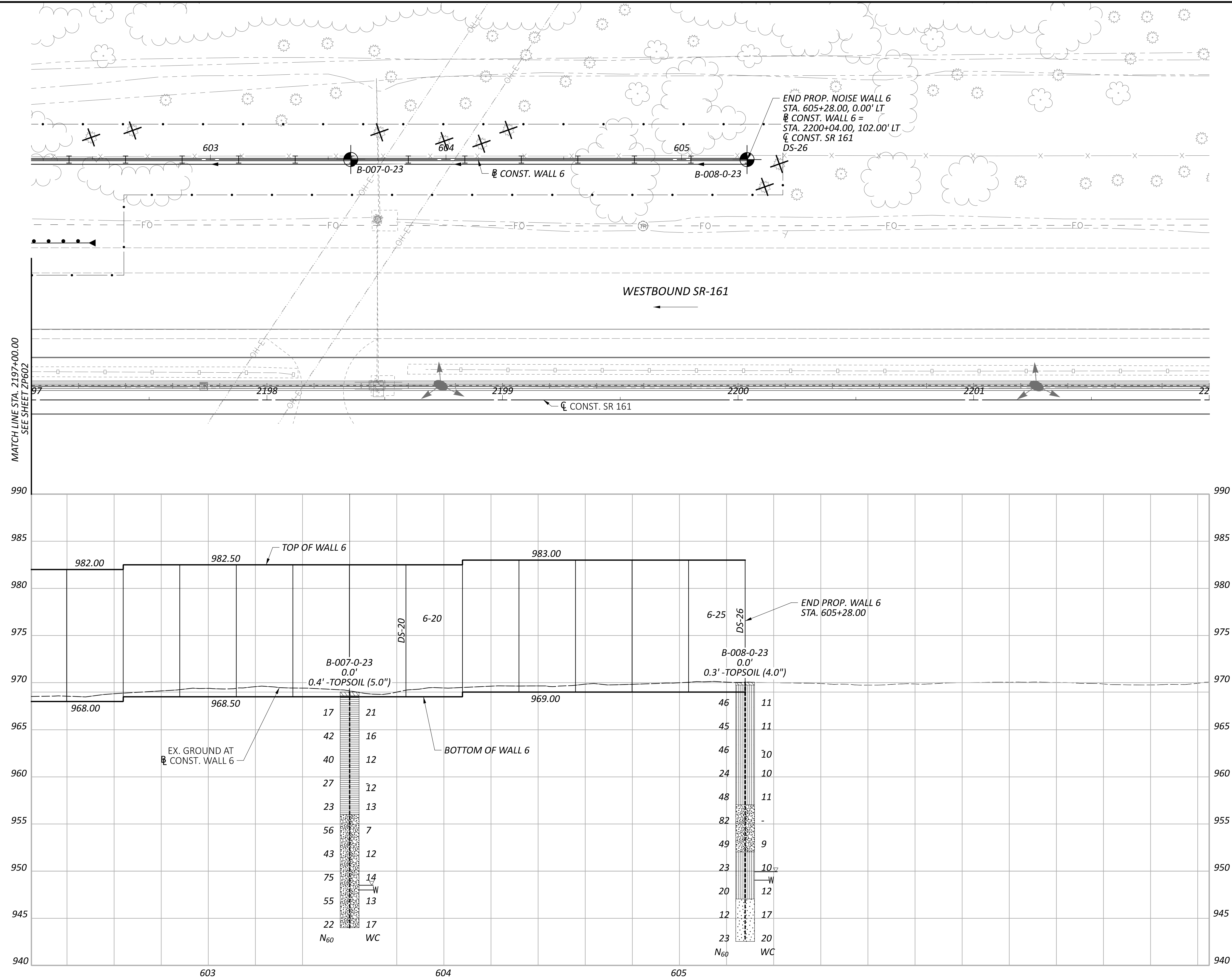
SUBSET TOTAL  
 8 66

SHEET TOTAL  
 P.237 295



**FRA-161-15.80 NOISE WALLS**

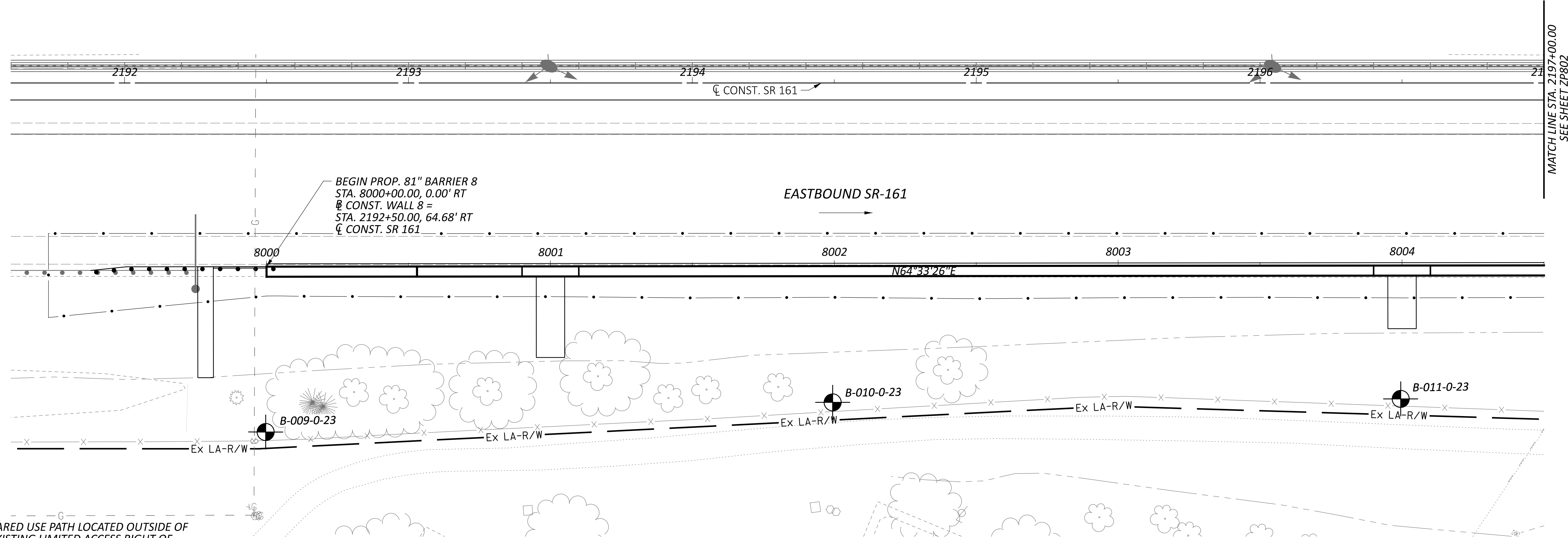
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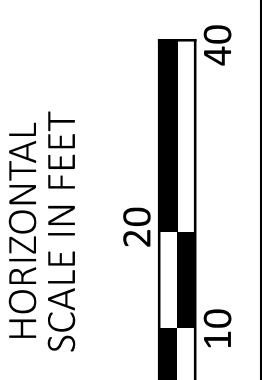
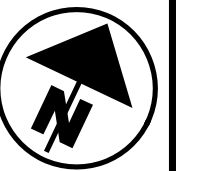
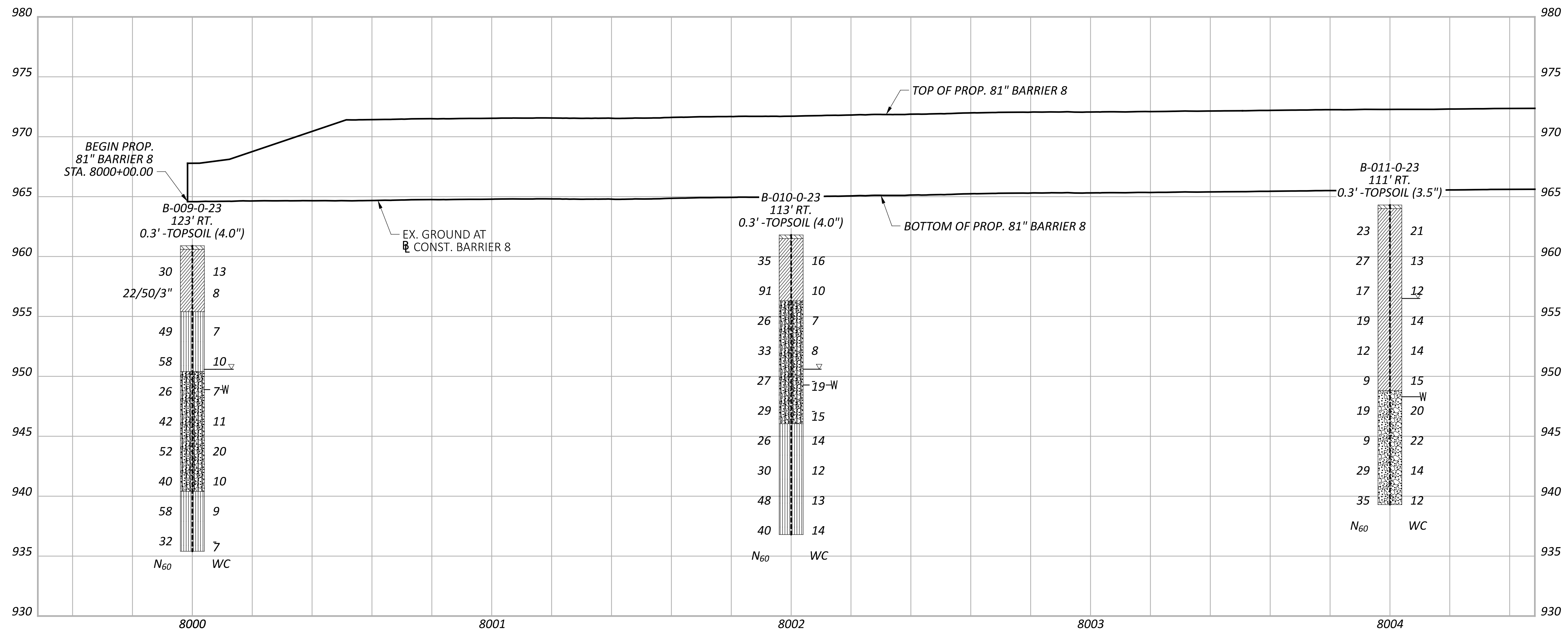
**GEOTECHNICAL PROFILE - NOISE WALL 6**  
 STA. 2197+00.00 TO STA. 2202+00.00

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
| <br>RESOURCE INTERNATIONAL<br>8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 9   | 66    |
| SHEET   | TOTAL |
| P.238   | 295   |





**NOTES**  
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



**GEOTECHNICAL PROFILE - NOISE WALL 8**  
 STA. 2192+00.00 TO STA. 2197+00.00

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

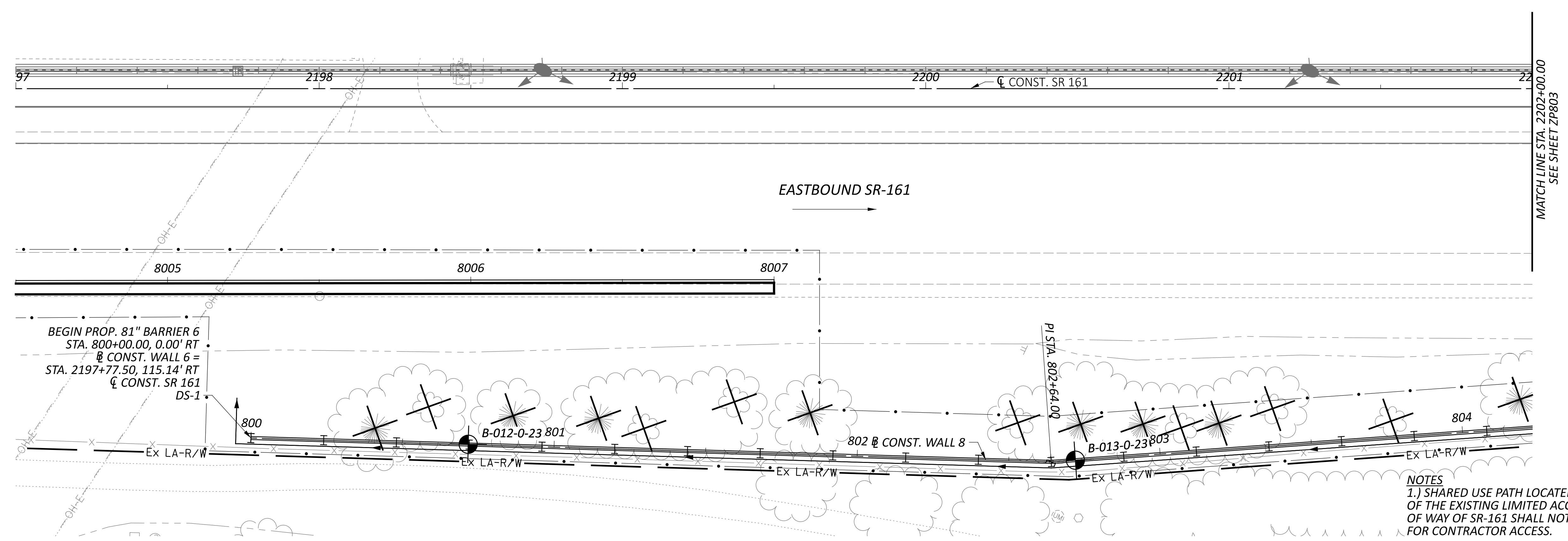
REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

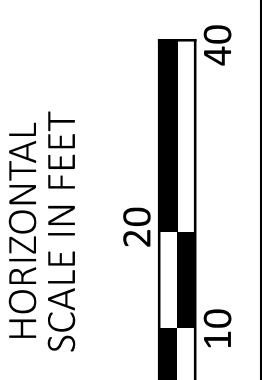
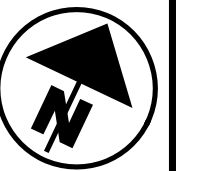
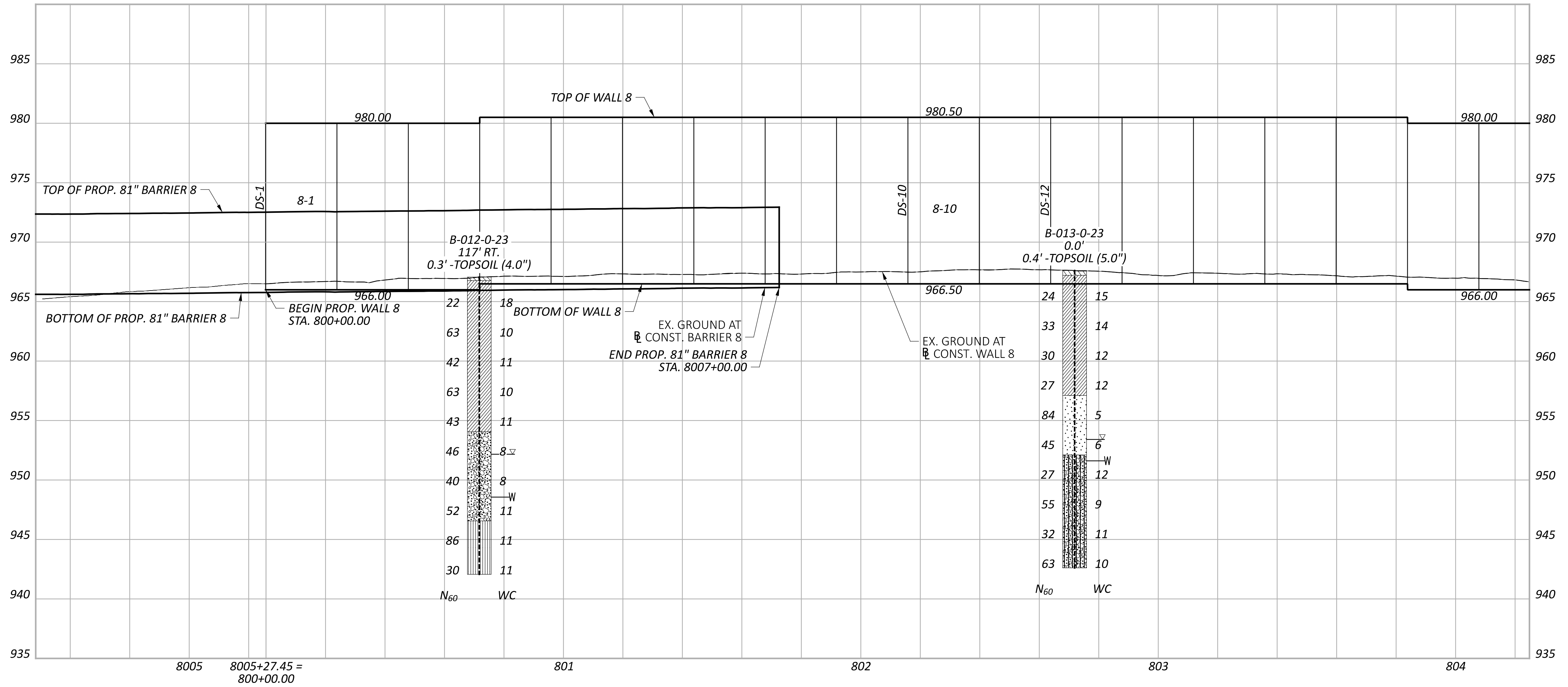
|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 10     | 66    |

|       |       |
|-------|-------|
| SHEET | TOTAL |
| P.239 | 295   |






NOTES  
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



**GEOTECHNICAL PROFILE - NOISE WALL 8**  
 STA. 2197+00.00 TO STA. 2202+00.00

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

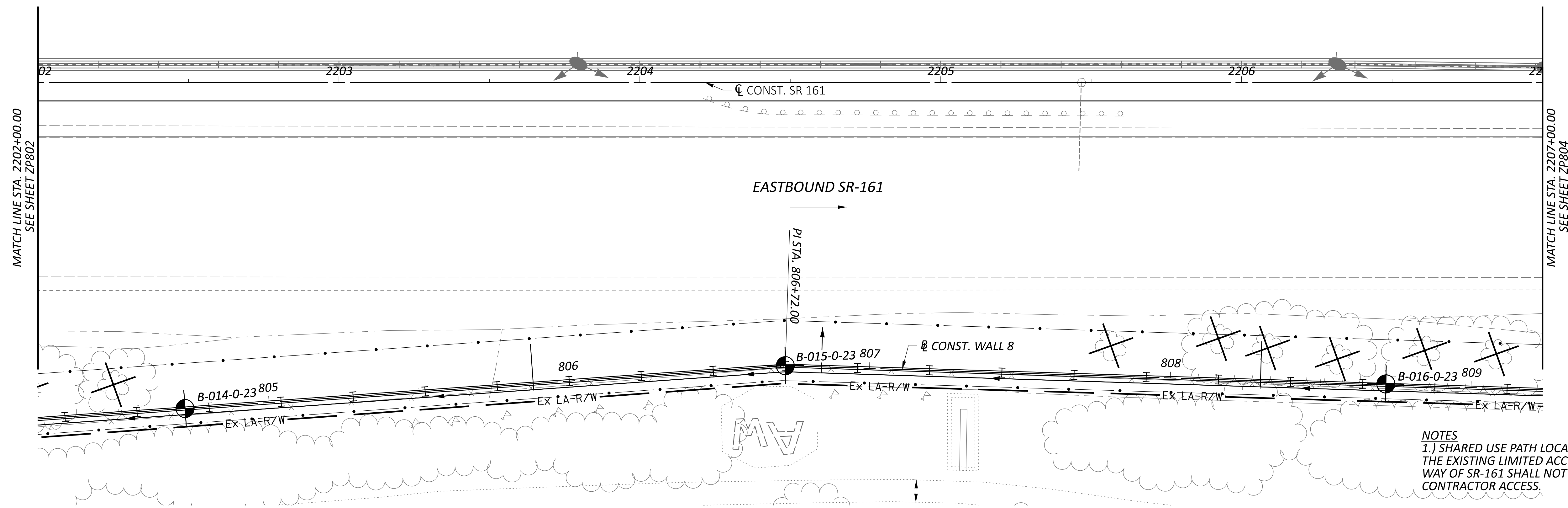
|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 11     | 66    |

|       |       |
|-------|-------|
| SHEET | TOTAL |
| P.240 | 295   |

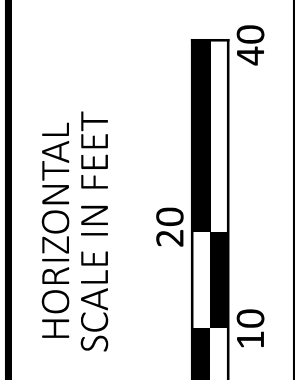
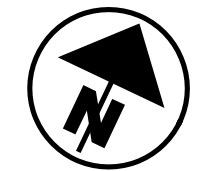
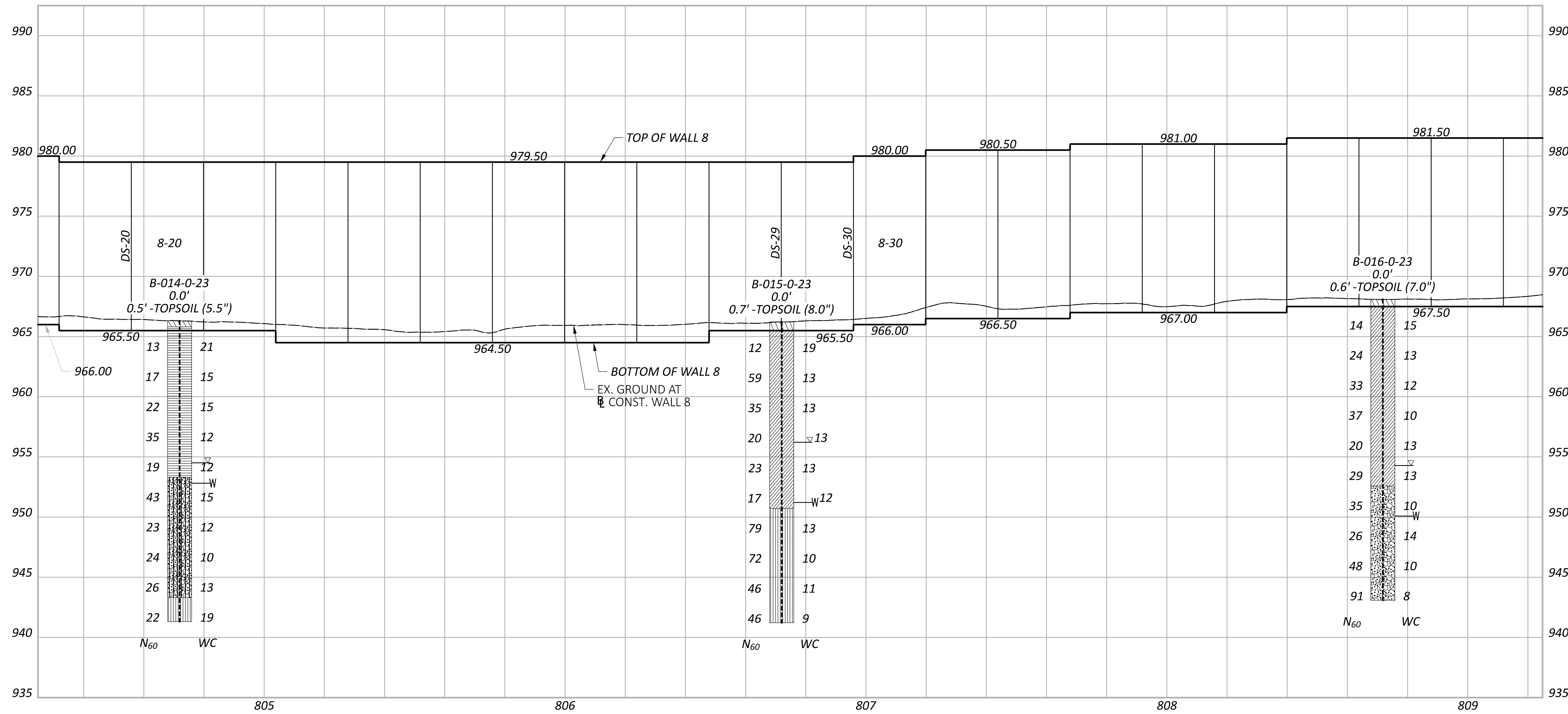


**FRA-161-15.80 NOISE WALLS**

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 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP803.dgn



**NOTES**  
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



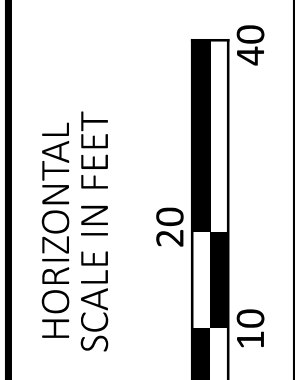
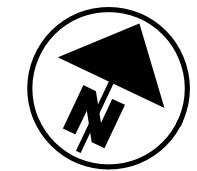
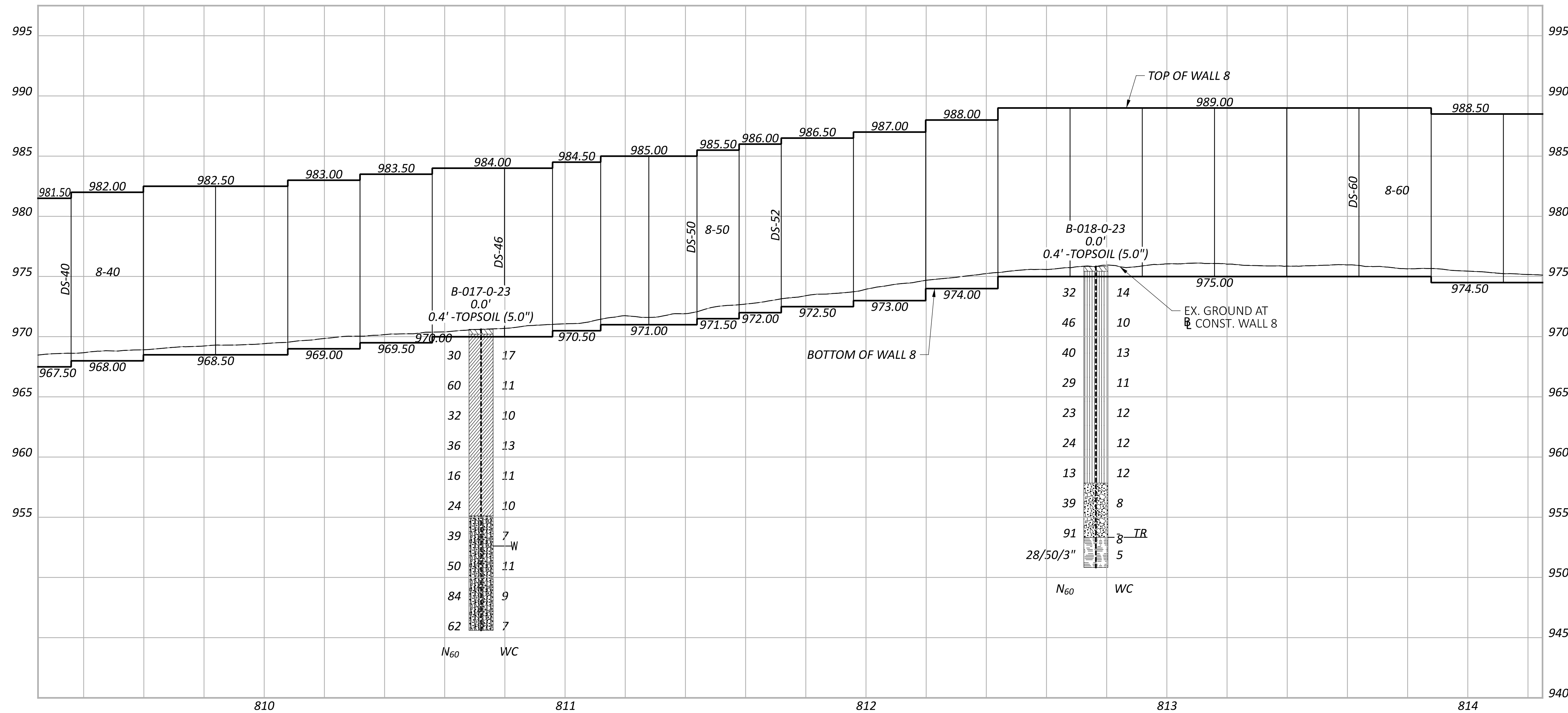
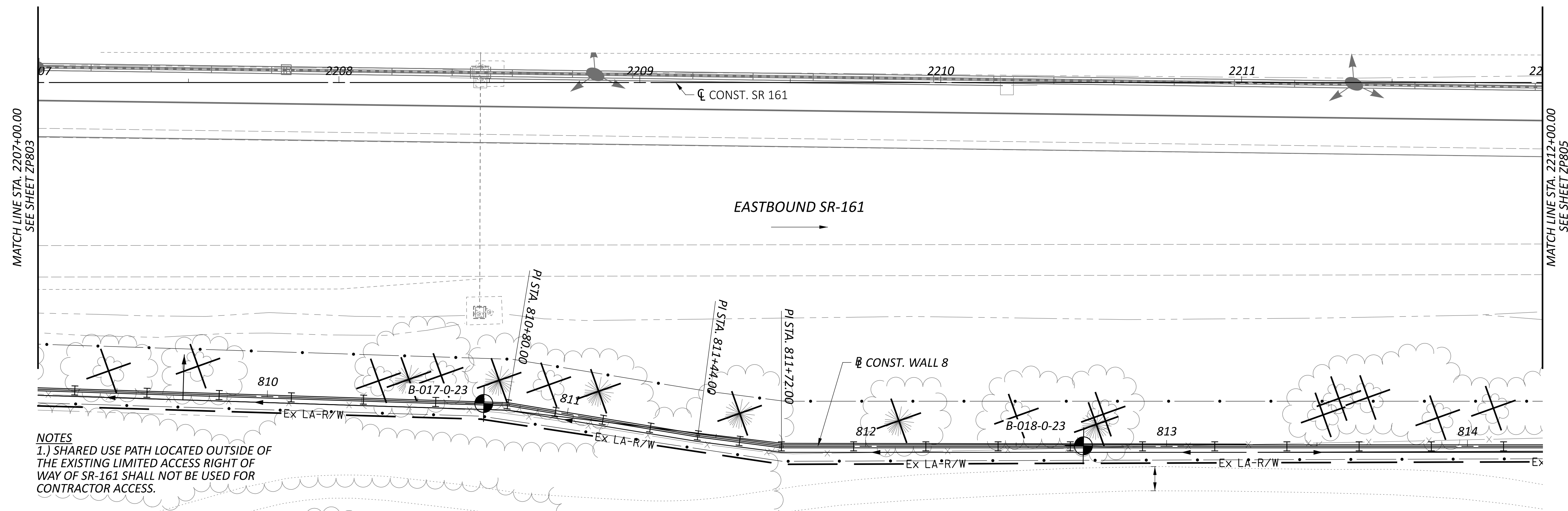
**GEOTECHNICAL PROFILE - NOISE WALL 8  
 STA. 2202+00.00 TO STA. 2207+00.00**

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
| <br>RESOURCE INTERNATIONAL<br>8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 12  | 66    |
| SHEET   | TOTAL |
| P.241   | 295   |



**FRA-161-15.80 NOISE WALLS**

MODEL: CLP\_SR161 - Plan 10 PAPER SIZE: 34x42 (in.) DATE: 3/14/2024 TIME: 4:57:12 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP804.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 8**  
 STA. 2207+00.00 TO STA. 2212+00.00

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
**KSJ**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

