

| | | | | |
|-----------------------|----------|-------------------|--------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| FAU 3578 | 1327B | COOK | 108 | 83 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT- | | 22 SHEETS |

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amber Court, Suite 204
Naperville, Illinois 60565
(630) 351-2838

SOIL BORING LOG

PAGE 1 of 1
DATE December 3, 2004
LOGGED BY TOB
GSI JOB No. 0444

ROUTE IL Route 7 DESCRIPTION Retaining Wall
TWNESHIP Orland Park LOCATION Township 36 N Range 12 E Orland Park, IL
COUNTY Cook DRILLING METHOD 3.5" Hollow Stem Augers HAMMER TYPE CME-75 Automatic

STRUCT. NO. 016-W970
Station XX
BORING NO. R-16
Station 1809786.5, Sta. 1509+34.95
Offset 1114817.4, Offset 6.52' LT
Ground Surface Elev. 681.7

| DEPTH (ft) | BLOW COUNT (S) | UCS (tsf) | MOISTURE (%) | DESCRIPTION | DEPTH (ft) | BLOW COUNT (S) | UCS (tsf) | MOISTURE (%) |
|------------|----------------|-----------|--------------|---|------------|----------------|-----------|--------------|
| 0-6.0 | | | | 6.0" ASPHALT, 6.0" CRUSHED STONE | | | | |
| 6.0-6.6 | 4 | | | ORGANIC CLAY with fibrous peat -dark brown to black (A-8) | 6.0-6.6 | 1 | | 62 |
| 6.6-6.8 | 6 | 4.25P | 19 | CLAY-brown & gray-stiff to hard (A-6) Fill | 6.6-6.8 | 2 | 0.2B | 62 |
| 6.8-7.1 | 1 | | 100 | | 6.8-7.1 | | | |
| 7.1-7.3 | 3 | | | | 7.1-7.3 | | | |
| 7.3-7.5 | 5 | 1.25B | 23 | CLAY-gray-stiff to very stiff (A-6) | 7.3-7.5 | 25 | 1.25P | 19 |
| 7.5-7.8 | 1 | | 99 | | 7.5-7.8 | | | |
| 7.8-8.0 | 2 | 0.8B | 26 | CLAY-brown & gray-medium stiff to stiff (A-6) Fill, Wet | 7.8-8.0 | 2 | | 108 |
| 8.0-8.1 | 1 | | | | 8.0-8.1 | 3 | | |
| 8.1-8.3 | 10 | 1.5P | 25 | | 8.1-8.3 | 5 | 1.8B | 21 |
| 8.3-8.4 | 1 | | 97 | | 8.3-8.4 | | | |
| 8.4-8.6 | 2 | 0.9B | 26 | | 8.4-8.6 | 6 | 1.25P | 23 |
| 8.6-8.7 | 1 | | 68 | | 8.6-8.7 | 5 | | 107 |
| 8.7-8.9 | 1 | | | | 8.7-8.9 | 7 | | |
| 8.9-9.1 | 15 | 0.5B | 50 | | 8.9-9.1 | 7 | 2.7B | 18 |
| 9.1-9.2 | 1 | | 33 | | 9.1-9.2 | | | |
| 9.2-9.4 | 1 | 0.2B | 140 | | 9.2-9.4 | 4 | | 112 |
| 9.4-9.6 | 1 | | | | 9.4-9.6 | 6 | | |
| 9.6-9.8 | 20 | 1.0P | 140 | End Of Boring @ -40.0' Hollow Stem Augers CME-75 Automatic Hammer | 9.6-9.8 | 12 | 1.8B | 13 |

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ROUTE IL Route 7 DESCRIPTION Retaining Wall
TWNESHIP Orland Park LOCATION Township 36 N Range 12 E Orland Park, IL
COUNTY Cook DRILLING METHOD 3.5" Hollow Stem Augers HAMMER TYPE CME-75 Automatic

STRUCT. NO. 016-W970
Station XX
BORING NO. R-17
Station 1809843.8, Sta. 1510+10.02
Offset 1114865.9, Offset 6.51' LT
Ground Surface Elev. 681.7

