

SOIL BORING LOG

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| <i>\(\frac{1}{2}\)</i>              | SCI Engi  | neering, Inc                             |              | ,   | JOIL DOMING  | <i>J</i> L00   |                 |                      |                              |  |
|-------------------------------------|---|--|--------------|---|--|--|-----------------|----------------------|------------------------------|--|
| ROUTE                               | FAS 253 (IL 251) DESCRIPTION                                  |  |              | ILLINOIS 251 OVER SANDY CREEK NORTH OF WENONA |  |  | te <u>12/</u>   | /02/02<br>-IDOT      |                              |  |
| ECTION _                            | (68) BR-1   | LOCA                                     | TION .       | NW 1/   | W 1/4, 3rd PM, SEC. 12, TWP. 30N, RNG. 1E,   |  |                 | 629th PM             |                              |  |
| OUNTY _                             | Marshall DRILLING METHOD                                      |  | ******       | Hollow Stem Auger                             |  | HAMMER TYPE  |                 | UTOMATIC             |                              |  |
| Offset<br>Ground Sur<br>ugered, Cla | 134+20<br>40 ft RT<br>face Elev. 634.8<br>y Loam, Gravel, Rip | D B L P O T W H S                        | C<br>S<br>Qu | M<br>O<br>I<br>S<br>T<br>(%)                  | Groundwater Elev.: First Encounter Upon Completion After Hrs. Hard, gray, calcareous       | ff | E P T H (ff) (/ | B U C S S Qu (tsf) 3 | M<br>0<br>1<br>S<br>T<br>(%) |  |
| ap, red we                          | athered Shale (fill)  | 7<br>4<br>5                              | No           | -ry   | Thin, Coal layers © 24<br>(continued)  | 4'   | - 6             | 9 >4.5<br>8 P        | 13                           |  |
|                                     | wn & gray, Clay Loam<br>Limestone cobble ®                    | 5<br>3<br>12                             | 0.9<br>B     | 30  |  |  | 8               | 6 6 8                | 11                           |  |
| ery stiff, re<br>hale               | od brown, weathered,  | 6 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1.0 P        | 29<br>17<br>15<br>11                          | Dense, gray Limestone<br>End of boring. Boring<br>with rock coring on 9,<br>Rock Core Log. | g continued -  |                 | 0                    | 10<br>7                      |  |
|                                     |   | 29                                       |              | 12  |  |  |                 |                      |                              |  |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

| (F) | Illinois Department of Transportation |
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ROCK CORE LOG

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FAS 253 68 BR-1 MARSHALL 97 8 G 187 98" SHEET NO. 15