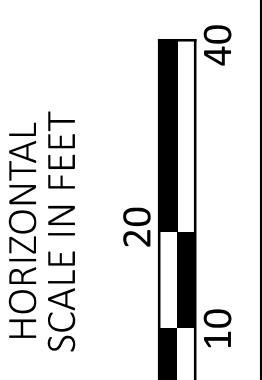
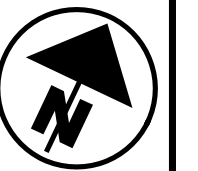
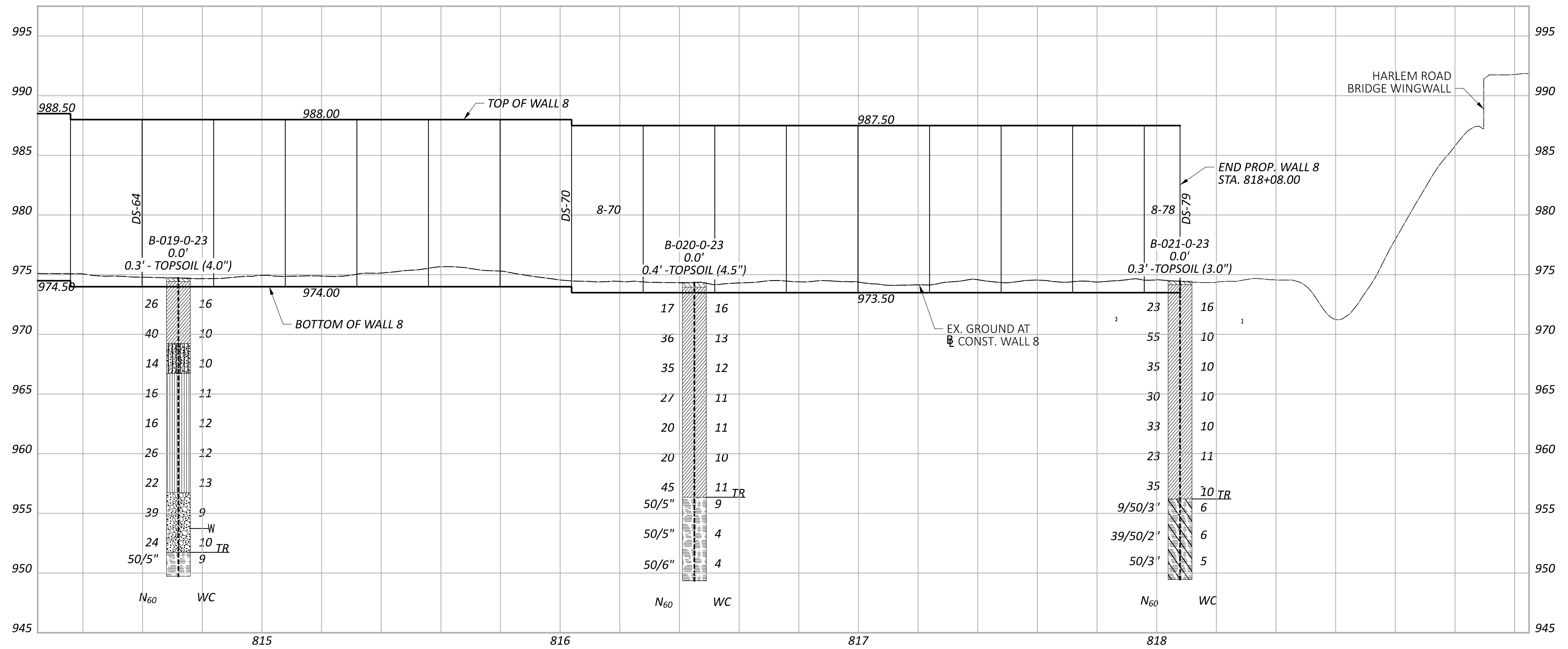
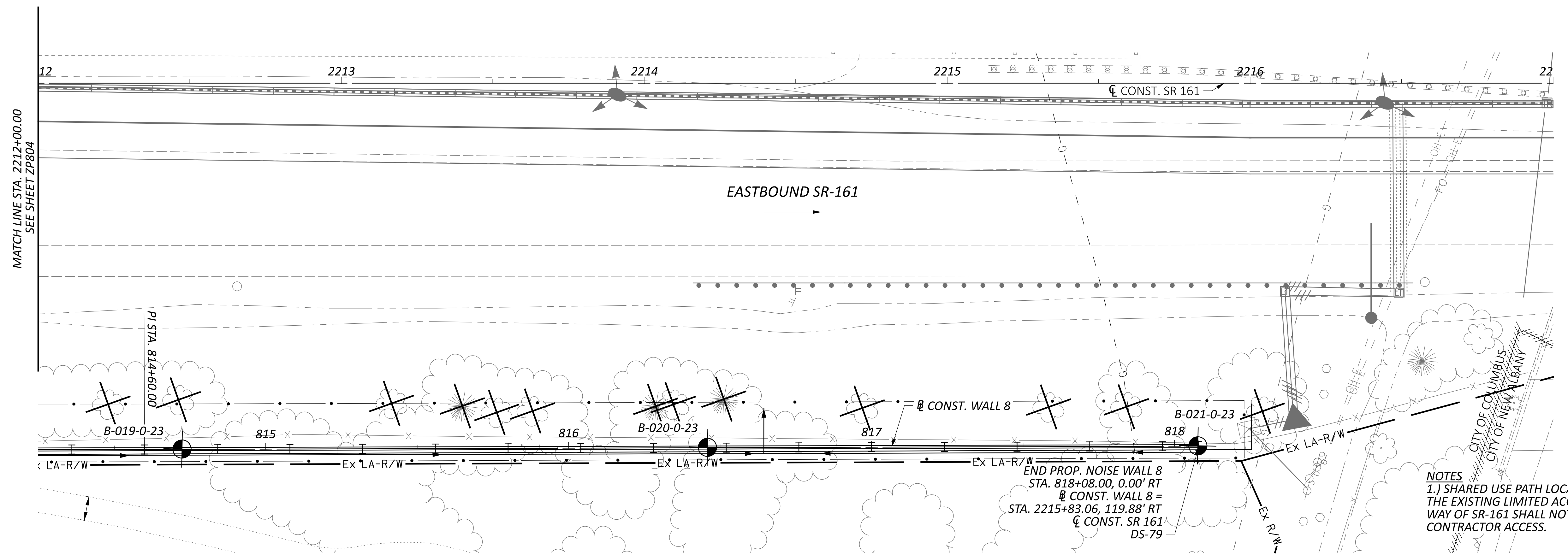
|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 13     | 66    |

|       |       |
|-------|-------|
| SHEET | TOTAL |
| P.242 | 295   |



**FRA-161-15.80 NOISE WALLS**

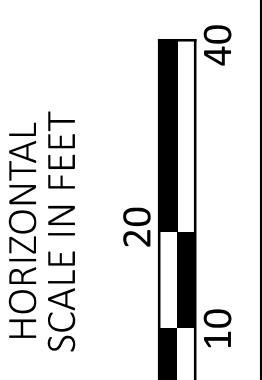
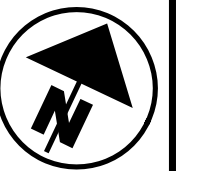
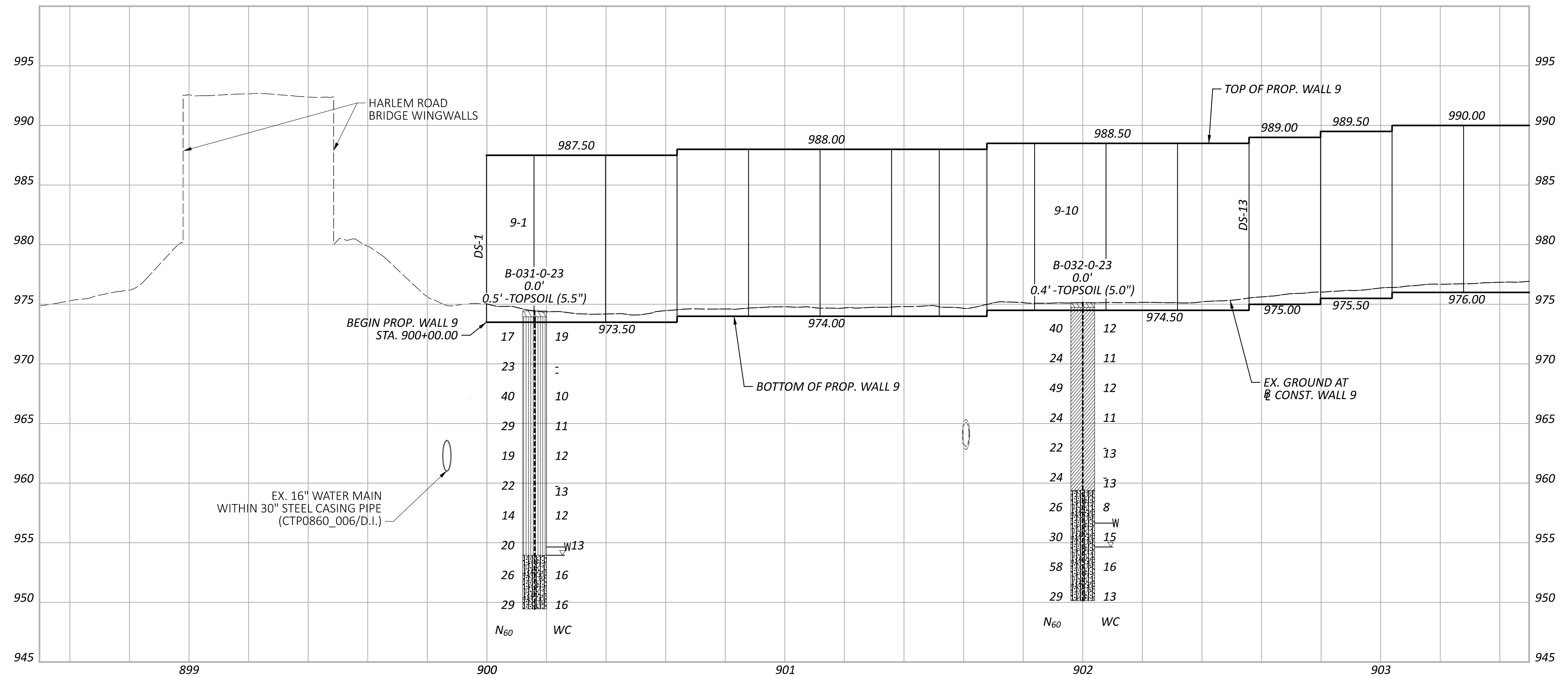
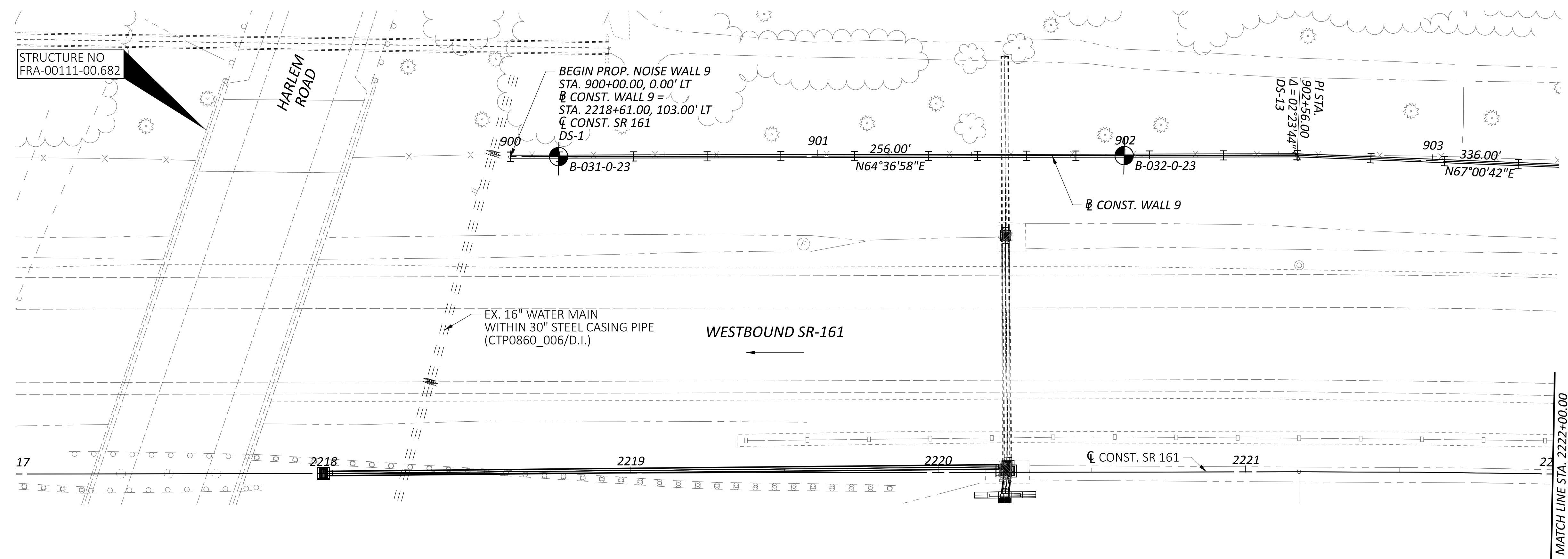
MODEL: CLP\_SR161 - Plan 11 PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 5:00:46 PM USER: juans  
 J:\GEO TECH\Connect Projects\2023\15-80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP805.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 8  
 STA. 2212+00.00 TO STA. 2217+00.00**

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
| <br>RESOURCE INTERNATIONAL<br>8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 14  | 66    |
| SHEET   | TOTAL |
| P.243   | 295   |





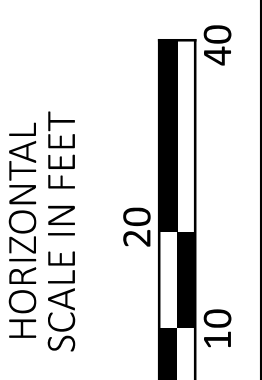
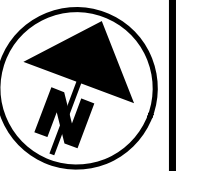
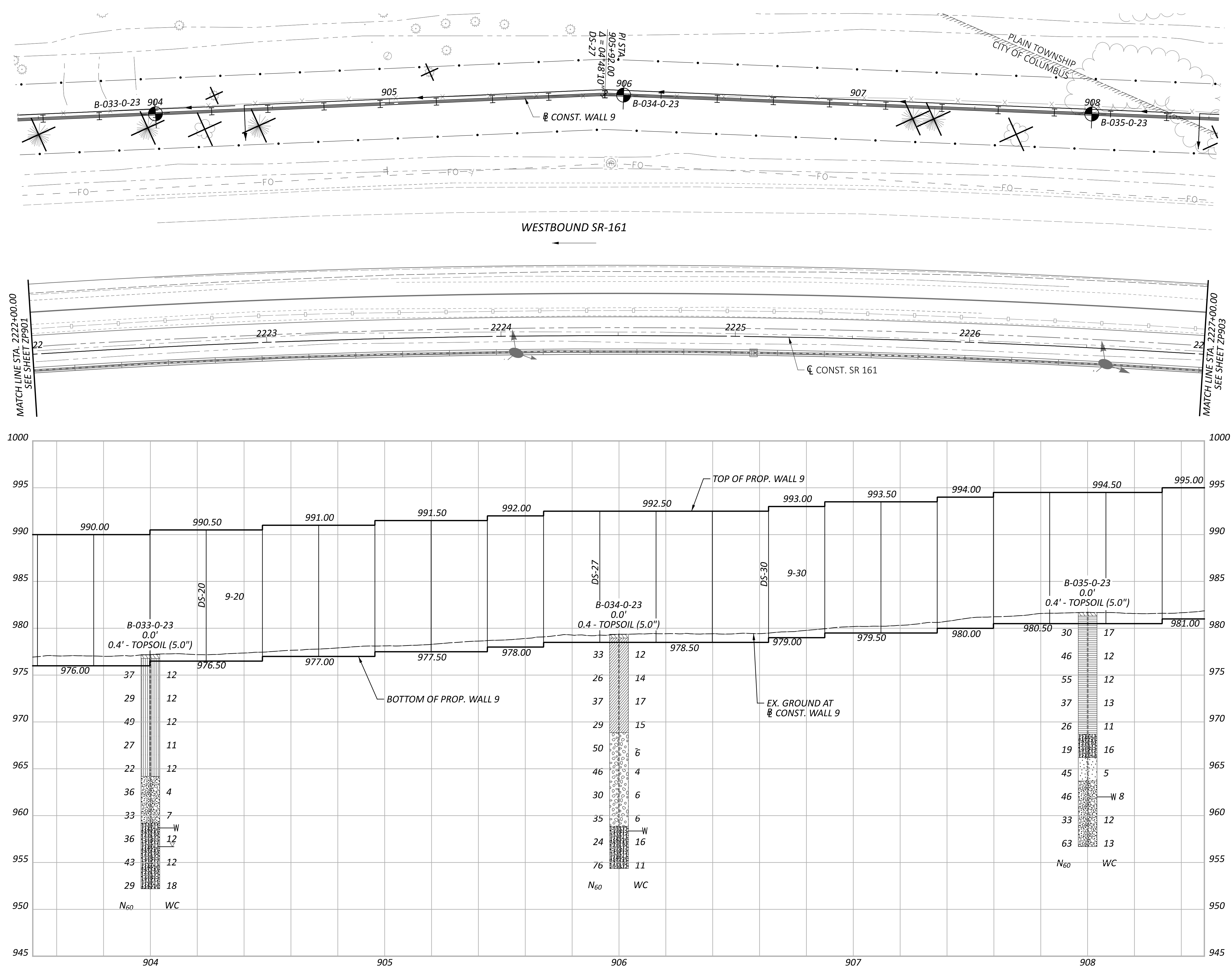
GEOTECHNICAL PROFILE - NOISE WALL 9  
 STA. 2217+00.00 TO STA. 2222+00.00

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
|   |       |
| 8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 15  | 66    |
| SHEET   | TOTAL |
| P.244   | 295   |



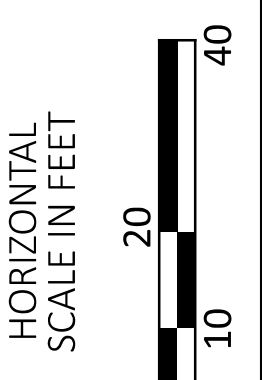
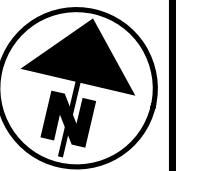
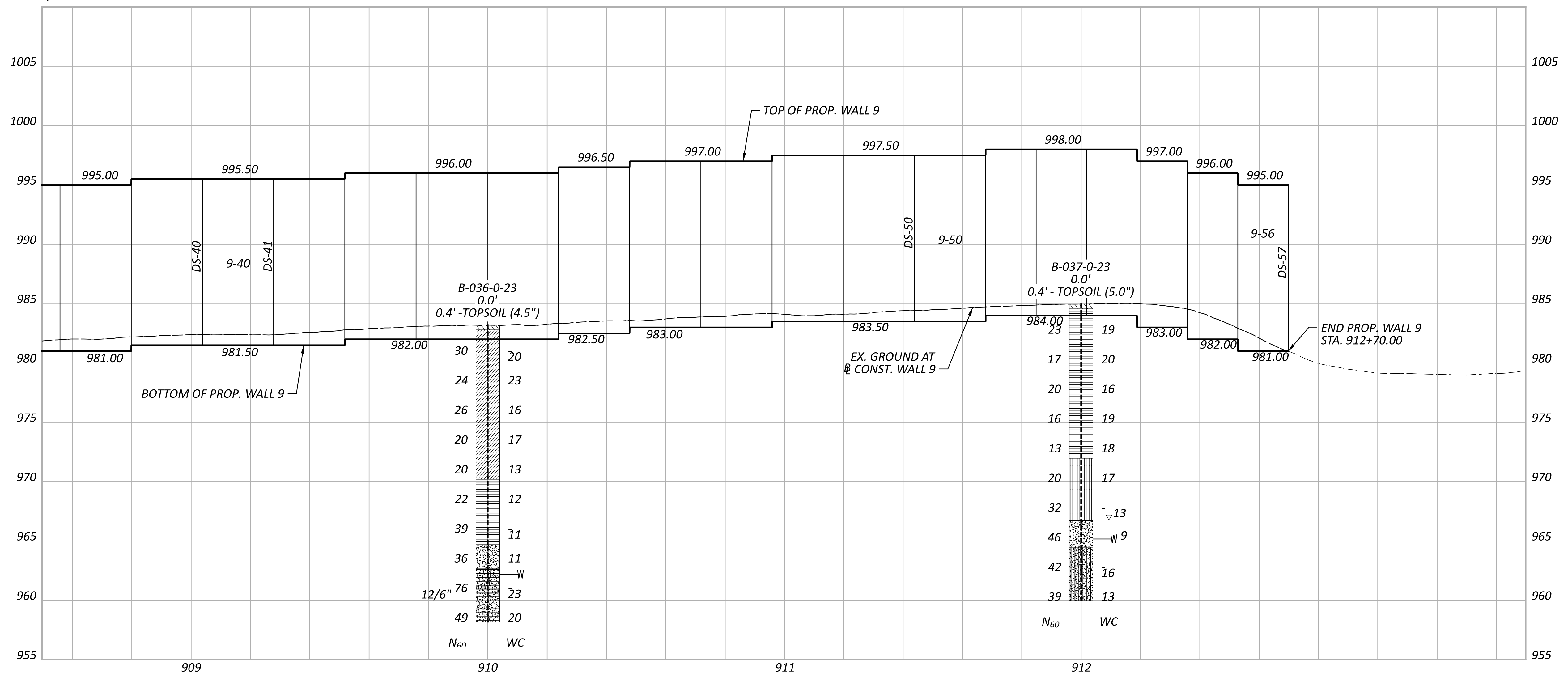
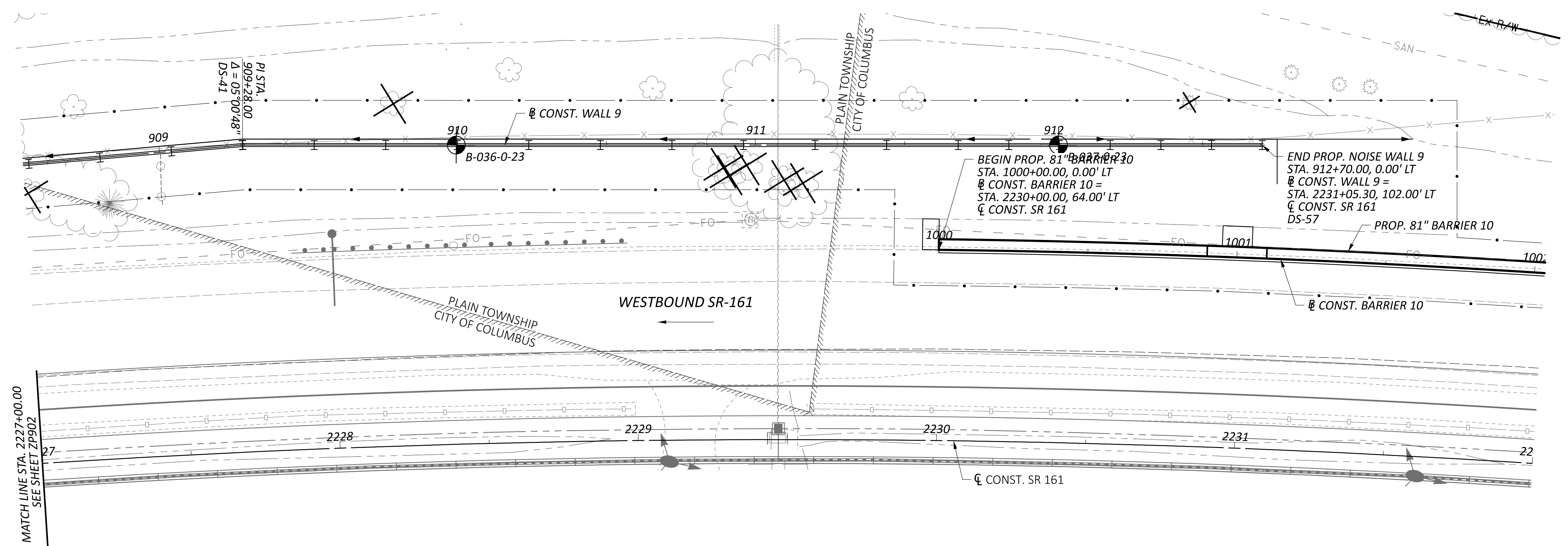
**FRA-161-15.80 NOISE WALLS**

MODEL: Wall 9 - Plan 13 PAPER/SIZE: 34x42 (in.) DATE: 3/14/2024 TIME: 5:16:33 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Sheets\117607\_Zp902.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 9  
 STA. 2222+00.00 TO STA. 2227+00.00**

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
|   |       |
| 6350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 16  | 66    |
| SHEET   | TOTAL |
| P.245   | 295   |



GEOTECHNICAL PROFILE - NOISE WALL 9  
 STA. 2227+00.00 TO STA. 2232+00.00

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

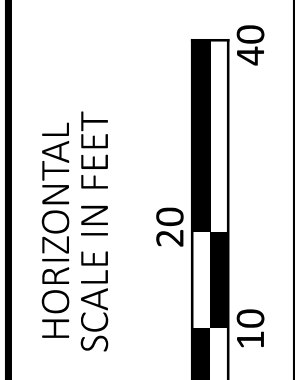
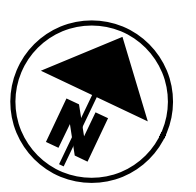
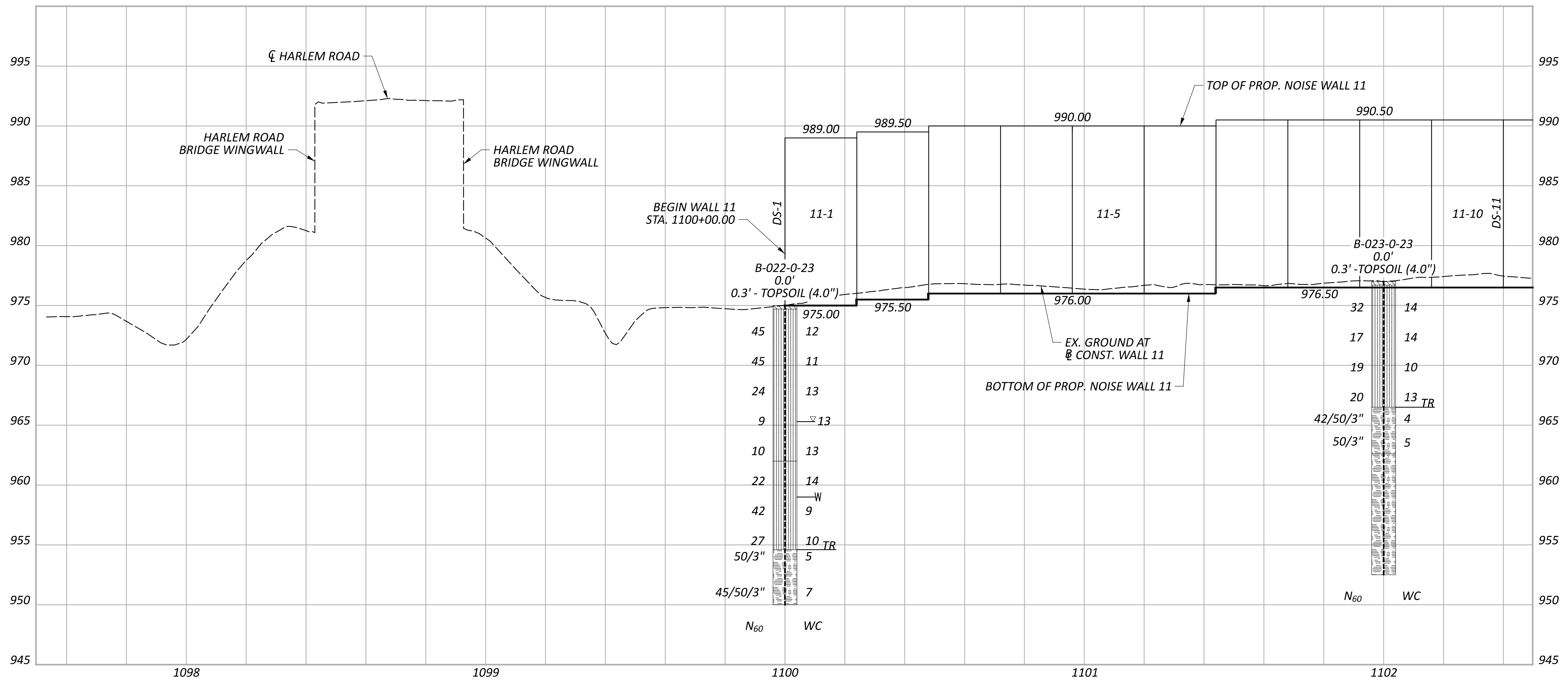
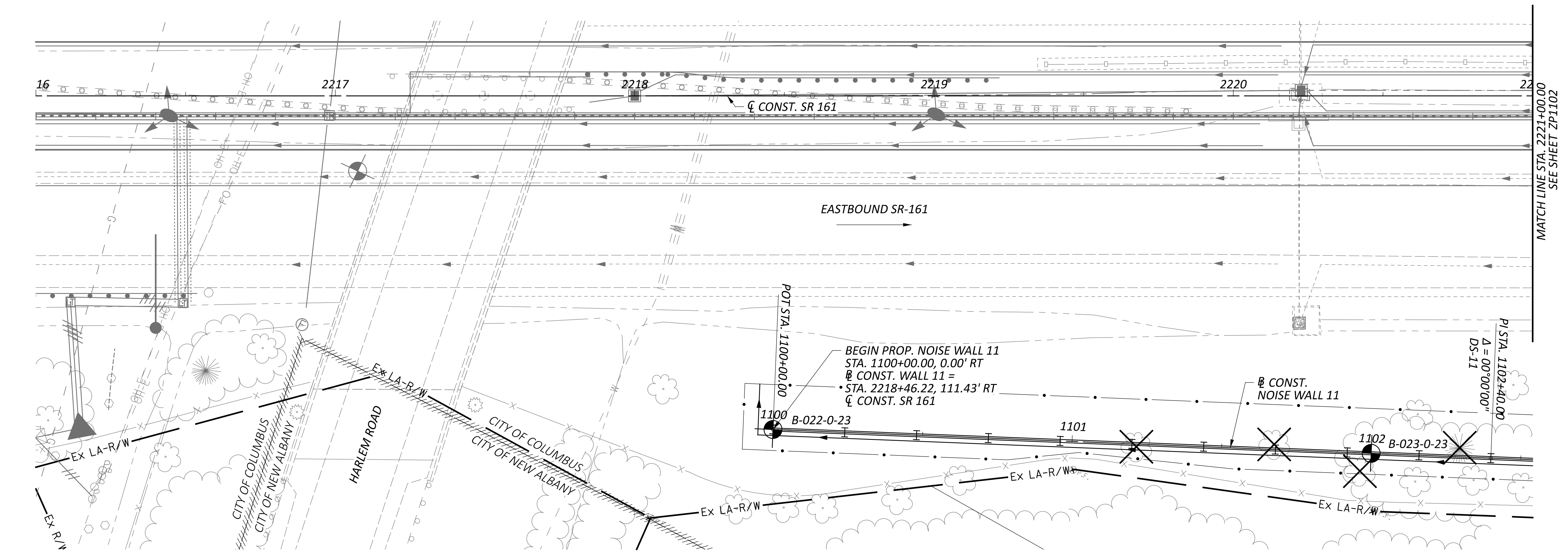
REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 17 66

SHEET TOTAL  
 P.246 295





**GEOTECHNICAL PROFILE - NOISE WALL 11**  
**STA. 2216+00.00 TO STA. 2221+00.00**

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
**KSJ**

REVIEWER  
**DEK 1/19/24**

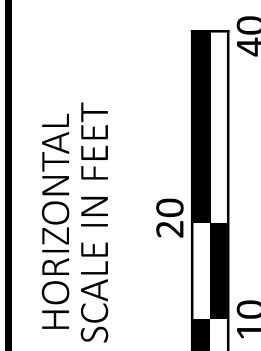
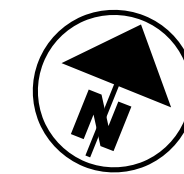
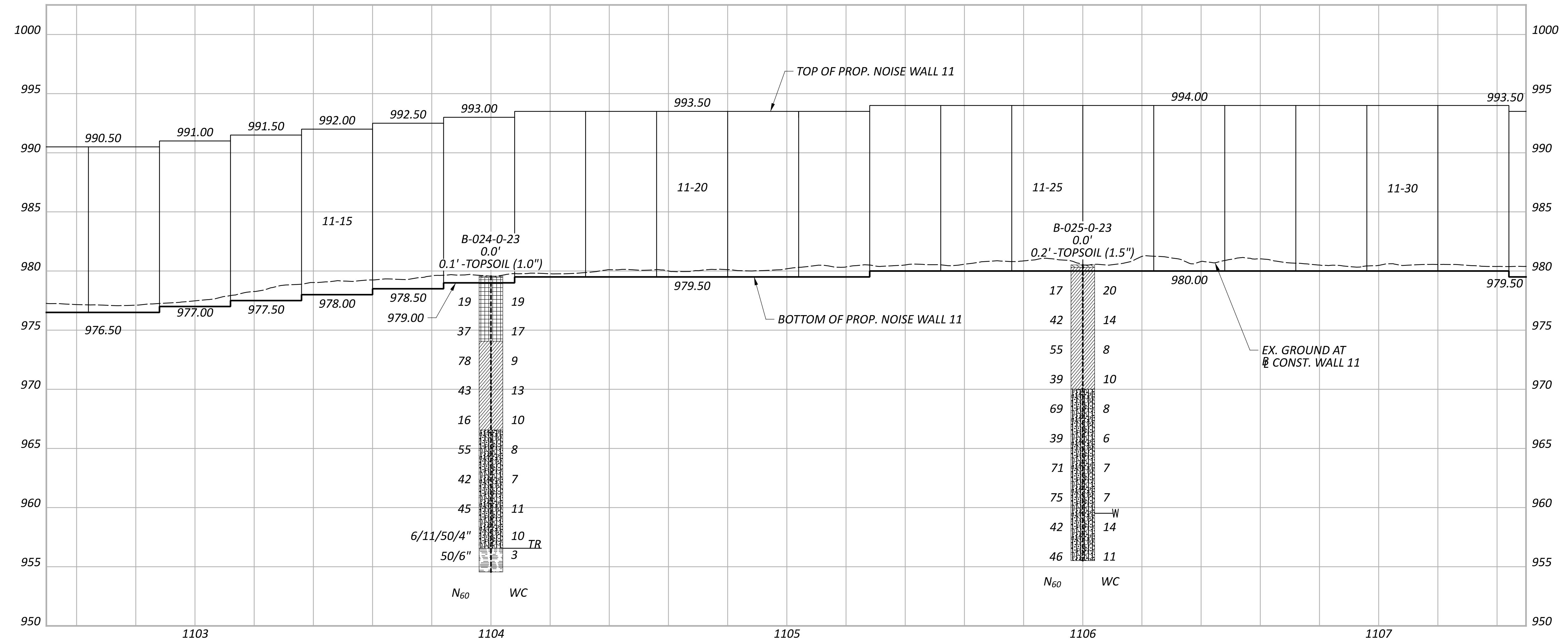
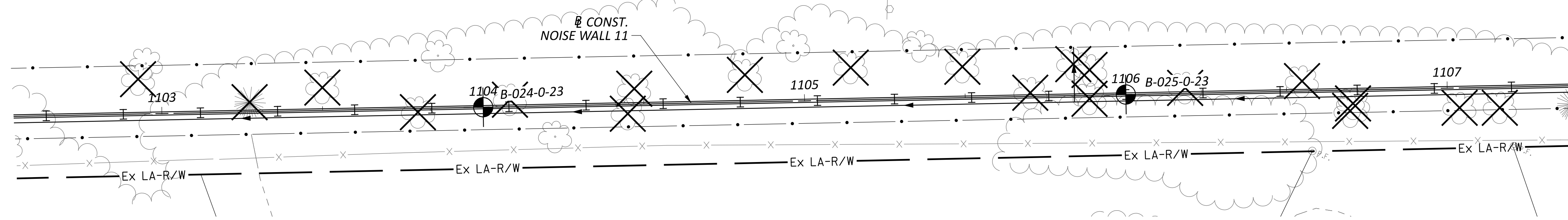
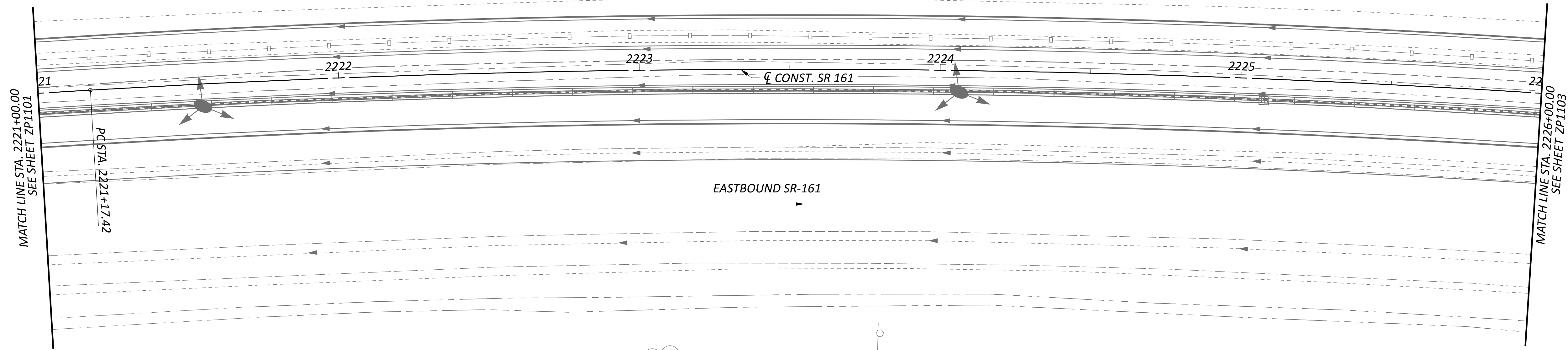
PROJECT ID  
**117607**

|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 18     | 66    |

|       |       |
|-------|-------|
| SHEET | TOTAL |
| P.247 | 295   |

**FRA-161-15.80 NOISE WALLS**

MODEL: Plan-1 PAPER SIZE: 34x42 (in.) DATE: 3/14/2024 TIME: 5:26:38 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1102.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 11  
 STA. 2221+00.00 TO STA. 2226+00.00**