| DEPTH (ft) | BLOW COUNT (S) | UCS (tsf) | MOISTURE (%) | DESCRIPTION | DEPTH (ft) | BLOW COUNT (S) | UCS (tsf) | MOISTURE (%) |
|------------|----------------|-----------|--------------|---|------------|----------------|-----------|--------------|
| 0-6.0 | | | | CRUSHED STONE | | | | |
| 6.0-6.5 | 5 | | 95 | | 6.0-6.5 | 2 | | 98 |
| 6.5-6.6 | 6 | | | | 6.5-6.6 | 4 | | |
| 6.6-6.8 | 6 | 2.2B | 22 | CLAY-brown & gray-stiff to very stiff (A-6) Fill | 6.6-6.8 | 4 | 1.6B | 25 |
| 6.8-7.0 | 2 | | 98 | | 6.8-7.0 | | | |
| 7.0-7.3 | 3 | | | | 7.0-7.3 | | | |
| 7.3-7.5 | 5 | 2.1B | 24 | CLAY-brown & gray-stiff to very stiff (A-6) Fill, Wet | 7.3-7.5 | 25 | 1.5P | 25 |
| 7.5-7.8 | 1 | | | | 7.5-7.8 | | | |
| 7.8-8.0 | 2 | | | | 7.8-8.0 | 2 | | 68 |
| 8.0-8.2 | 2 | 2.0P | 24 | ORGANIC CLAY-dark gray to black-(A-7/A-8) | 8.0-8.2 | 3 | | |
| 8.2-8.3 | 2 | | | | 8.2-8.3 | 4 | 1.1B | 49 |
| 8.3-8.4 | 1 | | 96 | | 8.3-8.4 | | | |
| 8.4-8.6 | 2 | | | | 8.4-8.6 | 1 | | 96 |
| 8.6-8.8 | 10 | 1.25B | 25 | CLAY-gray-very stiff to hard (A-6) | 8.6-8.8 | 3 | | |
| 8.8-9.0 | 4 | | | | 8.8-9.0 | 4 | | |
| 9.0-9.2 | 7 | | | | 9.0-9.2 | 6 | 1.25P | 23 |
| 9.2-9.4 | 6 | 1.25P | 23 | | 9.2-9.4 | 7 | | |
| 9.4-9.6 | 4 | | | | 9.4-9.6 | 4 | | 103 |
| 9.6-9.8 | 3 | | | | 9.6-9.8 | 6 | | |
| 9.8-10.0 | 15 | 2.0P | 26 | | 9.8-10.0 | 8 | 3.5B | 19 |
| 10.0-10.2 | 2 | | 80 | | 10.0-10.2 | | | |
| 10.2-10.4 | 3 | | | | 10.2-10.4 | 4 | 1.6B | 27 |
| 10.4-10.6 | 4 | 2.7B | 23 | | 10.4-10.6 | 4 | | |
| 10.6-10.8 | 3 | | | | 10.6-10.8 | 8 | | 115 |
| 10.8-11.0 | 5 | | | | 10.8-11.0 | 10 | | |
| 11.0-11.2 | 20 | 2.2B | 24 | End Of Boring @ -40.0' Hollow Stem Augers CME-75 Automatic Hammer | 11.0-11.2 | 12 | 6.2B | 16 |

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ROUTE IL Route 7 DESCRIPTION Retaining Wall
TWNESHIP Orland Park LOCATION Township 36 N Range 12 E Orland Park, IL
COUNTY Cook DRILLING METHOD 3.5" Hollow Stem Augers HAMMER TYPE CME-75 Automatic

STRUCT. NO. 016-W970
Station XX
BORING NO. R-18
Station 1809901.0, Sta. 1510+85.01
Offset 1114914.4, Offset 6.45' LT
Ground Surface Elev. 682.3

| DEPTH (ft) | BLOW COUNT (S) | UCS (tsf) | MOISTURE (%) | DESCRIPTION | DEPTH (ft) | BLOW COUNT (S) | UCS (tsf) | MOISTURE (%) |
|------------|----------------|-----------|--------------|---|------------|----------------|-----------|--------------|
| 0-6.0 | | | | TOPSOIL-dark brown to black (Fill) | | | | |
| 6.0-6.2 | | | | CLAY-brown- & gray-stiff to very stiff (A-6) Fill, Wet | 6.0-6.2 | | | |
| 6.2-6.4 | 2 | | 95 | | 6.2-6.4 | 2 | | 95 |
| 6.4-6.6 | 4 | | | | 6.4-6.6 | 4 | 2.7B | 21 |
| 6.6-6.8 | 6 | 2.2B | 21 | ORGANIC CLAY-black-stiff (A-8) | 6.6-6.8 | | | ST 0.75P 88 |
| 6.8-7.0 | 1 | | 98 | | 6.8-7.0 | | | |
| 7.0-7.2 | 2 | | | | 7.0-7.2 | | | |
| 7.2-7.4 | 5 | 1.9B | 23 | Vane Shear @ -25.0' Su (Peak) =1150psf | 7.2-7.4 | 25 | 1.5P | 25 |
| 7.4-7.6 | 2 | | | | 7.4-7.6 | | | |
| 7.6-7.8 | 3 | | | | 7.6-7.8 | 2 | | 68 |
| 7.8-8.0 | 3 | 1.0B | 26 | Vane Shear @ -27.0' Su (Peak) >1750psf | 7.8-8.0 | 3 | | |
| 8.0-8.2 | 3 | | | | 8.0-8.2 | 4 | 1.1B | 49 |
| 8.2-8.4 | 2 | | | | 8.2-8.4 | | | |
| 8.4-8.6 | 2 | | | | 8.4-8.6 | 1 | | 96 |
| 8.6-8.8 | 10 | 3.0P | 20 | CLAY-gray-stiff to very stiff (A-6) | 8.6-8.8 | 3 | | |
| 8.8-9.0 | 3 | | | | 8.8-9.0 | 3 | | |
| 9.0-9.2 | 15 | 3.1B | 21 | | 9.0-9.2 | 5 | | |
| 9.2-9.4 | 1 | | 80 | | 9.2-9.4 | 10 | 2.5B | 19 |
| 9.4-9.6 | 4 | | | | 9.4-9.6 | | | |
| 9.6-9.8 | 4 | 1.6B | 27 | | 9.6-9.8 | 4 | | |
| 9.8-10.0 | 1 | | | | 9.8-10.0 | 4 | | 115 |
| 10.0-10.2 | 2 | | | | 10.0-10.2 | 8 | | |
| 10.2-10.4 | 20 | 1.3B | 27 | End Of Boring @ -40.0' Hollow Stem Augers CME-75 Automatic Hammer | 10.2-10.4 | 9 | 2.2B | 17 |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%) NR-No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%) NR-No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%) NR-No Recovery

| | |
|----------|-----|
| DESIGNED | - |
| CHECKED | - |
| DRAWN | MD |
| CHECKED | SRT |

B Bollinger, Lach & Associates, Inc.

SOIL BORING LOGS R-16, R-17 & R-18
NORTHWEST RETAINING WALL
IL. 7 (Southwest Highway)
F.A.U. ROUTE 3578 SECTION 1327B
COOK COUNTY
STA. 1505+40.00 to STA. 1515+78.21
STRUCTURE NUMBER 016-W970