Contract #68573

| SECTION COUNTY STRUCT. NO Station   | AS 253 (IL 251) (68) BR-1 Marshall CORIN        | -                                    | NW 1/4 3rd        | WENONA                       |   |        | LOG    | GED B | Y <u>B. I</u> | Rataic |
|---|---|--------------------------------------|-------------------|------------------------------|---|--------|--------|-------|---------------|--------|
| COUNTY STRUCT, NO.  |   | LOCATION                             | NW 1/4 3rd        |                              |   |        |        |       |               |        |
| STRUCT. NO.   | Marshall CORIN                                  |                                      | 17 - 17 - 010     | PM, SEC. 12, TWP.            | 30N, RN                                 | IG. 1E |        |       | <del></del>   |        |
| -   |   | G METHOD                             | Rotary, surface s | et diamond bit               |   |        | R<br>E | R     | CORE          | S      |
| Station   | 062-0002 Existing                               | CORING BARREL                        | L TYPE & SIZE     | NW conv dbl t<br>split inner | 1                                       |        | C      |       | Ţ             | R      |
|   | 133+80  | Core Diamete                         | _                 | 1 in                         | E                                       | C<br>0 | 0<br>V | Q     | M             | E      |
| BORING NO.  | B-1A NORTH ABUT                                 | Top of Rock                          | Elev. <u>610</u>  |                              | P                                       | R      | E<br>R | D     | E             | 1      |
| Station   | 134+23<br>38 ft RT                              | Begin Core E                         | 010               | .311                         | н                                       |        | Y      |       |               | ŀ      |
| ***************************************   | Elev. <u>634.8</u>                              | ft Sus S                             |                   |                              | (ft)                                    | (#)    | (%)    |       | (min/ft)      | (ts    |
| CLAYEY SHALE:   | Gray, calcareous (Core                          | Run 1 – RMR Ro                       | ting 21: IV - P   | oor Rock)                    | -25                                     | 1      | 56     | 0     | 25            |        |
|   |   |                                      |                   |                              |   |        |        |       |               |        |
| SHALE: Gray, co   | alcareous (Core Run 2                           | - RMR Rating 26:                     | IV - Poor Rock    | ζ)———— <u>6</u>              | 08.3                                    | 2      | 98     | 41    | 27            |        |
| Moistura o  | ontent tests performed                          | an namalan ahtair                    | and from the fell | audaa damiba.                |   |        |        |       |               |        |
| 25.5  | feet - 10 percent                               | oir samples obtain                   | red from the rote | owing depins,                |   |        |        |       |               |        |
| 29 f  | feet - 10 percent<br>eet - 10 percent; Dry      |                                      |                   |                              |   |        |        |       |               |        |
| 35.1  | feet - 11 percent; Dr<br>feet - 11 percent      | y Density - 130 p                    | ocf               |                              | -30                                     | 3      | 91     | 35    | 16            |        |
|   | feet - 12 percent<br>feet - 11 percent; [       | )rv Densitv - 135                    | ncf               |                              |   |        |        |       |               |        |
| (Core Run 3 - RMR Rating 29: IV - Poor Rock) Shear planes observed in core at the following depths: |   |                                      |                   |                              |   |        |        |       |               |        |
| 3:  | 2.7 feet  | me ronowing dep                      | 71113.            |                              |   |        |        |       |               | 25     |
| 33  | 3 feet<br>3.5 feet                              |                                      |                   |                              |   |        |        |       |               |        |
|   | 5 feet<br>7 feet                                |                                      |                   |                              |   |        |        |       |               |        |
|   | 7,7 feet<br>ight gray at 34 feet.               |                                      |                   |                              | *************************************** |        |        |       |               |        |
| (Core Run   | 4 - RMR Rating 29:                              | IV - Poor Rock)                      |                   |                              | -35                                     | 4      | 90     | 28    | 21            |        |
|   |   |                                      |                   |                              |   |        |        |       |               |        |
| Becomes b<br>weathering) inter  | rown at approximately mittent in core.          | 36 feet. Deposits                    | s of clayey shale | (zones of                    | -35                                     |        |        |       |               |        |
|   | gray at 37 feet.                                |                                      |                   |                              |   |        |        |       |               |        |
| Becomes t   | prown at 37.8 feet.                             |                                      |                   |                              |   |        |        |       |               |        |
|   |   |                                      |                   |                              | ****                                    |        |        |       |               | 33     |
|   |   |                                      |                   | 5                            | 95.3                                    |        |        |       |               |        |
| Shale bedding a   | ppears horizontal.                              |                                      | 40 400 /5"        |                              | 40                                      |        |        |       |               |        |
| inches of coal o  | ained at 23.5 to 25 fo<br>bserved in the bottom | et. Blow counts<br>of the SPT sample | - 16, 100/5<br>e. | Approximately 3              |   |        |        |       |               |        |
| Boring terminate  | d at 39.5 ft.                                   |                                      |                   |                              | -                                       |        |        |       |               |        |
|   |   |                                      |                   |                              |   |        |        |       |               |        |
|   |   |                                      |                   |                              |   |        |        |       |               |        |
|   |   |                                      |                   |                              |   |        |        |       |               |        |

BBS, form 138 (Rev. 8-99)

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| REVISIONS |      | ILLINOIS DEDARTMENT | T OF TRANSPORTATION      |
|-----------|------|---------------------|--------------------------|
| NAME      | DATE | ILLINUIS DEPARTIMEN | T OF TRANSPORTATION      |
|           |      | BORING              | G LOGS                   |
|           |      |                     | TE. 251<br>NDY CREEK     |
|           |      | F.A.S. 253          | SEC. 68 BR-1<br>L COUNTY |
|           | -    | STA. 133+80.00      | S.N. 062-0085            |
|           |      | DESIGNED BY: S.G.   | DRAWN BY: T.C.S.         |
|           |      | DATE: 11-20-08      | CHECKED BY: O.A.O.       |