DESIGN AGENCY



8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER

KSJ

REVIEWER

DEK 1/19/24

PROJECT ID

117607

SUBSET TOTAL

19 66

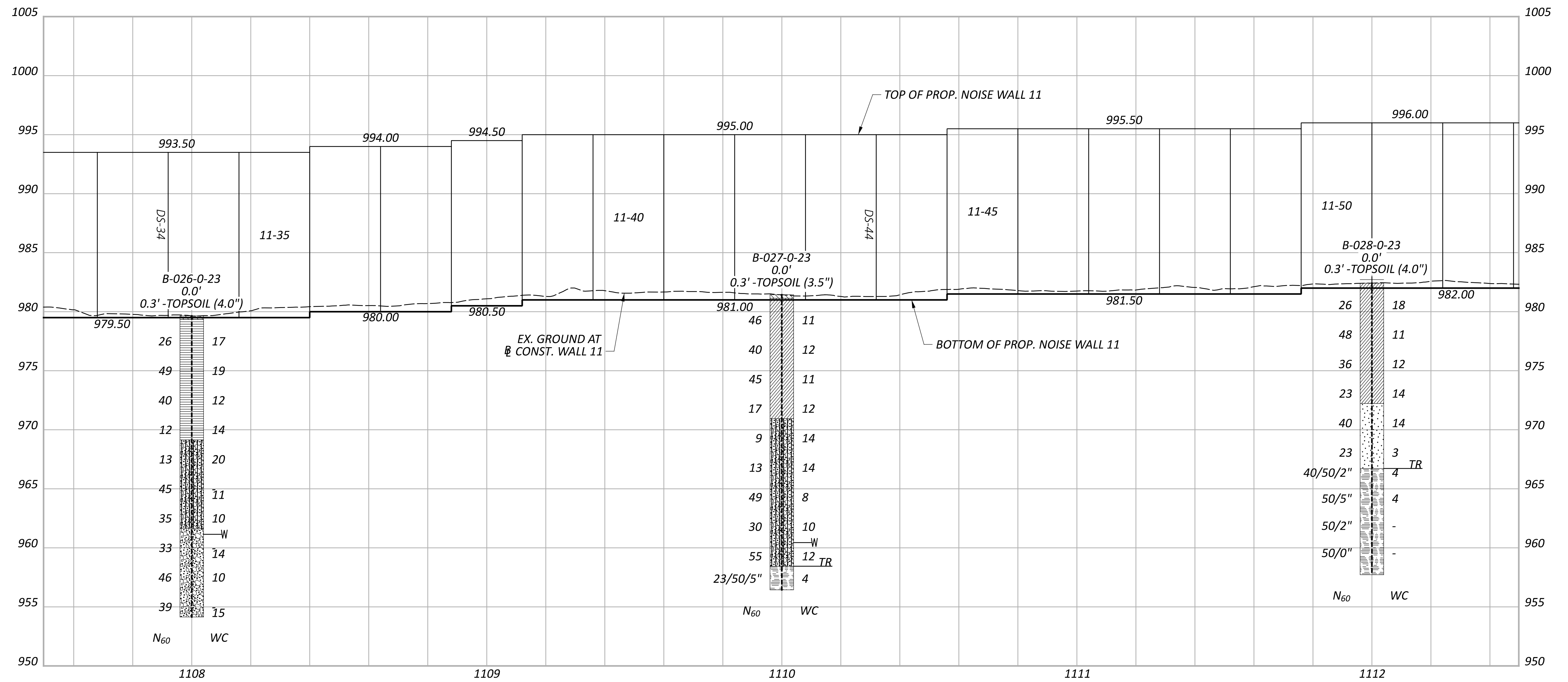
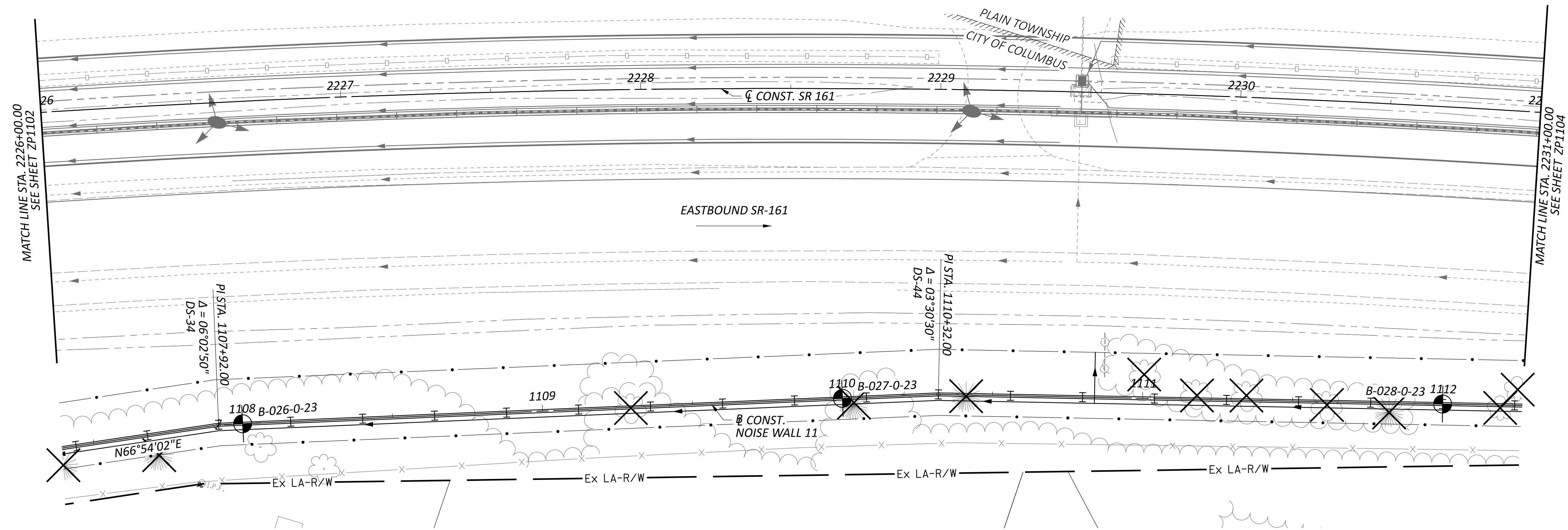
SHEET TOTAL

P.248 295



**FRA-161-15.80 NOISE WALLS**

MODEL: Plan-2 PAPER SIZE: 34x42 (in.) DATE: 3/14/2024 TIME: 5:29:13 PM USER: juans  
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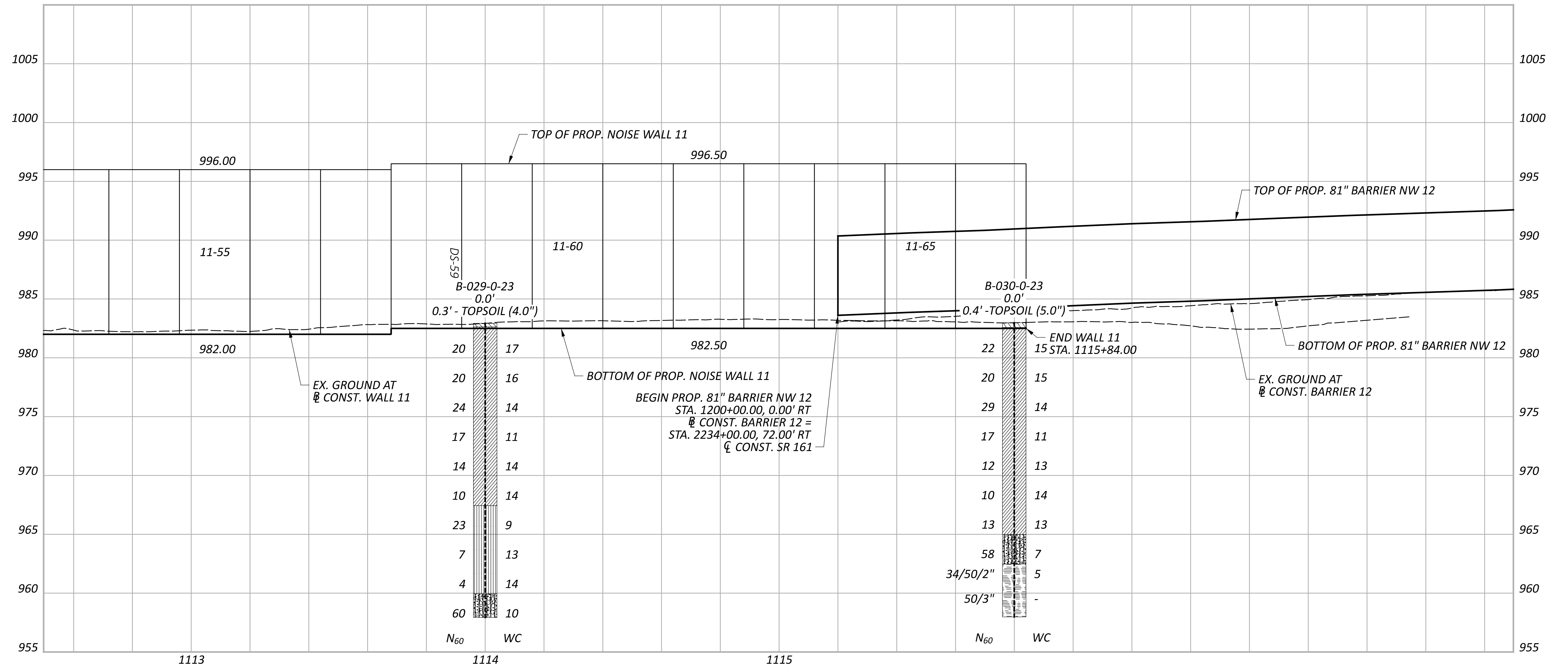
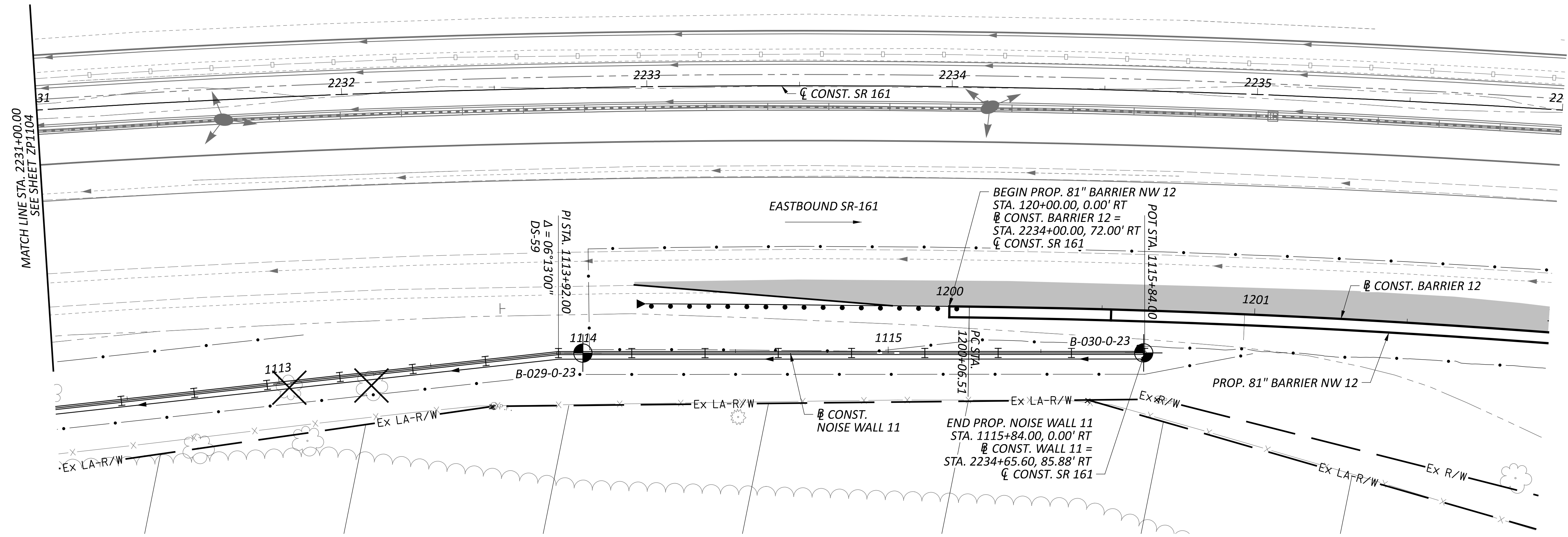


**GEOTECHNICAL PROFILE - NOISE WALL 11  
 STA. 2226+00.00 TO STA. 2231+00.00**

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 KSJ  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 20 66  
 SHEET TOTAL  
 P.249 295

**FRA-161-15.80 NOISE WALLS**

MODEL: Plan-3 PAPER SIZE: 34x42 (in.) DATE: 3/14/2024 TIME: 5:31:47 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\107-FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1104.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 11  
 STA. 2231+00.00 TO STA. 2236+00.00**

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

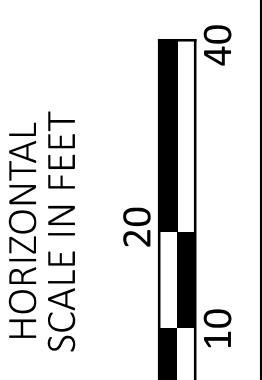
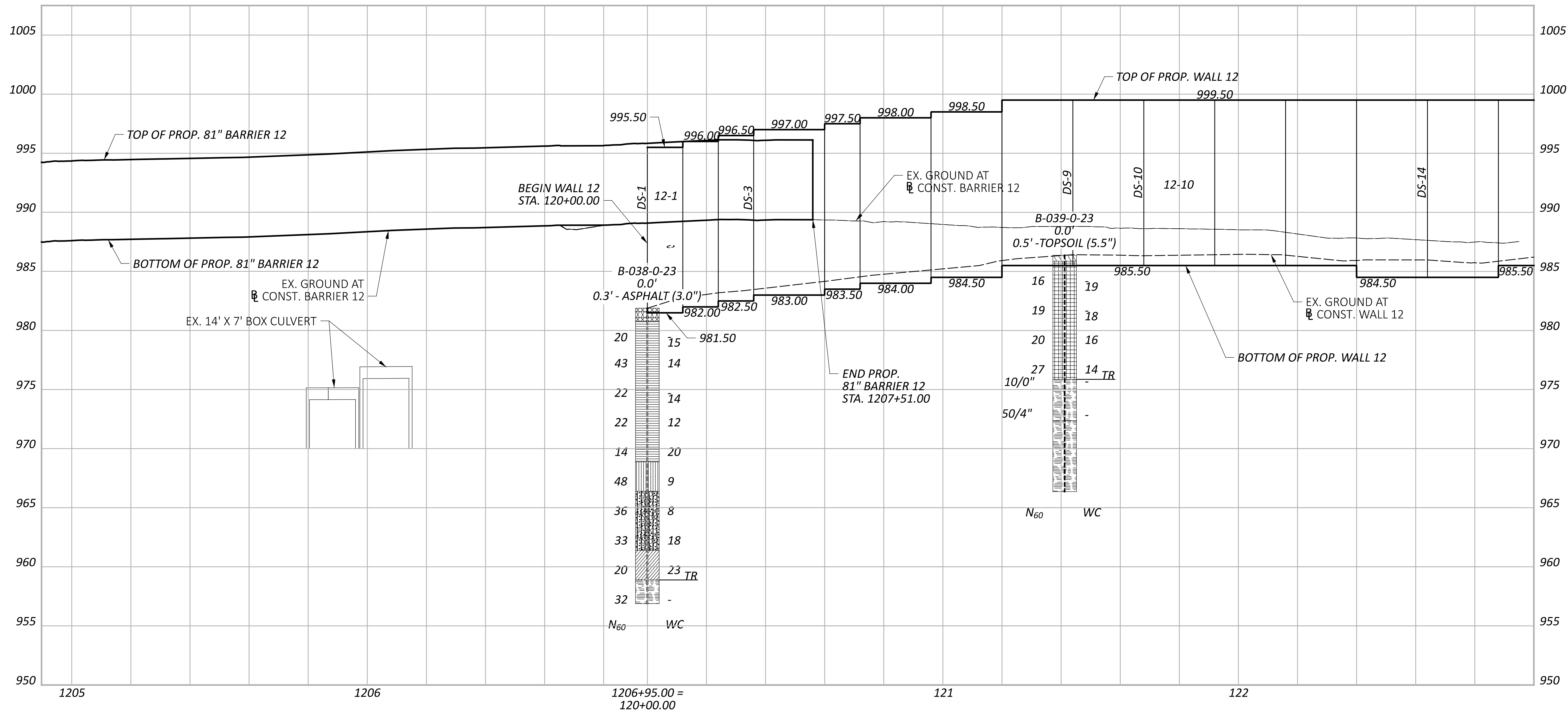
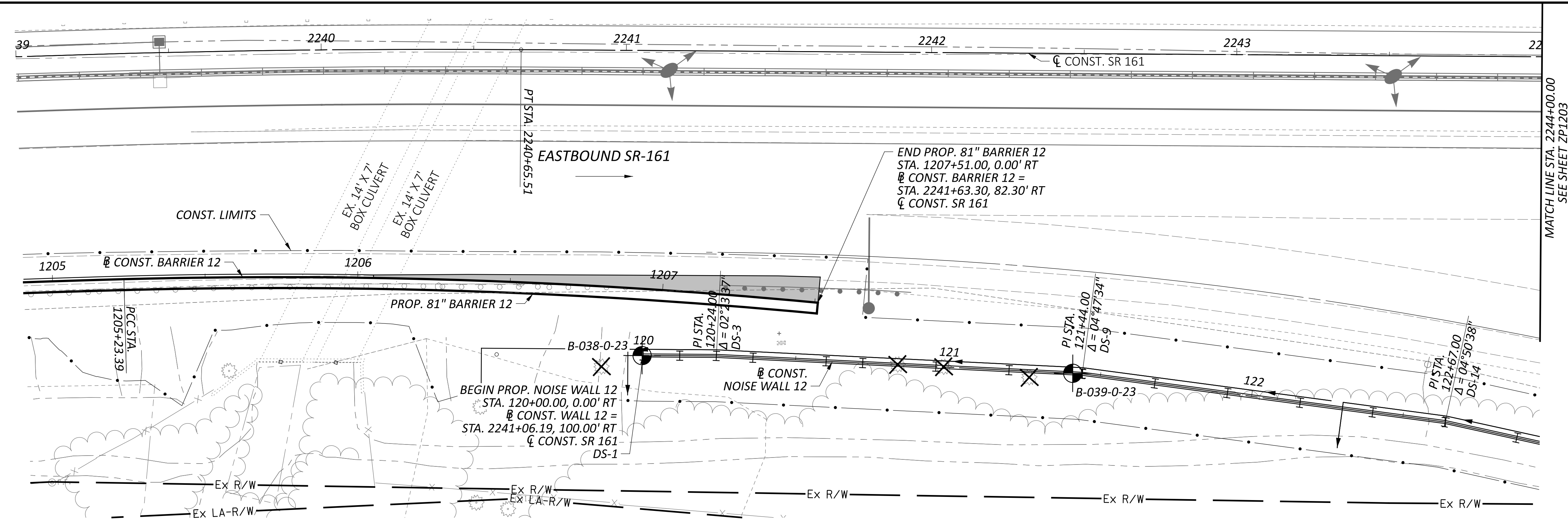
REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 21 66

SHEET TOTAL  
 P.250 295



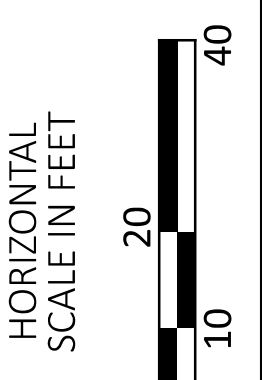
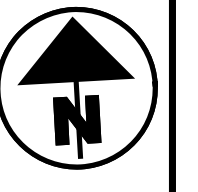
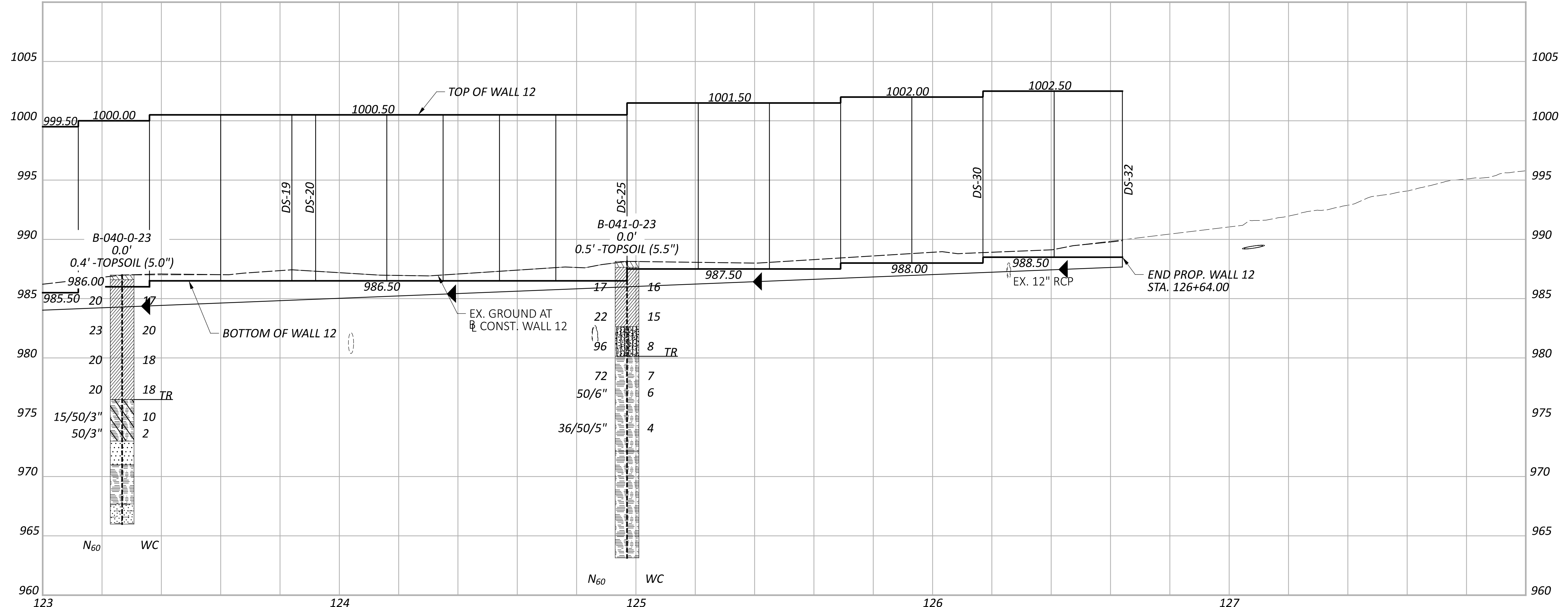
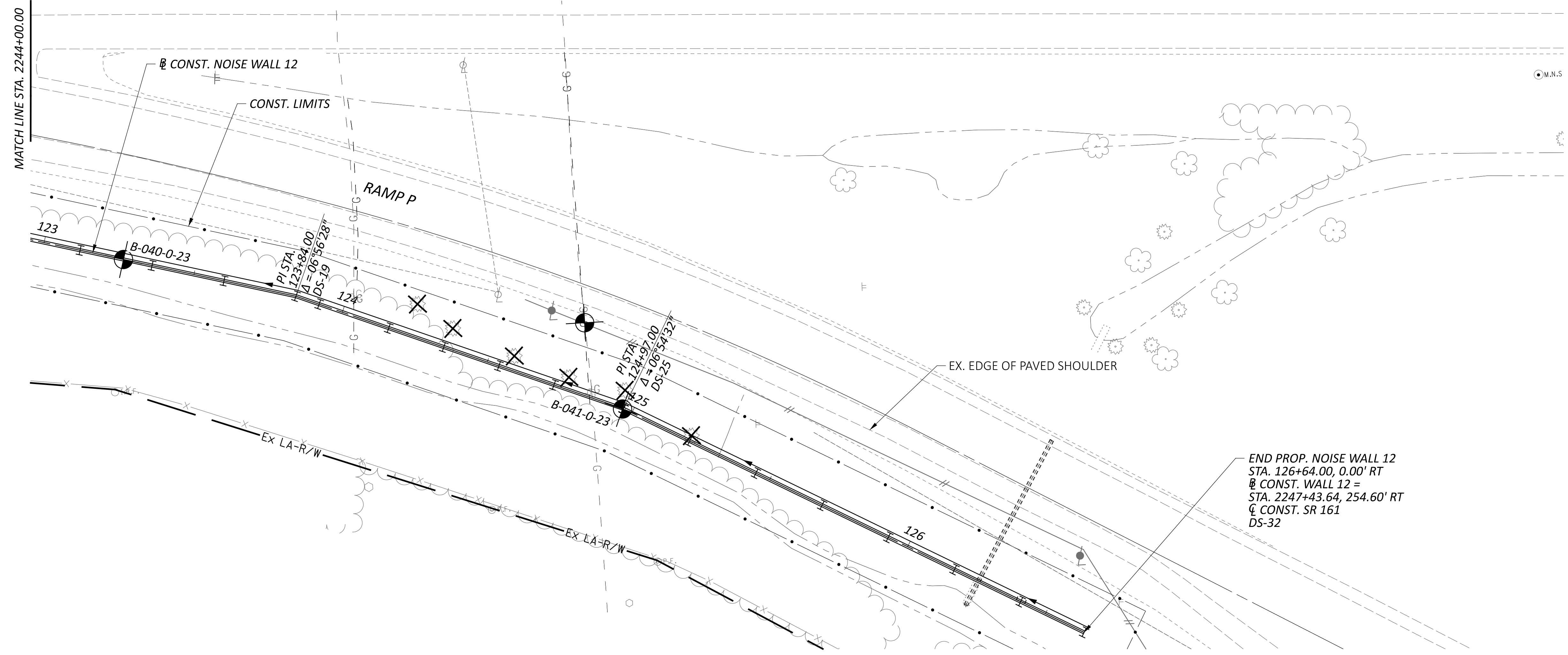


**GEOTECHNICAL PROFILE - NOISE WALL 12**  
 STA. 2239+00.00 TO STA. 2244+00.00

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
|   |       |
| 6350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 22  | 66    |
| SHEET   | TOTAL |
| P.251   | 295   |

**FRA-161-15.80 NOISE WALLS**

MODEL: Wall 12 - Plan 21 PAPER SIZE: 34x22 (in.) DATE: 3/26/2024 TIME: 10:24:02 AM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1203.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 12**  
**STA. 2244+00.00 TO STA. 2249+00.00**

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
**KSJ**

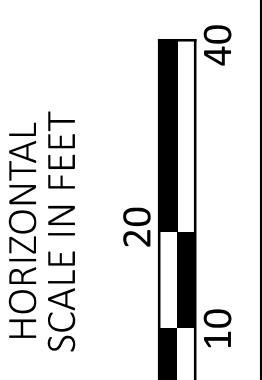
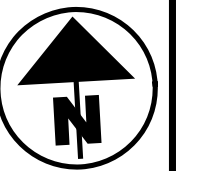
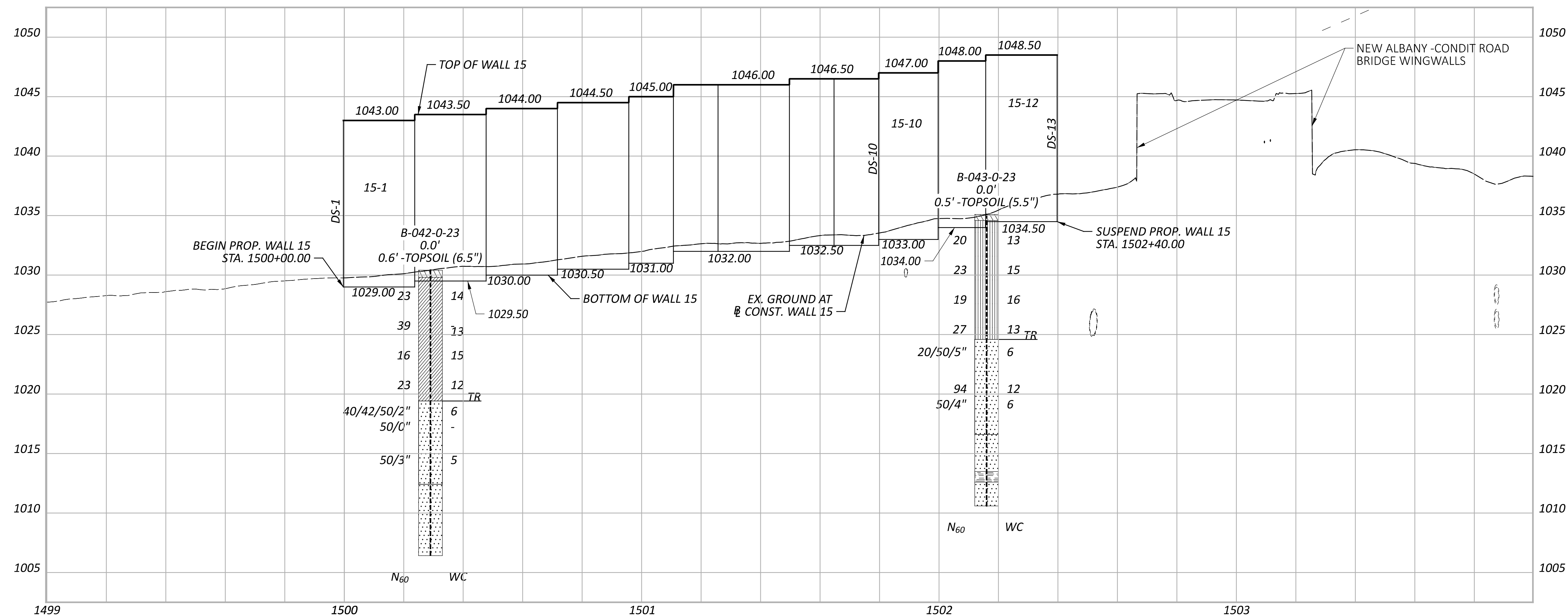
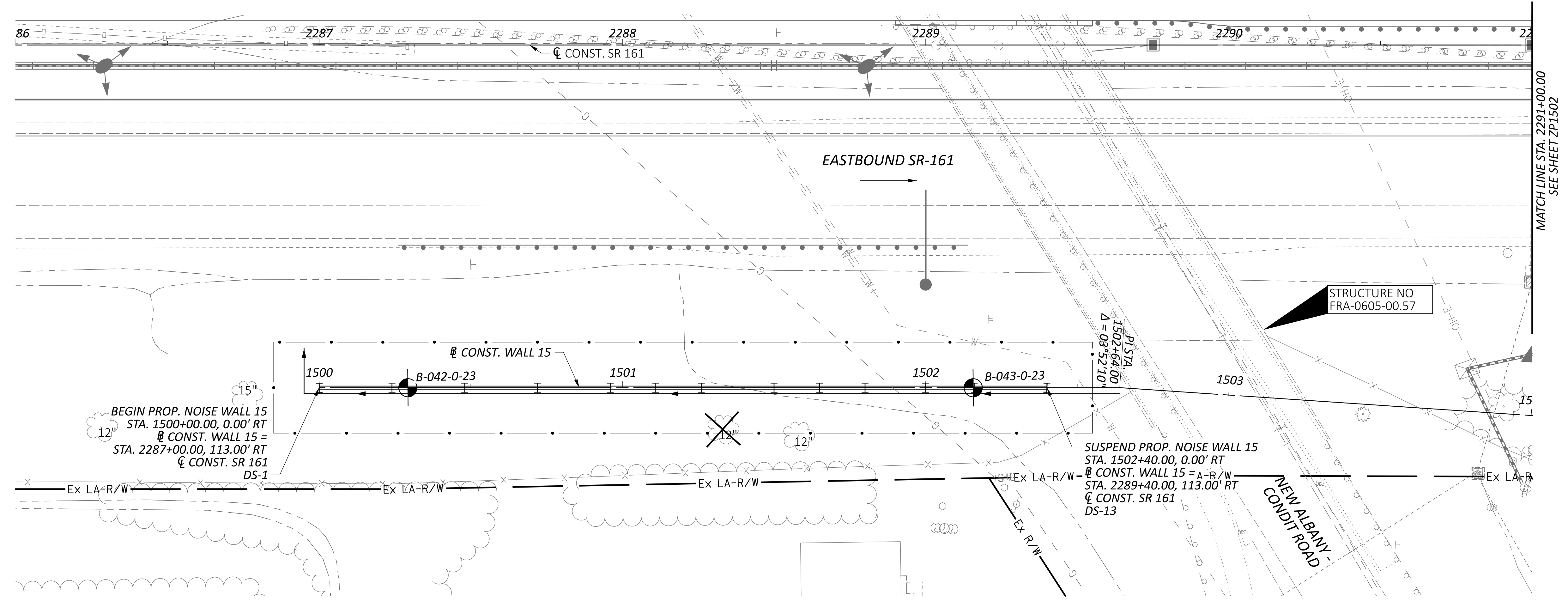
REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 23     | 66    |

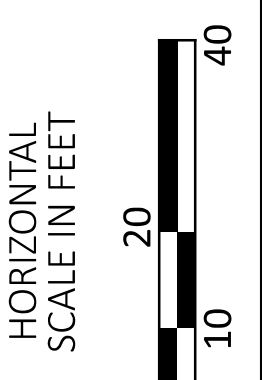
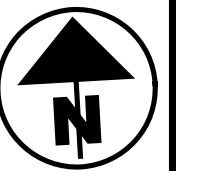
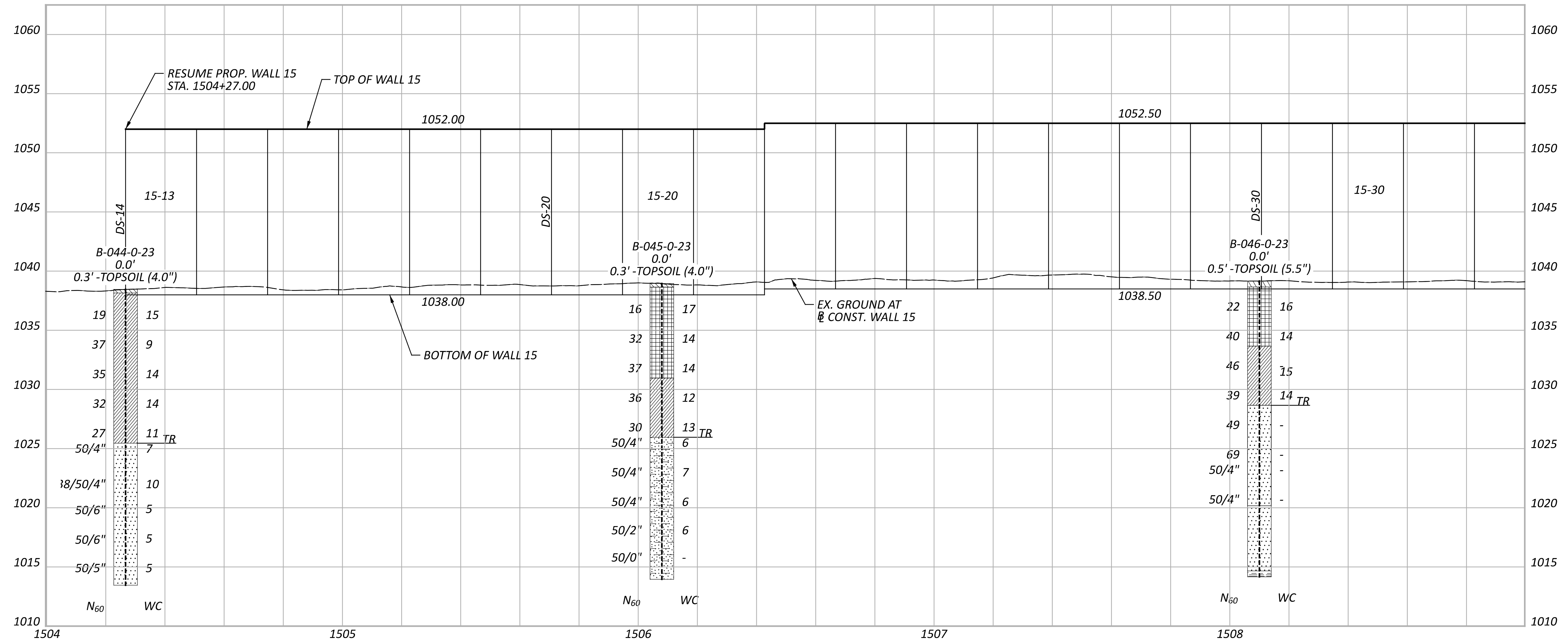
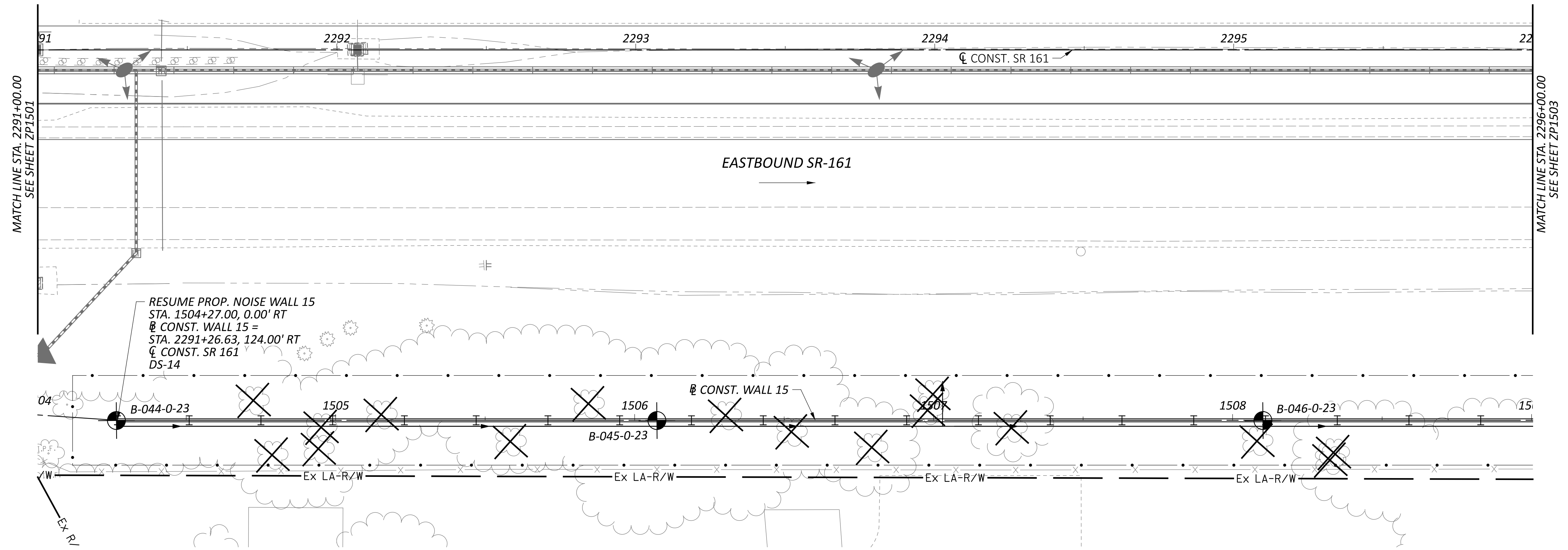
|       |       |
|-------|-------|
| SHEET | TOTAL |
| P.252 | 295   |





**GEOTECHNICAL PROFILE - NOISE WALL 15**  
 STA. 2286+00.00 TO STA. 2291+00.00

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
|   |       |
| 8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 24  | 66    |
| SHEET   | TOTAL |
| P.253   | 295   |



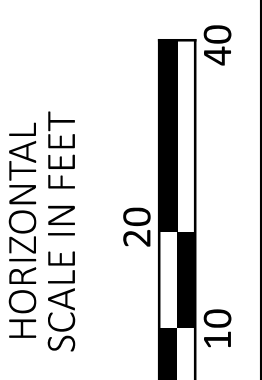
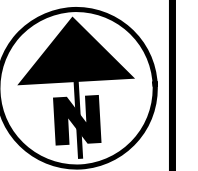
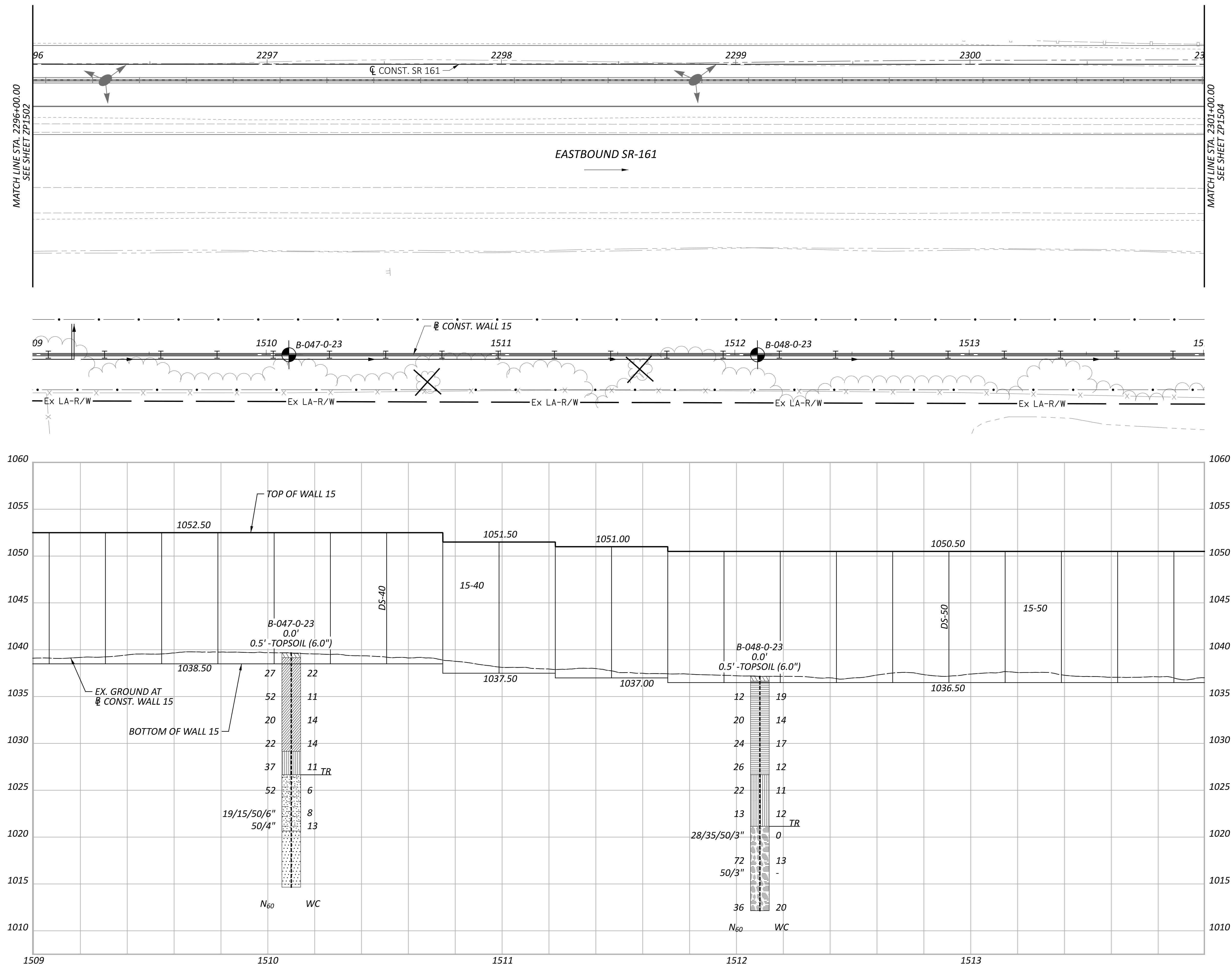
GEOTECHNICAL PROFILE - NOISE WALL 15  
 STA. 2291+00.00 TO STA. 2296+00.00

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
| <br>RESOURCE INTERNATIONAL<br>8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 25  | 66    |
| SHEET   |       |
| P.254   |       |
| TOTAL   |       |
| 295   |       |



**FRA-161-15.80 NOISE WALLS**

MODEL: Wall 15 - Plan 24 PAPER SIZE: 34x22 (in.) DATE: 3/15/2024 TIME: 4:33:23 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1503.dgn

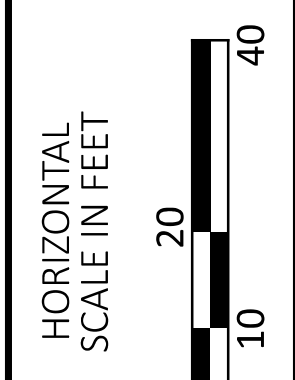
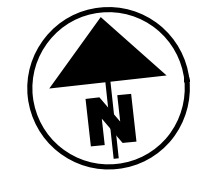
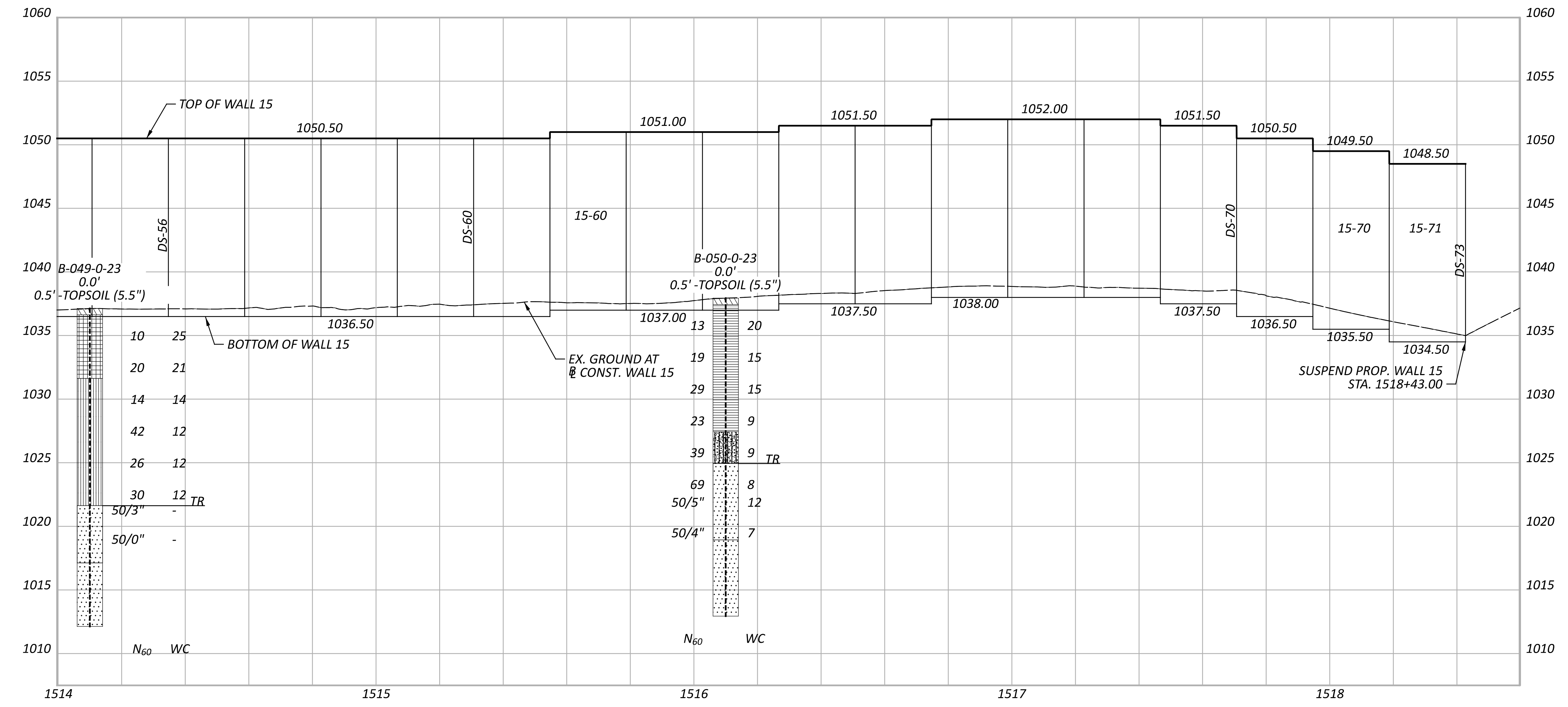
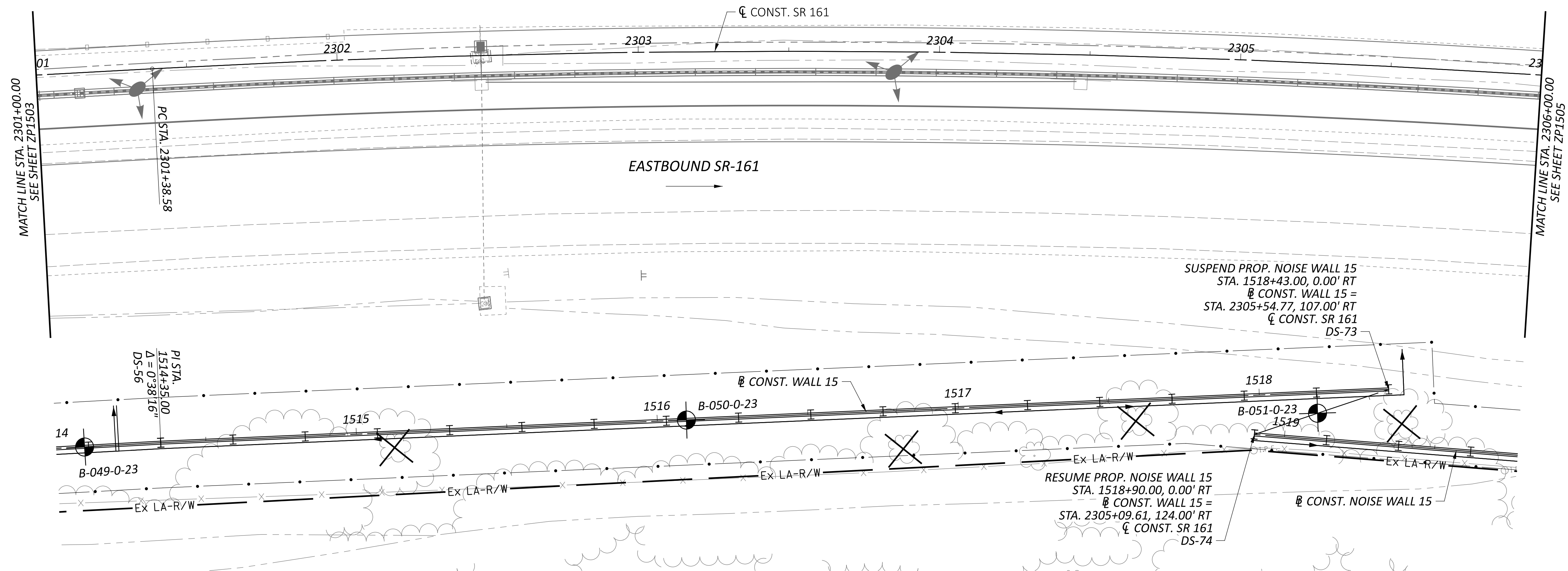


**GEOTECHNICAL PROFILE - NOISE WALL 15  
 STA. 2296+00.00 TO STA. 2301+00.00**

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
| <br>RESOURCE INTERNATIONAL<br>8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 26  | 66    |
| SHEET   | TOTAL |
| P.255   | 295   |

**FRA-161-15.80 NOISE WALLS**

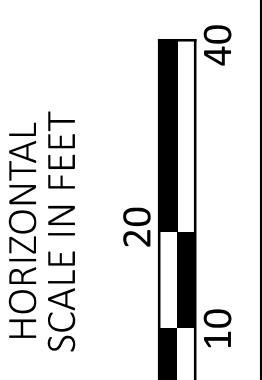
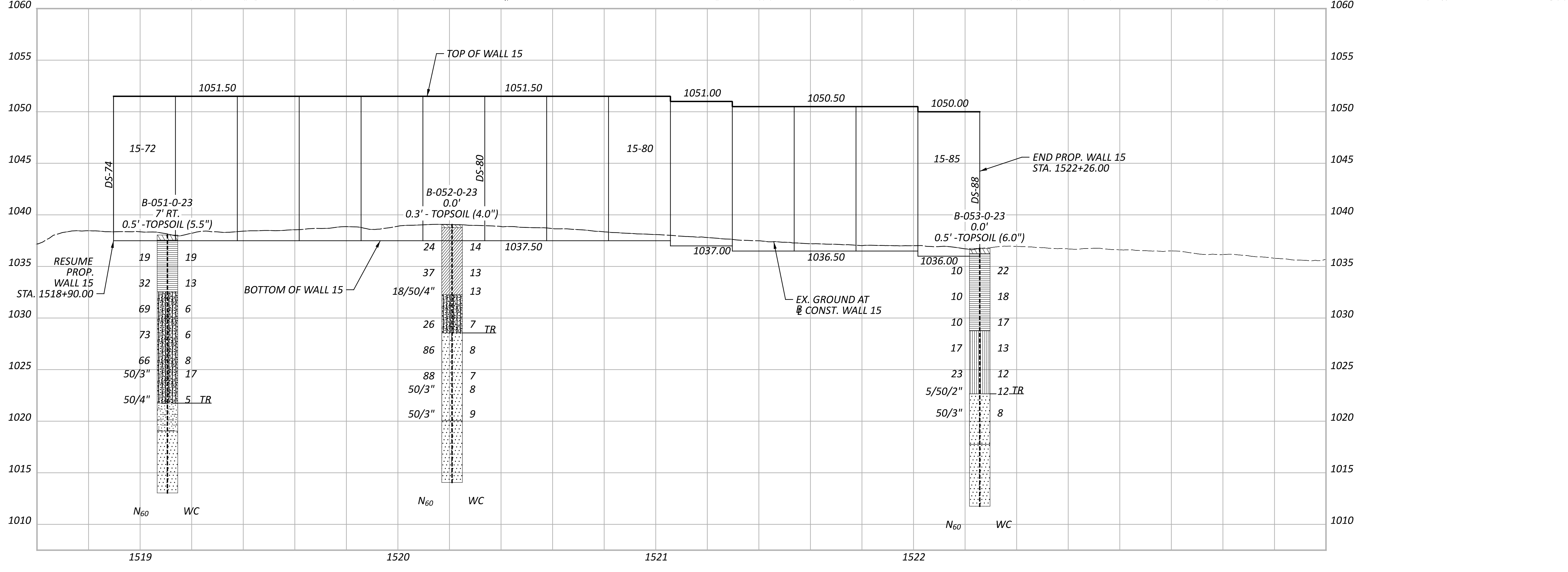
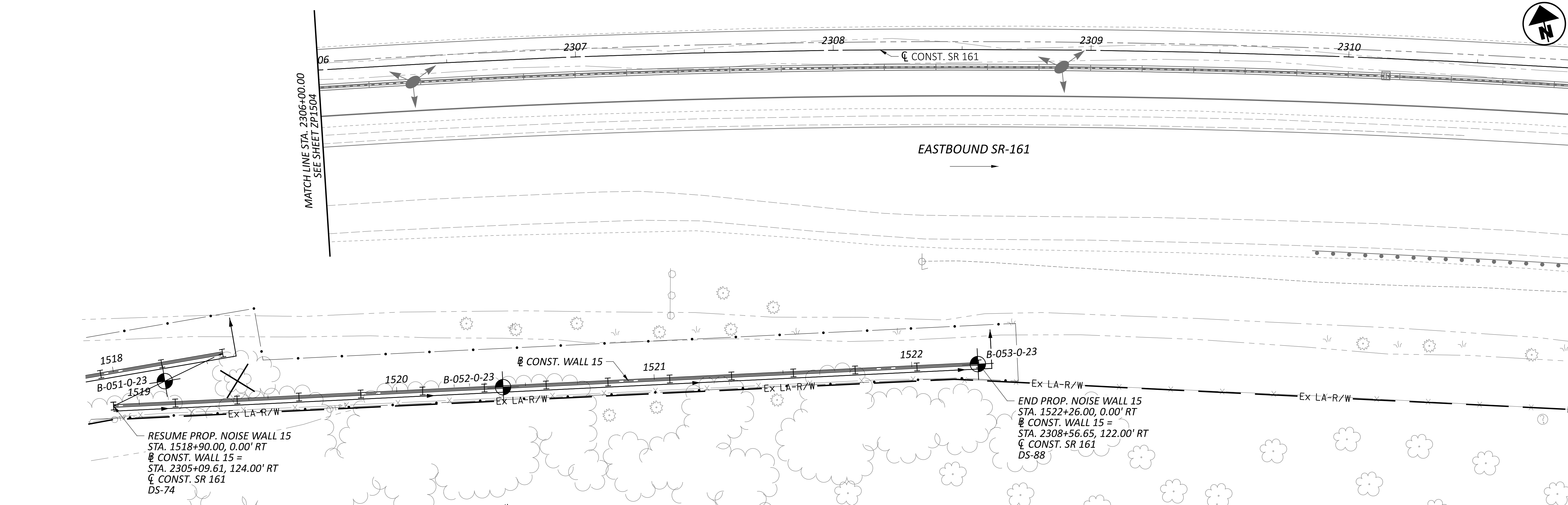
MODEL: Wall 15 - Plan 25 PAPER SIZE: 34x22 (in.) DATE: 3/15/2024 TIME: 4:36:56 PM USER: juans  
 J:\GEO\TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZP1504.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 15  
 STA. 2301+00.00 TO STA. 2306+00.00**

|   |       |
|---|-------|
| DESIGN AGENCY   |       |
|   |       |
| 8350 PRESIDENTIAL GATEWAY<br>COLUMBUS, OHIO 43231<br>(614) 823-4949 |       |
| DESIGNER  |       |
| KSJ   |       |
| REVIEWER  |       |
| DEK 1/19/24   |       |
| PROJECT ID  |       |
| 117607  |       |
| SUBSET  | TOTAL |
| 27  | 66    |
| SHEET   | TOTAL |
| P.256   | 295   |





GEOTECHNICAL PROFILE - NOISE WALL 15  
 STA. 2306+00.00 TO STA. 2311+00.00

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 KSJ

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 28 66

SHEET TOTAL  
 P.257 295



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/15/2024 TIME: 8:53:57 AM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1001.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/22/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 300+00 / 0'  
 ALIGNMENT: CL WALL 3  
 ELEVATION: 966.3 (MSL) EOB: 15.0 ft.  
 LAT / LONG: 40.080429, -82.864610

EXPLORATION ID  
**B-001-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (3.5")  
 HARD, BROWN SILT AND CLAY, LITTLE GRAVEL, TRACE SAND, DAMP.

**SANDSTONE** : GRAY, HIGHLY WEATHERED.  
 SANDSTONE : BROWN AND GRAY, MODERATELY TO SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, IRON STAINED, PYRITIC, FRACTURED, NARROW APERTURE, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE CONDITION.  
 -HIGHLY FRACTURED AND HEAVILY IRON STAINED FROM 5.0' - 7.0'  
 -@ 6.6' - 7.0' 60 DEGREE FRACTURE

-@ 10.3' - 10.8' 45 DEGREE FRACTURE AND HEAVILY IRON STAINED

-@ 10.8' - 13.6' SPECKLES OF PYRITE THROUGHOUT

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |      |    |    |    |    |    | WC | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|------|----|----|----|----|----|----|-------------|
|            |           |               |          | GR            | FS   | SI | CL | LL | PL | PI |    |             |
| 1          | 6         |               |          |               |      |    |    |    |    |    |    |             |
| 2          | 10        | 32            | 56       | SS-1          | 4.5+ |    |    |    |    |    | 15 | A-6a (V)    |
| 3          | 12        |               |          |               |      |    |    |    |    |    |    |             |
| 4          | 11        |               | 100      | SS-2          | 4.5+ |    |    |    |    |    | 16 | A-6a (V)    |
| 5          | 50/4"     |               |          |               |      |    |    |    |    |    |    |             |
| 6          |           |               |          |               |      |    |    |    |    |    |    |             |
| 7          | 0         |               | 80       | NQ2-1         |      |    |    |    |    |    |    | CORE        |
| 8          |           |               |          |               |      |    |    |    |    |    |    |             |
| 9          |           |               |          |               |      |    |    |    |    |    |    |             |
| 10         |           |               |          |               |      |    |    |    |    |    |    |             |
| 11         |           |               |          |               |      |    |    |    |    |    |    |             |
| 12         | 45        |               | 100      | NQ2-2         |      |    |    |    |    |    |    | CORE        |
| 13         |           |               |          |               |      |    |    |    |    |    |    |             |
| 14         |           |               |          |               |      |    |    |    |    |    |    |             |
| 15         |           |               |          |               |      |    |    |    |    |    |    |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

|  |  |
|--|--|
| <b>Photo No.</b><br>1                          |  |
| <b>Boring:</b><br>B-001-0-23                   |  |
| RC-1: 5.0'-10.0'<br>REC (%):80<br>RQD (%):10   |  |
| RC-2: 10.0'-15.0'<br>REC (%):100<br>RQD (%):45 |  |

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 JAS

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 29 66

SHEET TOTAL  
 P.258 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
 NOISE WALL 3  
 BORING LOG & ROCK CORE PHOTO FOR B-001-0-23



**FRA-161-15.80 NOISE WALLS**

MODEL: Sheet PAPER: 34x22 (in.) DATE: 3/14/2024 TIME: 6:46:43 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL002.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/22/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 302+00 / 0'  
 ALIGNMENT: CL WALL 3  
 ELEVATION: 968.1 (MSL) EOB: 15.3 ft.  
 LAT / LONG: 40.080609, -82.863925

EXPLORATION ID  
**B-002-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' - TOPSOIL (4.5')  
 HARD, BROWN-GRAY CLAY, SOME SILT, LITTLE COARSE TO FINE SAND, TRACE SAND AND GRAVEL, MOIST.  
 -@2.8' - 3.4' COBBLES  
 VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, DAMP.  
**SANDSTONE** : GRAY, HIGHLY WEATHERED.  
**SANDSTONE** : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.  
 -@6.0' - 9.7' APPROXIMATELY 4MM PYRITE NODULES THROUGHOUT  
 -@9.7' CLAY SEAM  
 -@10.25' - 12.0' MANY PYRITE FLECKS THROUGHOUT  
 -@11.0' - 15.75' FEW PYRITE FLECKS

| DEPTH (ft) | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | GRADATION (%) |    |    |    |    |    |           | WC | HOLE SEALED |  |
|------------|-------|-----------|---------------|----------|----|---------------|----|----|----|----|----|-----------|----|-------------|--|
|            |       |           |               |          |    | FS            | SI | CL | LL | PL | PI | ATTERBERG |    |             |  |
| 1          | 968.1 | 3         |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 2          | 967.7 | 5         |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 3          | 965.1 | 7         |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 4          | 963.5 | 14        |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 5          | 962.1 | 17        |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 6          |       | 50/2"     |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 7          |       |           |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 8          |       | 0         |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 9          |       |           |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 10         |       |           |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 11         |       |           |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 12         |       |           |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 13         |       |           |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 14         |       |           |               |          |    |               |    |    |    |    |    |           |    |             |  |
| 15         | 952.9 | 53        |               |          |    |               |    |    |    |    |    |           |    |             |  |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

|  |
|--|
| <b>Photo No.</b><br>2                          |
| <b>Boring:</b><br>B-002-0-23                   |
| RC-1: 6.0-10.25'<br>REC (%):68<br>RQD (%):10   |
| RC-2: 10.25-15.25'<br>REC (%):96<br>RQD (%):53 |





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:03 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL003.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/20/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA / NQ2  
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 304+00 / 0'  
ALIGNMENT: CL WALL 3  
ELEVATION: 969.1 (MSL) EOB: 15.0 ft.  
LAT / LONG: 40.080806, -82.863307

EXPLORATION ID  
**B-003-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5')  
HARD, BROWN SILT AND CLAY, TRACE GRAVEL

**SANDSTONE** : BROWN, HIGHLY WEATHERED.  
**SANDSTONE** : BROWN TO GRAY, MODERATELY TO SLIGHTLY WEATHERED; STRONG; FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.  
-@7.0' - 9.0' HIGHLY FRACTURED, RED IRON OXIDE STAINING IN FRACTURES

-@10.0' - 11.0' 4MM PYRITE NODULES THROUGHOUT  
-@11.0' - 11.2' CLAY SEAM  
-@11.2' - 13.5' MANY TINY PYRTIE SPECKS THROUGHOUT

-@13.5' - 15.0' LITTLE PYRITE

| DEPTH (ft) | ELEV. | SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    | WC | HOLE SEALED |      |
|------------|-------|-----------|-----------------|---------------|----------|---------------|----|----|----|----|----|----|-------------|------|
|            |       |           |                 |               |          | GR            | CS | FS | SI | CL | LL |    |             | PL   |
| 1          | 969.1 | 3         |                 |               |          |               |    |    |    |    |    |    |             |      |
| 2          | 968.6 | 5         | 16              | SS-1          | 4.5+     |               |    |    |    |    |    |    |             |      |
| 3          |       | 6         |                 |               |          |               |    |    |    |    |    |    |             |      |
| 4          | 964.4 | 5         |                 |               |          |               |    |    |    |    |    |    |             |      |
| 5          | 964.1 | 6         |                 | SS-2          | 4.5+     |               |    |    |    |    |    |    |             |      |
| 6          |       | 50/3"     |                 |               |          |               |    |    |    |    |    |    |             |      |
| 7          |       |           | 0               | NQ2-1         |          |               |    |    |    |    |    |    |             | CORE |
| 8          |       |           |                 |               |          |               |    |    |    |    |    |    |             |      |
| 9          |       |           |                 |               |          |               |    |    |    |    |    |    |             |      |
| 10         |       |           |                 |               |          |               |    |    |    |    |    |    |             |      |
| 11         |       |           |                 |               |          |               |    |    |    |    |    |    |             |      |
| 12         |       |           |                 |               |          |               |    |    |    |    |    |    |             |      |
| 13         |       | 55        |                 | NQ2-2         |          |               |    |    |    |    |    |    |             | CORE |
| 14         | 954.1 |           |                 |               |          |               |    |    |    |    |    |    |             |      |
| 15         | EOB   |           |                 |               |          |               |    |    |    |    |    |    |             |      |

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

**Photo No.**  
3

**Boring:**  
B-003-0-23


RC-1: 5.0'-10.0'  
REC (%):80  
RQD (%):0






**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:22 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1004.dgn

|   |   |   |
|---|---|---|
| <b>Project Name:</b> FRA-161-15.80            |   | <b>Location:</b><br>Franklin County, Ohio |
| <b>Photo No.</b><br>4                         |  |   |
| <b>Boring:</b><br>B-003-0-23                  |   |   |
| RC-2: 10.0-15.0'<br>REC (%):100<br>RQD (%):55 |   |   |

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  

|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 32     | 66    |
| SHEET  | TOTAL |
| P.261  | 295   |

GEOTECHNICAL PROFILE - NOISE WALLS  
 NOISE WALL 3  
 BORING LOG & ROCK CORE PHOTO FOR B-003-0-23



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:35 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL005.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 305+76 / 0'  
 ALIGNMENT: CL WALL 3  
 ELEVATION: 969.2 (MSL) EOB: 15.0 ft.  
 LAT / LONG: 40.081003, -82.862692

EXPLORATION ID  
**B-004-0-23**  
 PAGE  
 1 OF 1

| MATERIAL DESCRIPTION AND NOTES  | ELEV. | SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    | WC | HOLE SEALED |    |            |
|---|-------|-----------|-----------------|---------------|----------|---------------|----|----|----|----|----|----|-------------|----|------------|
|   |       |           |                 |               |          | GR            | CS | FS | SI | CL | LL |    |             | PL | PI         |
| 0.4' TOPSOIL (5.0')   | 969.2 | 3         |                 |               |          |               |    |    |    |    |    |    |             |    |            |
| HARD, MOTTLED BROWN CLAY, SOME SILT, TRACE COARSE TO FINE SAND, MOIST.  | 968.8 | 4         | 16              | SS-1          | 4.5+     | 0             | 1  | 6  | 35 | 58 | 52 | 20 | 32          | 21 | A-7-6 (18) |
|   |       | 4         | 7               |               |          |               |    |    |    |    |    |    |             |    |            |
|   |       | 4         | 16              | SS-2          | 4.5+     | -             | -  | -  | -  | -  | -  | -  | -           | 19 | A-7-6 (V)  |
|   |       | 4         | 7               |               |          |               |    |    |    |    |    |    |             |    |            |
| SANDSTONE : GRAY, HIGHLY WEATHERED.   | 963.7 | 50/2"     |                 | SS-3          |          |               |    |    |    |    |    |    |             | 10 | Rock (V)   |
|   |       | 50/2"     |                 | SS-4          |          |               |    |    |    |    |    |    |             | 5  | Rock (V)   |
|   |       |           |                 |               |          |               |    |    |    |    |    |    |             |    |            |
| SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.<br>-@11.8' - 12.4' FRACTURE<br>-@13.3' - 15.0' MANY TINY PYRITE NODULES THROUGHOUT | 959.2 | 0         |                 | NQ2-1         | 75       |               |    |    |    |    |    |    |             |    | CORE       |
|   |       |           |                 |               |          |               |    |    |    |    |    |    |             |    |            |
|   | 954.2 |           |                 |               |          |               |    |    |    |    |    |    |             |    |            |

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
**5**

**Boring:**  
 B-004-0-23

RC-1: 10.0'-15.0'  
 REC (%):75  
 RQD (%):0





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:55 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL006.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 600+00 / 0'  
 ALIGNMENT: CL WALL 6  
 ELEVATION: 961.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087831, -82.843714

EXPLORATION ID  
**B-005-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' - TOPSOIL (5.0")  
 VERY STIFF TO HARD, DARK BROWN TO BROWNISH GRAY SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE, DARK GRAY COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, WET.

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, WET.

DENSE, DARK GRAY COARSE AND FINE SAND, TRACE FINE GRAVEL, TRACE SILT, WET.

ELEV. 961.5

961.1

| DEPTH | SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GR | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) |
|-------|-----------|-----------------|---------------|----------|----|----|----|----|----|----|----|----|-----------------|
| 1     | 6         | 8               | SS-1          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 14 A-6a (V)     |
| 2     | 8         | 8               |               |          |    |    |    |    |    |    |    |    |                 |
| 3     |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 4     | 5         | 6               | SS-2          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 22 A-6a (V)     |
| 5     | 10        | 10              |               |          |    |    |    |    |    |    |    |    |                 |
| 6     | 8         | 16              | SS-3          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 12 A-6a (V)     |
| 7     | 23        | 23              |               |          |    |    |    |    |    |    |    |    |                 |
| 8     |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 9     | 7         | 7               | SS-4          | 4.5+     | 9  | 11 | 16 | 31 | 33 | 28 | 16 | 12 | 13 A-6a (7)     |
| 10    |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 11    | 4         | 4               | SS-5          | 2.50     | -  | -  | -  | -  | -  | -  | -  | -  | 14 A-6a (V)     |
| 12    | 4         | 5               |               |          |    |    |    |    |    |    |    |    |                 |
| 13    |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 14    | 5         | 19              | SS-6          | -        | -  | -  | -  | -  | -  | -  | -  | -  | 14 A-3a (V)     |
| 15    | 8         | 8               |               |          |    |    |    |    |    |    |    |    |                 |
| 16    | 21        | 21              | SS-7          | -        | -  | -  | -  | -  | -  | -  | -  | -  | 12 A-1-b (V)    |
| 17    | 16        | 16              |               |          |    |    |    |    |    |    |    |    |                 |
| 18    |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 19    | 31        | 15              | SS-8          | -        | -  | -  | -  | -  | -  | -  | -  | -  | 11 A-1-b (V)    |
| 20    | 25        | 25              |               |          |    |    |    |    |    |    |    |    |                 |
| 21    | 9         | 10              | SS-9          | -        | 51 | 17 | 10 | 13 | 9  | NP | NP | NP | 13 A-1-b (0)    |
| 22    | 16        | 16              |               |          |    |    |    |    |    |    |    |    |                 |
| 23    |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 24    | 8         | 12              | SS-10         | -        | -  | -  | -  | -  | -  | -  | -  | -  | 18 A-3a (V)     |
| 25    | 18        | 18              |               |          |    |    |    |    |    |    |    |    |                 |

EOB -25

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 15.5' AND UPON COMPLETION @ 14.7'. CAVE-IN DEPTH @ 11.8'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 601+77 / 0'  
 ALIGNMENT: CL WALL 6  
 ELEVATION: 968.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088035, -82.843136

EXPLORATION ID  
**B-006-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5")  
 HARD, BROWN SILT AND CLAY, SOME CLAY, TRACE FINE GRAVEL, DAMP.

DENSE TO MEDIUM DENSE, BROWN GRAY GRAVEL WITH SAND, SILT, AND CLAY, MOIST.

ELEV. 968.1

967.6

| DEPTH | SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GR | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) |
|-------|-----------|-----------------|---------------|----------|----|----|----|----|----|----|----|----|-----------------|
| 1     | 6         | 10              | SS-1          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 11 A-6a (V)     |
| 2     | 10        | 12              |               |          |    |    |    |    |    |    |    |    |                 |
| 3     |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 4     | 7         | 12              | SS-2          | 4.5+     | 7  | 11 | 16 | 32 | 34 | 29 | 17 | 12 | 14 A-6a (7)     |
| 5     | 13        | 13              |               |          |    |    |    |    |    |    |    |    |                 |
| 6     | 7         | 9               | SS-3          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 13 A-6a (V)     |
| 7     | 11        | 11              |               |          |    |    |    |    |    |    |    |    |                 |
| 8     |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 9     | 6         | 11              | SS-4          | -        | -  | -  | -  | -  | -  | -  | -  | -  | 11 A-2-4 (V)    |
| 10    | 16        | 16              |               |          |    |    |    |    |    |    |    |    |                 |
| 11    | 7         | 17              | SS-5          | -        | -  | -  | -  | -  | -  | -  | -  | -  | 7 A-2-4 (V)     |
| 12    | 16        | 16              |               |          |    |    |    |    |    |    |    |    |                 |
| 13    |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 14    | 9         | 15              | SS-6          | -        | -  | -  | -  | -  | -  | -  | -  | -  | -               |
| 15    | 16        | 16              |               |          |    |    |    |    |    |    |    |    |                 |
| 16    | 13        | -               | 2S-6A         | -        | -  | -  | -  | -  | -  | -  | -  | -  | 15 A-2-4 (V)    |
| 17    | 21        | 18              | SS-7          | -        | 36 | 19 | 14 | 19 | 12 | 24 | 17 | 7  | 11 A-2-4 (0)    |
| 18    | 15        | 15              |               |          |    |    |    |    |    |    |    |    |                 |
| 19    | 16        | 12              | SS-8          | -        | -  | -  | -  | -  | -  | -  | -  | -  | 10 A-2-4 (V)    |
| 20    | 8         | 8               |               |          |    |    |    |    |    |    |    |    |                 |
| 21    | 10        | 12              | SS-9          | -        | -  | -  | -  | -  | -  | -  | -  | -  | 12 A-3a (V)     |
| 22    | 12        | 12              |               |          |    |    |    |    |    |    |    |    |                 |
| 23    |           |                 |               |          |    |    |    |    |    |    |    |    |                 |
| 24    | 16        | 15              | SS-10         | -        | -  | -  | -  | -  | -  | -  | -  | -  | 10 A-1-b (V)    |
| 25    | 15        | 15              |               |          |    |    |    |    |    |    |    |    |                 |

EOB -25

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 13.5' AND UPON COMPLETION @ 15.5'. CAVE-IN DEPTH @ 12.2'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
**34 66**  
 SHEET TOTAL  
**P.263 295**

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 6**  
**BORING LOGS B-005-0-23 AND B-006-0-23**











**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:49:10 PM USER: juans  
 J:\GEO\GEOCH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607-400-Engineering\Geotechnical\Sheets\117607\_ZL009.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 2196+50 / 111' RT  
 ALIGNMENT: CL SR 161  
 ELEVATION: 964.3 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087493, -82.842814

EXPLORATION ID  
**B-011-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (3.5')

STIFF TO HARD, BROWN TO GRAY SILT AND CLAY, "AND" COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

LOOSE TO DENSE, BROWN GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, WET.

-HEAVE @ 21.0' AND 23.0'

| SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    | ATTERBERG |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |              |
|-----------|-----------------|---------------|----------|---------------|----|----|----|-----------|----|----|----|----|-----------------|-----------|--------------|
|           |                 |               |          | GR            | CS | FS | SI | CL        | LL | PL | PI |    |                 |           |              |
| 5         | 7               | 23            | 53       |               |    |    |    |           |    |    |    |    |                 |           |              |
| 9         | 7               | 9             | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           | 21 A-6a (V)  |
| 7         | 9               | 27            | 61       |               |    |    |    |           |    |    |    |    |                 |           | 13 A-6a (V)  |
| 10        | 9               | 10            | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 4         | 6               | 17            | 81       |               |    |    |    |           |    |    |    |    |                 |           | 12 A-6a (5)  |
| 6         | 6               | 6             | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 5         | 5               | 19            | 89       |               |    |    |    |           |    |    |    |    |                 |           | 14 A-6a (V)  |
| 8         | 5               | 8             | 3.75     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 2         | 3               | 12            | 56       |               |    |    |    |           |    |    |    |    |                 |           | 14 A-6a (V)  |
| 5         | 3               | 5             | 2.50     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 1         | 2               | 9             | 53       |               |    |    |    |           |    |    |    |    |                 |           | 15 A-6a (V)  |
| 4         | 2               | 4             | 1.25     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 3         | 6               | 19            | 39       |               |    |    |    |           |    |    |    |    |                 |           | 20 A-1-b (V) |
| 7         | 6               | 7             | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 2         | 2               | 9             | 67       |               |    |    |    |           |    |    |    |    |                 |           | 22 A-1-b (0) |
| 4         | 2               | 4             | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 9         | 2               | 9             | 68       |               |    |    |    |           |    |    |    |    |                 |           | 14 A-1-b (V) |
| 11        | 9               | 29            | 100      |               |    |    |    |           |    |    |    |    |                 |           |              |
| 11        | 9               | 11            | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 7         | 10              | 35            | 100      |               |    |    |    |           |    |    |    |    |                 |           | 12 A-1-b (V) |
| 14        | 10              | 14            | -        |               |    |    |    |           |    |    |    |    |                 |           |              |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 7.8'. CAVE-IN DEPTH @ 13.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GPJ

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 800+72 / 117' RT  
 ALIGNMENT: CL SR 161  
 ELEVATION: 967.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087734, -82.842176

EXPLORATION ID  
**B-012-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0')

HARD, LIGHT BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

-COBBLES FROM 4.8' - 5.2'  
 -AUGER REFUSAL @ 5.2'. OFFSET 7.0' SW, CONTINUED SAMPLING AT 6.0'

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

HARD, BROWN SANDY SILT, LITTLE CLAY, TRACE FINE GRAVEL, MOIST.

| SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    | ATTERBERG |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |              |
|-----------|-----------------|---------------|----------|---------------|----|----|----|-----------|----|----|----|----|-----------------|-----------|--------------|
|           |                 |               |          | GR            | CS | FS | SI | CL        | LL | PL | PI |    |                 |           |              |
| 5         | 6               | 22            | 53       |               |    |    |    |           |    |    |    |    |                 |           |              |
| 9         | 6               | 9             | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           | 18 A-6a (V)  |
| 14        | 6               | 63            | 72       |               |    |    |    |           |    |    |    |    |                 |           | 10 A-6a (V)  |
| 16        | 6               | 28            | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 11        | 13              | 42            | 78       |               |    |    |    |           |    |    |    |    |                 |           | 11 A-6a (8)  |
| 16        | 13              | 16            | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 20        | 28              | 63            | 47       |               |    |    |    |           |    |    |    |    |                 |           | 10 A-6a (V)  |
| 16        | 20              | 16            | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 5         | 18              | 43            | 33       |               |    |    |    |           |    |    |    |    |                 |           | 11 A-6a (V)  |
| 12        | 18              | 12            | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 7         | 14              | 46            | 53       |               |    |    |    |           |    |    |    |    |                 |           | 8 A-1-b (0)  |
| 18        | 14              | 18            | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 15        | 15              | 40            | 72       |               |    |    |    |           |    |    |    |    |                 |           | 8 A-1-b (V)  |
| 10        | 15              | 10            | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 17        | 18              | 52            | 61       |               |    |    |    |           |    |    |    |    |                 |           | 11 A-1-b (V) |
| 18        | 17              | 18            | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 18        | 18              | 61            | SS-8     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 18        | 18              | -             | -        |               |    |    |    |           |    |    |    |    |                 |           |              |
| 18        | 18              | 86            | 50       |               |    |    |    |           |    |    |    |    |                 |           | 11 A-4a (V)  |
| 26        | 18              | 26            | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |              |
| 6         | 9               | 30            | 47       |               |    |    |    |           |    |    |    |    |                 |           | 11 A-4a (V)  |
| 12        | 9               | 12            | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |              |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND UPON COMPLETION @ 14.9'. CAVE-IN DEPTH @ 18.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GPJ



DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
**37 66**  
 SHEET TOTAL  
**P.266 295**

**GEOTECHNICAL PROFILE - NOISE WALLS  
 NOISE WALL 8  
 BORING LOGS B-011-0-23 AND B-012-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:49:34 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL010.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 802+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 967.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.087953, -82.841539

EXPLORATION ID  
**B-013-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, LIGHT BROWN TO BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, GRAY COARSE AND FINE SAND, TRACE FINE GRAVEL, TRACE SILT, DAMP.

MEDIUM DENSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, MOIST.

-AUGER LOST IN BORING @ 18.5' - 23.5'

| SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    | ATTERBERG |    |    |   | WC | ODOT CLASS (GI) | BACK FILL |  |
|-----------|-----------------|---------------|----------|---------------|----|----|----|-----------|----|----|---|----|-----------------|-----------|--|
|           |                 |               |          | GR            | CS | FS | SI | LL        | PL | PI |   |    |                 |           |  |
| 5         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 7         | 24              | SS-1          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 15              | A-6a (V)  |  |
| 10        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 9         | 33              | SS-2          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 14              | A-6a (V)  |  |
| 10        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 13        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 11        | 30              | SS-3          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 12              | A-6a (V)  |  |
| 10        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 11        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 7         | 27              | SS-4          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 12              | A-6a (8)  |  |
| 8         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 11        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 10        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 17        | 84              | SS-5          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 5               | A-3a (V)  |  |
| 14        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 41        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 18        | 45              | SS-6          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 6               | A-3a (V)  |  |
| 15        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 16        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 5         | 27              | SS-7          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 12              | A-2-4 (V) |  |
| 8         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 11        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 14        | 55              | SS-8          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 9               | A-2-4 (V) |  |
| 24        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 14        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 9         | 32              | SS-9          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 11              | A-2-4 (0) |  |
| 12        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 10        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 23        | 63              | SS-10         | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 10              | A-2-4 (V) |  |
| 23        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 21        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 25        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 14.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GP1

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/6/23 END: 11/2/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 804+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 966.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088209, -82.840922

EXPLORATION ID  
**B-014-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' TOPSOIL (5.5")  
 HARD, LIGHT BROWN TO GRAY SILTY CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE TO DENSE, GRAY GRAVEL WITH SAND AND SILT, WET.

| SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    | ATTERBERG |    |    |   | WC | ODOT CLASS (GI) | BACK FILL |  |
|-----------|-----------------|---------------|----------|---------------|----|----|----|-----------|----|----|---|----|-----------------|-----------|--|
|           |                 |               |          | GR            | CS | FS | SI | LL        | PL | PI |   |    |                 |           |  |
| 3         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 3         | 13              | SS-1          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 21              | A-6b (V)  |  |
| 6         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 5         | 17              | SS-2          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 15              | A-6b (12) |  |
| 7         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 4         | 22              | SS-3          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 15              | A-6b (V)  |  |
| 6         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 9         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 16        | 35              | SS-4          | 4.5+     | -             | -  | -  | -  | -         | -  | -  | - | -  | 12              | A-6b (V)  |  |
| 14        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 10        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 5         | 19              | SS-5          | 4.25     | -             | -  | -  | -  | -         | -  | -  | - | -  | 12              | A-6b (V)  |  |
| 5         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 8         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 13        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 8         | 43              | SS-6          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 15              | A-2-4 (V) |  |
| 14        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 16        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 5         | 23              | SS-7          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 12              | A-2-4 (0) |  |
| 8         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 6         | 24              | SS-8          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 10              | A-2-4 (V) |  |
| 8         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 9         | 26              | SS-9          | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 13              | A-2-4 (V) |  |
| 8         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 10        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 5         | 22              | SS-10         | -        | -             | -  | -  | -  | -         | -  | -  | - | -  | 19              | A-4a (V)  |  |
| 7         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 8         |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |
| 25        |                 |               |          |               |    |    |    |           |    |    |   |    |                 |           |  |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 13.5' AND UPON COMPLETION @ 11.8'; CAVE-IN DEPTH @ 12.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GP1

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 38 66  
 SHEET TOTAL  
 P.267 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 8**  
**BORING LOGS B-013-0-23 AND B-014-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:49:59 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL01.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 806+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 966.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088482, -82.840308

EXPLORATION ID  
**B-015-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.7' -TOPSOIL (8.0")

VERY STIFF, BROWNISH GRAY TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, TRACE GRAVEL AND SAND, DAMP TO MOIST.

ELEV. 966.5

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT/ RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |    |    |          |   |    |          |
|-------|----------|---------------|---------------|-----------|-----------------|-----------|----|----|----------|---|----|----------|
| 1     | 3        |               |               |           |                 |           |    |    |          |   |    |          |
| 2     | 4        | 12            | -             | -         | 19              | A-6b (V)  |    |    |          |   |    |          |
| 3     | 4        |               |               |           |                 |           |    |    |          |   |    |          |
| 4     | 10       | 59            | -             | -         | 13              | A-6b (V)  |    |    |          |   |    |          |
| 5     | 11       |               |               |           |                 |           |    |    |          |   |    |          |
| 6     | 8        | 35            | 13            | 33        | 34              | 18        | 16 | 13 | A-6b (8) |   |    |          |
| 7     | 13       |               |               |           |                 |           |    |    |          |   |    |          |
| 8     |          |               |               |           |                 |           |    |    |          |   |    |          |
| 9     | 6        | 20            | -             | -         | 13              | A-6b (V)  |    |    |          |   |    |          |
| 10    | 8        |               |               |           |                 |           |    |    |          |   |    |          |
| 11    | 6        | 23            | -             | -         | 13              | A-6b (V)  |    |    |          |   |    |          |
| 12    | 10       |               |               |           |                 |           |    |    |          |   |    |          |
| 13    |          |               |               |           |                 |           |    |    |          |   |    |          |
| 14    | 6        | 17            | -             | -         | 12              | A-6b (V)  |    |    |          |   |    |          |
| 15    | 5        |               |               |           |                 |           |    |    |          |   |    |          |
| 16    | 17       |               |               |           |                 |           |    |    |          |   |    |          |
| 17    | 30       | 79            | -             | -         | 13              | A-4a (V)  |    |    |          |   |    |          |
| 18    | 25       |               |               |           |                 |           |    |    |          |   |    |          |
| 19    | 19       | 72            | 42            | 13        | 8               | 24        | 13 | 26 | 17       | 9 | 10 | A-4a (0) |
| 20    | 26       |               |               |           |                 |           |    |    |          |   |    |          |
| 21    | 10       | 46            | -             | -         | 11              | A-4a (V)  |    |    |          |   |    |          |
| 22    | 18       | 53            | -             | -         |                 |           |    |    |          |   |    |          |
| 23    | 14       |               |               |           |                 |           |    |    |          |   |    |          |
| 24    | 9        | 46            | -             | -         | 9               | A-4a (V)  |    |    |          |   |    |          |
| 25    | 17       |               |               |           |                 |           |    |    |          |   |    |          |

ELEV. 951.0

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT/ RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |    |    |    |   |    |          |
|-------|----------|---------------|---------------|-----------|-----------------|-----------|----|----|----|---|----|----------|
| 16    | 17       |               |               |           |                 |           |    |    |    |   |    |          |
| 17    | 30       | 79            | -             | -         | 13              | A-4a (V)  |    |    |    |   |    |          |
| 18    | 25       |               |               |           |                 |           |    |    |    |   |    |          |
| 19    | 19       | 72            | 42            | 13        | 8               | 24        | 13 | 26 | 17 | 9 | 10 | A-4a (0) |
| 20    | 26       |               |               |           |                 |           |    |    |    |   |    |          |
| 21    | 10       | 46            | -             | -         | 11              | A-4a (V)  |    |    |    |   |    |          |
| 22    | 18       | 53            | -             | -         |                 |           |    |    |    |   |    |          |
| 23    | 14       |               |               |           |                 |           |    |    |    |   |    |          |
| 24    | 9        | 46            | -             | -         | 9               | A-4a (V)  |    |    |    |   |    |          |
| 25    | 17       |               |               |           |                 |           |    |    |    |   |    |          |

NOTES: SEEPAGE @ 14.0'; GROUNDWATER INITIALLY ENCOUNTERED @ 15.0' AND UPON COMPLETION @ 10.0'; CAVE-IN DEPTH @ 14.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 808+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 968.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088693, -82.839666

EXPLORATION ID  
**B-016-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.6' -TOPSOIL (7.0")

VERY STIFF TO HARD, LIGHT BROWN TO BROWN SILT AND CLAY, SOME COARSE TO FINE GRAVEL, LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 968.4

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT/ RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |    |    |    |    |    |           |
|-------|----------|---------------|---------------|-----------|-----------------|-----------|----|----|----|----|----|-----------|
| 1     | 5        |               |               |           |                 |           |    |    |    |    |    |           |
| 2     | 5        | 14            | -             | -         | 15              | A-6a (V)  |    |    |    |    |    |           |
| 3     | 5        |               |               |           |                 |           |    |    |    |    |    |           |
| 4     | 8        | 24            | -             | -         | 13              | A-6a (V)  |    |    |    |    |    |           |
| 5     | 9        |               |               |           |                 |           |    |    |    |    |    |           |
| 6     | 11       | 33            | -             | -         | 12              | A-6a (V)  |    |    |    |    |    |           |
| 7     | 12       |               |               |           |                 |           |    |    |    |    |    |           |
| 8     |          |               |               |           |                 |           |    |    |    |    |    |           |
| 9     | 8        | 37            | 14            | 11        | 15              | 33        | 27 | 28 | 16 | 12 | 10 | A-6a (6)  |
| 10    | 13       |               |               |           |                 |           |    |    |    |    |    |           |
| 11    | 7        | 20            | -             | -         | 13              | A-6a (V)  |    |    |    |    |    |           |
| 12    | 7        |               |               |           |                 |           |    |    |    |    |    |           |
| 13    |          |               |               |           |                 |           |    |    |    |    |    |           |
| 14    | 5        | 29            | -             | -         | 13              | A-6a (V)  |    |    |    |    |    |           |
| 15    | 9        |               |               |           |                 |           |    |    |    |    |    |           |
| 16    | 12       | 35            | 50            | 23        | 9               | 12        | 6  | 23 | 17 | 6  | 10 | A-1-b (0) |
| 17    | 12       |               |               |           |                 |           |    |    |    |    |    |           |
| 18    |          |               |               |           |                 |           |    |    |    |    |    |           |
| 19    | 11       | 26            | -             | -         | 14              | A-1-b (V) |    |    |    |    |    |           |
| 20    | 9        |               |               |           |                 |           |    |    |    |    |    |           |
| 21    | 16       | 48            | -             | -         | 10              | A-1-b (V) |    |    |    |    |    |           |
| 22    | 17       |               |               |           |                 |           |    |    |    |    |    |           |
| 23    |          |               |               |           |                 |           |    |    |    |    |    |           |
| 24    | 13       | 91            | -             | -         | 8               | A-1-b (V) |    |    |    |    |    |           |
| 25    | 32       |               |               |           |                 |           |    |    |    |    |    |           |

ELEV. 952.9

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT/ RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |   |    |    |   |    |           |
|-------|----------|---------------|---------------|-----------|-----------------|-----------|---|----|----|---|----|-----------|
| 16    | 12       | 35            | 50            | 23        | 9               | 12        | 6 | 23 | 17 | 6 | 10 | A-1-b (0) |
| 17    | 12       |               |               |           |                 |           |   |    |    |   |    |           |
| 18    |          |               |               |           |                 |           |   |    |    |   |    |           |
| 19    | 11       | 26            | -             | -         | 14              | A-1-b (V) |   |    |    |   |    |           |
| 20    | 9        |               |               |           |                 |           |   |    |    |   |    |           |
| 21    | 16       | 48            | -             | -         | 10              | A-1-b (V) |   |    |    |   |    |           |
| 22    | 17       |               |               |           |                 |           |   |    |    |   |    |           |
| 23    |          |               |               |           |                 |           |   |    |    |   |    |           |
| 24    | 13       | 91            | -             | -         | 8               | A-1-b (V) |   |    |    |   |    |           |
| 25    | 32       |               |               |           |                 |           |   |    |    |   |    |           |

NOTES: SEEPAGE @ 17.5'; GROUNDWATER INITIALLY ENCOUNTERED @ 18.0' AND UPON COMPLETION @ 13.6'; CAVE-IN DEPTH @ 21.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 39 66  
 SHEET TOTAL  
 P.268 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 8**  
**BORING LOGS B-015-0-23 AND B-016-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:50:22 PM USER: juans  
 J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL012.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 810+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 970.7 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.088908, -82.839020

EXPLORATION ID  
**B-017-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0')

HARD TO VERY STIFF, BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP TO MOIST.

| DEPTH | ELEV. | SPT / RQD | REC SAMPLE (%) | HP ID | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------|-------|-----------|----------------|-------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|       |       |           |                |       | GR            | FS | SI | CL | LL | PL        | PI |    |    |                 |           |
| 1     | 970.7 | 6         |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 2     | 970.3 | 9         | 30             | SS-1  | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 17 | A-6a (V)        |           |
| 3     |       | 12        |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 4     |       | 20        | 60             | SS-2  | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 11 | A-6a (V)        |           |
| 5     |       | 22        | 20             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 6     |       | 12        | 32             | SS-3  | 4.5+          | 9  | 10 | 16 | 37 | 28        | 17 | 11 | 10 | A-6a (6)        |           |
| 7     |       | 11        | 11             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 8     |       |           |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 9     |       | 7         | 36             | SS-4  | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 13 | A-6a (V)        |           |
| 10    |       | 10        | 15             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 11    |       | 5         | 16             | SS-5  | 4.00          | -  | -  | -  | -  | -         | -  | -  | 11 | A-6a (V)        |           |
| 12    |       | 6         |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 13    |       |           |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 14    | 955.2 | 5         | 24             | SS-6  | 3.50          | -  | -  | -  | -  | -         | -  | -  | 10 | A-6a (V)        |           |
| 15    |       | 12        |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 16    |       | 10        | 39             | SS-7  | -             | -  | -  | -  | -  | -         | -  | -  | 7  | A-2-4 (V)       |           |
| 17    |       | 12        | 15             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 18    |       |           |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 19    |       | 10        | 50             | SS-8  | -             | 45 | 15 | 12 | 22 | 6         | NP | NP | 11 | A-2-4 (0)       |           |
| 20    |       | 15        | 20             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 21    |       | 15        | 84             | SS-9  | -             | -  | -  | -  | -  | -         | -  | -  | 9  | A-2-4 (V)       |           |
| 22    |       | 30        | 28             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 23    |       |           |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 24    | 945.7 | 13        | 62             | SS-10 | -             | -  | -  | -  | -  | -         | -  | -  | 7  | A-2-4 (V)       |           |
| 25    |       | 17        | 26             |       |               |    |    |    |    |           |    |    |    |                 |           |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.0'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 812+76 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 975.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.089106, -82.838365

EXPLORATION ID  
**B-018-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0')

VERY STIFF TO HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, BROWN-GRAY TO GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

| DEPTH | ELEV. | SPT / RQD | REC SAMPLE (%) | HP ID | GRADATION (%) |    |    |    |    | ATTERBERG |    |    | WC | ODOT CLASS (GI) | BACK FILL |
|-------|-------|-----------|----------------|-------|---------------|----|----|----|----|-----------|----|----|----|-----------------|-----------|
|       |       |           |                |       | GR            | FS | SI | CL | LL | PL        | PI |    |    |                 |           |
| 1     | 975.5 | 6         |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 2     |       | 10        | 32             | SS-1  | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 14 | A-4a (V)        |           |
| 3     |       | 12        |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 4     |       | 12        | 46             | SS-2  | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 10 | A-4a (V)        |           |
| 5     |       | 13        | 19             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 6     |       | 17        | 40             | SS-3  | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 13 | A-4a (V)        |           |
| 7     |       | 13        | 15             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 8     |       |           |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 9     |       | 8         | 29             | SS-4  | 4.5+          | -  | -  | -  | -  | -         | -  | -  | 11 | A-4a (V)        |           |
| 10    |       | 9         | 11             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 11    |       | 7         | 23             | SS-5  | 3.25          | 13 | 11 | 15 | 35 | 26        | 24 | 15 | 12 | A-4a (5)        |           |
| 12    |       | 8         | 8              |       |               |    |    |    |    |           |    |    |    |                 |           |
| 13    |       |           |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 14    |       | 6         | 24             | SS-6  | 3.25          | -  | -  | -  | -  | -         | -  | -  | 12 | A-4a (V)        |           |
| 15    |       | 8         | 9              |       |               |    |    |    |    |           |    |    |    |                 |           |
| 16    |       | 3         | 4              | SS-7  | 2.50          | -  | -  | -  | -  | -         | -  | -  | 12 | A-4a (V)        |           |
| 17    |       | 4         | 5              |       |               |    |    |    |    |           |    |    |    |                 |           |
| 18    | 957.5 |           |                |       |               |    |    |    |    |           |    |    |    |                 |           |
| 19    |       | 8         | 39             | SS-8  | -             | 61 | 15 | 8  | 11 | 5         | 26 | 20 | 8  | A-1-b (0)       |           |
| 20    |       | 13        | 14             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 21    |       | 11        | 91             | SS-9  | -             | -  | -  | -  | -  | -         | -  | -  | -  |                 |           |
| 22    | 953.0 | 29        | 34             |       |               |    |    |    |    |           |    |    |    |                 |           |
| 23    |       | 38        | -              | 2S-9A | -             | -  | -  | -  | -  | -         | -  | -  | 8  | Rock (V)        |           |
| 24    |       | 28        | -              | SS-10 | -             | -  | -  | -  | -  | -         | -  | -  | 5  | Rock (V)        |           |
| 25    | 950.5 | 50/3'     |                |       |               |    |    |    |    |           |    |    |    |                 |           |

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 16.4'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
 40 66  
 SHEET TOTAL  
 P.269 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 8**  
**BORING LOGS B-017-0-23 AND B-018-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:50:47 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL013.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 814+72 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 974.9 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.089329, -82.837734

EXPLORATION ID  
**B-019-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTHS | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | GRADATION (%) |    |    |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |              |
|--------|-------|-----------|---------------|----------|----|---------------|----|----|----|----|----|----|-----------------|-----------|--------------|
|        |       |           |               |          |    | FS            | SI | CL | LL | PL | PI |    |                 |           |              |
| 1      | 974.9 | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 2      | 974.6 | 9         |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           | 16 A-6a (V)  |
| 3      |       |           |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 4      |       | 12        |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           | 10 A-6a (V)  |
| 5      | 969.4 | 16        |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 6      |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 7      |       | 7         |               | 61       |    |               |    |    |    |    |    |    |                 |           | 10 A-2.4 (V) |
| 8      |       | 3         |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 9      |       | 5         |               | 4.25     | 12 | 11            | 17 | 35 | 25 | 24 | 14 | 10 | 11              |           | A-4a (5)     |
| 10     |       | 6         |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 11     |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 12     |       | 5         |               | 56       |    |               |    |    |    |    |    |    |                 |           | 12 A-4a (V)  |
| 13     |       | 6         |               | 44       |    |               |    |    |    |    |    |    |                 |           |              |
| 14     |       | 8         |               | 26       |    |               |    |    |    |    |    |    |                 |           | 12 A-4a (V)  |
| 15     |       | 10        |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 16     |       | 5         |               | 22       |    |               |    |    |    |    |    |    |                 |           | 13 A-4a (V)  |
| 17     |       | 6         |               | 89       |    |               |    |    |    |    |    |    |                 |           |              |
| 18     | 956.9 | 9         |               | 3.50     |    |               |    |    |    |    |    |    |                 |           |              |
| 19     |       | 10        |               |          | 53 | 18            | 10 | 13 | 6  | 24 | 18 | 6  | 9               |           | A-1-b (0)    |
| 20     |       | 12        |               | 47       |    |               |    |    |    |    |    |    |                 |           |              |
| 21     |       | 15        |               |          |    |               |    |    |    |    |    |    |                 |           |              |
| 22     |       | 8         |               | 56       |    |               |    |    |    |    |    |    |                 |           | 10 A-1-b (V) |
| 23     | 951.9 | 9         |               | 24       |    |               |    |    |    |    |    |    |                 |           |              |
| 24     |       | 50/5"     |               | 100      |    |               |    |    |    |    |    |    |                 |           | 9 Rock (V)   |
| 25     | 949.9 | EOB       |               |          |    |               |    |    |    |    |    |    |                 |           |              |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 17.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GP1

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/27/23 END: 10/27/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 816+46 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 974.3 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.089531, -82.837178

EXPLORATION ID  
**B-020-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTHS | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | GRADATION (%) |    |    |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |             |
|--------|-------|-----------|---------------|----------|----|---------------|----|----|----|----|----|----|-----------------|-----------|-------------|
|        |       |           |               |          |    | FS            | SI | CL | LL | PL | PI |    |                 |           |             |
| 1      | 974.3 | 5         |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 2      | 973.9 | 7         |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           | 16 A-6a (V) |
| 3      |       |           |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 4      |       | 10        |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           | 13 A-6a (V) |
| 5      |       | 15        |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 6      |       | 10        |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           |             |
| 7      |       | 14        |               | 58       |    |               |    |    |    |    |    |    |                 |           | A-6a (7)    |
| 8      |       | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 9      |       | 10        |               | 58       |    |               |    |    |    |    |    |    |                 |           | 11 A-6a (V) |
| 10     |       | 9         |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           |             |
| 11     |       | 4         |               | 58       |    |               |    |    |    |    |    |    |                 |           | 11 A-6a (V) |
| 12     |       | 8         |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           |             |
| 13     |       | 6         |               | 58       |    |               |    |    |    |    |    |    |                 |           |             |
| 14     |       | 8         |               | 4.5+     |    |               |    |    |    |    |    |    |                 |           | 10 A-6a (6) |
| 15     |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 16     |       | 16        |               | 45       |    |               |    |    |    |    |    |    |                 |           | 11 A-6a (V) |
| 17     |       | 15        |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 18     | 956.3 | 50/5"     |               | 67       |    |               |    |    |    |    |    |    |                 |           | 9 Rock (V)  |
| 19     |       |           |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 20     |       |           |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 21     |       | 50/5"     |               | 56       |    |               |    |    |    |    |    |    |                 |           | 4 Rock (V)  |
| 22     |       |           |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 23     |       |           |               |          |    |               |    |    |    |    |    |    |                 |           |             |
| 24     |       | 50/6"     |               | 73       |    |               |    |    |    |    |    |    |                 |           | 4 Rock (V)  |
| 25     | 949.3 | EOB       |               |          |    |               |    |    |    |    |    |    |                 |           |             |

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 17.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GP1

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 41 66  
 SHEET TOTAL  
 P.270 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 8**  
**BORING LOGS B-019-0-23 AND B-020-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:51:10 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\_ZL014.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/27/23 END: 10/27/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 818+03 / 0'  
 ALIGNMENT: CL WALL 8  
 ELEVATION: 974.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.089729, -82.836617

EXPLORATION ID  
**B-021-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (3.0")  
 HARD, BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.

| DEPTH | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | ODOT CLASS (GI) |
|-------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-----------------|
|       |           |               |          | GR            | CS | FS | SI | CL | LL | PL |    |                 |
| 1     | 6         |               |          |               |    |    |    |    |    |    |    |                 |
| 2     | 8         | 23            | 4.5+     | -             | -  | -  | -  | -  | -  | -  | -  | 16 A-6a (V)     |
| 3     | 8         |               |          |               |    |    |    |    |    |    |    |                 |
| 4     | 17        | 55            | 4.5+     | 9             | 10 | 15 | 33 | 33 | 31 | 17 | 14 | 10 A-6a (8)     |
| 5     | 19        |               |          |               |    |    |    |    |    |    |    |                 |
| 6     | 10        | 35            | 4.5+     | -             | -  | -  | -  | -  | -  | -  | -  | 10 A-6a (V)     |
| 7     | 12        |               |          |               |    |    |    |    |    |    |    |                 |
| 8     | 12        |               |          |               |    |    |    |    |    |    |    |                 |
| 9     | 9         | 30            | 4.5+     | -             | -  | -  | -  | -  | -  | -  | -  | 10 A-6a (V)     |
| 10    | 12        |               |          |               |    |    |    |    |    |    |    |                 |
| 11    | 8         | 33            | 4.5+     | -             | -  | -  | -  | -  | -  | -  | -  | 10 A-6a (V)     |
| 12    | 10        |               |          |               |    |    |    |    |    |    |    |                 |
| 13    | 13        |               |          |               |    |    |    |    |    |    |    |                 |
| 14    | 6         | 23            | 4.5+     | 19            | 11 | 14 | 32 | 24 | 26 | 15 | 11 | A-6a (5)        |
| 15    | 9         |               |          |               |    |    |    |    |    |    |    |                 |
| 16    | 12        |               |          |               |    |    |    |    |    |    |    |                 |
| 17    | 12        | 35            | 0        | -             | -  | -  | -  | -  | -  | -  | -  |                 |
| 18    | 12        |               |          |               |    |    |    |    |    |    |    |                 |
| 19    | 9         |               |          |               |    |    |    |    |    |    |    |                 |
| 20    | 50/3"     |               |          |               |    |    |    |    |    |    |    | 6 Rock (V)      |
| 21    | 39        |               |          |               |    |    |    |    |    |    |    |                 |
| 22    | 50/2"     |               |          |               |    |    |    |    |    |    |    | 6 Rock (V)      |
| 23    |           |               |          |               |    |    |    |    |    |    |    |                 |
| 24    | 50/3"     |               |          |               |    |    |    |    |    |    |    | 5 Rock (V)      |
| 25    |           |               |          |               |    |    |    |    |    |    |    |                 |

TR

EOB

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 19.7'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/30/23 END: 10/30/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1100+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 975.0 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090031, -82.835639

EXPLORATION ID  
**B-022-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (4.0")  
 VERY STIFF TO HARD, BROWN SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

| DEPTH | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | ODOT CLASS (GI) |
|-------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-----------------|
|       |           |               |          | GR            | CS | FS | SI | CL | LL | PL |    |                 |
| 1     | 9         |               |          |               |    |    |    |    |    |    |    |                 |
| 2     | 14        | 45            | 67       | 4.5+          | -  | -  | -  | -  | -  | -  | -  | 12 A-4a (V)     |
| 3     | 17        |               |          |               |    |    |    |    |    |    |    |                 |
| 4     | 11        | 45            | 44       | 4.5+          | -  | -  | -  | -  | -  | -  | -  | 11 A-4a (V)     |
| 5     | 17        |               |          |               |    |    |    |    |    |    |    |                 |
| 6     | 8         | 24            | 39       | 4.5+          | -  | -  | -  | -  | -  | -  | -  | 13 A-4a (V)     |
| 7     | 8         |               |          |               |    |    |    |    |    |    |    |                 |
| 8     | 9         |               |          |               |    |    |    |    |    |    |    |                 |
| 9     | 3         | 9             | 56       | 3.00          | 12 | 10 | 15 | 36 | 27 | 25 | 15 | 13 A-4a (6)     |
| 10    | 3         |               |          |               |    |    |    |    |    |    |    |                 |
| 11    | 3         | 10            | 39       | 2.50          | -  | -  | -  | -  | -  | -  | -  | 13 A-4a (V)     |
| 12    | 4         |               |          |               |    |    |    |    |    |    |    |                 |
| 13    |           |               |          |               |    |    |    |    |    |    |    |                 |
| 14    | 5         | 7             | 78       | SS-6          | -  | -  | -  | -  | -  | -  | -  | 14 A-4a (V)     |
| 15    | 8         |               |          |               |    |    |    |    |    |    |    |                 |
| 16    | 7         |               |          |               |    |    |    |    |    |    |    |                 |
| 17    | 14        | 42            | 50       | SS-7          | -  | 26 | 21 | 15 | 28 | 10 | 24 | 17 9 A-4a (1)   |
| 18    | 15        |               |          |               |    |    |    |    |    |    |    |                 |
| 19    | 5         | 9             | 72       | SS-8          | -  | -  | -  | -  | -  | -  | -  | 10 A-4a (V)     |
| 20    | 10        |               |          |               |    |    |    |    |    |    |    |                 |
| 21    | 50/3"     |               |          |               |    |    |    |    |    |    |    | 5 Rock (V)      |
| 22    |           |               |          |               |    |    |    |    |    |    |    |                 |
| 23    |           |               |          |               |    |    |    |    |    |    |    |                 |
| 24    | 45        |               |          |               |    |    |    |    |    |    |    |                 |
| 25    | 50/3"     |               |          |               |    |    |    |    |    |    |    | 7 Rock (V)      |

TR

EOB

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 9.7'; CAVE-IN DEPTH @ 17.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
**42 66**  
 SHEET TOTAL  
**P.271 295**

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALLS 8 AND 11**  
**BORING LOGS B-021-0-23 AND B-022-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:51:34 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL015.dgn

**RESOURCE INTERNATIONAL, INC.**

PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/30/23 END: 10/30/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1102+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 977.0 (MSL) EOB: 24.5 ft.  
 LAT / LONG: 40.090244, -82.835195

EXPLORATION ID  
**B-023-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTH (ft) | SPT / RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    | WC | HOLE SEALED |
|------------|-----------|-----------------|---------|-----------|----------|---------------|----|----|----|----|----|----|-------------|
|            |           |                 |         |           |          | GR            | FS | SI | CL | LL | PL |    |             |
| 1          | 7         |                 |         |           |          |               |    |    |    |    |    |    |             |
| 2          | 10        | 32              | 67      | SS-1      | 4.5+     | -             | -  | -  | -  | -  | -  | 14 | A-4a (V)    |
| 3          | 12        |                 |         |           |          |               |    |    |    |    |    |    |             |
| 4          | 6         | 17              | 75      | SS-2      | 4.5+     | 8             | 11 | 16 | 39 | 26 | 16 | 14 | A-4a (6)    |
| 5          | 6         |                 |         |           |          |               |    |    |    |    |    |    |             |
| 6          | 4         | 5               | 19      | SS-3      | 4.00     | -             | -  | -  | -  | -  | -  | 10 | A-4a (V)    |
| 7          | 8         |                 |         |           |          |               |    |    |    |    |    |    |             |
| 8          |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 9          | 4         | 5               | 20      | SS-4      | 3.50     | -             | -  | -  | -  | -  | -  | 13 | A-4a (V)    |
| 10         | 9         |                 |         |           |          |               |    |    |    |    |    |    |             |
| 11         | 42        |                 | 100     | SS-5      | -        | -             | -  | -  | -  | -  | -  | 4  | Rock (V)    |
| 12         | 50/3"     |                 |         |           |          |               |    |    |    |    |    |    |             |
| 13         |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 14         | 50/3"     |                 | 100     | SS-6      | -        | -             | -  | -  | -  | -  | -  | 5  | Rock (V)    |
| 15         | 0         |                 | 0       | NQ2-1     |          |               |    |    |    |    |    |    | CORE        |
| 16         |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 17         | 0         |                 | 35      | NQ2-2     |          |               |    |    |    |    |    |    | CORE        |
| 18         |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 19         |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 20         |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 21         |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 22         | 0         |                 | 100     | NQ2-3     |          |               |    |    |    |    |    |    | CORE        |
| 23         |           |                 |         |           |          |               |    |    |    |    |    |    |             |
| 24         |           |                 |         |           |          |               |    |    |    |    |    |    |             |

0.3' - TOPSOIL (4.0')  
 VERY STIFF TO HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : BLACK, HIGHLY WEATHERED, WEAK, VERY FINE GRAINED, LAMINATED, HIGHLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, VERY POOR SURFACE.

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 16.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

|                                      |   |  |  |
|--------------------------------------|---|--|--|
| <p><b>Photo No.</b><br/>6</p>        |   |  |  |
| <p><b>Boring:</b><br/>B-023-0-23</p> | <p>RC-1: 14.4-15.0'<br/>REC (%):0<br/>RQD (%):0</p> | <p>RC-2: 15.0-19.5'<br/>REC (%):35<br/>RQD (%):0</p> |  |



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:54:39 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1016.dgn

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

|                               |                                      |   |
|-------------------------------|--------------------------------------|---|
| <p><b>Photo No.</b><br/>7</p> | <p><b>Boring:</b><br/>B-023-0-23</p> | <p>RC-3: 19.5-24.5'<br/>REC (%):100<br/>RQD (%):0</p> |
|-------------------------------|--------------------------------------|---|





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:54:54 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL017.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ

DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC

STATION / OFFSET: 1104+00 / 0'  
ALIGNMENT: CL WALL 11

ELEVATION: 979.6 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090471, -82.834551

EXPLORATION ID  
**B-024-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    | ATTERBERG |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |            |
|------------|-----------|---------------|----------|---------------|----|----|----|-----------|----|----|----|----|-----------------|-----------|------------|
|            |           |               |          | GR            | CS | FS | SI | CL        | LL | PL | PI |    |                 |           |            |
| 1          | 5         |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 2          | 5         | 19            | 4.5+     |               |    |    |    |           |    |    |    |    |                 | 19        | A-7-6 (V)  |
| 3          | 8         |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 4          | 10        | 37            | 4.5+     |               |    |    |    |           |    |    |    |    |                 | 17        | A-7-6 (13) |
| 5          | 16        |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 6          | 17        | 28            | 4.5+     |               |    |    |    |           |    |    |    |    |                 | 9         | A-6a (V)   |
| 7          | 26        |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 8          |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 9          | 28        | 18            | 4.5+     |               |    |    |    |           |    |    |    |    |                 | 13        | A-6a (V)   |
| 10         | 12        | 43            |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 11         | 5         | 6             | 2.50     |               |    |    |    |           |    |    |    |    |                 | 10        | A-6a (V)   |
| 12         | 5         | 16            |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 13         |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 14         | 10        | 17            | 67       |               |    |    |    |           |    |    |    |    |                 | 8         | A-2-4 (V)  |
| 15         | 21        | 55            |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 16         | 10        | 14            | 42       |               |    |    |    |           |    |    |    |    |                 | 7         | A-2-4 (V)  |
| 17         | 15        |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 18         |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 19         | 6         | 14            | 45       | 75            | 40 | 14 | 12 | 21        | 13 | 25 | 18 | 7  | 11              | 11        | A-2-4 (0)  |
| 20         | 17        |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 21         | 6         | 11            | 75       |               |    |    |    |           |    |    |    |    |                 | 10        | A-2-4 (V)  |
| 22         | 50/4"     |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 23         |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |
| 24         | 50/6"     |               | 36       | SS-10         |    |    |    |           |    |    |    |    |                 | 3         | Rock (V)   |
| 25         |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |            |

SHALE : GRAY, HIGHLY WEATHERED.

TR

EOB

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 18.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ

DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC

STATION / OFFSET: 1106+00 / 0'  
ALIGNMENT: CL WALL 11

ELEVATION: 980.2 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090688, -82.833893

EXPLORATION ID  
**B-025-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    | ATTERBERG |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |           |
|------------|-----------|---------------|----------|---------------|----|----|----|-----------|----|----|----|----|-----------------|-----------|-----------|
|            |           |               |          | GR            | CS | FS | SI | CL        | LL | PL | PI |    |                 |           |           |
| 1          | 4         |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 2          | 5         | 17            | 4.5+     |               |    |    |    |           |    |    |    |    |                 | 20        | A-6a (V)  |
| 3          | 7         |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 4          | 8         | 42            | 4.5+     |               |    |    |    |           |    |    |    |    |                 | 14        | A-6a (V)  |
| 5          | 17        |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 6          | 12        | 55            | 4.5+     |               |    |    |    |           |    |    |    |    |                 |           |           |
| 7          | 17        | 21            |          |               |    |    |    |           |    |    |    |    |                 | 8         | A-6a (6)  |
| 8          |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 9          | 10        | 39            | 4.5+     |               |    |    |    |           |    |    |    |    |                 | 10        | A-6a (V)  |
| 10         | 13        | 64            |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 11         | 18        | 21            | 83       |               |    |    |    |           |    |    |    |    |                 | 8         | A-2-4 (V) |
| 12         | 27        |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 13         |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 14         | 9         | 12            | 39       | 78            | 38 | 23 | 12 | 17        | 10 | 27 | 20 | 7  | 6               | 6         | A-2-4 (0) |
| 15         | 15        |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 16         | 14        | 21            | 71       | 64            |    |    |    |           |    |    |    |    |                 | 7         | A-2-4 (V) |
| 17         | 28        |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 18         |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 19         | 12        | 22            | 75       | 39            |    |    |    |           |    |    |    |    |                 | 7         | A-2-4 (V) |
| 20         | 30        |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 21         | 12        | 16            | 42       | 61            |    |    |    |           |    |    |    |    |                 | 14        | A-2-4 (V) |
| 22         | 13        |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 23         |           |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |
| 24         | 8         | 15            | 46       | 61            |    |    |    |           |    |    |    |    |                 | 11        | A-2-4 (V) |
| 25         | 17        |               |          |               |    |    |    |           |    |    |    |    |                 |           |           |

-SHALE FRAGMENTS PRESENT THROUGHOUT

TR

EOB

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 15.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET TOTAL  
45 66

SHEET TOTAL  
P.274 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 11**  
**BORING LOGS B-024-0-23 AND B-025-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:55:17 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL018.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 10/31/23 END: 10/31/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1108+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 979.8 (MSL) EOB: 25.5 ft.  
 LAT / LONG: 40.090906, -82.833225

EXPLORATION ID  
**B-026-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
 VERY STIFF TO HARD, LIGHT BROWN SILTY CLAY, "AND" FINE TO COARSE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 979.8  
 979.5

SPT / RQD

GRADATION (%)

ATTERBERG

BACK FILL

| DEPTH | ELEV. | SPT / RQD | REC SAMPLE (%) | HP ID  | GR   | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) |              |
|-------|-------|-----------|----------------|--------|------|----|----|----|----|----|----|----|-----------------|--------------|
| 1     | 979.5 | 4         | 67             | SS-1   | 4.5+ | -  | -  | -  | -  | -  | -  | 17 | A-6b (V)        |              |
| 2     |       | 5         | 13             |        |      |    |    |    |    |    |    |    |                 |              |
| 3     |       |           |                |        |      |    |    |    |    |    |    |    |                 |              |
| 4     |       | 18        | 49             | SS-2   | 4.5+ | -  | -  | -  | -  | -  | -  | 19 | A-6b (V)        |              |
| 5     |       | 18        | 16             |        |      |    |    |    |    |    |    |    |                 |              |
| 6     |       | 9         | 13             |        |      |    |    |    |    |    |    |    |                 |              |
| 7     |       | 13        | 40             | SS-3   | 4.5+ | -  | -  | -  | -  | -  | -  | 12 | A-6b (V)        |              |
| 8     |       | 15        |                |        |      |    |    |    |    |    |    |    |                 |              |
| 9     |       | 4         | 4              |        |      |    |    |    |    |    |    |    |                 |              |
| 10    |       | 4         | 12             | SS-4   | 4.00 | 19 | 24 | 12 | 23 | 22 | 36 | 19 | 17              | A-6b (4)     |
| 11    |       |           |                |        |      |    |    |    |    |    |    |    |                 |              |
| 12    |       | 3         | 4              |        |      |    |    |    |    |    |    |    |                 |              |
| 13    |       | 4         | 5              |        |      |    |    |    |    |    |    |    |                 |              |
| 14    |       | 14        | 45             | SS-6   | -    | -  | -  | -  | -  | -  | -  | -  | -               |              |
| 15    |       | 16        |                |        |      |    |    |    |    |    |    |    |                 |              |
| 16    |       | 7         |                | 2S-6A  | -    | -  | -  | -  | -  | -  | -  | -  | -               | 11 A-2-4 (V) |
| 17    |       | 14        | 35             | SS-7   | -    | -  | -  | -  | -  | -  | -  | -  | -               | 10 A-2-4 (V) |
| 18    | 961.8 | 10        |                |        |      |    |    |    |    |    |    |    |                 |              |
| 19    |       | 9         | 33             | SS-8   | -    | -  | -  | -  | -  | -  | -  | -  | -               |              |
| 20    |       | 14        |                |        |      |    |    |    |    |    |    |    |                 |              |
| 21    |       | 12        | 46             | SS-9   | -    | 50 | 20 | 11 | 11 | 8  | 24 | 18 | 6               | 10 A-1-b (0) |
| 22    |       | 15        | 17             |        |      |    |    |    |    |    |    |    |                 |              |
| 23    |       | 11        | 39             | SS-10  | -    | -  | -  | -  | -  | -  | -  | -  | -               |              |
| 24    |       | 14        |                |        |      |    |    |    |    |    |    |    |                 |              |
| 25    | 954.3 | 8         |                | 2S-10A | -    | -  | -  | -  | -  | -  | -  | -  | -               | 15 A-1-b (V) |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 13.5'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1110+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 981.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091062, -82.832539

EXPLORATION ID  
**B-027-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (3.5")  
 HARD LIGHT BROWN SILT AND CLAY LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP.

ELEV. 981.5  
 981.2

SPT / RQD

GRADATION (%)

ATTERBERG

BACK FILL

| DEPTH | ELEV. | SPT / RQD | REC SAMPLE (%) | HP ID | GR   | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) |              |
|-------|-------|-----------|----------------|-------|------|----|----|----|----|----|----|----|-----------------|--------------|
| 1     | 981.2 | 7         | 46             | SS-1  | 4.5+ | -  | -  | -  | -  | -  | -  | 11 | A-6a (V)        |              |
| 2     |       | 13        | 19             |       |      |    |    |    |    |    |    |    |                 |              |
| 3     |       |           |                |       |      |    |    |    |    |    |    |    |                 |              |
| 4     |       | 11        | 40             | SS-2  | 4.5+ | -  | -  | -  | -  | -  | -  | 12 | A-6a (V)        |              |
| 5     |       | 13        | 15             |       |      |    |    |    |    |    |    |    |                 |              |
| 6     |       | 13        | 45             | SS-3  | 4.5+ | -  | -  | -  | -  | -  | -  | 11 | A-6a (V)        |              |
| 7     |       | 16        |                |       |      |    |    |    |    |    |    |    |                 |              |
| 8     |       | 8         | 17             | SS-4  | 4.5+ | -  | -  | -  | -  | -  | -  | 12 | A-6a (V)        |              |
| 9     |       | 5         | 7              |       |      |    |    |    |    |    |    |    |                 |              |
| 10    | 971.0 |           |                |       |      |    |    |    |    |    |    |    |                 |              |
| 11    |       | 3         | 9              | SS-5  | -    | -  | -  | -  | -  | -  | -  | 14 | A-2-4 (V)       |              |
| 12    |       | 3         |                |       |      |    |    |    |    |    |    |    |                 |              |
| 13    |       |           |                |       |      |    |    |    |    |    |    |    |                 |              |
| 14    |       | 4         | 13             | SS-6  | -    | 35 | 20 | 14 | 19 | 12 | 29 | 19 | 10              | 14 A-2-4 (0) |
| 15    |       | 4         | 5              |       |      |    |    |    |    |    |    |    |                 |              |
| 16    |       | 7         | 49             | SS-7  | -    | -  | -  | -  | -  | -  | -  | -  | -               | 8 A-2-4 (V)  |
| 17    |       | 16        | 18             |       |      |    |    |    |    |    |    |    |                 |              |
| 18    |       |           |                |       |      |    |    |    |    |    |    |    |                 |              |
| 19    |       | 6         | 30             | SS-8  | -    | 54 | 20 | 8  | 13 | 5  | 28 | 18 | 10              | 10 A-2-4 (0) |
| 20    | 960.5 | 12        |                |       |      |    |    |    |    |    |    |    |                 |              |
| 21    |       | 12        | 55             | SS-9  | -    | -  | -  | -  | -  | -  | -  | -  | -               | 12 A-2-4 (V) |
| 22    |       | 14        | 24             |       |      |    |    |    |    |    |    |    |                 |              |
| 23    | 958.5 | TR        |                |       |      |    |    |    |    |    |    |    |                 |              |
| 24    |       | 23        | 50/5'          | SS-10 | -    | -  | -  | -  | -  | -  | -  | -  | -               | 4 Rock (V)   |
| 25    | 956.5 |           |                |       |      |    |    |    |    |    |    |    |                 |              |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 16.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 46 66  
 SHEET TOTAL  
 P.275 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 11**  
**BORING LOGS B-026-0-23 AND B-027-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:55:42 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL019.dgn

**RESOURCE INTERNATIONAL, INC.**

PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1112+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 982.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091197, -82.831841

EXPLORATION ID  
**B-028-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (4.0")  
 VERY STIFF TO HARD, BROWNISH GRAY TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE TO DENSE, GRAY TO BROWN COARSE AND FINE SAND, SOME SILT, TRACE CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

| DEPTH | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    |    |   |  | WC | ODOT CLASS (GI) | BACK FILL |             |
|-------|-------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|---|--|----|-----------------|-----------|-------------|
|       |       |           |               |          | GR            | CS | FS | SI | CL | LL | PL | PI |   |  |    |                 |           |             |
| 1     | 982.2 | 6         |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 2     | 981.9 | 8         | 26            | 4.5+     |               |    |    |    |    |    |    |    |   |  |    |                 |           | 18 A-6a (V) |
| 3     |       | 10        |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 4     |       | 11        | 48            | 4.5+     |               |    |    |    |    |    |    |    |   |  |    |                 |           | 11 A-6a (V) |
| 5     |       | 15        | 18            |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 6     |       | 10        | 36            | 4.5+     |               |    |    |    |    |    |    |    |   |  |    |                 |           | 12 A-6a (7) |
| 7     |       | 11        | 14            |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 8     |       | 4         | 6             |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 9     | 971.7 | 6         | 23            | 3.00     |               |    |    |    |    |    |    |    |   |  |    |                 |           | 14 A-6a (V) |
| 10    |       | 10        |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 11    |       | 23        | 40            |          |               |    |    |    |    |    |    |    |   |  |    |                 |           | 14 A-3a (V) |
| 12    |       | 13        | 15            |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 13    |       | 5         | 8             |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 14    |       | 8         | 23            | 100      | 1             | 32 | 38 | 22 | 7  | NP | NP | NP | 3 |  |    |                 |           | A-3a (0)    |
| 15    |       | 40        |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 16    | 966.2 | 50/2"     |               | 63       |               |    |    |    |    |    |    |    |   |  |    |                 |           | 4 Rock (V)  |
| 17    |       |           |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 18    |       | 50/5"     |               | 33       |               |    |    |    |    |    |    |    |   |  |    |                 |           | 4 Rock (V)  |
| 19    |       |           |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 20    |       |           |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 21    |       | 50/2"     |               | 0        |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 22    |       |           |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 23    |       | 50/0"     |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 24    | 957.2 |           |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |
| 25    |       |           |               |          |               |    |    |    |    |    |    |    |   |  |    |                 |           |             |

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 15.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**

PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1114+00 / 0'  
 ALIGNMENT: CL WALL 11  
 ELEVATION: 983.0 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091321, -82.831138

EXPLORATION ID  
**B-029-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' - TOPSOIL (4.0")  
 HARD TO VERY STIFF BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.


MEDIUM STIFF TO VERY STIFF, BLACK TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

VERY DENSE DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.  
 -SHALE FRAGMENTS IN SS-10

| DEPTH | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    |    |  |  | WC | ODOT CLASS (GI) | BACK FILL |             |
|-------|-------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|--|--|----|-----------------|-----------|-------------|
|       |       |           |               |          | GR            | CS | FS | SI | CL | LL | PL | PI |  |  |    |                 |           |             |
| 1     | 982.7 | 3         |               |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 2     |       | 5         | 20            | 4.5+     |               |    |    |    |    |    |    |    |  |  |    |                 |           | 17 A-6a (V) |
| 3     |       | 9         |               |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 4     |       | 4         | 20            | 81       | 4.5+          |    |    |    |    |    |    |    |  |  |    |                 |           | 16 A-6a (V) |
| 5     |       | 6         | 8             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 6     |       | 4         | 24            | 89       | 4.5+          |    |    |    |    |    |    |    |  |  |    |                 |           | 14 A-6a (V) |
| 7     |       | 7         | 10            |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 8     |       | 4         | 17            | 61       | 4.5+          |    |    |    |    |    |    |    |  |  |    |                 |           | 11 A-6a (5) |
| 9     |       | 5         | 7             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 10    |       | 4         | 14            | 81       | 2.50          |    |    |    |    |    |    |    |  |  |    |                 |           | 14 A-6a (V) |
| 11    |       | 3         | 7             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 12    |       | 3         | 14            | 81       | 2.50          |    |    |    |    |    |    |    |  |  |    |                 |           | 14 A-6a (V) |
| 13    |       | 7         | 4             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 14    | 967.5 | 2         | 10            | 42       | 2.00          |    |    |    |    |    |    |    |  |  |    |                 |           | 14 A-6a (V) |
| 15    |       | 3         | 4             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 16    |       | 4         | 7             | 23       | 3.00          |    |    |    |    |    |    |    |  |  |    |                 |           | 9 A-4a (V)  |
| 17    |       | 7         | 9             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 18    |       |           |               |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 19    |       | 2         | 7             | 56       | 2.25          |    |    |    |    |    |    |    |  |  |    |                 |           | 13 A-4a (4) |
| 20    |       | 2         | 3             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 21    |       | 1         | 4             | 33       | 0.75          |    |    |    |    |    |    |    |  |  |    |                 |           | 14 A-4a (V) |
| 22    |       | 1         | 2             |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 23    | 960.0 |           |               |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |
| 24    | 958.0 | 8         | 19            | 60       | 83            |    |    |    |    |    |    |    |  |  |    |                 |           | 10 A-24 (V) |
| 25    |       | 23        |               |          |               |    |    |    |    |    |    |    |  |  |    |                 |           |             |

NOTES: SEEPAGE @ 22.4' - 25.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 13.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
 47 66  
 SHEET TOTAL  
 P.276 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 11**  
**BORING LOGS B-028-0-23 AND B-029-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:56:05 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL020.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1115+84 / 0'  
ALIGNMENT: CL WALL 11  
ELEVATION: 983.0 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.091378, -82.830480

EXPLORATION ID  
**B-030-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0')  
VERY STIFF TO HARD, BROWN TO DARK BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 983.0

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT / RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |
|-------|-----------|---------------|---------------|-----------|-----------------|-----------|
| 1     | 3         |               |               |           |                 |           |
| 2     | 6         | SS-1          | 78            | 4.5+      | 15              | A-6a (V)  |
| 3     | 9         |               |               |           |                 |           |
| 4     | 5         |               |               |           |                 |           |
| 5     | 6         | SS-2          | 100           | 4.5+      | 15              | A-6a (7)  |
| 6     | 8         |               |               |           |                 |           |
| 7     | 4         | SS-3          | 94            | 4.5+      | 14              | A-6a (V)  |
| 8     | 12        |               |               |           |                 |           |
| 9     | 4         |               |               |           |                 |           |
| 10    | 5         | SS-4          | 86            | 4.5+      | 11              | A-6a (V)  |
| 11    | 7         |               |               |           |                 |           |
| 12    | 2         |               |               |           |                 |           |
| 13    | 3         | SS-5          | 39            | 3.25      | 13              | A-6a (V)  |
| 14    | 5         |               |               |           |                 |           |
| 15    | 2         | SS-6          | 50            | 2.00      | 14              | A-6a (5)  |
| 16    | 2         |               |               |           |                 |           |
| 17    | 4         | SS-7          | 61            | 3.00      | 13              | A-6a (V)  |
| 18    | 5         |               |               |           |                 |           |
| 19    | 8         |               |               |           |                 |           |
| 20    | 20        | SS-8          | 86            | -         | 7               | A-2-4 (V) |
| 21    | 34        |               |               |           |                 |           |
| 22    | 50/2'     | SS-9          | 50            | -         | 5               | Rock (V)  |
| 23    |           |               |               |           |                 |           |
| 24    | 50/3'     | SS-10         | 0             | -         | -               | Rock (V)  |
| 25    |           |               |               |           |                 |           |

ELEV. 965.0

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT / RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |
|-------|-----------|---------------|---------------|-----------|-----------------|-----------|
| 1     | 3         |               |               |           |                 |           |
| 2     | 6         | SS-1          | 78            | 4.5+      | 15              | A-6a (V)  |
| 3     | 9         |               |               |           |                 |           |
| 4     | 5         |               |               |           |                 |           |
| 5     | 6         | SS-2          | 100           | 4.5+      | 15              | A-6a (7)  |
| 6     | 8         |               |               |           |                 |           |
| 7     | 4         | SS-3          | 94            | 4.5+      | 14              | A-6a (V)  |
| 8     | 12        |               |               |           |                 |           |
| 9     | 4         |               |               |           |                 |           |
| 10    | 5         | SS-4          | 86            | 4.5+      | 11              | A-6a (V)  |
| 11    | 7         |               |               |           |                 |           |
| 12    | 2         |               |               |           |                 |           |
| 13    | 3         | SS-5          | 39            | 3.25      | 13              | A-6a (V)  |
| 14    | 5         |               |               |           |                 |           |
| 15    | 2         | SS-6          | 50            | 2.00      | 14              | A-6a (5)  |
| 16    | 2         |               |               |           |                 |           |
| 17    | 4         | SS-7          | 61            | 3.00      | 13              | A-6a (V)  |
| 18    | 5         |               |               |           |                 |           |
| 19    | 8         |               |               |           |                 |           |
| 20    | 20        | SS-8          | 86            | -         | 7               | A-2-4 (V) |
| 21    | 34        |               |               |           |                 |           |
| 22    | 50/2'     | SS-9          | 50            | -         | 5               | Rock (V)  |
| 23    |           |               |               |           |                 |           |
| 24    | 50/3'     | SS-10         | 0             | -         | -               | Rock (V)  |
| 25    |           |               |               |           |                 |           |

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 22.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 900+16 / 0'  
ALIGNMENT: CL WALL 9  
ELEVATION: 974.5 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090580, -82.836109

EXPLORATION ID  
**B-031-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' TOPSOIL (5.5')  
HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 974.5

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT / RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |
|-------|-----------|---------------|---------------|-----------|-----------------|-----------|
| 1     | 4         |               |               |           |                 |           |
| 2     | 5         | SS-1          | 78            | 4.5+      | 19              | A-4a (V)  |
| 3     | 7         |               |               |           |                 |           |
| 4     | 18        |               |               |           |                 |           |
| 5     | 9         | SS-2          | 0             | -         | -               |           |
| 6     | 7         |               |               |           |                 |           |
| 7     | 30        |               |               |           |                 |           |
| 8     | 16        |               |               |           |                 |           |
| 9     | 12        | SS-3          | 83            | 4.5+      | 10              | A-4a (V)  |
| 10    | 13        |               |               |           |                 |           |
| 11    | 10        | SS-4          | 78            | 4.5+      | 11              | A-4a (V)  |
| 12    | 6         |               |               |           |                 |           |
| 13    | 6         | SS-5          | 83            | 4.5+      | 12              | A-4a (6)  |
| 14    | 7         |               |               |           |                 |           |
| 15    | 6         |               |               |           |                 |           |
| 16    | 7         | SS-6          | 0             | -         | -               |           |
| 17    | 12        |               |               |           |                 |           |
| 18    | 4         |               |               |           |                 |           |
| 19    | 5         | SS-7          | 75            | 4.5+      | 12              | A-4a (V)  |
| 20    | 3         |               |               |           |                 |           |
| 21    | 4         | SS-8          | 83            | 4.5+      | 13              | A-4a (V)  |
| 22    | 10        |               |               |           |                 |           |
| 23    | 8         | SS-9          | 78            | -         | 16              | A-1-b (0) |
| 24    | 8         |               |               |           |                 |           |
| 25    | 12        | SS-10         | 92            | -         | 16              | A-1-b (V) |

ELEV. 954.0

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

| DEPTH | SPT / RQD | REC SAMPLE ID | GRADATION (%) | ATTERBERG | ODOT CLASS (GI) | BACK FILL |
|-------|-----------|---------------|---------------|-----------|-----------------|-----------|
| 1     | 4         |               |               |           |                 |           |
| 2     | 5         | SS-1          | 78            | 4.5+      | 19              | A-4a (V)  |
| 3     | 7         |               |               |           |                 |           |
| 4     | 18        |               |               |           |                 |           |
| 5     | 9         | SS-2          | 0             | -         | -               |           |
| 6     | 7         |               |               |           |                 |           |
| 7     | 30        |               |               |           |                 |           |
| 8     | 16        |               |               |           |                 |           |
| 9     | 12        | SS-3          | 83            | 4.5+      | 10              | A-4a (V)  |
| 10    | 13        |               |               |           |                 |           |
| 11    | 10        | SS-4          | 78            | 4.5+      | 11              | A-4a (V)  |
| 12    | 6         |               |               |           |                 |           |
| 13    | 6         | SS-5          | 83            | 4.5+      | 12              | A-4a (6)  |
| 14    | 7         |               |               |           |                 |           |
| 15    | 6         |               |               |           |                 |           |
| 16    | 7         | SS-6          | 0             | -         | -               |           |
| 17    | 12        |               |               |           |                 |           |
| 18    | 4         |               |               |           |                 |           |
| 19    | 5         | SS-7          | 75            | 4.5+      | 12              | A-4a (V)  |
| 20    | 3         |               |               |           |                 |           |
| 21    | 4         | SS-8          | 83            | 4.5+      | 13              | A-4a (V)  |
| 22    | 10        |               |               |           |                 |           |
| 23    | 8         | SS-9          | 78            | -         | 16              | A-1-b (0) |
| 24    | 8         |               |               |           |                 |           |
| 25    | 12        | SS-10         | 92            | -         | 16              | A-1-b (V) |

MEDIUM DENSE, DARK GRAY GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, MOIST.  
-SHALE FRAGMENTS PRESENT THROUGHOUT

-1.5' OF HEAVING SANDS @23.5'

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.8' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 13.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949  
DESIGNER  
JAS  
REVIEWER  
DEK 1/19/24  
PROJECT ID  
117607  
SUBSET TOTAL  
48 66  
SHEET TOTAL  
P.277 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALLS 11 AND 9**  
**BORING LOGS B-030-0-23 AND B-031-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:56:26 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1021.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 902+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 975.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090809, -82.835481

EXPLORATION ID  
**B-032-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.

ELEV. 975.2  
 974.8

SPT / RQD  
 9  
 14  
 14

REC SAMPLE ID  
 SS-1

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-6a (V)

ELEV. 959.5

SPT / RQD  
 8  
 24  
 9

REC SAMPLE ID  
 SS-2

GRADATION (%)  
 FS 10  
 SI 19  
 CL 28  
 LL 27  
 PL 16  
 PI 11

BACK FILL  
 A-6a (6)

ELEV. 950.2

SPT / RQD  
 5  
 8  
 12

REC SAMPLE ID  
 SS-3

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-6a (V)

ELEV. 956.7

SPT / RQD  
 8  
 24  
 9

REC SAMPLE ID  
 SS-4

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-6a (V)

ELEV. 954.7

SPT / RQD  
 4  
 9  
 9

REC SAMPLE ID  
 SS-5

GRADATION (%)  
 FS 41  
 SI 14  
 CL 12  
 LL 21  
 PL 12  
 PI 8

BACK FILL  
 A-2-4 (0)

ELEV. 950.2

SPT / RQD  
 8  
 10  
 11

REC SAMPLE ID  
 SS-6

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 15  
 22  
 18

REC SAMPLE ID  
 SS-7

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 950.2

SPT / RQD  
 5  
 8  
 12

REC SAMPLE ID  
 SS-8

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 12  
 10  
 10

REC SAMPLE ID  
 SS-9

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 12  
 10  
 10

REC SAMPLE ID  
 SS-10

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 12  
 10  
 10

REC SAMPLE ID  
 SS-10

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

MEDIUM DENSE TO DENSE, GRAY GRAVEL WITH SAND AND SILT, LITTLE CLAY, MOIST.

ELEV. 959.5

SPT / RQD  
 6  
 8  
 9

REC SAMPLE ID  
 SS-6

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-6a (V)

ELEV. 956.7

SPT / RQD  
 4  
 9  
 9

REC SAMPLE ID  
 SS-7

GRADATION (%)  
 FS 41  
 SI 14  
 CL 12  
 LL 21  
 PL 12  
 PI 8

BACK FILL  
 A-2-4 (0)

ELEV. 954.7

SPT / RQD  
 8  
 10  
 11

REC SAMPLE ID  
 SS-8

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 950.2

SPT / RQD  
 15  
 22  
 18

REC SAMPLE ID  
 SS-9

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 950.2

SPT / RQD  
 5  
 8  
 12

REC SAMPLE ID  
 SS-10

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 950.2

SPT / RQD  
 5  
 8  
 12

REC SAMPLE ID  
 SS-10

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 15.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 904+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 977.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091043, -82.834836

EXPLORATION ID  
**B-033-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
 HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP.

ELEV. 977.2  
 976.8

SPT / RQD  
 7  
 12  
 14

REC SAMPLE ID  
 SS-1

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-4a (V)

ELEV. 964.2

SPT / RQD  
 10  
 29  
 10

REC SAMPLE ID  
 SS-2

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-4a (V)

ELEV. 964.2

SPT / RQD  
 8  
 20  
 14

REC SAMPLE ID  
 SS-3

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-4a (V)

ELEV. 964.2

SPT / RQD  
 6  
 9  
 10

REC SAMPLE ID  
 SS-4

GRADATION (%)  
 FS 12  
 SI 9  
 CL 16  
 LL 39  
 PL 24  
 PI 15

BACK FILL  
 A-4a (6)

ELEV. 964.2

SPT / RQD  
 6  
 7  
 8

REC SAMPLE ID  
 SS-5

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-4a (V)

ELEV. 959.2

SPT / RQD  
 12  
 33  
 11

REC SAMPLE ID  
 SS-7

GRADATION (%)  
 FS 59  
 SI 21  
 CL 9  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-1-a (0)

ELEV. 959.2

SPT / RQD  
 9  
 13  
 12

REC SAMPLE ID  
 SS-6

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-1-a (V)

ELEV. 952.2

SPT / RQD  
 17  
 15  
 15

REC SAMPLE ID  
 SS-9

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 12  
 10  
 10

REC SAMPLE ID  
 SS-10

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

DENSE, GRAY TO BLACK GRAVEL, SOME FINE TO COARSE SAND, LITTLE SILT, MOIST.  
 -LIMESTONE FRAGMENTS IN SS-6

ELEV. 964.2

SPT / RQD  
 7  
 13  
 12

REC SAMPLE ID  
 SS-6

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-1-a (V)

ELEV. 959.2

SPT / RQD  
 8  
 12  
 11

REC SAMPLE ID  
 SS-7

GRADATION (%)  
 FS 59  
 SI 21  
 CL 9  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-1-a (0)

ELEV. 959.2

SPT / RQD  
 9  
 13  
 12

REC SAMPLE ID  
 SS-8

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 17  
 15  
 15

REC SAMPLE ID  
 SS-9

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 12  
 10  
 10

REC SAMPLE ID  
 SS-10

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

MEDIUM DENSE TO DENSE, DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.  
 -SHALE FRAGMENTS PRESENT THROUGHOUT

ELEV. 959.2

SPT / RQD  
 12  
 33  
 11

REC SAMPLE ID  
 SS-7

GRADATION (%)  
 FS 59  
 SI 21  
 CL 9  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-1-a (0)

ELEV. 959.2

SPT / RQD  
 9  
 13  
 12

REC SAMPLE ID  
 SS-8

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 17  
 15  
 15

REC SAMPLE ID  
 SS-9

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

ELEV. 952.2

SPT / RQD  
 12  
 10  
 10

REC SAMPLE ID  
 SS-10

GRADATION (%)  
 FS -  
 SI -  
 CL -  
 LL -  
 PL -  
 PI -

BACK FILL  
 A-2-4 (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 14.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 49 66  
 SHEET TOTAL  
 P.278 295



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:56:50 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL022.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 906+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 979.3 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091273, -82.834170

EXPLORATION ID  
**B-034-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' - TOPSOIL (5.0")  
 HARD, BROWN SILT AND CLAY, LITTLE GRAVEL AND SAND, DAMP.

-ROOT FIBERS IN SS-4

DENSE TO VERY DENSE, GRAY GRAVEL, LITTLE COARSE TO FINE SAND, TRACE SILT, DAMP.

MEDIUM DENSE TO VERY DENSE, BLACK GRAVEL WITH SAND AND SILT, MOIST.  
 -SHALE FRAGMENTS PRESENT THROUGHOUT

| ELEV. | DEPTH | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | CS | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) | BACK FILL |
|-------|-------|-----------|---------------|----------|----|----|----|----|----|----|----|----|----|-----------------|-----------|
| 979.3 |       |           |               |          |    |    |    |    |    |    |    |    |    |                 |           |
| 978.9 | 1     | 6         |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 2     | 10        | SS-1          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 12 | A-6a (V)        |           |
|       | 3     | 13        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 4     | 8         | SS-2          | 4.5+     | 11 | 10 | 15 | 38 | 26 | 30 | 18 | 12 | 14 | A-6a (7)        |           |
|       | 5     | 10        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 6     | 12        | SS-3          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 17 | A-6a (V)        |           |
|       | 7     | 14        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 8     |           |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 9     | 10        | SS-4          | 4.5+     | -  | -  | -  | -  | -  | -  | -  | -  | 15 | A-6a (V)        |           |
|       | 10    | 10        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
| 968.8 | 11    | 7         | SS-5          | -        | -  | -  | -  | -  | -  | -  | -  | -  | -  | -               |           |
|       | 12    | 15        | 0             | SS-5     | -  | -  | -  | -  | -  | -  | -  | -  | -  | -               |           |
|       | 13    | 20        | -             | 2S-5A    | -  | -  | -  | -  | -  | -  | -  | -  | -  | 6               | A-1-a (V) |
|       | 14    | 18        | 46            | SS-6     | -  | 74 | 10 | 6  | -  | 10 | NP | NP | 4  | A-1-a (0)       |           |
|       | 15    | 14        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 16    | 10        | 30            | SS-7     | -  | -  | -  | -  | -  | -  | -  | -  | 6  | A-1-a (V)       |           |
|       | 17    | 11        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 18    |           |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 19    | 12        | 35            | SS-8     | -  | -  | -  | -  | -  | -  | -  | -  | 6  | A-1-a (V)       |           |
|       | 20    | 14        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
| 958.8 | 21    | 6         | 75            | SS-9     | -  | -  | -  | -  | -  | -  | -  | -  | 16 | A-2-4 (V)       |           |
|       | 22    | 7         | 24            |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 23    | 10        |               |          |    |    |    |    |    |    |    |    |    |                 |           |
|       | 24    | 8         | 76            | SS-10    | -  | -  | -  | -  | -  | -  | -  | -  | 11 | A-2-4 (V)       |           |
|       | 25    | 11        | 42            |          |    |    |    |    |    |    |    |    |    |                 |           |
| 954.3 | EOB   |           |               |          |    |    |    |    |    |    |    |    |    |                 |           |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.0'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 908+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 981.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091443, -82.833496

EXPLORATION ID  
**B-035-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' - TOPSOIL (5.0")  
 HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.

-CHERT FRAGMENTS IN SS-5

MEDIUM DENSE, BROWN TO BLACK GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP.  
 -SHALE FRAGMENTS IN SS-6

DENSE, GRAY COARSE AND FINE SAND, LITTLE GRAVEL, TRACE SILT, DAMP.

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

| ELEV. | DEPTH | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR   | CS | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) | BACK FILL |
|-------|-------|-----------|---------------|----------|------|----|----|----|----|----|----|----|----|-----------------|-----------|
| 981.4 |       |           |               |          |      |    |    |    |    |    |    |    |    |                 |           |
| 981.0 | 1     | 7         |               |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 2     | 9         | 30            | SS-1     | 4.5+ | -  | -  | -  | -  | -  | -  | -  | 17 | A-6b (V)        |           |
|       | 3     | 12        |               |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 4     | 10        | 46            | SS-2     | 4.5+ | 13 | 8  | 13 | 38 | 28 | 34 | 18 | 12 | A-6b (9)        |           |
|       | 5     | 15        | 17            |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 6     | 13        | 55            | SS-3     | 4.5+ | -  | -  | -  | -  | -  | -  | -  | 12 | A-6b (V)        |           |
|       | 7     | 18        | 20            |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 8     |           |               |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 9     | 6         | 37            | SS-4     | 4.5+ | -  | -  | -  | -  | -  | -  | -  | 13 | A-6b (V)        |           |
|       | 10    | 14        |               |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 11    | 8         | 26            | SS-5     | 4.5+ | -  | -  | -  | -  | -  | -  | -  | 11 | A-6b (V)        |           |
|       | 12    | 9         | 9             |          |      |    |    |    |    |    |    |    |    |                 |           |
| 968.4 | 13    |           |               |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 14    | 6         | 19            | SS-6     | -    | -  | -  | -  | -  | -  | -  | -  | 16 | A-2-4 (V)       |           |
|       | 15    | 7         | 6             |          |      |    |    |    |    |    |    |    |    |                 |           |
| 965.9 | 16    | 7         | 45            | SS-7     | -    | -  | -  | -  | -  | -  | -  | -  | 5  | A-3a (V)        |           |
|       | 17    | 13        | 18            |          |      |    |    |    |    |    |    |    |    |                 |           |
| 963.4 | 18    |           |               |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 19    | 10        | 46            | SS-8     | -    | 57 | 17 | 9  | 15 | 2  | NP | NP | 8  | A-1-b (0)       |           |
|       | 20    | 14        | 18            |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 21    | 5         | 33            | SS-9     | -    | -  | -  | -  | -  | -  | -  | -  | 12 | A-1-b (V)       |           |
|       | 22    | 11        | 12            |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 23    |           |               |          |      |    |    |    |    |    |    |    |    |                 |           |
|       | 24    | 18        | 63            | SS-10    | -    | -  | -  | -  | -  | -  | -  | -  | 13 | A-1-b (V)       |           |
|       | 25    | 24        | 20            |          |      |    |    |    |    |    |    |    |    |                 |           |
| 956.4 | EOB   |           |               |          |      |    |    |    |    |    |    |    |    |                 |           |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.7' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.3'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
 JAS  
 REVIEWER  
 DEK 1/19/24  
 PROJECT ID  
 117607  
 SUBSET TOTAL  
 50 66  
 SHEET TOTAL  
 P.279 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 9**  
**BORING LOGS B-034-0-23 AND B-035-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:57:14 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL023.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 910+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 983.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091597, -82.832807

EXPLORATION ID  
**B-036-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTHS | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | GRADATION (%) |    |    |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|--------|-------|-----------|---------------|----------|----|---------------|----|----|----|----|----|----|-----------------|-----------|--|
|        |       |           |               |          |    | FS            | SI | CL | LL | PL | PI |    |                 |           |  |
| 1      | 983.2 | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 2      | 982.8 | 10        | SS-1          | -        |    |               |    |    |    |    |    |    |                 |           |  |
| 3      |       | 11        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 4      |       | 12        | 2S-1A         | 4.5+     |    |               |    |    |    |    |    |    | 20              | A-6a (V)  |  |
| 5      |       | 6         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 6      |       | 11        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 7      |       | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 8      |       | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 9      |       | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 10     |       | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 11     |       | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 12     | 970.2 | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 13     |       | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 14     |       | 5         |               |          | 33 | 15            | 13 | 29 | 10 | 38 | 21 | 17 | 12              | A-6b (2)  |  |
| 15     |       | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 16     |       | 10        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 17     |       | 10        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 18     | 964.7 | 17        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 19     |       | 11        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 20     |       | 13        |               |          | 31 | 31            | 16 | 20 | 2  | 23 | 17 | 6  | 11              | A-1-b (0) |  |
| 21     | 962.7 | 10        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 22     |       | 18        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 23     |       | 35        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 24     |       | 12        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 25     | 958.2 | 10        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
|        |       | 17        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
|        |       | 17        |               |          |    |               |    |    |    |    |    |    |                 |           |  |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 912+00 / 0'  
 ALIGNMENT: CL WALL 9  
 ELEVATION: 984.9 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091724, -82.832101

EXPLORATION ID  
**B-037-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTHS | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | GRADATION (%) |    |    |    |    |    | WC | ODOT CLASS (GI) | BACK FILL |  |
|--------|-------|-----------|---------------|----------|----|---------------|----|----|----|----|----|----|-----------------|-----------|--|
|        |       |           |               |          |    | FS            | SI | CL | LL | PL | PI |    |                 |           |  |
| 1      | 984.9 | 5         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 2      | 984.5 | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 3      |       | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 4      |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 5      |       | 5         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 6      |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 7      |       | 5         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 8      |       | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 9      |       | 6         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 10     |       | 5         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 11     |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 12     |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 13     | 971.9 | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 14     |       | 4         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 15     |       | 7         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 16     |       | 3         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 17     |       | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 18     | 966.7 | 13        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 19     |       | 16        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 20     | 964.4 | 16        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 21     |       | 9         |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 22     |       | 14        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 23     |       | 15        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 24     |       | 14        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
| 25     | 959.9 | 12        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
|        |       | 12        |               |          |    |               |    |    |    |    |    |    |                 |           |  |
|        |       | 15        |               |          |    |               |    |    |    |    |    |    |                 |           |  |

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.8' AND UPON COMPLETION @ 18.2'; CAVE-IN DEPTH @ 19.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
  
 6350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949  
 DESIGNER  
**JAS**  
 REVIEWER  
**DEK 1/19/24**  
 PROJECT ID  
**117607**  
 SUBSET TOTAL  
 51 66  
 SHEET TOTAL  
 P.280 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 9**  
**BORING LOGS B-036-0-23 AND B-037-0-23**







**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:57:54 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\117607-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1025.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 121+41.21 / 0'  
 ALIGNMENT: CL WALL 12  
 ELEVATION: 986.4 (MSL) EOB: 20.0 ft.  
 LAT / LONG: 40.091317, -82.827731

EXPLORATION ID  
**B-039-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5')  
 HARD, BROWN CLAY, LITTLE COARSE TO FINE SAND,  
 TRACE FINE GRAVEL, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : GRAY, MODERATELY WEATHERED, WEAK,  
 VERY FINE GRAINED, LAMINATED, FRACTURED,  
 NARROW APERTURES, SLIGHTLY ROUGH SURFACE,  
 BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

| DEPTH (ft) | SPT / RQD | N <sub>60</sub> | REC (%) | SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | ODOT CLASS (GI) | HOLE SEALED |
|------------|-----------|-----------------|---------|-----------|----------|---------------|----|----|----|----|----|----|----|-----------------|-------------|
|            |           |                 |         |           |          | GR            | FS | SI | CL | LL | PL | PI |    |                 |             |
| 1          | 7         |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 2          | 5         | 16              | 0       | SS-1      | -        | -             | -  | -  | -  | -  | -  | -  | -  | -               |             |
| 3          | 9         |                 | 100     | 2S-1A     | 4.5+     | -             | -  | -  | -  | -  | -  | -  | 19 | A-7.6 (V)       |             |
| 4          | 6         | 19              | 0       | SS-2      | -        | -             | -  | -  | -  | -  | -  | -  | -  | -               |             |
| 5          | 10        |                 | 50      | 2S-2A     | 4.5+     | -             | -  | -  | -  | -  | -  | -  | 18 | A-7.6 (V)       |             |
| 6          | 8         | 20              | 81      | SS-3      | 4.5+     | 28            | 9  | 7  | 25 | 31 | 50 | 20 | 30 | 16              | A-7.6 (13)  |
| 7          |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 8          |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 9          | 9         | 27              | 75      | SS-4      | 4.5+     | -             | -  | -  | -  | -  | -  | -  | 14 | A-7.6 (V)       |             |
| 10         | 10        |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 11         | 10/0"     |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 12         |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 13         |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 14         | 50/14"    |                 | 0       | SS-6      | -        | -             | -  | -  | -  | -  | -  | -  | -  | Rock (V)        |             |
| 15         | 0         |                 | 0       | NQ2-1     |          |               |    |    |    |    |    |    |    | CORE            |             |
| 16         |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 17         | 43        |                 | 100     | NQ2-2     |          |               |    |    |    |    |    |    |    | CORE            |             |
| 18         |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 19         |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |
| 20         |           |                 |         |           |          |               |    |    |    |    |    |    |    |                 |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 11.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

|   |  |  |  |
|---|--|--|--|
| <p><b>Photo No.</b><br/>8</p>                           |  |  |  |
| <p><b>Boring:</b><br/>B-039-0-23</p>                    |  |  |  |
| <p>RC-1: 14.0'-15.0'<br/>REC (%):0<br/>RQD (%):0</p>    |  |  |  |
| <p>RC-2: 15.0'-20.0'<br/>REC (%):100<br/>RQD (%):43</p> |  |  |  |



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:58:14 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1026.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA / NQ2  
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 123+26.79 / 0'  
ALIGNMENT: CL WALL 12  
ELEVATION: 987.0 (MSL) EOB: 21.0 ft.  
LAT / LONG: 40.091207, -82.827079

EXPLORATION ID  
**B-040-0-23**  
PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.4' TOPSOIL (5.0")  
HARD, BROWN TO GRAY SILT AND CLAY, LITTLE TO TRACE SAND AND GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.  
-@14.3' IRON STAINING IN FRACTURE  
-@15.0' - 15.2' ZONE OF FRACTURES  
-@15.7' CLAY SEAM

SHALE : GRAY, MODERATELY WEATHERED, WEAK, FINE GRAINED, LAMINATED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

SILTSTONE : GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, VERY FINE GRAINED, VERY THIN, HIGHLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, FAIR SURFACE.

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-------------|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |    |             |
| 1          | 3         |               |          |               |    |    |    |    |    |    |    |             |
| 2          | 6         |               |          |               |    |    |    |    |    |    |    |             |
| 3          | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 4          | 7         | SS-1          | 4.5+     |               |    |    |    |    |    |    | 17 | A-6a (V)    |
| 5          | 9         |               |          |               |    |    |    |    |    |    |    |             |
| 6          | 6         | SS-2          | 4.5+     |               |    |    |    |    |    |    | 20 | A-6a (V)    |
| 7          | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 8          | 4         | SS-3          | 4.5+     | 9             | 15 | 37 | 32 | 33 | 18 | 15 | 18 | A-6a (9)    |
| 9          | 6         |               |          |               |    |    |    |    |    |    |    |             |
| 10         | 8         | SS-4          | 4.5+     |               |    |    |    |    |    |    | 18 | A-6a (V)    |
| 11         | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 12         | 15        |               |          |               |    |    |    |    |    |    | 10 | Rock (V)    |
| 13         | 50/3"     |               |          |               |    |    |    |    |    |    |    |             |
| 14         | 60/3"     | SS-6          |          |               |    |    |    |    |    |    | 2  | Rock (V)    |
| 15         | 0         | NQ2-1         |          |               |    |    |    |    |    |    |    | CORE        |
| 16         |           |               |          |               |    |    |    |    |    |    |    |             |
| 17         |           |               |          |               |    |    |    |    |    |    |    |             |
| 18         | 0         | NQ2-2         |          |               |    |    |    |    |    |    |    | CORE        |
| 19         |           |               |          |               |    |    |    |    |    |    |    |             |
| 20         |           |               |          |               |    |    |    |    |    |    |    |             |
| 21         |           |               |          |               |    |    |    |    |    |    |    |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER.

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

**Photo No.**  
9

**Boring:**  
B-040-0-23

RC-1: 14.0-16.0'  
REC (%):37  
RQD (%):0

RC-2: 16.0-21.0'  
REC (%):100  
RQD (%):0



|            |         |
|------------|---------|
| DESIGNER   | JAS     |
| REVIEWER   | 1/19/24 |
| PROJECT ID | 117607  |
| SUBSET     | 54      |
| TOTAL      | 66      |
| SHEET      | P.283   |
| TOTAL      | 295     |

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 12**  
**BORING LOG & ROCK CORE PHOTO FOR B-040-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:58:35 PM USER: juans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1027.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 124+97.00 / 0'  
 ALIGNMENT: CL WALL 12  
 ELEVATION: 988.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.091033, -82.826474

EXPLORATION ID  
**B-041-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTHS | ELEV. | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    | WC | HOLE SEALED |    |           |
|--------|-------|-----------|---------------|----------|---------------|----|----|----|----|----|----|-------------|----|-----------|
|        |       |           |               |          | GR            | FS | SI | CL | LL | PL |    |             |    |           |
| 1      | 988.2 | 4         |               |          |               |    |    |    |    |    |    |             |    |           |
| 2      | 987.7 | 5         | SS-1          | 3.50     | -             | -  | -  | -  | -  | -  | 16 | A-6a (V)    |    |           |
| 3      |       | 7         |               |          |               |    |    |    |    |    |    |             |    |           |
| 4      |       | 5         | SS-2          | 3.00     | 6             | 12 | 19 | 34 | 29 | 30 | 17 | 13          | 15 | A-6a (7)  |
| 5      | 982.7 | 10        |               |          |               |    |    |    |    |    |    |             |    |           |
| 6      |       | 13        |               |          |               |    |    |    |    |    |    |             |    |           |
| 7      |       | 32        | SS-3          | -        | -             | -  | -  | -  | -  | -  | -  | -           | 8  | A-2-4 (V) |
| 8      | 980.2 | 35        |               |          |               |    |    |    |    |    |    |             |    |           |
| 9      |       | 10        | SS-4          | -        | -             | -  | -  | -  | -  | -  | -  | -           | 7  | Rock (V)  |
| 10     |       | 21        |               |          |               |    |    |    |    |    |    |             |    |           |
| 11     |       | 29        |               |          |               |    |    |    |    |    |    |             |    |           |
| 12     |       | 50/6"     | SS-5          | -        | -             | -  | -  | -  | -  | -  | -  | -           | 6  | Rock (V)  |
| 13     |       | 36        |               |          |               |    |    |    |    |    |    |             |    |           |
| 14     |       | 50/5"     | SS-6          | -        | -             | -  | -  | -  | -  | -  | -  | -           | 4  | Rock (V)  |
| 15     |       |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 16     | 972.2 |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 17     |       |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 18     |       | 20        | NQ2-1         | 68       |               |    |    |    |    |    |    |             |    | CORE      |
| 19     |       |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 20     |       |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 21     |       |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 22     |       | 40        | NQ2-2         | 100      |               |    |    |    |    |    |    |             |    | CORE      |
| 23     |       |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 24     |       |           |               |          |               |    |    |    |    |    |    |             |    |           |
| 25     | 963.2 |           |               |          |               |    |    |    |    |    |    |             |    |           |

0.5' -TOPSOIL (5.5')  
 VERY STIFF, BROWN SILTY CLAY, SOME TO LITTLE SAND, LITTLE GRAVEL, MOIST.

VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : GRAY, MODERATELY TO SLIGHTLY WEATHERED, WEAK, FINE GRAINED, LAMINATED TO THIN BEDDED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, DISTURBED, SEAMY, POOR TO GOOD SURFACE.  
 -0.3' CLAYSTONE SEAM @ 16.0'  
 -@17.4' CLAY SEAM  
 -@18.0' CLAY SEAM

-SILTSTONE SEAM @ 21.4'-23.0'

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 12.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER.

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
**10**

**Boring:**  
 B-041-0-23

RC-1: 16.0-20.0'  
 REC (%):68  
 RQD (%):20

RC-2: 20.0-25.0'  
 REC (%):100  
 RQD (%):40





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:58:56 PM USER: juans  
 J:\GEO\GEO\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1028.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/9/23 END: 11/9/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1500+29 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1030.3 (MSL) EOB: 24.0 ft.  
 LAT / LONG: 40.090577, -82.811738

EXPLORATION ID  
**B-042-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.6' TOPSOIL (6.5")  
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | ODOT CLASS (GI) | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-----------------|-------------|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |    |                 |             |
| 1          | 3         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 2          | 8         | 23            | 4.5+     |               |    |    |    |    |    |    | 14 | A-6a (V)        |             |
| 3          | 8         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 4          | 14        | 39            |          |               |    |    |    |    |    |    |    |                 |             |
| 5          | 13        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 6          | 17        |               | 4.5+     |               |    |    |    |    |    |    | 13 | A-6a (V)        |             |
| 7          | 4         | 5             | 4.5+     |               |    |    |    |    |    |    | 15 | A-6a (6)        |             |
| 8          | 6         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 9          | 4         | 8             | 4.5+     |               |    |    |    |    |    |    | 12 | A-6a (V)        |             |
| 10         | 8         | 23            |          |               |    |    |    |    |    |    |    |                 |             |
| 11         | 40        |               |          |               |    |    |    |    |    |    | 6  | Rock (V)        |             |
| 12         | 42        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 13         | 50/2'     |               |          |               |    |    |    |    |    |    |    |                 |             |
| 14         | 50/0"     |               |          |               |    |    |    |    |    |    |    |                 |             |
| 15         |           |               |          |               |    |    |    |    |    |    |    |                 |             |
| 16         | 50/3"     |               |          |               |    |    |    |    |    |    | 5  | Rock (V)        |             |
| 17         |           |               |          |               |    |    |    |    |    |    |    |                 |             |
| 18         | 58        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 19         |           |               |          |               |    |    |    |    |    |    |    |                 |             |
| 20         |           |               |          |               |    |    |    |    |    |    |    |                 |             |
| 21         |           |               |          |               |    |    |    |    |    |    |    |                 |             |
| 22         | 68        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 23         |           |               |          |               |    |    |    |    |    |    |    |                 |             |
| 24         |           |               |          |               |    |    |    |    |    |    |    |                 |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 16.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

|   |  |  |  |
|---|--|--|--|
| <p><b>Photo No.</b><br/>11</p>  |  |  |  |
| <p><b>Boring:</b><br/>B-042-0-23</p>  |  |  |  |
| <p>RC-1: 18.0-19.0'<br/>                 REC (%):75<br/>                 RQD (%):58</p> |  |  |  |
| <p>RC-2: 19.0-24.0'<br/>                 REC (%):92<br/>                 RQD (%):68</p> |  |  |  |

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:57 - U:\G18\PROJECTS\2023\W-23-107.GPJ

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 JAS

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 56     | 66    |

|       |       |
|-------|-------|
| SHEET | TOTAL |
| P.285 | 295   |

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 15**  
**BORING LOG & ROCK CORE PHOTO FOR B-042-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:59:17 PM USER: juans J:\GEO\GEO\GEOtech Connect Projects\2023\117607-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1029.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/9/23 END: 11/9/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA / NQ2  
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1502+16 / 0'  
ALIGNMENT: CL WALL 15  
ELEVATION: 1035.0 (MSL) EOB: 24.5 ft.  
LAT / LONG: 40.090545, -82.811039

EXPLORATION ID  
**B-043-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5')

HARD, BROWN SANDY SILT, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST TO DAMP.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

SHALE : GRAY, MODERATELY WEATHERED, WEAK, FINE GRAINED, LAMINATED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC       | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----------|-------------|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |          |             |
| 1          | 3         |               |          |               |    |    |    |    |    |    |          |             |
| 2          | 5         | 20            | 4.5+     |               |    |    |    |    |    | 13 | A-4a (V) |             |
| 3          | 9         |               |          |               |    |    |    |    |    |    |          |             |
| 4          | 7         | 23            | 4.5+     |               |    |    |    |    |    | 15 | A-4a (V) |             |
| 5          | 8         |               |          |               |    |    |    |    |    |    |          |             |
| 6          | 3         | 19            | 4.5+     | 14            | 11 | 14 | 34 | 27 | 17 | 10 | A-4a (5) |             |
| 7          | 5         | 8             |          |               |    |    |    |    |    |    |          |             |
| 8          |           |               |          |               |    |    |    |    |    |    |          |             |
| 9          | 4         | 27            | 4.5+     |               |    |    |    |    |    | 13 | A-4a (V) |             |
| 10         | 14        |               |          |               |    |    |    |    |    |    |          |             |
| 11         | 20        |               |          |               |    |    |    |    |    | 6  | Rock (V) |             |
| 12         | 50/5"     |               |          |               |    |    |    |    |    |    |          |             |
| 13         |           |               |          |               |    |    |    |    |    |    |          |             |
| 14         | 20        | 94            |          |               |    |    |    |    |    | 12 | Rock (V) |             |
| 15         | 30        | 35            |          |               |    |    |    |    |    |    |          |             |
| 16         | 50/4"     |               |          |               |    |    |    |    |    | 6  | Rock (V) |             |
| 17         |           |               |          |               |    |    |    |    |    |    |          |             |
| 18         |           |               |          |               |    |    |    |    |    |    |          |             |
| 19         | 0         |               |          |               |    |    |    |    |    |    | CORE     |             |
| 20         |           |               |          |               |    |    |    |    |    |    |          |             |
| 21         |           |               |          |               |    |    |    |    |    |    |          |             |
| 22         | 33        |               |          |               |    |    |    |    |    |    | CORE     |             |
| 23         |           |               |          |               |    |    |    |    |    |    |          |             |
| 24         |           |               |          |               |    |    |    |    |    |    |          |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

|  |  |
|--|--|
| <b>Photo No.</b><br>12                       |  |
| <b>Boring:</b><br>B-043-0-23                 |  |
| RC-1: 18.5-19.5'<br>REC (%):75<br>RQD (%):10 |  |
| RC-2: 19.5-24.5'<br>REC (%):68<br>RQD (%):33 |  |

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
8350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
JAS

REVIEWER  
DEK 1/19/24

PROJECT ID  
117607

SUBSET TOTAL  
57 66

SHEET TOTAL  
P.286 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 15**  
**BORING LOG & ROCK CORE PHOTO FOR B-043-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:59:37 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL030.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1504+27 / 0'  
ALIGNMENT: CL WALL 15  
ELEVATION: 1038.3 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090479, -82.810313

EXPLORATION ID  
**B-044-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
HARD, LIGHT BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

| DEPTH | ELEV.  | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) |
|-------|--------|-----------|---------------|----------|----|----|----|----|----|----|----|----|-----------------|
| 1     | 1038.3 | 4         |               |          |    |    |    |    |    |    |    |    |                 |
| 2     | 1038.0 | 7         | SS-1          | 4.5+     |    |    |    |    |    |    |    | 15 | A-6a (V)        |
| 3     |        | 6         |               |          |    |    |    |    |    |    |    |    |                 |
| 4     |        | 12        | SS-2          |          |    |    |    |    |    |    |    | 9  | A-6a (V)        |
| 5     |        | 13        |               |          |    |    |    |    |    |    |    |    |                 |
| 6     |        | 10        | SS-3          | 4.5+     |    |    |    |    | 30 | 17 | 13 | 14 | A-6a (6)        |
| 7     |        | 12        |               |          |    |    |    |    |    |    |    |    |                 |
| 8     |        | 8         | SS-4          | 4.5+     |    |    |    |    |    |    |    | 14 | A-6a (V)        |
| 9     |        | 9         |               |          |    |    |    |    |    |    |    |    |                 |
| 10    |        | 13        |               |          |    |    |    |    |    |    |    |    |                 |
| 11    |        | 6         | SS-5          | 4.5+     |    |    |    |    |    |    |    | 11 | A-6a (V)        |
| 12    | 1025.3 | 10        |               |          |    |    |    |    |    |    |    |    |                 |
| 13    |        | 50/4"     | SS-6          |          |    |    |    |    |    |    |    | 7  | Rock (V)        |
| 14    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 15    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 16    |        | 38        | SS-7          |          |    |    |    |    |    |    |    | 10 | Rock (V)        |
| 17    |        | 50/4"     |               |          |    |    |    |    |    |    |    |    |                 |
| 18    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 19    |        | 50/6"     | SS-8          |          |    |    |    |    |    |    |    | 5  | Rock (V)        |
| 20    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 21    |        | 50/6"     | SS-9          |          |    |    |    |    |    |    |    | 5  | Rock (V)        |
| 22    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 23    |        | 50/5"     | SS-10         |          |    |    |    |    |    |    |    | 5  | Rock (V)        |
| 24    | 1013.3 |           |               |          |    |    |    |    |    |    |    |    |                 |
| 25    |        |           |               |          |    |    |    |    |    |    |    |    |                 |

SANDSTONE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 12.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA  
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1506+08 / 0'  
ALIGNMENT: CL WALL 15  
ELEVATION: 1038.9 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090452, -82.809651

EXPLORATION ID  
**B-045-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.3' TOPSOIL (4.0")  
HARD, LIGHT BROWN TO BROWN CLAY, "AND" SILT, TRACE COARSE TO FINE SAND, DAMP.

| DEPTH | ELEV.  | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) |
|-------|--------|-----------|---------------|----------|----|----|----|----|----|----|----|----|-----------------|
| 1     | 1038.9 | 5         |               |          |    |    |    |    |    |    |    |    |                 |
| 2     | 1038.9 | 16        | SS-1          | 4.5+     |    |    |    |    |    |    |    | 17 | A-7-6 (17)      |
| 3     |        | 6         |               |          |    |    |    |    |    |    |    |    |                 |
| 4     |        | 9         | SS-2          | 4.5+     |    |    |    |    |    |    |    | 14 | A-7-6 (V)       |
| 5     |        | 10        |               |          |    |    |    |    |    |    |    |    |                 |
| 6     |        | 12        |               |          |    |    |    |    |    |    |    |    |                 |
| 7     |        | 13        | SS-3          | 4.5+     |    |    |    |    |    |    |    | 14 | A-7-6 (V)       |
| 8     |        | 10        |               |          |    |    |    |    |    |    |    |    |                 |
| 9     | 1030.9 | 13        | SS-4          |          |    |    |    |    |    |    |    | 12 | A-6a (5)        |
| 10    |        | 8         |               |          |    |    |    |    |    |    |    |    |                 |
| 11    |        | 4         | SS-5          |          |    |    |    |    |    |    |    | 13 | A-6a (V)        |
| 12    |        | 6         |               |          |    |    |    |    |    |    |    |    |                 |
| 13    |        | 15        |               |          |    |    |    |    |    |    |    |    |                 |
| 14    | 1025.9 | 50/4"     | SS-6          |          |    |    |    |    |    |    |    | 6  | Rock (V)        |
| 15    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 16    |        | 50/4"     | SS-7          |          |    |    |    |    |    |    |    | 7  | Rock (V)        |
| 17    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 18    |        | 50/4"     | SS-8          |          |    |    |    |    |    |    |    | 6  | Rock (V)        |
| 19    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 20    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 21    |        | 50/2"     | SS-9          |          |    |    |    |    |    |    |    | 6  | Rock (V)        |
| 22    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 23    |        |           |               |          |    |    |    |    |    |    |    |    |                 |
| 24    | 1013.9 | 50/0"     | SS-10         |          |    |    |    |    |    |    |    |    | Rock (V)        |
| 25    |        |           |               |          |    |    |    |    |    |    |    |    |                 |

SILTSTONE : GRAY TO DARK GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER; CAVE-IN DEPTH @ 13.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY  
**RESOURCE INTERNATIONAL**  
8350 PRESIDENTIAL GATEWAY  
COLUMBUS, OHIO 43231  
(614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

SUBSET TOTAL  
**58 66**

SHEET TOTAL  
**P.287 295**

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 15**  
**BORING LOGS B-044-0-23 AND B-045-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:00:05 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL031.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1508+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1039.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090415, -82.808921

EXPLORATION ID  
**B-046-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-------------|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |    |             |
| 1          | 5         |               |          |               |    |    |    |    |    |    |    |             |
| 2          | 7         |               |          |               |    |    |    |    |    |    |    |             |
| 3          | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 4          | 12        |               |          |               |    |    |    |    |    |    |    |             |
| 5          | 14        |               |          |               |    |    |    |    |    |    |    |             |
| 6          | 15        |               |          |               |    |    |    |    |    |    |    |             |
| 7          | 16        |               |          |               |    |    |    |    |    |    |    |             |
| 8          | 10        |               |          |               |    |    |    |    |    |    |    |             |
| 9          | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 10         | 12        |               |          |               |    |    |    |    |    |    |    |             |
| 11         | 11        |               |          |               |    |    |    |    |    |    |    |             |
| 12         | 18        |               |          |               |    |    |    |    |    |    |    |             |
| 13         | 16        |               |          |               |    |    |    |    |    |    |    |             |
| 14         | 6         |               |          |               |    |    |    |    |    |    |    |             |
| 15         | 16        |               |          |               |    |    |    |    |    |    |    |             |
| 16         | 50/4"     |               |          |               |    |    |    |    |    |    |    |             |
| 17         |           |               |          |               |    |    |    |    |    |    |    |             |
| 18         | 50/4"     |               |          |               |    |    |    |    |    |    |    |             |
| 19         | 0         |               |          |               |    |    |    |    |    |    |    |             |
| 20         |           |               |          |               |    |    |    |    |    |    |    |             |
| 21         |           |               |          |               |    |    |    |    |    |    |    |             |
| 22         | 37        |               |          |               |    |    |    |    |    |    |    |             |
| 23         |           |               |          |               |    |    |    |    |    |    |    |             |
| 24         |           |               |          |               |    |    |    |    |    |    |    |             |
| 25         |           |               |          |               |    |    |    |    |    |    |    |             |

0.5' - TOPSOIL (5.5')  
 HARD, BROWNISH GRAY CLAY, "AND" SILT, LITTLE FINE GRAVEL, LITTLE COARSE TO FINE SAND, DAMP.

HARD, BROWNISH GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, SOME FINE GRAVEL, MOIST.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.  
 -@21.3' - 21.5' SHALE  
 -@22.5' CLAY SEAM

-@ 24.5'-25.0' SHALE

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.2'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio



**Photo No.**  
 13

**Boring:**  
 B-046-0-23

RC-1: 19.0-20.0'  
 REC (%):33  
 RQD (%):10

RC-2: 20.0-25.0'  
 REC (%):93  
 RQD (%):37

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
 JAS

REVIEWER  
 DEK 1/19/24

PROJECT ID  
 117607

SUBSET TOTAL  
 59 66

SHEET TOTAL  
 P.288 295

**GEOTECHNICAL PROFILE - NOISE WALLS**  
 NOISE WALL 15  
 BORING LOG & ROCK CORE PHOTO FOR B-046-0-23



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:00:26 PM USER: juans J:\GEO\GEO\GEOtech Connect Projects\2023\117607-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL032.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1510+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1039.2 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090391, -82.808171

EXPLORATION ID  
**B-047-0-23**  
 PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    |  | WC | HOLE SEALED |  |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|--|----|-------------|--|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |  |    |             |  |
| 1          | 4         |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 2          | 8         | 27            | 4.5+     |               |    |    |    |    |    |    |  |    |             |  |
| 3          | 11        |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 4          | 17        | 52            | 4.5+     | 11            | 13 | 36 | 31 | 31 | 17 | 14 |  |    |             |  |
| 5          | 19        |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 6          | 5         | 6             | 20       | 75            |    |    |    |    |    |    |  |    |             |  |
| 7          | 8         |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 8          |           |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 9          | 5         | 7             | 22       | 58            |    |    |    |    |    |    |  |    |             |  |
| 10         | 8         |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 11         |           |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 12         | 14        | 37            | 61       | 58            | 14 | 32 | 18 | 26 | 17 | 9  |  |    |             |  |
| 13         | 12        |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 14         | 15        | 20            | 52       | 36            |    |    |    |    |    |    |  |    |             |  |
| 15         | 16        |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 16         | 19        | 15            | 54       | 54            |    |    |    |    |    |    |  |    |             |  |
| 17         | 50/6"     |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 18         |           |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 19         | 50/4"     |               | 100      |               |    |    |    |    |    |    |  |    |             |  |
| 20         | 0         |               | 42       |               |    |    |    |    |    |    |  |    |             |  |
| 21         |           |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 22         |           |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 23         | 55        |               | 92       |               |    |    |    |    |    |    |  |    |             |  |
| 24         |           |               |          |               |    |    |    |    |    |    |  |    |             |  |
| 25         |           |               |          |               |    |    |    |    |    |    |  |    |             |  |

0.5' - TOPSOIL (6.0")  
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.

HARD, BROWN SANDY SILT, LITTLE CLAY, SOME FINE GRAVEL, DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.

-@22.4' CLAY SEAM  
 -@ 19.0' - 25.0' RED IRON STAINING THROUGHOUT

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 14.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

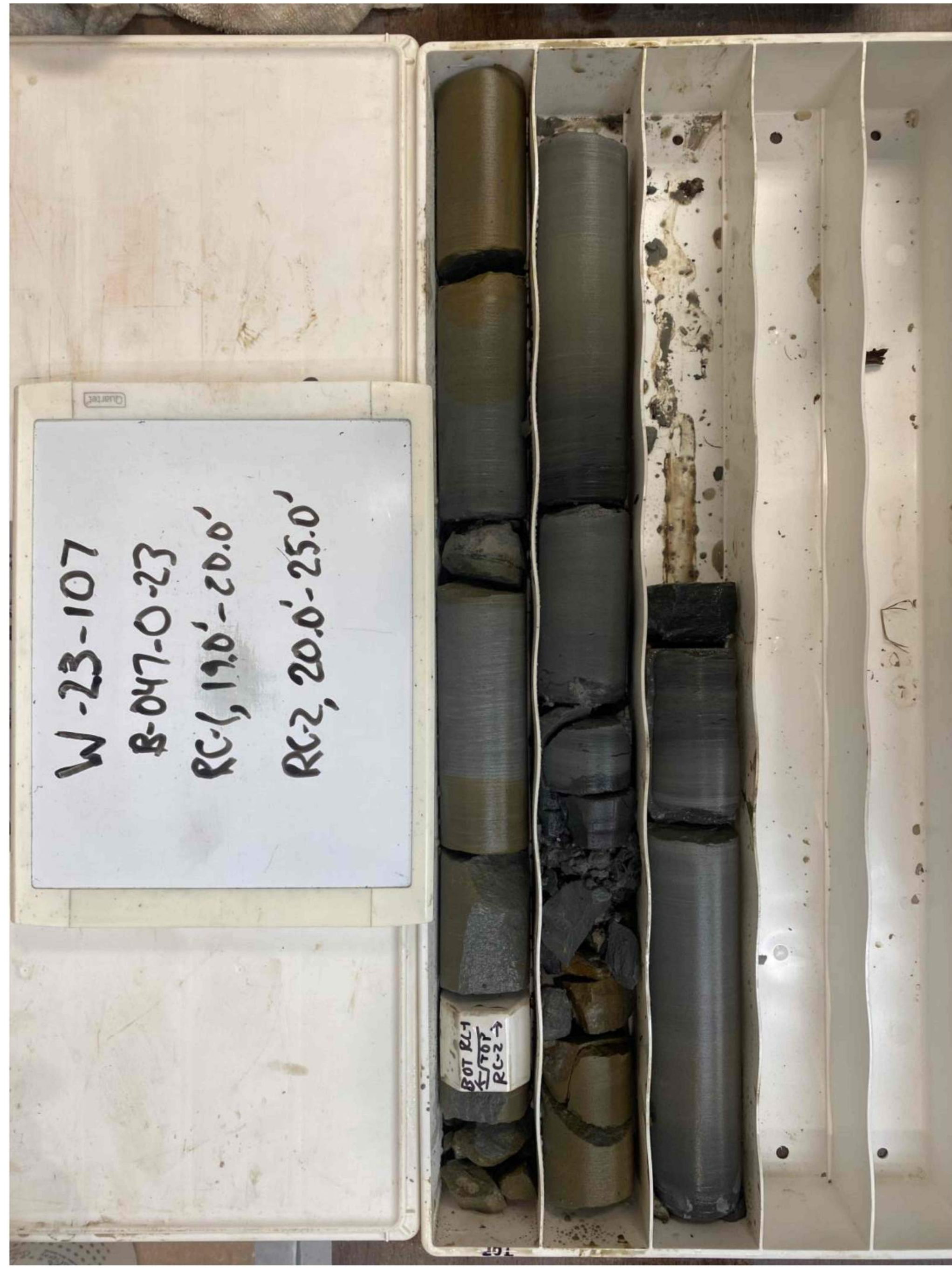
**Location:**  
 Franklin County, Ohio

**Photo No.**  
 14

**Boring:**  
 B-047-0-23

RC-1: 19.0-20.0'  
 REC (%):42  
 RQD (%):10

RC-2: 20.0-25.0'  
 REC (%):92  
 RQD (%):55





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:00:46 PM USER: juans  
 J:\GEO\GEO\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_Z1033.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA  
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1512+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1037.4 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090360, -82.807478

EXPLORATION ID  
**B-048-0-23**

PAGE  
 1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

|   |              |                                    |           |               |          |       |    |    |    |    |    |    |    |                 |           |          |  |
|---|--------------|------------------------------------|-----------|---------------|----------|-------|----|----|----|----|----|----|----|-----------------|-----------|----------|--|
| 0.5' - TOPSOIL (6.0')   | ELEV. 1037.4 | DEPTHS                             | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR    | FS | SI | CL | LL | PL | PI | WC | ODOT CLASS (GI) | BACK FILL |          |  |
| HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST. | 1036.9       | 1-3                                | 3         | SS-1          | 4.5+     | -     | -  | -  | -  | -  | -  | -  | 19 | A-6b (V)        |           |          |  |
| VERY STIFF TO HARD, GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP.                   | 1026.9       | 4-6                                | 20        | SS-2          | 4.5+     | 10    | 5  | 19 | 32 | 34 | 36 | 17 | 19 | A-6b (10)       |           |          |  |
|   |              | 7-11                               | 6         | 24            | SS-3     | 4.5+  | -  | -  | -  | -  | -  | -  | -  | 17              | A-6b (V)  |          |  |
|   |              | 9-10                               | 6         | 26            | SS-4     | 4.5+  | -  | -  | -  | -  | -  | -  | -  | 12              | A-6b (V)  |          |  |
|   |              | 11-12                              | 5         | 22            | SS-5     | 4.5+  | 18 | 11 | 14 | 33 | 24 | 26 | 16 | 10              | A-4a (4)  |          |  |
|   |              | 14-15                              | 3         | 13            | SS-6     | 3.00  | -  | -  | -  | -  | -  | -  | -  | -               | 12        | A-4a (V) |  |
|   |              | 16-17                              | 28        | -             | SS-7     | -     | -  | -  | -  | -  | -  | -  | -  | -               | 0         | Rock (V) |  |
|   |              | 19-20                              | 15        | 72            | SS-8     | -     | -  | -  | -  | -  | -  | -  | -  | -               | 13        | Rock (V) |  |
|   |              | 21-22                              | 60/3"     | -             | SS-9     | -     | -  | -  | -  | -  | -  | -  | -  | -               | -         | Rock (V) |  |
|   |              | 24-25                              | 1021.4    | 11            | 36       | SS-10 | -  | -  | -  | -  | -  | -  | -  | -               | 20        | Rock (V) |  |
|   |              | SHALE : BROWN, SEVERELY WEATHERED. | 1021.4    | TR            |          |       |    |    |    |    |    |    |    |                 |           |          |  |

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 16.1'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:57 - U:\G18\PROJECTS\2023\W-23-107 GPJ

DESIGN AGENCY  
  
 8350 PRESIDENTIAL GATEWAY  
 COLUMBUS, OHIO 43231  
 (614) 823-4949

DESIGNER  
**JAS**

REVIEWER  
**DEK 1/19/24**

PROJECT ID  
**117607**

|        |       |
|--------|-------|
| SUBSET | TOTAL |
| 61     | 66    |

|       |       |
|-------|-------|
| SHEET | TOTAL |
| P.290 | 295   |

**GEOTECHNICAL PROFILE - NOISE WALLS**  
**NOISE WALL 15**  
**BORING LOG B-048-0-23**



**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:01:03 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL034.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1514+10 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.9 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090327, -82.806756

EXPLORATION ID  
**B-049-0-23**  
 PAGE  
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**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5')  
 VERY STIFF TO HARD, BROWN CLAY, SOME SILT,  
 SOME FINE GRAVEL, TRACE COARSE TO FINE SAND,  
 MOIST TO DAMP.

HARD, GRAY SANDY SILT, TRACE GRAVEL, MOIST TO DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED,  
 STRONG, FINE GRAINED, THIN BEDDED, MODERATELY  
 FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH  
 SURFACES, BLOCKY, GOOD SURFACE.

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | ODOT CLASS (GI) | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-----------------|-------------|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |    |                 |             |
| 1          | 1         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 2          | 3         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 3          | 4         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 4          | 5         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 5          | 6         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 6          | 8         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 7          | 3         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 8          | 4         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 9          | 6         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 10         | 8         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 11         | 13        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 12         | 16        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 13         | 4         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 14         | 8         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 15         | 10        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 16         | 5         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 17         | 7         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 18         | 14        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 19         | 50/3"     |               |          |               |    |    |    |    |    |    |    |                 |             |
| 20         | 0         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 21         | 5         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 22         | 7         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 23         | 14        |               |          |               |    |    |    |    |    |    |    |                 |             |
| 24         | 5         |               |          |               |    |    |    |    |    |    |    |                 |             |
| 25         | 10        |               |          |               |    |    |    |    |    |    |    |                 |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 17.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 15

**Boring:**  
 B-049-0-23

RC-1: 19.0-20.0'  
 REC (%):0  
 RQD (%):0

RC-2: 20.0-25.0'  
 REC (%):42  
 RQD (%):28





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:01:23 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL035.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
TYPE: NOISE WALLS  
PID: 117607 SFN: NA  
START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG  
SAMPLING FIRM / LOGGER: RII / MJ  
DRILLING METHOD: 3.25" HSA / NQ2  
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
HAMMER: AUTOMATIC  
CALIBRATION DATE: 3/21/22  
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1516+10 / 0'  
ALIGNMENT: CL WALL 15  
ELEVATION: 1038.0 (MSL) EOB: 25.0 ft.  
LAT / LONG: 40.090286, -82.806054

EXPLORATION ID  
**B-050-0-23**

PAGE  
1 OF 1

**MATERIAL DESCRIPTION AND NOTES**

0.5' - TOPSOIL (5.5')  
VERY STIFF TO HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

DENSE, BROWN GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.  
-@21.0' RED STAINING

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-------------|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |    |             |
| 1          | 2         |               |          |               |    |    |    |    |    |    |    |             |
| 2          | 4         |               |          |               |    |    |    |    |    |    |    |             |
| 3          | 5         |               |          |               |    |    |    |    |    |    |    |             |
| 4          | 7         |               |          |               |    |    |    |    |    |    |    |             |
| 5          | 6         |               |          |               |    |    |    |    |    |    |    |             |
| 6          | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 7          | 10        |               |          |               |    |    |    |    |    |    |    |             |
| 8          | 10        |               |          |               |    |    |    |    |    |    |    |             |
| 9          | 4         |               |          |               |    |    |    |    |    |    |    |             |
| 10         | 5         |               |          |               |    |    |    |    |    |    |    |             |
| 11         | 11        |               |          |               |    |    |    |    |    |    |    |             |
| 12         | 18        |               |          |               |    |    |    |    |    |    |    |             |
| 13         | 15        |               |          |               |    |    |    |    |    |    |    |             |
| 14         | 12        |               |          |               |    |    |    |    |    |    |    |             |
| 15         | 16        |               |          |               |    |    |    |    |    |    |    |             |
| 16         | 32        |               |          |               |    |    |    |    |    |    |    |             |
| 17         | 50/5"     |               |          |               |    |    |    |    |    |    |    |             |
| 18         | 50/4"     |               |          |               |    |    |    |    |    |    |    |             |
| 19         | 0         |               |          |               |    |    |    |    |    |    |    |             |
| 20         | 25        |               |          |               |    |    |    |    |    |    |    |             |
| 21         |           |               |          |               |    |    |    |    |    |    |    |             |
| 22         | 82        |               |          |               |    |    |    |    |    |    |    |             |
| 23         |           |               |          |               |    |    |    |    |    |    |    |             |
| 24         |           |               |          |               |    |    |    |    |    |    |    |             |
| 25         |           |               |          |               |    |    |    |    |    |    |    |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 13.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
Franklin County, Ohio

**Photo No.**  
16

**Boring:**  
B-050-0-23

RC-1: 19.0-20.0'  
REC (%):0  
RQD (%):25

RC-2: 20.0-25.0'  
REC (%):100  
RQD (%):82





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:01:44 PM USER: juans  
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL036.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1519+10.6 / 8.77' LT  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.1 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090226, -82.806530

EXPLORATION ID  
**B-051-0-23**  
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**MATERIAL DESCRIPTION  
 AND NOTES**

0.5' - TOPSOIL (5.5")  
 HARD, BROWN SILTY CLAY, LITTLE GRAVEL AND SAND, DAMP.

VERY DENSE, BROWN TO GRAY GRAVEL WITH SAND AND SILT, DAMP.

-@ 6.0' - 8.0' COBBLES

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

-VERTICAL FRACTURE @ 20.3', 20.9', 23.2' AND 24.7'

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GR | GRADATION (%) |    |    |    |    |    |           | WC | HOLE SEALED |
|------------|-----------|---------------|----------|----|---------------|----|----|----|----|----|-----------|----|-------------|
|            |           |               |          |    | FS            | SI | CL | LL | PL | PI | ATTERBERG |    |             |
| 1          | 3         |               |          |    |               |    |    |    |    |    |           |    |             |
| 2          | 6         |               |          |    |               |    |    |    |    |    |           |    |             |
| 3          | 7         |               |          |    |               |    |    |    |    |    |           |    |             |
| 4          | 10        |               |          |    |               |    |    |    |    |    |           |    |             |
| 5          | 12        |               |          |    |               |    |    |    |    |    |           |    |             |
| 6          | 36        |               |          |    |               |    |    |    |    |    |           |    |             |
| 7          | 26        |               |          |    |               |    |    |    |    |    |           |    |             |
| 8          | 22        |               |          |    |               |    |    |    |    |    |           |    |             |
| 9          | 17        |               |          |    |               |    |    |    |    |    |           |    |             |
| 10         | 19        |               |          |    |               |    |    |    |    |    |           |    |             |
| 11         | 32        |               |          |    |               |    |    |    |    |    |           |    |             |
| 12         | 17        |               |          |    |               |    |    |    |    |    |           |    |             |
| 13         | 29        |               |          |    |               |    |    |    |    |    |           |    |             |
| 14         | 14        |               |          |    |               |    |    |    |    |    |           |    |             |
| 15         | 50/3"     |               |          |    |               |    |    |    |    |    |           |    |             |
| 16         | 50/4"     |               |          |    |               |    |    |    |    |    |           |    |             |
| 17         |           |               |          |    |               |    |    |    |    |    |           |    |             |
| 18         |           |               |          |    |               |    |    |    |    |    |           |    |             |
| 19         | 50        |               |          |    |               |    |    |    |    |    |           |    |             |
| 20         |           |               |          |    |               |    |    |    |    |    |           |    |             |
| 21         |           |               |          |    |               |    |    |    |    |    |           |    |             |
| 22         | 50        |               |          |    |               |    |    |    |    |    |           |    |             |
| 23         |           |               |          |    |               |    |    |    |    |    |           |    |             |
| 24         |           |               |          |    |               |    |    |    |    |    |           |    |             |
| 25         |           |               |          |    |               |    |    |    |    |    |           |    |             |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 14.8'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio

**Photo No.**  
 17

**Boring:**  
 B-051-0-23

RC-1: 19.0'-20.0'  
 REC (%):75  
 RQD (%):50

RC-2: 20.0'-25.0'  
 REC (%):97  
 RQD (%):50





**FRA-161-15.80 NOISE WALLS**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:02:05 PM USER: jluans  
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL037.dgn

**RESOURCE INTERNATIONAL, INC.**



PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1520+41 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1038.6 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090130, -82.804859

EXPLORATION ID  
**B-052-0-23**  
 PAGE  
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**MATERIAL DESCRIPTION AND NOTES**

| DEPTH (ft) | SPT / RQD | REC SAMPLE ID | HP (tsf) | GRADATION (%) |    |    |    |    |    |    | WC | HOLE SEALED |
|------------|-----------|---------------|----------|---------------|----|----|----|----|----|----|----|-------------|
|            |           |               |          | GR            | FS | SI | CL | LL | PL | PI |    |             |
| 1          | 6         |               |          |               |    |    |    |    |    |    |    |             |
| 2          | 7         |               |          |               |    |    |    |    |    |    |    |             |
| 3          | 10        |               | 4.5+     |               |    |    |    |    |    |    |    | 14 A-6a (V) |
| 4          | 12        |               |          |               |    |    |    |    |    |    |    |             |
| 5          | 13        |               |          |               |    |    |    |    |    |    |    |             |
| 6          | 18        |               |          |               |    |    |    |    |    |    |    |             |
| 7          | 50/4"     |               | 4.5+     |               |    |    |    |    |    |    |    | 13 A-6a (V) |
| 8          |           |               |          |               |    |    |    |    |    |    |    |             |
| 9          | 12        |               |          |               |    |    |    |    |    |    |    |             |
| 10         | 10        |               |          |               |    |    |    |    |    |    |    |             |
| 11         | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 12         | 26        |               |          |               |    |    |    |    |    |    |    |             |
| 13         | 8         |               |          |               |    |    |    |    |    |    |    |             |
| 14         | 10        |               |          |               |    |    |    |    |    |    |    |             |
| 15         | 25        |               |          |               |    |    |    |    |    |    |    |             |
| 16         | 35        |               |          |               |    |    |    |    |    |    |    |             |
| 17         | 28        |               |          |               |    |    |    |    |    |    |    |             |
| 18         | 19        |               |          |               |    |    |    |    |    |    |    |             |
| 19         | 42        |               |          |               |    |    |    |    |    |    |    |             |
| 20         | 50/3"     |               |          |               |    |    |    |    |    |    |    |             |
| 21         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 22         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 23         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 24         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 25         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 26         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 27         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 28         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 29         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 30         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 31         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 32         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 33         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 34         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 35         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 36         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 37         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 38         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 39         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 40         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 41         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 42         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 43         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 44         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 45         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 46         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 47         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 48         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 49         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 50         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 51         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 52         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 53         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 54         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 55         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 56         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 57         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 58         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 59         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 60         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 61         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 62         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 63         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 64         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 65         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 66         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 67         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 68         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 69         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 70         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 71         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 72         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 73         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 74         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 75         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 76         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 77         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 78         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 79         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 80         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 81         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 82         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 83         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 84         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 85         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 86         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 87         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 88         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 89         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 90         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 91         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 92         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 93         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 94         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 95         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 96         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 97         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 98         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 99         | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 100        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 101        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 102        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 103        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 104        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 105        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 106        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 107        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 108        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 109        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 110        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 111        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 112        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 113        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 114        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 115        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 116        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 117        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 118        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 119        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 120        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 121        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 122        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 123        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 124        | 92        |               |          |               |    |    |    |    |    |    |    |             |
| 125        | 92        |               |          |               |    |    |    |    |    |    |    |             |

0.3' - TOPSOIL (4.0')  
 HARD, BROWN SILT AND CLAY, LITTLE GRAVEL AND SAND, DAMP.

MEDIUM DENSE, BROWN GRAVEL WITH SAND AND SILT, DAMP.  
 -COBBLES @ 6.5'-8.0'

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

-SHALE SEAMS @ 22.6', 23.0, 24.2'

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 13.8'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio



**Photo No. 18**

**Boring:**  
 B-052-0-23

RC-1: 19.0-20.0'  
 REC (%):92  
 RQD (%):92

RC-2: 20.0-25.0'  
 REC (%):93  
 RQD (%):77



**FRA-161-15.80 NOISE WALLS**

MODEL: Sheet PAPER: 34x22 (in.) DATE: 3/14/2024 TIME: 7:02:26 PM USER: juans J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607\_ZL038.dgn

**RESOURCE INTERNATIONAL, INC.**

PROJECT: FRA-161-15.80  
 TYPE: NOISE WALLS  
 PID: 117607 SFN: NA  
 START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG  
 SAMPLING FIRM / LOGGER: RII / MJ  
 DRILLING METHOD: 3.25" HSA / NQ2  
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)  
 HAMMER: AUTOMATIC  
 CALIBRATION DATE: 3/21/22  
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1522+26 / 0'  
 ALIGNMENT: CL WALL 15  
 ELEVATION: 1036.5 (MSL) EOB: 25.0 ft.  
 LAT / LONG: 40.090039, -82.804245

EXPLORATION ID  
**B-053-0-23**  
 PAGE  
 1 OF 1

| MATERIAL DESCRIPTION AND NOTES   | ELEV.  | SPT / RQD | N <sub>60</sub> | REC SAMPLE ID | HP (tsf) | GRADATION (%) |      |    |    |    |    |    | WC       | HOLE SEALED |    |           |
|--|--------|-----------|-----------------|---------------|----------|---------------|------|----|----|----|----|----|----------|-------------|----|-----------|
|  |        |           |                 |               |          | GR            | FS   | SI | CL | LL | PL | PI |          |             |    |           |
| 0.5' - TOPSOIL (6.0")<br>VERY STIFF TO HARD, BROWN TO GRAY SILTY CLAY, SOME TO TRACE SAND, TRACE GRAVEL, MOIST.  | 1036.5 | 1         |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  | 1036.0 | 2         | 10              | SS-1          | 4.00     | -             | -    | -  | -  | -  | -  | 22 | A-6b (V) |             |    |           |
|  |        | 3         |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 4         | 3               | 10            | SS-2     | 4.25          | 4    | 8  | 13 | 33 | 42 | 35 | 19       | 16          | 18 | A-6b (10) |
|  |        | 5         | 4               |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 6         | 2               | 3             | 10       | SS-3          | 4.5+ | -  | -  | -  | -  | -  | 17       | A-6b (V)    |    |           |
|  |        | 7         | 4               |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 8         |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
| HARD, BROWN TO BROWN GRAY SANDY SILT, TRACE GRAVEL, DAMP TO MOIST.   | 1028.5 |           |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 9         | 3               | 17            | SS-4     | 4.5+          | -    | -  | -  | -  | -  | 13 | A-4a (V) |             |    |           |
|  |        | 10        | 7               |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 11        | 5               | 23            | SS-5     | 4.5+          | 13   | 13 | 14 | 29 | 31 | 25 | 15       | 10          | 12 | A-4a (5)  |
|  |        | 12        | 9               |               |          |               |      |    |    |    |    |    |          |             |    |           |
| SANDSTONE : GRAY, HIGHLY WEATHERED.  | 1022.4 | 5         | -               | SS-6          | -        | -             | -    | -  | -  | -  | -  | 12 | Rock (V) |             |    |           |
|  |        | 14        | 50/2"           |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 16        | 50/3"           | 100           | SS-7     | -             | -    | -  | -  | -  | -  | 8  | Rock (V) |             |    |           |
|  |        | 17        |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
| SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.<br>-@22.2' FRACTURE<br>-@22.8' SHALE SEAM<br>-@24.0 CLAY SEAM | 1017.5 | 50        |                 | NQ2-1         | 50       |               |      |    |    |    |    |    | CORE     |             |    |           |
|  |        | 19        |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 20        |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 21        |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  |        | 22        | 68              |               | NQ2-2    | 100           |      |    |    |    |    |    |          | CORE        |    |           |
|  |        | 23        |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  | 24     |           |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |
|  | 25     |           |                 |               |          |               |      |    |    |    |    |    |          |             |    |           |

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.8'  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

**Project Name:** FRA-161-15.80

**Location:**  
 Franklin County, Ohio



**Photo No.**  
 19

**Boring:**  
 B-053-0-23

RC-1: 19.0-20.0'  
 REC (%):50  
 RQD (%):50

RC-2: 20.0-25.0'  
 REC (%):100  
 RQD (%):68